The South African business response to climate change: Is it delivering the required performance?

CDP South Africa 100 Climate Change Report 2013

November 2013

Lead Partner
National Business Initiative

Report written by
Incite

The evolution of CDP

With great pleasure, CDP announced an exciting change this year.

Over ten years ago CDP pioneered the only global disclosure system for companies to report their environmental impacts and strategies to investors. In that time, and with your support, CDP has accelerated climate change and natural resource issues to the boardroom and has moved beyond the corporate world to engage with cities and governments.

The CDP platform has evolved significantly, supporting multinational purchasers to build more sustainable supply chains. It enables cities around the world to exchange information, take best practice action and build climate resilience. We assess the climate performance of companies and drive improvements through shareholder engagement.

Our offering to the global marketplace has expanded to cover a wider spectrum of the earth's natural capital, specifically water and forests, alongside carbon, energy and climate.

For these reasons, we have outgrown our former name of the Carbon Disclosure Project and rebranded to CDP. Many of you already know and refer to us in this way. Our rebrand denotes our progress as we continue to catalyse action and respond to business, finance, investment and environmental needs globally.

We now have a bolder, more dynamic look and logo that reflects the scale of the work we must undertake in the coming years to move the markets ahead of where they would otherwise be on these issues and realise truly sustainable economies.

- **Over 5,000 companies from all over the world have been asked to report on climate change through CDP this year;**
- **81% of the world's 500 largest public companies listed on the Global 500 engage with CDP to enable effective measurement of their carbon footprint and climate change action;**
- **CDP is a not-for-profit organization. If you would like to support our vital work through donations or sponsorship opportunities, please email paul.robins@cdp.net or telephone +44 (0) 7703 184 312.**

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DRIVING SUSTAINABLE ECONOMIES

Contents

To read 2013 company responses in full please go to https://www.cdp.net/en-US/Results/Pages/responses.aspx

For investors, the risk of stranded assets has been brought to the fore by the work of Carbon Tracker. They calculate around 80% of coal, oil and gas reserves are unburnable, if governments are to meet global commitments to keep the temperature rise below 2°C. This has serious implications for institutional investors' portfolios and valuations of companies with fossil fuel reserves.

CEO Foreword

As countries around the world seek economic growth, strong employment and safe environments, corporations have a unique responsibility to deliver that growth in a way that uses natural resources wisely. The opportunity is enormous and it is the only growth worth having.

This year we passed a significant landmark of 400ppm of carbon dioxide in the atmosphere and are rapidly heading towards 450ppm, accepted by many governments as the upper limit to avoid dangerous climate change. The Intergovernmental Panel on Climate Change (IPCC) 5th assessment report (AR5) strengthens the scientific case for action.

Fears are increasing over future climate change impacts as we see more extreme weather events, Hurricane Sandy the most noted with damages totalling some $42 billion.[1] The unprecedented melting of the Arctic ice is a clear climate alarm bell, while the first 10 years of this century have been the world's hottest since records began, according to the World Meteorological Organization.

The result is a seismic shift in corporate awareness of the need to assess physical risk from climate change and to build resilience.

For investors, the risk of stranded assets has been brought to the fore by the work of Carbon Tracker. They calculate around 80% of coal, oil and gas reserves are unburnable, if governments are to meet global commitments to keep the temperature rise below 2°C. This has serious implications for institutional investors' portfolios and valuations of companies with fossil fuel reserves.

The economic case for action is strengthening. This year, we published the 3% Solution[2] with WWF showing that the US corporate sector could reduce emissions by 3% each year between 2010 and 2020 and deliver $780 billion in savings above costs as a result. 79% of US companies responding to CDP report higher ROI on emission reductions investments than on the average business investment. Meanwhile, governments are taking new action: The US Administration has launched its Climate Action Plan, with a new emphasis on reducing emissions from utilities; China is developing air pollution measures and moving toward pilot cap and trade schemes; the UK Government has mandated greenhouse gas emissions reporting for all large listed companies; the EU is looking at improving environmental and other reporting.

The pressure on corporations, investors and governments to act continues. At CDP, we have broadened our work to add forests to climate and water so our programs now extend to an estimated 79% of natural capital, by value.[3] To reflect this, we rebranded at the start of the year from the Carbon Disclosure Project to CDP and are increasing our focus on projects to accelerate action. One explores how corporations influence public policy on climate change both positively and negatively. Some corporations are still acting – both directly and through trade associations – to prevent the inevitable: nations need sensible climate regulation that protects the public interest over the long term.

As countries around the world seek economic growth, strong employment and safe environments, corporations have a unique responsibility to deliver that growth in a way that uses natural resources wisely. The opportunity is enormous and it is the only growth worth having.

Paul Simpson
CEO CDP

1 New York State Hurricane Sandy Damage Assessment; Governor Andrew Cuomo; November 12, 2012 http://www.governor.ny.gov/press/11262012-damageassessment
2 https://www.cdproject.net/CDPResults/3-percent-solution-report.pdf
3 Based on findings from the report Natural Capital at Risk: The Top 100 Externalities of Business, published by TEEB for Business Coalition in April 2013

NBI Foreword

We believe that business needs to work together, building on the best practice and significant progress reported here, to accelerate our performance in regard to climate mitigation. We invite you to join us as we support our members to do exactly that.

Disclosure to the CDP, and the activities disclosed in this year's South African CDP Climate Change report, is voluntary. Once again the South African company response rate is the second highest in the world with a remarkable 83%; more importantly the performance scores are steadily improving. These voluntary efforts alone should dispel the myth that business does not think climate change is real and is not prepared to act.

According to this year's disclosure, despite modest economic growth and accounting for efficiencies by Eskom, South Africa's net emissions are slightly down against 2012 data. The CDP 2013 report is filled with examples of how leading South African companies are working hard to manage the short, medium and long term impacts of climate change. There is also the broader context of companies participating in the NBI's Energy Efficiency Leadership Network and their commitment to further energy use reductions and sharing of best practice. The training programmes on greenhouse gas accounting that the NBI runs in partnership with the World Resource Institute are fully subscribed and the number of responding companies who fall outside of the formal JSE sample (including, for the first time, a submission from the NBI) are a growing testament to the commitment of the South African business sector. We can be in no doubt that leading South African business has a genuine intention to reduce emissions and adapt to the long term impacts of climate change.

However the report also shows that we are not doing enough to meet the reductions required by science. A recent CEO Survey by the United Nations Global Compact (of which the NBI is the local focal point) and Accenture showed that "as business leaders have continued their journey, many have found themselves stuck on their ascent, unable to scale sustainability at the pace required to address global challenges… business leaders described a plateau beyond which they cannot progress without radical changes in market structures and systems, driven by a common understanding of global priorities". This aligns well with a long standing message at the NBI: the systemic nature of climate challenges and the need for a broader enabling, incentivising framework means business cannot go it alone. We need partnerships between government, business, labour and civil society. The fact that the private sector invested R80 billion in renewable energy projects in the last few years illustrates the potential that is unleashed when the enabling framework is correct. As illustrated by our support of carbon tax discussions held jointly with National Treasury, the NBI will continue our mission to create trusted platforms for these stakeholders to engage and to identify areas where working together we can make significant progress towards implementing solutions.

It must be said that business can do more. The report also identifies a number of areas of concern: that emissions reductions are largely being achieved in one sector, that business are not reporting their most material emissions across their value chains (Scope 3), and that targets are still hugely variable in terms of ambition and timelines. We believe that business needs to work together, building on the best practice and significant progress reported here, to accelerate our performance in regard to climate mitigation. We invite you to join us as we support our members to do exactly that.

Joanne Yawitch
CEO National Business Initiative

Executive Summary

1

South African companies again demonstrate leadership in their commitment to transparency, their improvements in disclosure, and the voluntary adoption of emission reduction targets.

The South Africa 100 CDP response rate of 83% once again ranks South Africa as the second highest internationally by geographic region. The high response rate has been accompanied by improvements in disclosure across most sectors and indicators, as well as an increase in the number of companies that have voluntarily adopted emissions reduction targets.

2

Despite the encouraging disclosure improvement and voluntary commitments, company actions are not resulting in significant emissions reductions – and there remains great variation in performance between and within sectors.

While total reported Scope 1 and 2 emissions have decreased slightly on 2012 emissions, the level of reduction falls short of national and global policy expectations. Most of the reductions are being made in the energy-intensive Minerals & Energy sector, with almost all other sectors showing an increase in emissions.

3

Companies are generally not reporting and addressing the most material emissions across their value chains.

With the introduction of final, clear guidelines on Scope 3 reporting from the Greenhouse Gas Protocol, it will be desirable to see this changing over time.

Executive Summary continued

CDP's climate change programme is an investor-led initiative to accelerate company action on carbon emission reductions and energy efficiency initiatives. This year, CDP acts on behalf of 722 institutional investors (CDP signatories) representing US$87 trillion in assets. This is the seventh CDP report analysing South African companies' response to climate change and carbon emissions. This report is written by Incite in partnership with the National Business Initiative (NBI). The report provides a concise analysis of the South African company responses to the CDP information request that was sent to the 100 largest JSE listed companies by market capitalisation.

The results of CDP South Africa 2013 reflects the trend of increasing engagement by the South African business sector in anticipating and responding to climate change issues. In the context of the National Treasury's updated Carbon Tax Policy Paper,[4] and ongoing discussion about the potential impacts of the proposed tax on economic growth,[5] it is encouraging to see the continuing voluntary improvements in the levels of disclosure across almost all indicators, as well as the further increase in voluntary commitment to reduce emissions, amongst the participating South African companies. These increases could be attributed to a combination of companies' increased commitment to more sustainable business, as well as to the Carbon Tax Policy Paper and the Climate Change Response White Paper,[6] both of which envisage mandatory greenhouse gas (GHG) reporting for emitters above a threshold in the future.

Despite these improvements it is suggested that significant further progress will be required in emissions reductions if businesses are to meet South Africa's proposed national emissions reductions targets[7] as part of the country's commitment to making a fair and equitable contribution to the global ambition of limiting warming to 2°C on pre-industrial levels.[8]

4 South African National Treasury (2013) Carbon Tax Policy Paper: Reducing greenhouse gas emissions and facilitating the transition to a green economy: http://www.treasury.gov.za/public%20comments/Carbon%20Tax%20Policy%20Paper%202013.pdf

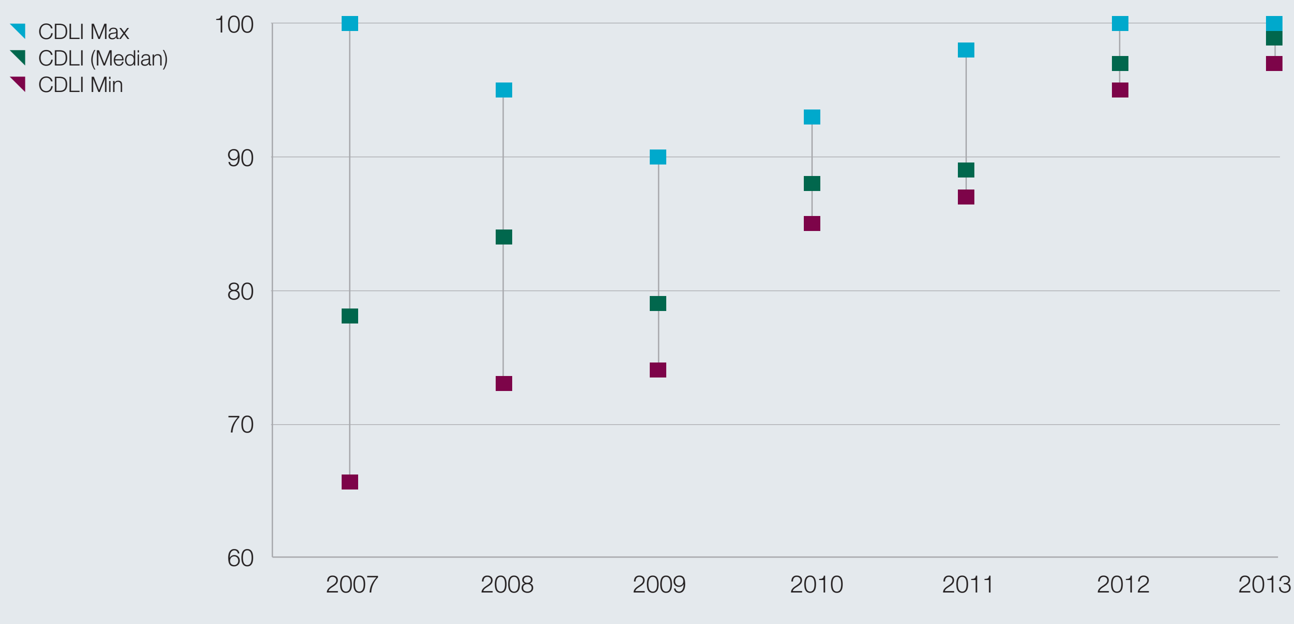
5 BUSA (2013) Carbon Tax Policy: BUSA submission to Portfolio Committee on Trade and Industry: http://www.thedti.gov.za/parliament/Busa_carbon_tax.pdf

6 Department of Environmental Affairs (2011) National Climate Change Response White Paper https://www.environment.gov.za/sites/default/files/legislations/national_climatechange_response_whitepaper.pdf

7 ibid

8 United Nations FCCC (15 March 2012) Report of the Conference of the Parties on its seventeenth session, held in Durban from 28 November to 11 December 2011. http://unfccc.int/resource/docs/2011/cop17/eng/09a01.pdf

Figure 1: Improving scores for the Climate Disclosure Leadership Index (CDLI) JSE 100 over time



The JSE 100 response rate confirms South African businesses' continuing commitment to transparency

- South Africa's 2013 CDP information request generated a response rate of 83%. This ranks South Africa as the second highest internationally by geographic region, with only the Europe sample (90%) showing a better response rate. The response rate of the JSE 100 is higher than that of the Global 500 sample, which is at 81%. The increase on last year's response rate (78%) is largely due to the high response rate (four out of six) of new entrants into the JSE 100 sample.[9]
- Of the 79 unique company responses analysed, seven companies chose not to make their submissions publicly available (eight in 2012). No companies who completed the information request in 2012 declined to participate in 2013, although there are two companies who responded in prior years and who declined to participate this year.[10]
- The Health Care sector showed the highest levels of participation (100%), while Consumer Staples, Energy & Materials and Industrials each had response rates of 90% or more. The Financials sector continues to show the lowest response rate, with only 20 out of 31[11] companies responding, due to the continuing poor response rate of the property sub-sector.
- This year, 13 South African companies that are not in the JSE 100 chose to report voluntarily to the CDP. This is the same number as in 2012, although comprises a different mix of companies.

There has been a further improvement in the historically excellent levels of disclosure from South African companies

- The average disclosure score of all responding companies is 83/100, showing a continuing consistent increase: up from 82 in 2012, 76 in 2011, 74 in 2010 and 62 in 2009. Energy & Materials achieved the highest average disclosure score for a sector, followed by the Financials and Industrials sectors.
- The lowest score for companies that qualified for the Climate Disclosure Leadership Index (CDLI) has improved to 97/100 (normalised points), up from 95/100 in 2012. Eleven companies constituted the top 10% that qualified for this year's CDLI. Gold Fields Ltd and Nedbank Ltd are the overall leaders, each with 100 points.
- All of the 79 responses (100%) disclose figures for global Scope 1 and/or Scope 2 emissions (only one company disclosing Scope 2 emissions did not also disclose Scope 1 emissions). This is a significant improvement on disclosure when CDP first engaged with the JSE 100 (in 2008), when only 41 of 58 (71%) respondents measured and disclosed emissions. This improvement has been accompanied by a continuing increase in the levels of voluntary reporting on climate change issues, with 76 companies (96%) reporting GHG information in their annual reports.
- There has been an increase in levels of emissions verification: 48 companies (61%) have emissions verification complete or underway for Scope 1 and 2 emissions (reported and approved)[12], up from 37 (49%) in 2012. There are 30 companies (40%) that have verification complete or underway for Scope 3 emissions (reported and approved).
- There has been a decrease in the number of companies disclosing Scope 3 emissions: 65 companies (82%), down from 71 (93%) in 2012.

> Improved disclosure is highlighted with respect to the CDLI, where the barrier to entry for the top 10% of companies increased to 97/100. Gold Fields Ltd and Nedbank Ltd both scored a maximum 100 points.

There has been a slight improvement in average levels of performance

- This year, eight companies qualified for the Carbon Performance Leadership Index (CPLI): Anglo American, Barloworld, FirstRand Ltd, Growthpoint Properties, Harmony Gold Mining Co Ltd, Nampak Ltd, Pick n Pay Holdings Ltd and Remgro (listed alphabetically). This is up from six companies in 2012: Anglo American, Barloworld, FirstRand Ltd, Gold Fields Ltd, Mondi Plc and Woolworths Holdings Ltd.
- There are 52 companies (66%) that report having emissions reduction targets, up from 43 (55%) in 2012, and 40 (48%) in 2011. These targets comprise a mix of both absolute and intensity-based reduction targets, and continue to show significantly varying

9 Four companies answered through another listed company. Therefore while 83% of companies answered the questionnaire in 2013, a total of 79 questionnaires were quantitatively analysed for this report.

10 The two companies are AVI (answered in 2008, but not public) and Mr Price (answered in 2011).

11 This number includes those companies that have responded through another entity (AQ sa).

12 "Reported and approved" refers to CDP verification assessment criteria. These criteria are stipulated in the scoring methodology. Companies that do not meet the criteria are not considered to have provided sufficient evidence of effective and appropriate emissions verification. These companies are not awarded related performance points.

Executive Summary continued

levels of ambition and timeframes (see Appendix 3). The Energy & Materials sector has the highest proportion of companies with targets (17 out of 21 companies).

- There are 78 companies (99%) that report having a board committee or executive body with responsibility for climate change (up from 73 in 2012), while 57 companies (72%) provide monetary incentives for management performance related to the achievement of climate change objectives (up from 47 in 2012).
- Energy efficiency for building services and processes is still the core focus for company emissions reductions initiatives, with 110 and 88 initiatives respectively out of a total of 312.
- This year, the median disclosure score of 83 improved slightly from last year's 82, while the median performance score improved from a C to a B.

The improvements in disclosure and performance are not matched by an equivalent improvement in emissions reductions

- There has been a slight increase in the total reported direct GHG emissions of South Africa's top companies. Total reported direct (Scope 1) emissions increased to 134.6 million metric tons of carbon dioxide equivalent (CO_2e) from 132.9 million metric tons CO_2e in 2012. The largest increase in Scope 1 GHG emissions by sector was in the Energy sub-sector (Sasol Ltd), with emissions increasing by 1.4 million metric tons CO_2e. Increasing Scope 1 global emissions were reported in the Industrials, Consumer Discretionary, and IT & Telecoms sectors. The largest reduction in Scope 1 emissions was reported in the Materials sub-sector (490,390 metric tons CO_2e).
- Total reported indirect (Scope 2) emissions have decreased slightly from 86.6 million metric tons CO_2e in 2012 to 85 million metric tons CO_2e in 2013. This decrease was achieved almost exclusively in the Energy & Materials sector, which reported reductions of almost 4 million metric tons CO_2e. Other than a small decrease in IT & Telecoms, all other sectors reported an increase in Scope 2 emissions.
- The data highlights the continuing predominant contribution of a few large GHG emitters to South Africa's total Scope 1 GHG emissions. Notably, this includes Sasol Ltd (59.9 million metric tons CO_2e), followed by ArcelorMittal South Africa Ltd (11.3 million metric tons CO_2e), Pretoria Portland Cement Co Ltd (4.4 million metric tons CO_2e), BHP Billiton (2.9 million metric tons CO_2e) and Sappi (2.6 million metric tons CO_2e). Placing this in context, Eskom's publicly reported emissions of carbon dioxide for the year ending March 2013 is 227.9 million metric tons CO_2e[13] (down from 231.9 million metric tons CO_2e in 2012). Taken together with Eskom, the responding companies in the JSE 100 account for 60% of the country's total estimated GHG emissions of approximately 559.65 million metric tons CO_2e.[14]

> The decrease in Scope 2 emissions was almost exclusively due to reductions in the Energy & Materials sector. Other than a small decrease in IT & Telecoms, all other sectors reported an increase in their Scope 2 emissions.

13 Eskom Annual Integrated Report 2013: http://overendstudio.co.za/online_reports/eskom_ar2013/index.php

14 This figure is drawn from the World Resource Institute (WRI) Climate Data Explorer at http://cait2.wri.org/. It is in line with projections from the Department of Environmental Affairs. The Department of Environmental Affairs is currently updating the national GHG inventory for the period 2001-2010. An updated figure for 2011-2013 cannot be provided at this stage (Witi, J. 2011. Department of Environmental Affairs. Personal communication, 26 September and 9 October 2013).

Table 1: The JSE 100 Climate Performance Leadership Index (CPLI)

Company (in alphabetical order)	Sector	2013 Performance Band	2012 Performance Band	2011 Performance Band
Anglo American	Energy & Materials	A	A	C
Barloworld	Industrials	A	A	B
FirstRand Ltd	Financials	A	A	B
Growthpoint Properties	Financials	A	B	C
Harmony Gold Mining Co Ltd	Energy & Materials	A	B	B
Nampak Ltd	Energy & Materials	A	B	B
Pick n Pay Holdings Ltd	Consumer Staples	A	B	A-
Remgro	Financials	A	B	A-

Table 2: The JSE 100 Climate Disclosure Leadership Index (CDLI)

Company	Sector	2013 Score	2012 Score	2011 Score
Anglo American Platinum	Energy & Materials	99	96	85
Barloworld	Industrials	97	93	89
Exxaro Resources Ltd	Energy & Materials	97	100	94
Gold Fields Ltd	Energy & Materials	100	99	98
Harmony Gold Mining Co Ltd	Energy & Materials	98	98	91
Investec Ltd	Financials	99	90	79
Kumba Iron Ore	Energy & Materials	98	88	82
Mediclinic International	Health Care	99	97	74
Nampak Ltd	Energy & Materials	97	95	85
Nedbank Ltd	Financials	100	92	96
Remgro	Financials	99	97	80

Box 1: South Africa's Grid Emissions Factor for use in the CDP Climate Change Programme

The NBI is working with its members to ensure consistent and comparable Greenhouse Gas (GHG) reporting. We have a partnership with the World Resource Institute (WRI) to conduct GHG accounting training and we are working to standardise the use of the WRI GHG Protocol and encourage the development and use of South Africa appropriate emission factors.

An immediate challenge is the use of conversion factors when calculating Scope 2 emissions (indirect electrical energy use) and Scope 3 Category 3 emissions (fuel and energy related activities). Currently companies mostly use emission factors published by Eskom. In 2011 CDP respondents used a Scope 2 conversion factor ranging from 0.94 – 1.04 t CO_2e/MWh. Reasons for the variation include: mismatches between calendar and financial years; how the grid is defined; what is accounted for; and the interpretation of reporting grid transmission and distribution losses. The factors sourced from Eskom relate only to the electrical energy produced by Eskom and omit the emissions of other energy sources, in particular renewable energy produced by Independent Power Producers (IPPs). With lower-carbon energy sources increasing, the use of Eskom-published factors does not accurately reflect the carbon emissions incurred when accessing energy from the South African grid.

To address the need for a Grid Emissions Factor (GEF), Exxaro initiated a process supported by the NBI, MAC Consulting, WRI, CDP, Eskom and the Industry Task Team on Climate Change (ITTCC). A discussion document on a proposed methodology for calculating a GEF was released by the NBI in March 2013 for consultation. The feedback received was robust and thorough. There was a general consensus that the approach followed is correct, but some concerns were raised about the auditability of the underlying calculations, particularly in reference to the emissions of IPPs.

Due to the positive response from CDP participants the NBI recommends the use of this factor for CDP submissions. However this should be done in consultation with verification providers and under the caveat that, although unlikely, significant assumption changes may require restating in future. The methodology proposed in the discussion document results in a GEF of 0.94 t CO_2e/MWh for South Africa for calendar year 2011, which is up to 10% less than reported and used by some companies. To track emission reduction targets over time, some companies using the proposed GEF in future will need to recalculate their base year. As the factor will change due to changes in the energy mix, and because companies may require factors going back several years, the NBI will continue to work with its project partners to produce GEFs for the previous five years and the next reporting year. It will also provide greater disclosure of the full calculation to satisfy verification requirements.

Guest comment:
KPMG South Africa

Now is the time, globally and in South Africa, to move sustainability efforts from the margin into the core of business to achieve transformative change.

Shifting gears: moving towards transformative action on sustainability

"It is good news but still not enough"; these comments, made by the authors of a recent study into global emission trends,[15] seem apt to describe the results of CDP South Africa 2013. The global report celebrated the fact that emissions in 2012 increased at less than half the average over the past decade, but cautioned that this was still short of the mitigation required by science to prevent dangerous climate change. Similarly, the CDP report highlights good progress made by South African companies in disclosure, voluntary target setting and actual emission reductions, but shows how much further action is needed in managing emissions in the supply chain (the number of companies disclosing Scope 3 emissions fell this year) and in the overall scale of emission reductions (which varied significantly between and within sectors and seem to fall short of national and global policy expectations). Now is the time, globally and in South Africa, to move sustainability efforts from the margin into the core of business to achieve transformative change.

There are four key reasons why we can, and indeed must achieve a step change in our emissions trajectory.

Firstly, building sustainability truly into the core of a company's operating model can help navigate an increasingly complex and uncertain business environment. KPMG's report entitled 'Expect the Unexpected' identified ten sustainability megaforces which, individually and collectively, are expected to fundamentally alter operating conditions across sectors over the next twenty years. These changes require a business response that is nothing short of a radical reorganisation of our methods of production and consumption, where improvements at the margin of existing operating models may no longer be fit-for-purpose. Companies need to match their scale of action to the challenges and opportunities posed by these megaforces, whilst continuing to perform on reporting and disclosure.

The second driver for transformative action on sustainability is the message from the latest science. The findings of the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) reiterated, with increasing levels of confidence, that the planet is warming, that human activities are a contributing cause, and that urgent action is required at large scale. It shows that many developing countries, including South Africa are vulnerable to the impacts of climate change and that adaptation must remain a priority. However, the report can also be seen to caution against moving the focus away from mitigation, and the softening focus on reducing emissions is a major risk also highlighted by the World Economic Forum. The need for action (the 'why') and the scale of the challenge (the 'what') are clear and we have long had the tools needed to act (the 'how'). What we must now demonstrate is the will that brings different stakeholders together to make the fundamental shifts needed.

Thirdly, climate policy and regulation at a national and sub-national level around the world are slowly but surely setting economies on a low-carbon path, and this trend is set to continue. The KPMG Green Tax Index released in 2013 revealed thousands of green tax penalties and incentives across the 21 countries studied in the report. It showed how taxes and incentives, as part of a broader suite of policy instruments available to governments, can play an important role in shifting behaviour towards

15 Olivier, J. *et al.* Trends in Global Emissions: 2013 Study

a low-carbon path. Whilst the recent roll-back of the carbon pricing scheme in Australia and the lively debate about the design of the carbon tax in South Africa demonstrate that there are significant challenges in designing and implementing climate policies, the trend towards increasing carbon regulation is clear. Clear and stable policy no doubt remains an important driver for action by companies, particularly in relation to the long-term nature of transformative investments. Yet, companies would be well served to pre-empt legislation, engage with government and design their own responses to match the scale of ambition required, thereby being prepared to act swiftly once the appropriate regulatory framework is in place.

The final driver for transformative action on sustainability is the enormous untapped potential to leverage the power of financial innovation to finance breakthrough solutions. A study on the barriers to financing low-carbon projects in South Africa undertaken by the National Business Initiative (NBI), with technical support from KPMG and funding from the British Prosperity Fund, revealed eleven inter-related barriers which, if resolved, could unlock significant financing for sustainability. Whilst many of these barriers related to the policy and regulatory framework discussed above, a number of these impediments could be removed through better internal organisation amongst financing institutions, partnerships between different types of funders, and the creation of capacity amongst project developers. Given that financing represents a primary challenge in the implementation of large-scale sustainability solutions, there exists an opportunity for profitable business growth for funding institutions and companies to direct the efforts of financial innovation towards enabling large-scale change.

Seen through the lens of these four drivers of transformative change, the CDP South Africa 2013 results provide reason for cautious optimism. The progress on disclosure, target setting and internal assurance are good news for embedding sustainability into business management, and the decline in absolute emissions is promising but must be sustained. Yet, the seemingly lower attention paid to supply chain emissions and the variance in the degree of mitigation effort within and across sectors shows how much still needs to be done. It is our hope that these areas form the focus of companies' efforts over the next year and beyond to build the momentum for systemic change.

Moses Kgosana,
Chief Executive, KPMG South Africa

> Companies would be well served to pre-empt legislation, engage with government and design their own responses to match the scale of ambition required, thereby being prepared to act swiftly once the appropriate regulatory framework is in place.

About KPMG's Global Climate Change & Sustainability Practice
KPMG's Climate Change and Sustainability Services (CC&S) professionals provide sustainability and climate change assurance, Tax and Advisory services to organisations to help them apply sustainability as a strategic lens to their business operations. We have more than 25 years experience working with leading businesses and public sector organisations which has enabled us to develop extensive relationships with the world's leading companies and to contribute to shaping the sustainability agenda.

About KPMG International
KPMG is a global network of professional firms providing Audit, Tax, and Advisory services. We operate in 150 countries and have 138,000 people working in member firms around the world. The independent member firms of the KPMG network are affiliated with KPMG International Cooperative ("KPMG International"), a Swiss entity. Each KPMG firm is a legally distinct and separate entity and describes itself as such.

CDP South Africa 2013: An overview

This is the seventh annual CDP report for the South African business sector. In South Africa CDP is run through a partnership between CDP, headquartered in London, and the National Business Initiative (NBI) in Johannesburg. The NBI manages the partnership with CDP and all other stakeholders, including businesses, government, and sponsors. This year the CDP South Africa 2013 report is supported by KPMG, the Industrial Development Corporation (IDC) and the South African Post Office.

Box 2: The Climate Disclosure Standards Board (CDSB)

The Climate Disclosure Standards Board (CDSB), managed as a special project of CDP, is an international organisation committed to the integration of climate change-related information into mainstream corporate reporting. Established in 2007 at the World Economic Forum, CDSB is a coalition of leading environmental and business organisations, accountancy professionals, companies and investors from around the world.

CDSB's internationally accepted Climate Change Reporting Framework is designed for use by companies to make disclosures in their mainstream financial reports about the risks and opportunities of climate change. It has been developed using existing standards and practices to ensure a harmonised approach to reporting rather than creating new standards. Designed in line with the objectives of financial reporting and rules on non-financial reporting, CDSB complements the work of the International Integrated Reporting Council (IIRC) and the Global Reporting Initiative (GRI).

CDSB's Framework is designed to be ready for use by governments introducing new regulations on greenhouse gas emissions and the use of natural resources. The recent regulations introduced for United Kingdom quoted companies references CDSB's Reporting Framework as one means of compliance with the law.

CDP's disclosure system is the established mechanism for organisations worldwide to measure and disclose greenhouse gas emissions and climate change risk information. This information is of great value to investor decision making and helps companies understand what is material to their specific businesses and take the appropriate strategic action.

Working closely with CDP, CDSB's Framework acts as a lens of materiality on the data a company measures and discloses to investors through CDP. Together CDP and CDSB provide a full disclosure toolkit for companies on carbon and climate change, both in reporting to financial markets and in preparing for and adhering to mandatory reporting around the world.

The CDSB's Reporting Framework and guidance is available on the CDSB's website: www.cdsb.net

Incite once again undertook the scoring, analysis and report writing for this year's report. The report offers an objective and largely quantitative account of the corporate responses, allowing readers to make their own informed assessment of companies' climate-related actions. The information enables investors, policy-makers, climate change practitioners and other interested parties to undertake further analysis and to use this information to increase corporate accountability. The report provides broad indications of climate-related performance and trends. Responses for all companies with publicly available submissions (see Table 3) can be downloaded from CDP's website for further analysis.

CDP 2013: the JSE 100 sample

The JSE 100 sample for CDP 2013 (Table 3) was identified on the basis of market capitalisation as at 30 November 2012.[16] The sample does not include large parastatal emitters such as Eskom or Transnet, nor does it include potentially large emitters from non-listed private companies.

Industry sectors were identified using the Global Industry Classification Standards (GICS). To facilitate sectoral analysis, and to maintain comparability with the previous years' reporting, the companies are clustered into seven key sectors (Figure 2).[17] By number of companies, the predominant sectors on the JSE 100 are Financials (33), Energy & Materials (23), Consumer Discretionary (12) and Consumer Staples (12). The samples for 2012 and 2013 are largely comparable in terms of the composition of companies per sector.

By market capitalisation (Figure 3), the JSE 100 is dominated by Energy & Materials (42%), followed by Consumer Staples (22%) and Financials (16%). When comparing CDP data trends over the last few years, it is important to bear in mind how the composition of the JSE 100 has changed. Consumer Staples has increased its share from 12% to 22%, while the value of both Energy & Materials and Financials has decreased by 4%. Due to delisting and/or changes in market capitalisation,

16 Data provided by Bloomberg

17 A more detailed description of the composition of each sector is presented on page 38.

six companies from the CDP 2012 sample are not included in the 2013 sample: JSE Ltd, Lewis Group, Metorex Ltd, Optimum Coal Holdings, Palabora Mining Co Ltd and PSG Group.

There are seventeen JSE-listed companies which are also included in the Global 500 sample: Anglo American, BHP Billiton, British American Tobacco, Capital & Counties Properties, Compagnie Financière Richemont SA, FirstRand Ltd, Intu Properties Plc, Kumba Iron Ore, Lonmin, Mondi Plc, MTN Group, Naspers, Old Mutual Plc, SABMiller, Sasol Ltd, Standard Bank Group and Vodacom Group. These companies have thus been scored by PwC as part of the Global 500 assessment process.

> When comparing CDP data trends over the last few years, it is important to bear in mind how the composition of the JSE 100 has changed. The increase of Consumer Staples at the expense of Energy & Materials and Industrials has had an impact on the total emissions of the sample.

Figure 2: Number of JSE 100 companies per sector and number of responding companies[18] per sector

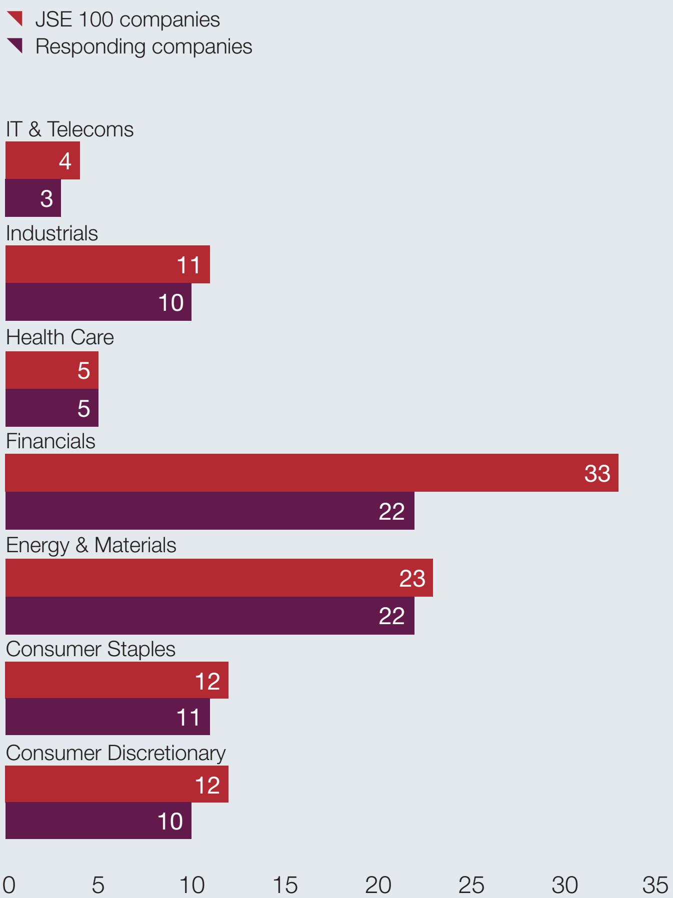
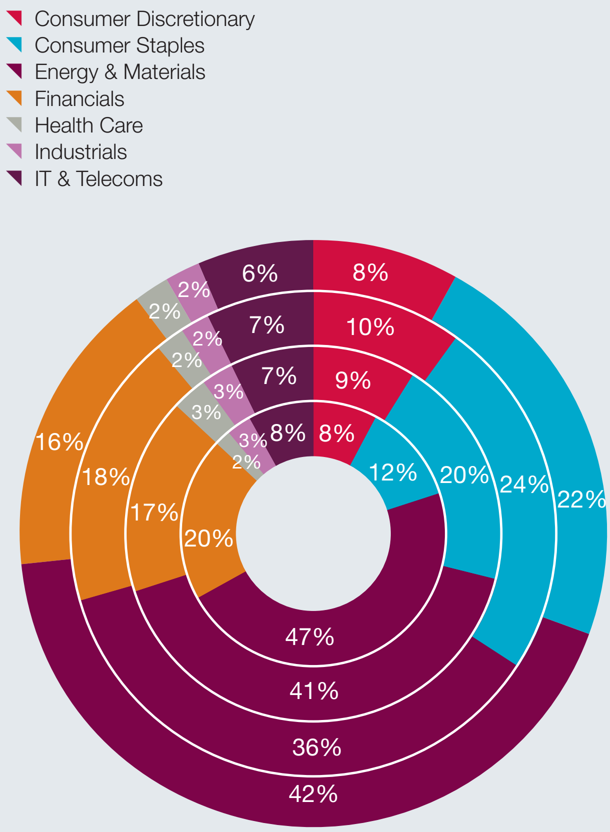


Figure 3: Percentage of total market capitalisation of JSE 100 by sector (outer to inner ring: 2013-2010)



18 For this figure, responding companies include AQ sa.

Table 3: Overview of JSE 100 company responses[19]

Company	Sector	Sub-sector	2013 Response	2012 Response	2011 Response	2010 Response	Scope 1 South Africa (tCO_2e)	Scope 1 Global (tCO_2e)
Absa Group	Financials	Commercial Banks	AQ	AQ	AQ	AQ	15,626	15,626
Acucap	Financials	Real Estate Management & Development	DP	DP	/	DP		
Adcock Ingram	Health Care	Pharmaceuticals	AQ	AQ	AQ	AQ	10,822	12,195
AECI Ltd Ord	Energy & Materials	Chemicals	AQ	AQ	AQ	AQ	276,809	281,888
African Bank Investments Ltd	Financials	Diversified Financial Services	AQ	AQ	AQ	DP	24,345	24,345
African Oxygen Ltd Ord	Industrials	Industrial Conglomerates	AQ sa	/	AQ sa	AQ sa		
African Rainbow Minerals	Energy & Materials	Metals & Mining	AQ	AQ	AQ	AQ	475,977	480,420
Allied Electronics Corporation Ltd (Altron)	Industrials	Industrial Conglomerates	AQ	AQ	AQ	AQ	12,503	15,091
Anglo American	Energy & Materials	Metals & Mining	AQ	AQ	AQ	AQ	1,954,091	8,470,754
Anglo American Platinum	Energy & Materials	Metals & Mining	AQ	AQ	AQ	AQ	524,028	532,649
AngloGold Ashanti	Energy & Materials	Metals & Mining	AQ	AQ	AQ	AQ	96,000	1,245,000
Arcelor Mittal South Africa Ltd	Energy & Materials	Metals & Mining	AQ	AQ	AQ	AQ	11,318,077	11,318,077
Aspen Pharmacare Holdings	Health Care	Pharmaceuticals	AQ	AQ	AQ	DP	3,394	6,774
Assore Ltd	Energy & Materials	Metals & Mining	AQ np	AQ np	NR	/		
Aveng Ltd	Industrials	Construction & Engineering	AQ	AQ	AQ	AQ np	393,374	439,373
Avi Ltd	Consumer Staples	Food Products	DP	DP	DP	DP		
Barloworld	Industrials	Trading Companies & Distributors	AQ	AQ	AQ	AQ		118,335
BHP Billiton	Energy & Materials	Metals & Mining	AQ	AQ	AQ	AQ	2,947,000	20,200,000
Bidvest Group Ltd	Industrials	Industrial Conglomerates	AQ	AQ	AQ	AQ	172,075	397,674
Brait SE	Financials	Diversified Financial Services	DP	DP	/	/		
British American Tobacco	Consumer Staples	Tobacco	AQ	AQ	AQ	/		359,184
Capital & Counties Properties	Financials	Real Estate Investment Trusts	AQ np	/	/	/		
Capital Property Fund	Financials	Real Estate Investment Trusts	NR	DP	NR	DP		
Capitec Bank Holdings Ltd	Financials	Commercial Banks	AQ np	AQ np	NR	/		
Clicks Group Ltd	Consumer Discretionary	Multiline Retail	AQ	AQ	AQ	AQ	1,899	1,899
Compagnie Financière Richemont SA	Consumer Discretionary	Textiles, Apparel & Luxury Goods	AQ	AQ np	AQ np	AQ np		18,600
Coronation Fund Managers Ltd	Financials	Diversified Financial Services	NR	DP	/	/		
Datatec	IT & Telecoms	Software & Services	DP	DP	/	NR		
Discovery Holdings Ltd	Financials	Insurance	AQ	AQ	AQ	AQ	752	752
Emira Property Fund	Financials	Real Estate Investment Trusts	AQ	AQ	AQ	DP	1,205	1,205
Exxaro Resources Ltd	Energy & Materials	Metals & Mining	AQ	AQ	AQ	AQ	343,405	345,401
Famous Brands Ltd	Consumer Discretionary	Consumer Services	NR	/	/	/		
FirstRand Ltd	Financials	Diversified Financial Services	AQ	AQ	AQ	AQ	11,572	11,572
Foschini Group Ltd	Consumer Discretionary	Specialty Retail	AQ np	AQ np	AQ np	AQ np		
Fountainhead Property Trust	Financials	Real Estate Investment Trusts	NR	DP	NR	DP		
Gold Fields Ltd	Energy & Materials	Metals & Mining	AQ	AQ	AQ	AQ	792,618	1,220,651
Grindrod Ltd	Industrials	Marine	AQ	AQ	AQ	AQ	124,266	384,011
Growthpoint Properties	Financials	Real Estate Management & Development	AQ	AQ	AQ	AQ	58	58
Harmony Gold Mining Co Ltd	Energy & Materials	Metals & Mining	AQ	AQ	AQ	AQ	33,652	100,336
Hosken Consolidated Investments	Financials	Diversified Financial Services	AQ	AQ	AQ	AQ	101,580	110,744
Hyprop Investments Ltd	Financials	Real Estate Management & Development	DP	DP	NR	DP		
Illovo Sugar Ltd	Consumer Staples	Food Products	AQ	AQ	AQ np	DP	169,817	290,644
Impala Platinum Holdings	Energy & Materials	Metals & Mining	AQ	AQ	AQ	AQ	462,004	487,911
Imperial Holdings	Consumer Discretionary	Distributors	AQ	AQ	AQ	AQ		913,784
Intu Properties Plc	Financials	Real Estate Investment Trusts	AQ	/	/	/	5,458	5,458
Investec Ltd	Financials	Capital Markets	AQ	AQ	AQ	AQ	1,476	2,261
Investec Plc - see Investec Ltd	Financials	Capital Markets	AQ sa	/	AQ	AQ		
JD Group Ltd	Consumer Discretionary	Specialty Retail	AQ	DP	DP	DP	27,352	27,352
KAP Industrial Holdings	Industrials	Industrial Conglomerates	AQ	/	/	/	409,579	409,579
Kumba Iron Ore	Energy & Materials	Metals & Mining	AQ	AQ	AQ	AQ	448,274	448,274
Liberty Holdings Ltd (inc Liberty Life Group Ltd)	Financials	Insurance	AQ	AQ	AQ	AQ	2,309	2,309
Life Healthcare Group Holdings Ltd	Health Care	Health Care Providers & Services	AQ	DP	NR	/		

19 Metric tons CO_2e is abbreviated to tCO_2e in all tables throughout this report.

Scope 2 South Africa (tCO_2e)	Scope 2 Global (tCO_2e)	Scope 1 & 2 South Africa (tCO_2e)	Scope 1 & 2 Global (tCO_2e)	Scope 3 Global (tCO_2e)	Number of Scope 3 Categories Reported	Verification/ Assurance Status	Targets Reported	2013 Score	2012 Score	2011 Score
316,407	316,407	332,033	332,033	18,876	1	VAA S1 S2 S3	Absolute	83 B	85 B	74 B
31,196	34,934	42,018	47,130	19,421	5			71 D	84 D	80 E
194,873	224,365	471,682	506,253			VAA S1 S2	Absolute	87 B	77 D	84 C
80,632	80,632	104,977	104,977	14,347	4	VAA S1 S2 S3	Absolute	92 C	93 B	74 D
1,329,769	1,329,785	1,805,746	1,810,205	2,804,458	6	VAA S1 S2		96 B	77 C	48 -
125,910	131,372	138,413	146,463	11,637	2	VAF S1 S2 S3	Absolute	88 B	85 B	72 D
7,266,477	9,403,534	9,220,568	17,874,288	312,979,555	11	VAA S1 S2 S3	Absolute	96 A	94 A	81 C
5,153,339	5,253,513	5,677,367	5,786,162	1,798,042	9	VAA S1 S2 S3	Intensity	99 A-	96 B	85 C
3,039,000	3,344,000	3,135,000	4,589,000			VAA S1 S2	Intensity	87 B	78 C	74 C
3,898,531	3,898,531	15,216,608	15,216,608	551,525	2	VAR S1 S2	Intensity	81 C	78 D	82 D
83,410	88,008	86,804	94,782	3,827	3	VAA S1 S2		87 C	72 D	63 E
129,792	139,605	523,166	578,978			VAR S1		79 D	81 D	66 D
	79,154		197,489	96,381	2	VAA S1 S2	Intensity	97 A	93 A	89 B
12,410,000	20,000,000	15,357,000	40,200,000	341,408,000	2	VAA S1 S2	Intensity	75 C	71 B	73 B
225,939	309,031	398,014	706,705	18,211	2	VAA S1 S2	Abs & Int	78 B	86 C	88 B
	387,168		746,352	339,637	4	VAA S1 S2 S3	Intensity	94 B	86 B	91 A
91,447	91,447	93,346	93,346	25,027	3	VAA S1 S2 S3	Abs & Int	94 B	92 B	84 B
	45,200		63,800	34,400	1	VAR S1 S2 S3	Intensity	79 B		
32,164	32,164	32,916	32,916	13,469	2	VAA S1 S2 S3	Abs & Int	95 B	86 C	69 D
187,107	187,107	188,312	188,312	94	4			77 C	81 D	70 D
1,100,822	1,117,409	1,444,227	1,462,810	72,479,756	11	VAA S1 S2 S3	Absolute	97 B	100 B	94 A-
257,172	257,172	268,744	268,744	16,818	2	VAA S1 S2 S3		96 A	97 A	88 B
4,340,001	4,607,613	5,132,619	5,828,264	1,171,791	9	VAA S1 S2 S3		100 A-	99 A	98 A-
17,114	23,199	141,380	407,210	11,746	3	VAA S1 S2	Abs & Int	84 C	88 B	63 E
1,864	1,864	1,922	1,922	804,368	9	VAA S1 S2	Absolute	93 A	95 B	83 C
2,929,656	2,929,656	2,963,308	3,029,992	1,131,607	3	VAA S1 S2 S3	Abs & Int	98 A	98 B	91 B
375,938	403,103	477,518	513,847	2,461	1			63 D	77 C	78 D
194,881	259,857	364,698	550,501	782	1		Absolute	69 C	70 D	
2,887,903	3,170,280	3,349,907	3,658,191	112,265	3	VAA S1 S2	Absolute	91 B	91 B	80 C
	203,725		1,117,509	12,451	2			82 C	80 D	55 D
41,857	41,857	47,315	47,315			VAR S1 S2	Absolute	74 B		
31,561	39,183	33,037	41,444	12,273	4	VAA S1 S2 S3	Absolute	99 A	90 C	79 B
206,035	206,035	233,387	233,387					82 D		
273,389	273,389	682,968	682,968					81 D		
516,315	516,315	964,589	964,589	106,289,314	9	VAA S1 S2 S3	Absolute	98 B	88 C	82 B
44,743	44,743	47,052	47,051	4,158	3	VAA S1 S2 S3		62 D	76 D	71 C
135,970	135,970	135,970	135,970					56 E		

Company	Sector	Sub-sector	2013 Response	2012 Response	2011 Response	2010 Response	Scope 1 South Africa (tCO_2e)	Scope 1 Global (tCO_2e)
Lonmin	Energy & Materials	Metals & Mining	AQ	AQ	AQ	AQ	97,452	97,452
Massmart Holdings Ltd	Consumer Staples	Food & Staples Retailing	AQ	AQ	AQ	AQ	25,674	25,674
Mediclinic International	Health Care	Health Care Providers & Services	AQ	AQ	AQ	AQ	20,214	20,214
MMI Holdings Ltd	Financials	Insurance	AQ	AQ	AQ	AQ	739	739
Mondi Ltd - see Mondi Plc	Energy & Materials	Paper & Forest Products	AQ sa	AQ sa	AQ sa	/		
Mondi Plc	Energy & Materials	Paper & Forest Products	AQ	AQ	AQ	AQ	733,832	4,329,585
Mr Price Group Ltd	Consumer Discretionary	Speciality Retail	DP	DP	AQ	AQ np		
MTN Group	IT & Telecoms	Wireless Telecommunication Services	AQ	AQ	AQ	AQ	3,674	652,790
Murray & Roberts Holdings Ltd	Industrials	Construction & Engineering	AQ	AQ	AQ	AQ	344,785	455,104
Nampak Ltd	Energy & Materials	Containers & Packaging	AQ	AQ	AQ	AQ	128,568	203,733
Naspers	Consumer Discretionary	Media	AQ np	DP	AQ np	AQ np		
Nedbank Ltd	Financials	Commercial Banks	AQ	AQ	AQ	AQ	848	848
Netcare Ltd	Health Care	Health Care Providers & Services	AQ	AQ	AQ	AQ	41,931	41,931
Northam Platinum Ltd	Energy & Materials	Metals & Mining	AQ	AQ	AQ	AQ	15,134	15,134
Oceana	Consumer Staples	Food Products	AQ	AQ	/	/	85,969	150,234
Old Mutual Plc	Financials	Insurance	AQ	AQ	AQ	AQ	3,231	10,200
Omnia Holdings Ltd	Energy & Materials	Chemicals	NR	DP	/	/		
Pick n Pay Holdings Ltd	Consumer Staples	Food & Staples Retailing	AQ	AQ	AQ	AQ	64,967	64,967
Pioneer Foods	Consumer Staples	Food Products	AQ np	AQ np	AQ np	DP		
Pretoria Portland Cement Co Ltd	Energy & Materials	Construction Materials	AQ	AQ	AQ	AQ	4,437,330	4,437,330
Redefine Properties Ltd	Financials	Real Estate Management & Development	AQ	DP	NR	DP	635	635
Reinet Investments	Financials	Diversified Financial Services	DP	DP	DP	DP		
Remgro	Financials	Diversified Financial Services	AQ	AQ	AQ	AQ	311,450	311,450
Resilient Prop Inc	Financials	Real Estate Management & Development	NR	DP	NR	DP		
Reunert	Industrials	Industrial Conglomerates	AQ	AQ	AQ	AQ np	10,535	10,535
Rmb Holdings Ltd - see FirstRand	Financials	Diversified Financial Services	AQ sa	AQ sa	AQ sa	AQ sa		
RMI Holdings	Financials	Insurance	DP	DP	/	/		
Royal Bafokeng Platinum Ltd	Energy & Materials	Metals & Mining	AQ	AQ	AQ np	/	3,336	3,336
SA Corporate Real Estate Fund	Financials	Real Estate Investment Trusts	NR	DP	/	DP		
SABMiller	Consumer Staples	Beverages	AQ	AQ	AQ	AQ	224,702	1,009,825
Sanlam	Financials	Insurance	AQ	AQ	AQ	AQ	42	42
Santam Ltd	Financials	Insurance	AQ	AQ	AQ	AQ	54	54
Sappi	Energy & Materials	Paper & Forest Products	AQ	AQ	AQ	AQ	2,620,570	4,539,831
Sasol Ltd	Energy & Materials	Oil, Gas & Consumable Fuels	AQ	AQ	AQ	AQ	59,880,000	66,895,000
Shoprite Holdings Ltd	Consumer Staples	Food & Staples Retailing	AQ np	AQ np	AQ np	DP		
Standard Bank Group	Financials	Commercial Banks	AQ	AQ	AQ	AQ		9,198
Steinhoff International Holdings	Consumer Discretionary	Household Durables	AQ	AQ	AQ np	AQ np	436,931	491,000
Sun International Ltd	Consumer Discretionary	Hotels, Restaurants & Leisure	AQ	AQ np	NR	DP	20,564	33,941
Telkom SA Ltd	IT & Telecoms	Diversified Telecommunication Services	AQ	AQ	AQ	DP	51,648	51,648
The Spar Group Ltd	Consumer Staples	Food & Staples Retailing	AQ	AQ	AQ	AQ	41,360	41,360
Tiger Brands	Consumer Staples	Food & Staples Retailing	AQ	AQ np	AQ	AQ	243,615	247,169
Tongaat Hulett Ltd	Consumer Staples	Food Products	AQ	AQ	AQ	AQ	763,578	885,976
Trencor	Industrials	Marine	DP	DP	/	DP		
Truworths International	Consumer Discretionary	Specialty Retail	AQ	AQ	AQ	AQ	434	434
Vodacom Group	IT & Telecoms	Wireless Telecommunication Services	AQ	AQ	AQ	AQ	12,118	45,851
Vukile Property Fund	Financials	Real Estate Investment Trusts	DP	/	/	/		
Wilson Bayly Holmes-Ovcon Ltd	Industrials	Construction & Engineering	AQ	AQ	AQ	AQ	29,774	29,774
Woolworths Holdings Ltd	Consumer Discretionary	Multiline Retail	AQ	AQ	AQ	AQ	4,245	4,245
JSE Summary		**Companies: 100**	**83**	**78**	**83**	**74**	**92,154,483**	**134,580,169**

Scope 2 South Africa (tCO_2e)	Scope 2 Global (tCO_2e)	Scope 1 & 2 South Africa (tCO_2e)	Scope 1 & 2 Global (tCO_2e)	Scope 3 Global (tCO_2e)	Number of Scope 3 Categories Reported	Verification/ Assurance Status	Targets Reported	2013 Score	2012 Score	2011 Score
1,470,773	1,470,773	1,568,225	1,568,225	5,811	3	VAA S1 S2 S3	Intensity	88 B	78 B	65 C
298,522	298,522	324,196	324,196	22,413	5	VAA S1 S2	Abs & Int	87 B	79 C	71 C
150,200	150,200	170,414	170,415	24,129	5	VAA S1 S2 S3	Intensity	99 B	97 B	74 C
62,932	62,932	63,671	63,671	6,157	1	VAA S1 S2 S3		75 D	78 D	75 D
693,211	1,267,224	1,427,043	5,596,809	2,003,000		VAA S1 S2	Intensity	87 B	88 A	84 B
192,187	384,725	195,861	1,037,515	3,208	1			76 D	69 C	75 D
66,001	68,107	410,786	523,211	4,343	1			83 D	79 D	75 D
577,785	628,483	706,353	832,216	13,798	3	VAA S1 S2 S3	Absolute	97 A	95 B	85 B
154,023	164,804	154,871	165,651	60,659	3	VAA S1 S2 S3	Abs & Int	100 B	92 B	96 A-
197,513	197,513	239,444	239,444	3,015	1	VAA S1 S2 S3	Intensity	84 B	84 B	85 B
602,314	602,314	617,448	617,448	3,315	2	VAA S1 S2	Absolute	89 B	81 D	84 B
56,060	61,685	142,029	211,919	17,504	3	VAA S1 S2 S3	Intensity	95 B	95 B	
614,155	655,638	617,386	665,837	34,629	3	VAA S1 S2 S3	Intensity	91 B	85 B	85 B
512,322	512,322	577,289	577,289	45,027	3	VAA S1 S2 S3	Absolute	95 A	96 B	86 A-
594,110	594,110	5,031,440	5,031,440			VAA S1 S2	Intensity	77 C	82 D	76 C
50,627	50,627	51,262	51,262	490,656	3	VAA S1 S2 S3	Intensity	87 D		
367,713	367,713	679,163	679,163	44,054	3	VAA S1 S2 S3	Absolute	99 A	97 B	80 A-
56,480	56,575	67,015	67,110	78,432	3			75 D	83 D	41 -
316,681	316,681	320,017	320,017	16,899	2	VAA S1 S2		90 B	89 C	
258,855	997,465	483,557	2,007,290			VAA S1 S2	Intensity	74 B	68 C	63 C
41,540	41,540	41,582	41,581	10,387	5	VAA S1 S2	Intensity	96 B	97 B	88 B
8,109	8,109	8,163	8,163	7,549	6	VAF S1 S2 S3	Intensity	82 C	90 B	80 B
1,127,718	1,700,923	3,748,288	6,240,754	1	1		Intensity	78 C	88 C	80 C
7,504,000	8,553,000	67,384,000	75,448,000	45,855,775	8	VAA S1 S2	Abs & Int	96 B	81 C	79 C
	363,916		373,114	38,975	4	VAA S1 S2 S3	Absolute	71 C	74 D	74 C
479,424	569,719	916,355	1,060,719				Intensity	86 C	82 D	
278,036	304,716	298,600	338,657					58 D		
655,465	655,465	707,113	707,113	62,103	4	VAA S1 S2 S3		75 C	79 C	76 D
61,053	61,053	102,413	102,413	74,905	3			73 D	85 D	88 C
244,490	253,167	488,105	500,336	2,069	1		Intensity	68 C		68 D
242,649	360,258	1,006,227	1,246,234	6,345	2	VAA S1 S2 VAF S3	Abs & Int	76 C	79 B	70 D
64,829	64,829	65,263	65,263	12,022	3			81 D	73 D	72 E
367,366	401,703	379,484	447,554	22,134	5	VAA S1 S2 S3	Intensity	94 B	88 B	81 B
11,492	11,492	41,266	41,266	1,874	1			83 D	82 D	77 D
299,958	299,958	304,203	304,203	57,371	4	VAA S1 S2 S3	Intensity	77 B	94 A	90 A-
68,406,387	**84,955,695**	**160,560,870**	**219,535,864**	**891,273,802**			**Abs: 29** **Int: 33** **Either: 52**			

Table 3 provides an overview of key data elements drawn from company responses. Where companies have isolated their South African emissions from their global emissions, this figure has been provided. Although not mandatory for companies to report in this way, it is important to consider this information when interpreting the carbon emissions data of large companies with global footprints. The emissions data must be read with the explanatory information provided in Appendix 4.

Key to accompany Table 3:

a. **AQ** Answered Questionnaire
   AQ np Answered Questionnaire but declined permission to make this public
   AQ sa Answered Questionnaire via another listed company also in sample (other than for Afrox – their parent company Linde is not in the sample)
   DP Declined to Participate
   NR No Response
   " / " Company not included in the sample

b. Only Scope 3 categories reported using the Greenhouse Gas Protocol Scope 3 named categories (as provided in the Online Response System) are included when determining the number of categories reported. Where companies have not provided emissions data or where they have not reported a named Scope 3 category according to the GHG Protocol Scope 3 standard, this column is blank.

c. VAA: Verification/Assurance approved. Companies have reported that they have verification complete or underway with last year's certificate available and have been awarded the full points available for their statement.
   VAF: Verification/Assurance reported as underway, first year. Companies have reported that they have verification underway but that it is the first year they have undertaken verification
   VAR: Verification/Assurance reported. Companies have reported that the have verification complete or underway with last year's statement available but the verification statement provided has not been awarded the full points available, or they have not been scored and therefore their verification statement has not been assessed.
   S1: verification/assurance applies to Scope 1 emissions.
   S2: verification/assurance applies to Scope 2 emissions.
   S3: verification/assurance applies to Scope 3 emissions.

d. Abs: Absolute target. Companies have reported 'absolute targets' and have provided supporting information: percentage reduction from base year; metric; base year; normalised base year emissions; and target year.
   Int: Intensity target. Companies have reported 'intensity targets' or 'absolute and intensity targets' and have provided supporting information: percentage reduction from base year; metric; base year; normalised base year emissions; and target year.

e. The 2013 score comprises the disclosure score number and performance score letter. Only companies that have scored more than 50 for their disclosure score are given a performance score.

CDP 2013: Evaluating the responses

The response rate for South Africa continues to improve

Of the 100 companies approached this year, 83 answered the questionnaire, while 17 declined to participate or did not respond to the information request.[20] The South African response rate is higher than the Global 500 response rate (81%). South Africa also has a higher response rate than other developing regions such as Brazil (56%), China (19%), India (27%) and Russia (18%) (see Appendix 1). Figure 4 summarises the CDP South Africa response rate for the past four years, while Figure 5 compares key trends in the JSE 100 with the Global 500.

A more detailed overview of the response of each JSE 100 company is provided in Table 3 and in the sector analysis (pages 38-53). Three of the responding companies (Investec Plc; Mondi Ltd; Rmb Holdings Ltd) answered through an alternative company also listed on the JSE, and African Oxygen answered via its parent company Linde. Thus, while 83 companies answered the questionnaire in 2013, a total of 79 questionnaires were quantitatively analysed for this report. Of these 79 companies, seven made 'non-public' responses.[21] All companies that submitted responses last year submitted responses again this year.

Figure 4: JSE 100 response rate by year

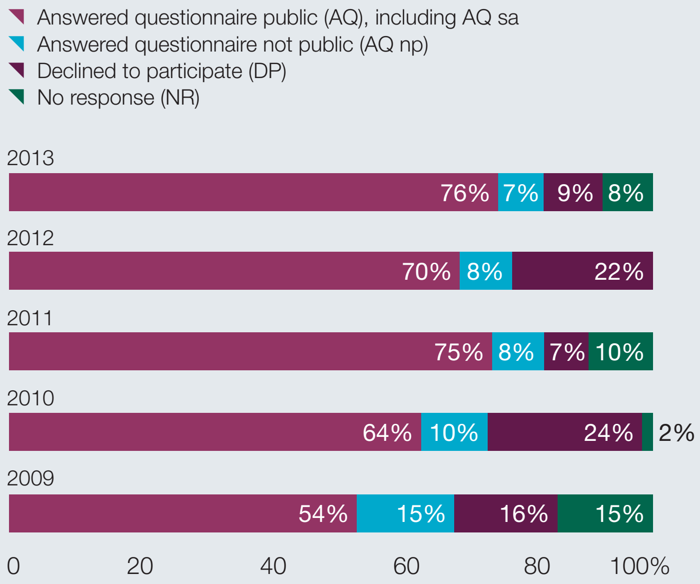
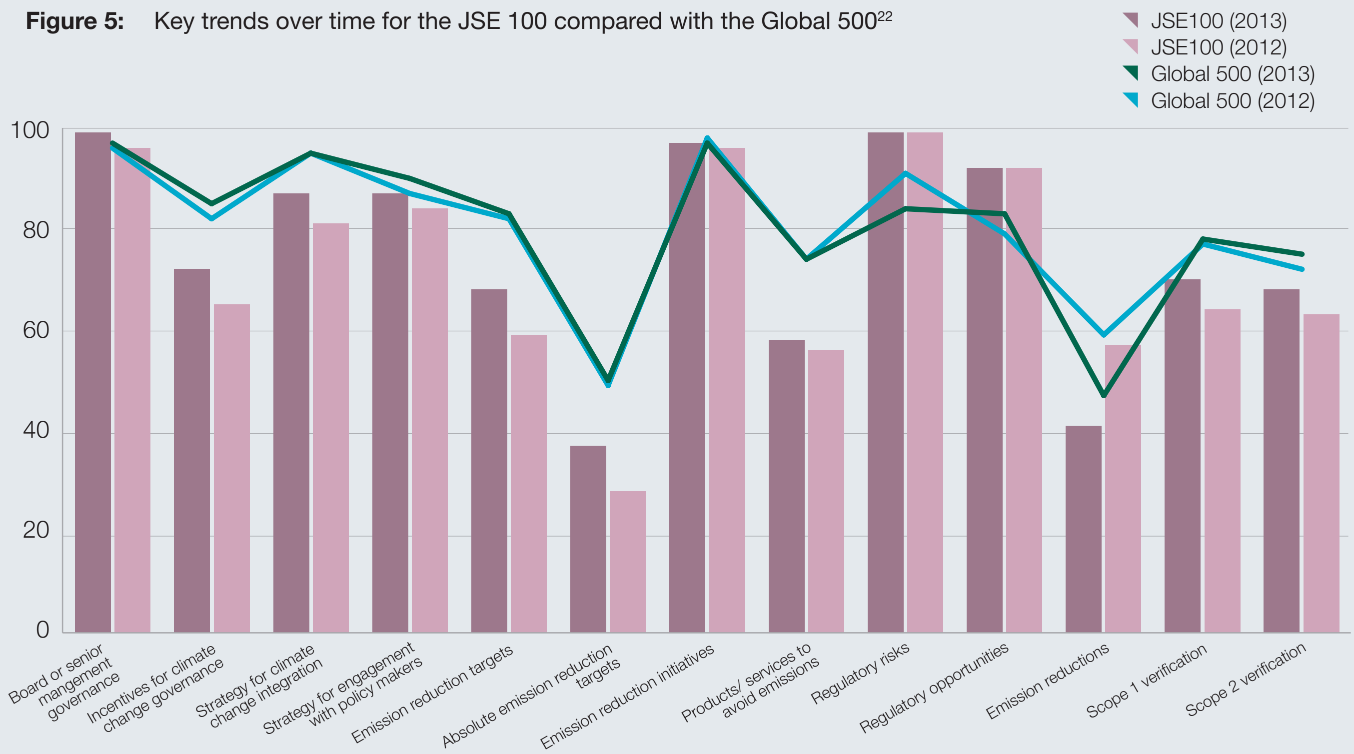


Figure 5: Key trends over time for the JSE 100 compared with the Global 500[22]



20 Except when referring to overall disclosure rates, the total number of direct/unique companies in the sample that are AQ (not including SA) is used as a denominator for calculating "% of responding companies". For 2013, this is 79 companies. This approach is in line with the CDP methodology.

21 For the purposes of this report, data from these companies that are 'non-public' will only be used in aggregate trends and will not be reflected by company name.

22 The Global 500 data is drawn from the CDP Global 500 analysis. For details of statistics, see Appendix 1 (Global key trends).

The Financials sector once again has the worst response rate. The non-participation of Real Estate companies (only five out of thirteen submitted a response) remains the main reason for this low response. The Health Care, Consumer Staples and Energy & Materials sectors continue to show strong participation, each of them with response rates of 90% or over (although several of these are from a very small sample).

Box 3: A Business Call to Action to Plug into Energy Efficiency

In the context of increasing energy costs and the ever present challenge of energy security, it is most opportune that the NBI recently won its bid of £8.6 million from the UK Department for International Development (DFID) to implement a countrywide project on energy efficiency support to commercial and industrial companies of various sizes and sectors. This initiative is strongly supported by the South African Department of Energy in an effort to meet their own strategic objectives including the introduction of mandatory submission of company energy management plans and reporting of progress in the future

The Private Sector Energy Efficiency (PSEE) Project aims to give many companies direct support through consultants and the NBI's project management within the PSEE, to either start their journey towards great energy efficiency improvement, or to assess and implement further improvements based on their own roadmaps. Such action will serve to mitigate the increasing cost of energy and the potential costs of carbon taxes, improve energy security, and promote business competitiveness and growth. Services have been prioritised to give the greatest support to large companies that have an overall annual energy spend of over R45 million. The project will follow a cost-sharing model with a 60% contribution of up to 60 days of consultant support provided to over 60 large companies. This support is focused on a strategic engagement with companies to define where they are versus where they need to be. This support includes energy audits, opportunity assessments, development of Energy Management plans and business case development pitched for internal capital investment or through sourcing and accessing external financing or tax incentives. Capacity building on site can also be included as part of this support.

One thousand medium sized companies with an annual total energy spend of between R750 000 and R45 million will receive free energy audits and site surveys aimed at providing them with actionable energy efficiency interventions and further follow up support from PSEE staff. Two thousand five hundred small enterprises will benefit from remote advisory support through a dedicated website which will include Energy Efficiency awareness raising information, guides, written and audiovisual case studies, toolkits and tutorials. A helpdesk for advice and signposting to further assistance will also be available and based on these engagements, focused training will be provided. The PSEE will be open for business following a public launch on 4 December 2013.

Further improvement in the historically excellent levels of disclosure from South African companies

The average disclosure score for 2013 is 83, increasing slightly from 82 in 2012, and significantly improved when compared with 76 in 2011, 74 in 2010 and 62 in 2009. By sector, the average disclosure scores compare favourably with the average disclosure scores for the Global 500 (see Table 9, page 39). The qualifying score for the Climate Disclosure Leadership Index (CDLI) is high at 97, with a median score of 99.

The responses in the JSE 100 sample remain broadly comparable with the Global 500 sample. Areas where the Global 500 significantly outperforms South African companies are:

- The provision of incentives for management of climate change;
- Levels of commitment to GHG emissions reduction targets (intensity and absolute); and
- Evidence of products or initiatives that enable third parties (suppliers or customers) to mitigate GHG emissions.

As outlined later in the report (see Figure 9) there is evidence that the JSE sample is improving year-on-year in each of the above-listed best practice areas.
All of the 79 unique company responses that were analysed provided their global Scope 1 or Scope 2 emissions figures.[23] Only one company (Life Healthcare Group Holdings Ltd) disclosing Scope 2 emissions did not also disclose Scope 1 emissions. This represents a significant improvement on the level of measurement and disclosure that was evident when the CDP first engaged with the JSE 100 in 2008, when only 41 companies (77% of responding companies) reported their emissions (Figure 6).

There has been a decrease in the number of companies calculating and disclosing Scope 3 emissions. The number of companies is at 65 (82%) across 15 categories, down from 71 (93%) covering 13 categories in 2012. There were 61 companies (78%) which reported on Scope 3 emissions in 2011. Further details on Scope 3 disclosures can be found in Figure 7. Scope 3 emissions disclosure by sector is reviewed in the Sector Analysis (pages 38-53).

Companies are demonstrating increasing competence at disclosure in line with the requirements of the CDP scoring methodology. Better disclosure allows for deeper interrogation of companies' climate change performance. Looking at targets, as an example, the level of ambition and links to emissions achieved still

23 This includes AQ np companies, which is not reflected in the overview of company responses in Table 3. Where data about GHG emissions has been rounded either in the text of this report or in graphs, figures have been rounded.

varies, even though the number of companies reporting targets in place is increasing year on year (52 companies in 2013).

There has been a continuing increase in the levels of disclosure of climate change information in corporate annual reports. This year, 76 companies (96%) reported GHG information in their annual reports, compared to 64 companies in 2012.[24] This trend of voluntary public reporting of emissions data is repeated in the number of companies (13) that fall outside of the JSE 100 making voluntarily submissions to CDP.

CDP remains committed to increasing the level of verification of emissions disclosures to improve the quality of information submitted by companies. This improvement would allow for wider use of the data in analysis and decision-making. Since 2011, the CDP has rewarded verification highly in both disclosure and performance scoring, and verification is a criterion for entry into the CPLI.

Figure 6: Number of responding companies providing data for Scope 1 and Scope 2 emissions by year[25]

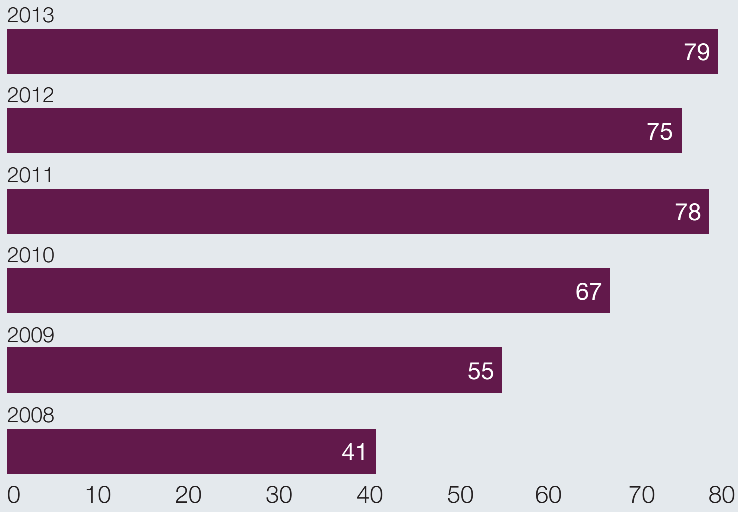
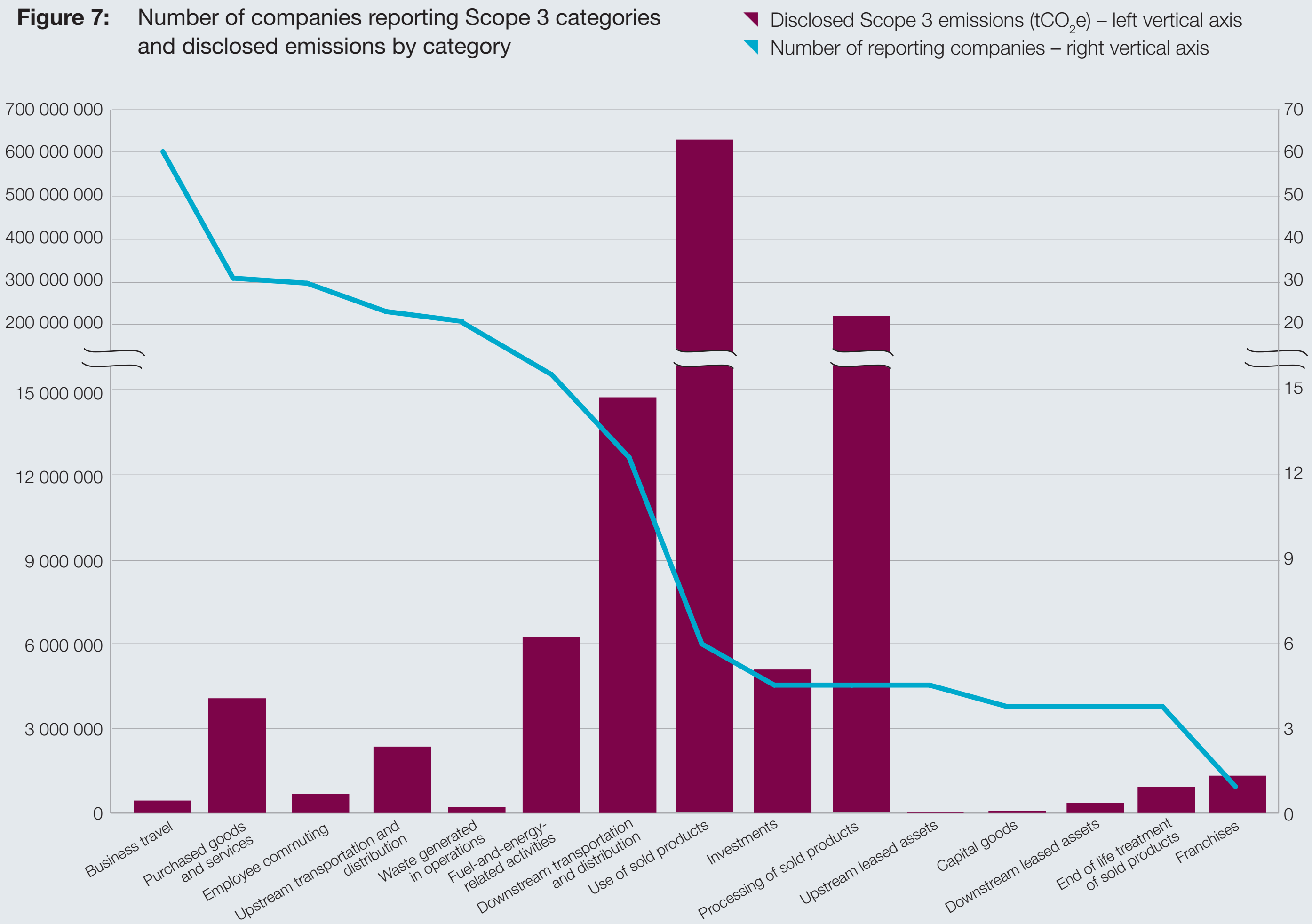


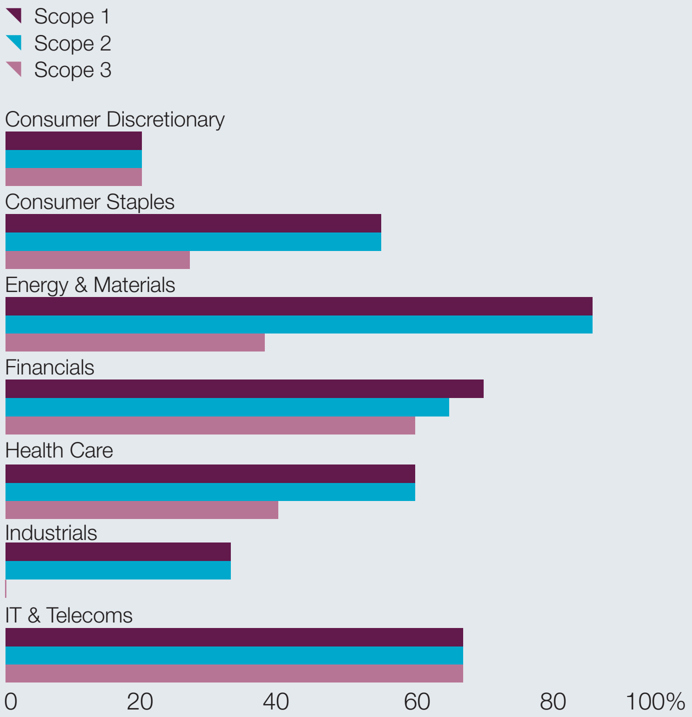
Figure 7: Number of companies reporting Scope 3 categories and disclosed emissions by category



24 This number has been restated as it had been incorrectly stated as 74 in 2012

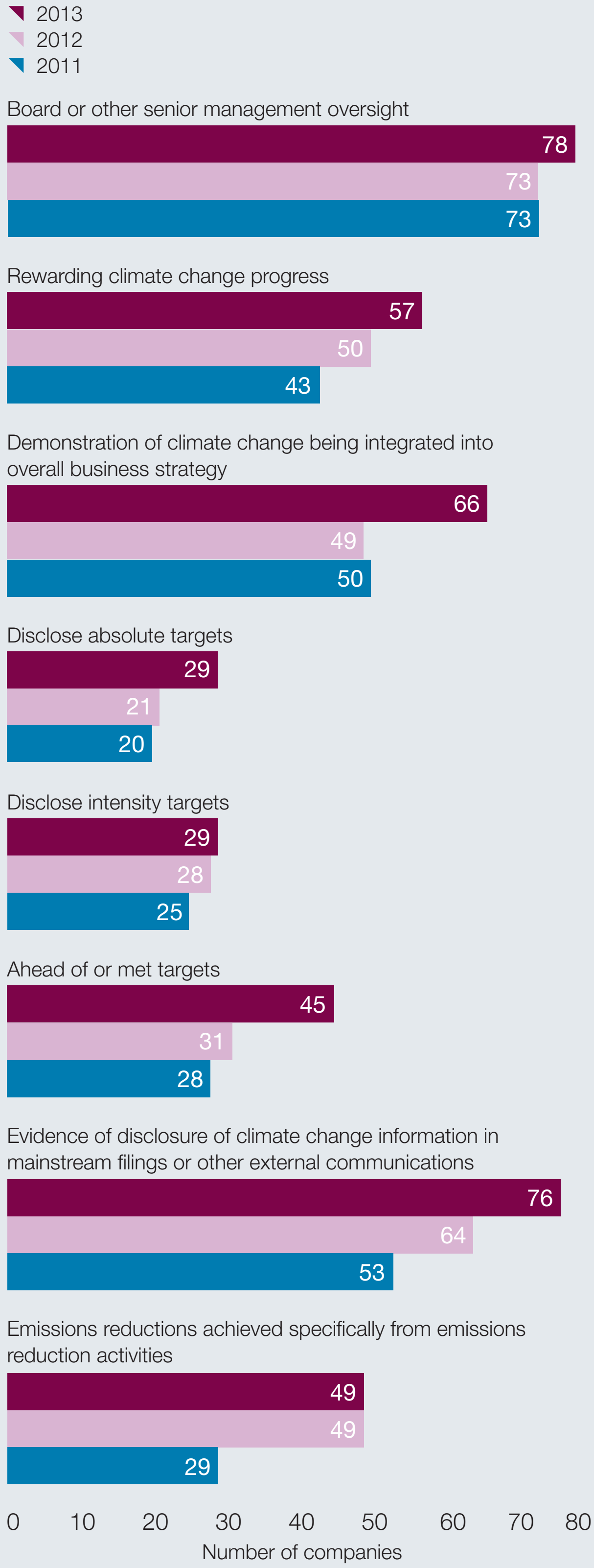
25 The graph tracks progress since 2008, the first year that the CDP South Africa information request was sent to the JSE 100. In 2007 the information request was sent to the JSE Top 40.

Figure 8: Percentage of responding companies with third party verification/assurance of emissions by sector



> We have achieved a 9% reduction in absolute emissions resulting from fuel efficiency improvements, fuel switching, more efficient fuel mix and grid improvement.
> **SABMiller**

Figure 9: Number of responding companies with key best practices by year



In 2013, CDP launched a verification white paper and undertook consultation on a verification roadmap (2013-2018) to encourage more companies to verify their climate data. More information on verification standards is provided at https://www.cdproject.net/verification.

There has been an encouraging increase in verification of emissions in 2013, with 48 companies (61%) having verification reported and approved for at least part of their emissions data, in line with CDP requirements.[26] Of these companies, 48 verifiy their Scope 1 emissions, 48 companies verify Scope 2 and 29 verify Scope 3. This builds on the 37 companies (49%) that verified emissions in 2012 (Figure 8).

Is improved climate disclosure translating into improved performance?

This year, the median disclosure score of 83 improved slightly from last year's 82, while the median performance score improved from a C to a B band. The number of companies qualifying for the CPLI increased from six to eight, namely: Anglo American, Barloworld, FirstRand Limited, Growthpoint Properties, Harmony Gold Mining Co Ltd, Nampak Ltd, Pick n Pay Holdings Ltd, and Remgro. This increase is encouraging, particularly given the strengthening of the performance criteria.

Table 4 compares the median disclosure and performance scores for the JSE 100 across 2012 and 2013 with the Global 500 2013. The comparison shows that South African companies need to do more to improve both their disclosure and performance if they are to match the Global 500 sample.

Governance of climate change issues is improving (Figure 9), with all except one company reporting that they have board or senior leadership oversight of climate change issues. There are 57 companies that reward climate change progress, up from 51 companies in 2012. There is similarly an increase in the number of companies reporting that they are integrating climate change into strategy: 66 companies, compared with 49 in 2012.

Given the increased attention that company governance structures are paying to climate change issues and the increased focus at a strategic level, it is perhaps surprising that the management of risk has decreased from 83% of risks managed in 2012 to 74% in 2013. The total number of risks identified increased slightly from 216 in 2012 to 225 in 2013 (Figure 10).

As outlined in Figure 10 the level of risk management diminishes this year compared with 2012, while the management of opportunities does not show such a marked decrease. This has narrowed the gap in terms of which risks have traditionally been managed better than opportunities within the JSE 100.

The responses also suggest that companies providing more evidence on strategy, governance and targets are able to manage risks more effectively than those that have not embedded climate change more fully into their activities. This is highlighted in the responses, when linking these disclosures to the risk management performance scores.

Table 4: Median disclosure and performance scores by sector, Global 500 and JSE 100

	CDP Global 500		CDP JSE 100			
	2013		2013		2012	
Sector	**Disclosure**	**Performance Band**	**Disclosure**	**Performance Band**	**Disclosure**	**Performance Band**
Consumer Discretionary	87	B	80	C	80	D
Consumer Staples	84	B	76	C	79	C
Energy & Materials	86	B	90	B	85	C
Financials	85	B	85	C	85	C
Health Care	86	B	84	C	84	C
Industrials	90	B	83	E	84	D
IT & Telecoms	85	B	76	C	79	C
Total	**86**	**B**	**83**	**B**	**82**	**C**

26 "Reported and approved" refers to CDP verification assessment criteria. These criteria are stipulated in the scoring methodology. Companies that do not meet the criteria are not considered to have provided sufficient evidence of effective and appropriate emissions verification. These companies are not awarded related performance points.

Figure 10: Number of responding companies reporting and managing climate related risks and opportunities

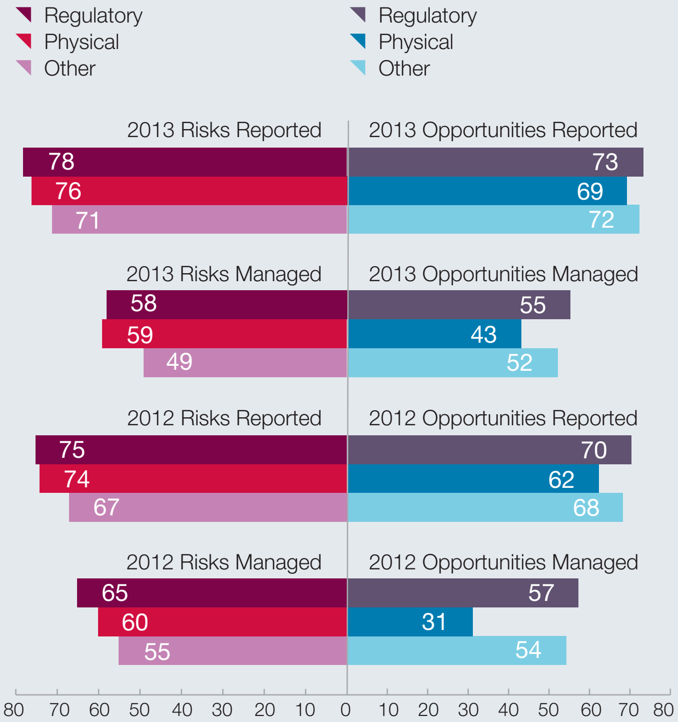
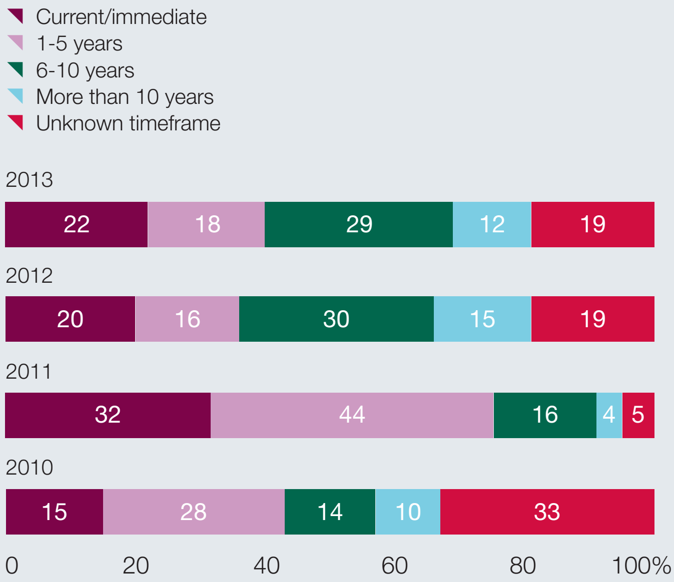


Figure 11: Rate of reported direct and indirect risks and opportunities by year

> Governance of climate change issues is improving, with all except one company reporting that they have board or senior leadership oversight of climate change issues. There is similarly an increase in the number of companies reporting that they are integrating climate change into strategy.

Figure 12: Timeframes for expected physical risks impact by year



Box 4: Perceived risks related to a carbon tax in South Africa

With the release of the National Treasury's second Carbon Tax Policy Paper[27] in May 2013, the South African government has clarified its intentions with respect to a proposed carbon tax. Last year, South African companies disclosed starkly varying perceptions as to whether the risks associated with the tax would be high or low, and direct or indirect.

Figure 13 shows the perceived risks associated with a possible carbon tax. Each dot represents a unique risk identified, with more than one risk per company represented in some cases. There continues to be a surprising divergence on both magnitude and type of risk perceived by companies within the same sector. There has been little change on last year, despite the release of the carbon tax discussion paper earlier this year. It is possible that this variation reflects that the carbon tax is likely to impact heavy emitters more.

The National Treasury policy document proposes a tax on the carbon content of fuels when they enter the economy. The first phase will run from 2015 to 2019 and comprise a tax of R120 per metric ton CO_2e, rising at 10% per year until 2019. Key areas of exposure disclosed by companies are:

- A tax on direct emissions generated from burning fuels (Scope 1);
- Indirect exposure to pass-through on taxes paid by energy suppliers, such as oil refineries and Eskom (Scopes 2 and 3);
- Indirect exposure due to increases in input and operational costs within the supply chain; and
- Indirect exposure due to decreasing disposable income of customers as energy prices increase.

Although the final implications of this tax are likely to depend on negotiations between the National Energy Regulator of South Africa (NERSA) and Eskom, it is likely that the tax will lead to further increases in electricity prices due to pass-through of the tax. The exposure of relatively low-carbon industries in relation to pass-through taxation associated with Scope 2 (indirect) electricity use is potentially significant.

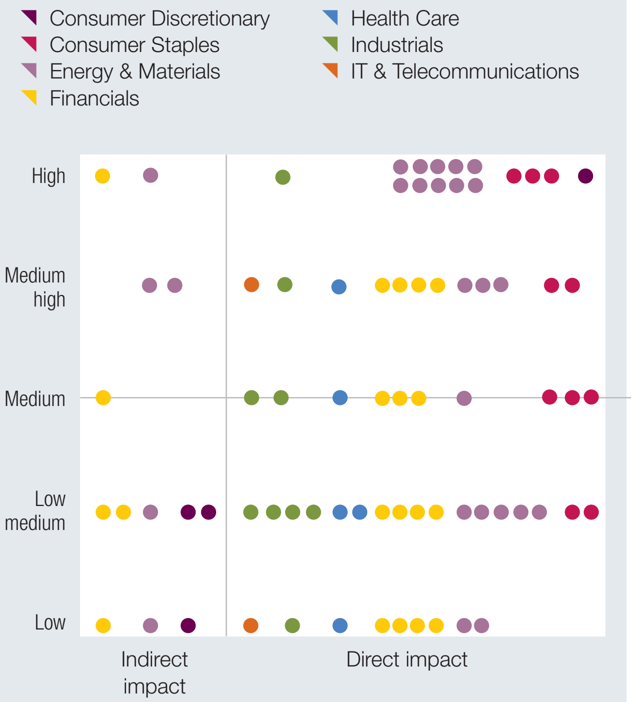
It is worth noting that other market forces will influence how the tax impacts companies through different channels. South African households spend, on average, 14% of their total monthly household income on energy needs.[28] For middle (LSM 4-6) and low (LSM 1-3) income categories, this number increases to 15% and 17%, respectively.

Given this information, it is surprising that companies have not identified a larger proportion of indirect risks associated with the proposed carbon tax.

27 South African National Treasury (2013) Carbon Tax Policy Paper: Reducing greenhouse gas emissions and facilitating the transition to a green economy: http://www.treasury.gov.za/public%20comments/Carbon%20Tax%20Policy%20Paper%202013.pdf

28 A survey of energy-related behaviour and perceptions in South Africa: The Residential Sector 2012 published by the Department of Energy.

Figure 13: Perceived risks associated with a possible carbon tax



Looking in further detail at company disclosure on risks and opportunities, Figure 11 shows that there is negligible change in the last three years regarding companies' perceptions on whether climate-related risks are direct or indirect. As regards the anticipated timing of the physical impacts of climate change, Figure 12 shows a general trend of these risks being identified as being over the longer term (other than in 2011 – the year of UNFCCC-COP17 in Durban – where there was a significant spike in the identification of shorter term risks). By contrast more companies now view regulatory risks to be more immediate than previously reported; given recent regulatory developments this is not surprising.

There is a continued increase in the number of companies with GHG emissions reduction targets. This year 52 (66%) companies report having emissions reduction targets, as compared with 43 (55%) companies in 2012. Figure 14 shows the number of companies within each sector that have adopted absolute and/or intensity-based emissions targets.[29] While Energy & Materials has the highest absolute number of companies with targets in place, Consumer Staples has the highest proportion (82%), followed by Energy & Materials (81%) and Financials (62%). A detailed description of these targets is provided in Appendix 3, highlighting the significant variability in their Scope, levels of ambition and time frames.

While the increase in voluntary emissions reduction targets is commendable, particularly given the current lack of regulatory requirement to reduce emissions, it is nevertheless anticipated that significant further progress will be required in emissions reductions if South Africa is to make a "fair and equitable" contribution to the global ambition of limiting warming to 2°C on pre-industrial levels.[30]

In South Africa, the national commitment to reducing absolute GHG emissions must be contextualised with reference to an equally urgent economic development imperative. The drive to reduce emissions for companies is often, albeit not always, at odds with growth strategies. South African government and companies are faced with significant trade-offs in pursuing concomitant strategies for growth, job creation and emissions reductions over the short, medium and long term.

As in 2012 and 2011, energy efficiency initiatives relating to processes and to building services is the most common emissions reduction initiative. Behavioural-change activities (including awareness-raising aimed at reducing energy consumption), recycling, and switching from paper to electronic communication are also commonly reported. This is not necessarily correlated with the shortest payback period, with energy efficiency initiatives often reporting the longest payback periods.

29 To be regarded as having targets in place, companies are required to state whether targets reported were absolute or intensity targets, and to provide data as evidence, including: percentage reduction from base year; base year; base year emissions; metrics for intensity targets; and target year.

30 This commitment was reaffirmed at the UNFCCC COP17 meeting in Durban: Report of the Conference of the Parties on its seventeenth session, held in Durban from 28 November to 11 December 2011: http://unfccc.int/resource/docs/2011/cop17/eng/09a01.pdf

Figure 14: Number of responding companies with targets by sector

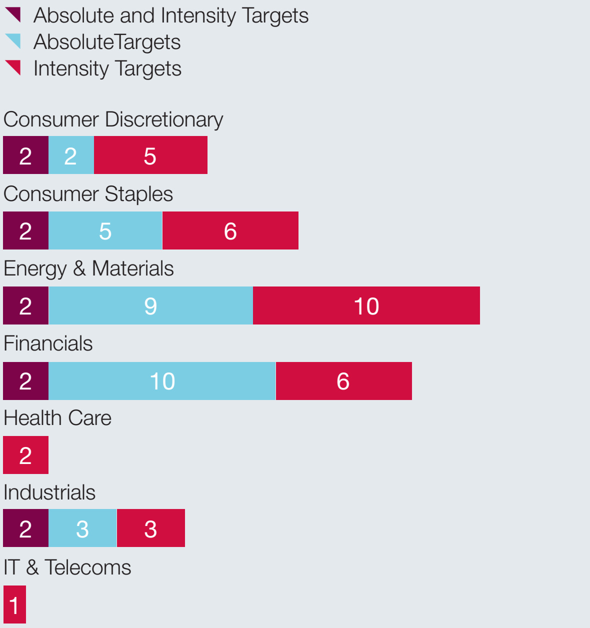


Figure 15: Percentage of responding companies with emissions reductions due to emissions reduction initiatives

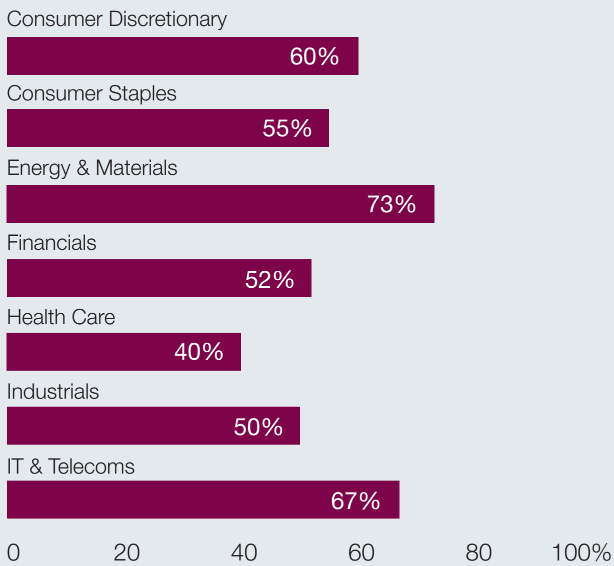


Figure 16 shows the payback periods for various emissions reduction activities, with behavioural change, transportation and energy efficiency initiatives demonstrating significant potential for short payback periods. Given the context of increasing energy prices and current constraints with private electricity generation in South Africa, there is a noticeable focus on energy efficiency initiatives as a contributor to GHG emissions reductions. This trend is evident in the decrease in Scope 2 emissions (Figure 17).

GHG emissions of South Africa's top companies for 2013 remain comparable to 2012

Overall, global emissions reported by the JSE 100 increased by 0.1 million metric tons CO_2e. The total reported direct (Scope 1) GHG emissions from the responding JSE 100 companies increased from 132.9 million metric tons CO_2e in 2012 to 134.6 million metric tons CO_2e in 2013. However, this is less than the reported 137.2 million metric tons CO_2e in 2011. There is a slight reduction in Scope 2 GHG emissions, reducing to 85 million metric tons CO_2e in 2013 from 86.6 million metric tons CO_2e in 2012 (as compared with 98.4 million metric tons CO_2e in 2011 and 103.4 million metric tons CO_2e in 2010).[31] (Figure 17). Changes in the composition of the sample can effect the totals reported; the changes reported should not be necessarily attributed to energy efficiency improvements alone.

While it is not possible to provide a detailed explanation for the changes in GHG emissions, certain contributory factors can be identified:

- The largest increase in Scope 1 GHG emissions by sector is in the Energy sector (Sasol), with emissions increasing by 1.4 million metric tons CO_2e. Sectors with increasing Scope 1 global emissions are: Industrials (689,266 metric tons CO_2e), Consumer Discretionary (133,656 metric tons CO_2e) and IT & Telecoms (115,986 metric tons CO_2e). There were decreases in global Scope 1 emissions in the Materials sector (490,390 metric tons CO_2e), Consumer Staples (146,692 metric tons CO_2e), Financials (83,284 metric tons CO_2e) and Health Care (1,491 metric tons CO_2e).
- For Scope 2 global emissions, there are net increases across all sectors, except in Energy & Materials, which reports reductions of almost 4 million metric tons CO_2e, and in IT & Telecoms which reports reductions of 15,817 metric tons CO_2e. Within the Energy & Materials sector, BHP Billiton, the largest emitter of Scope 2 emissions, reports a decrease in its Scope 2 emissions by 963,000 metric tons CO_2e. In the Energy & Materials sector, 76% of

31 These figures refer to global emissions. Where companies have operations in more than one country or region, some elected to account for South African emission separately, allowing for direct comparison with other South African emissions. However, some companies did not specify South African emissions. This should be borne in mind when comparing companies' emissions.

Figure 16: Expected payback periods for emissions reduction initiatives by initiative

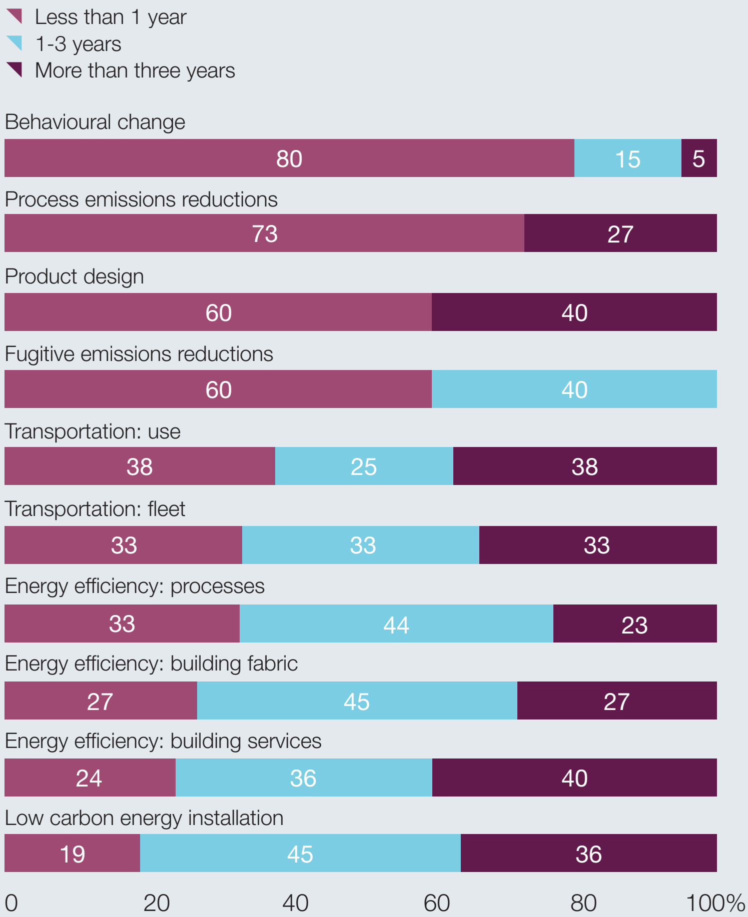


Figure 17: Global Scope 1 and 2 reported emissions (metric tons CO_2e) by year

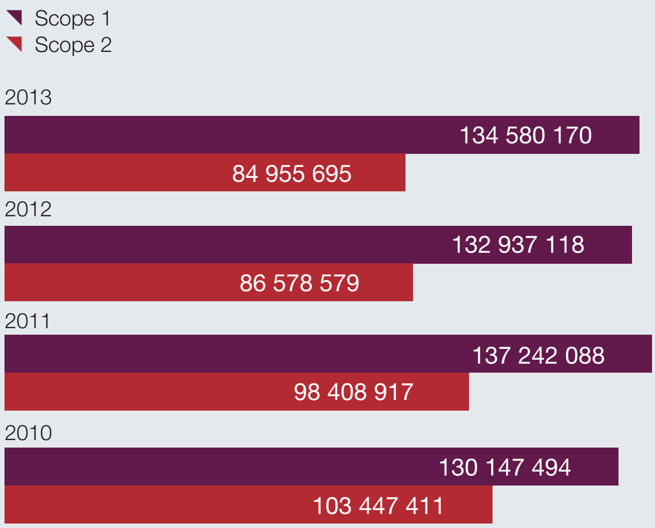
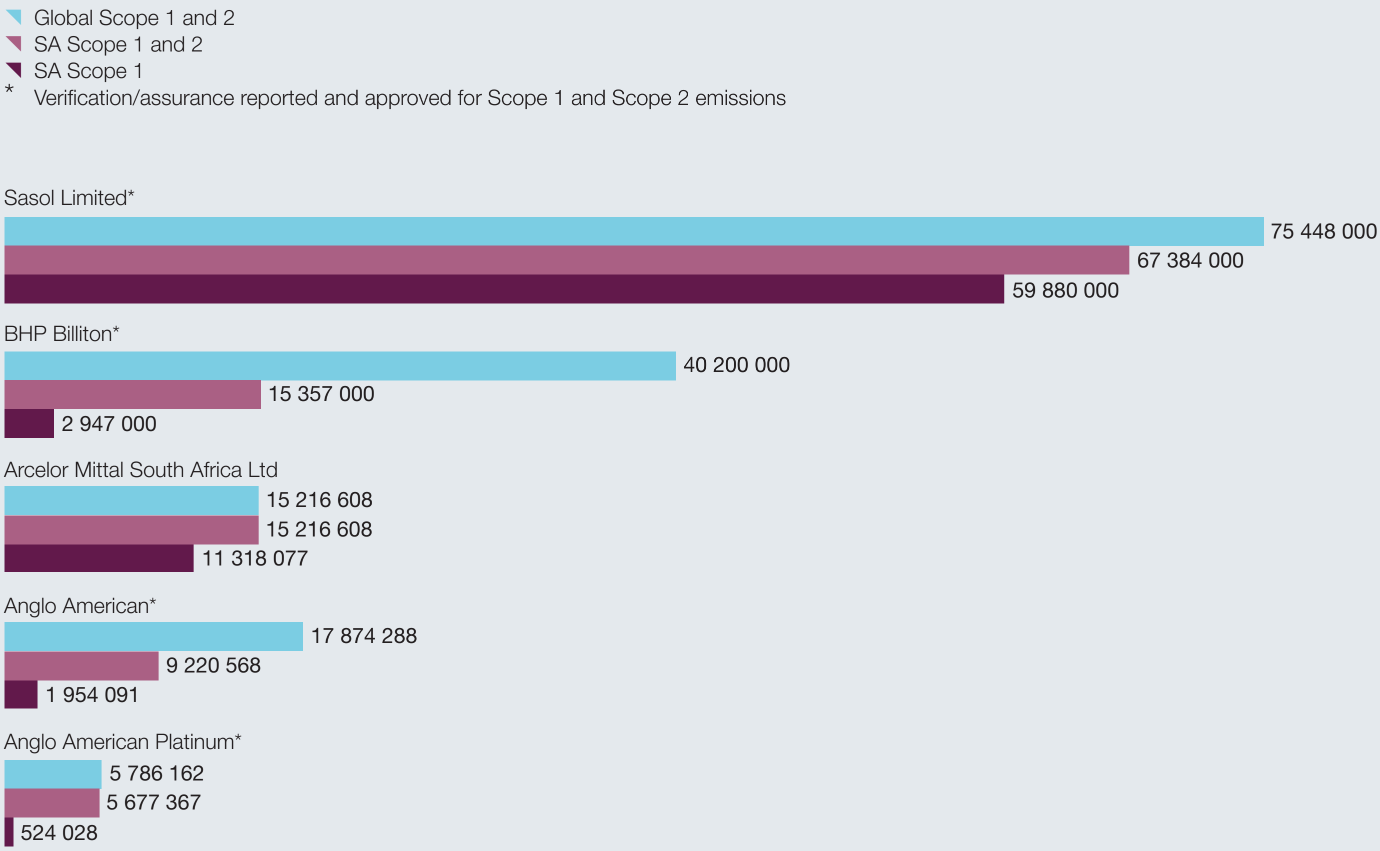
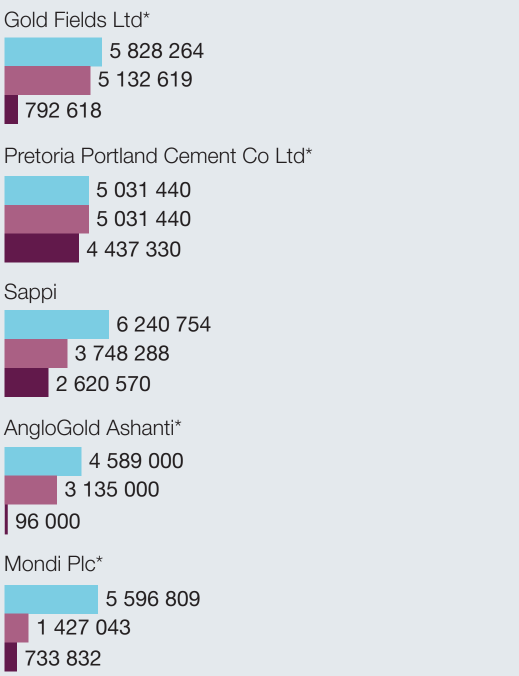
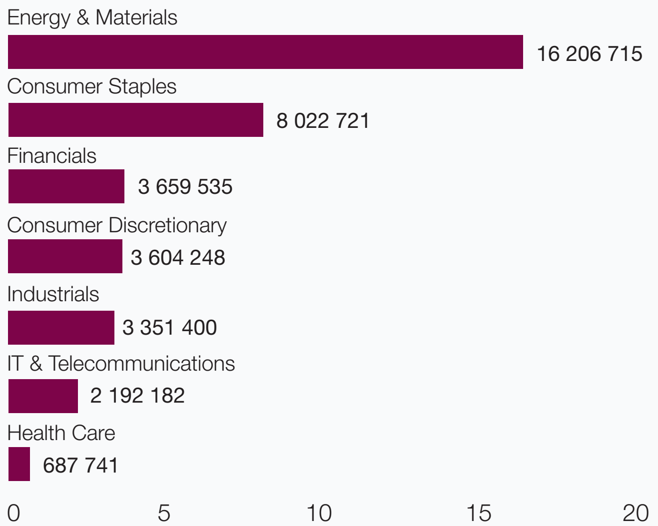


Figure 18: Top emitters of global Scope 1 and 2 emissions, listed in order of South African Scope 1 and 2 emissions (metric tons of CO_2e)





Global Scope 1 and 2 emissions by sector, excluding those from top ten emitters (metric tons of CO_2e)



companies report reductions as a specific result of emissions reductions initiatives.

- There are 45 companies that report emissions reductions of more than 3%, year-on-year, specifically as a result of emissions reduction initiatives. If there are concurrent increases in emissions from other sources, such as an increase in the Scope of the measurement, or the acquisition of a new business unit, these changes are not accounted for in the 3% decrease. Of the 45 companies that achieved this 3% decrease in emissions as a result of emissions reductions initiatives (all things being equal), 38 report any absolute emissions reductions of Scope 1 and 2 combined.

Figure 18 provides a breakdown of the GHG emissions of the top ten global Scope 1 and 2 emitters. The companies are ranked according to their South African Scope 1 and Scope 2 emissions levels. The top ten emitting companies are all in the Energy & Materials or Industrials sectors.

The data highlights the continuing predominant contribution of a few large GHG emitters to South Africa's total Scope 1 emissions. This includes, notably, Sasol Ltd (with reported annual South African Scope 1 emissions of 59.9 million metric tons CO_2e), followed by ArcelorMittal South Africa Ltd (11.3 million metric tons CO_2e), Pretoria Portland Cement Co Ltd (4.4 million metric tons CO_2e) and BHP Billiton (2.9 million metric tons CO_2e). Placing the South African emissions in context, Eskom's publicly reported calculated emissions of carbon dioxide for the year ending March 2013, is 227.9 million metric tons CO_2e[32] (down from 231.9 million metric tons CO_2e in 2012). Taken together with Eskom, the responding companies in the JSE 100 account for 60% of South Africa's total estimated emissions of approximately 559.65 million metric tons CO_2e (Figure 19).[33]

32 Eskom Annual Integrated Report 2013: http://overendstudio.co.za/online_reports/eskom_ar2013/index.php

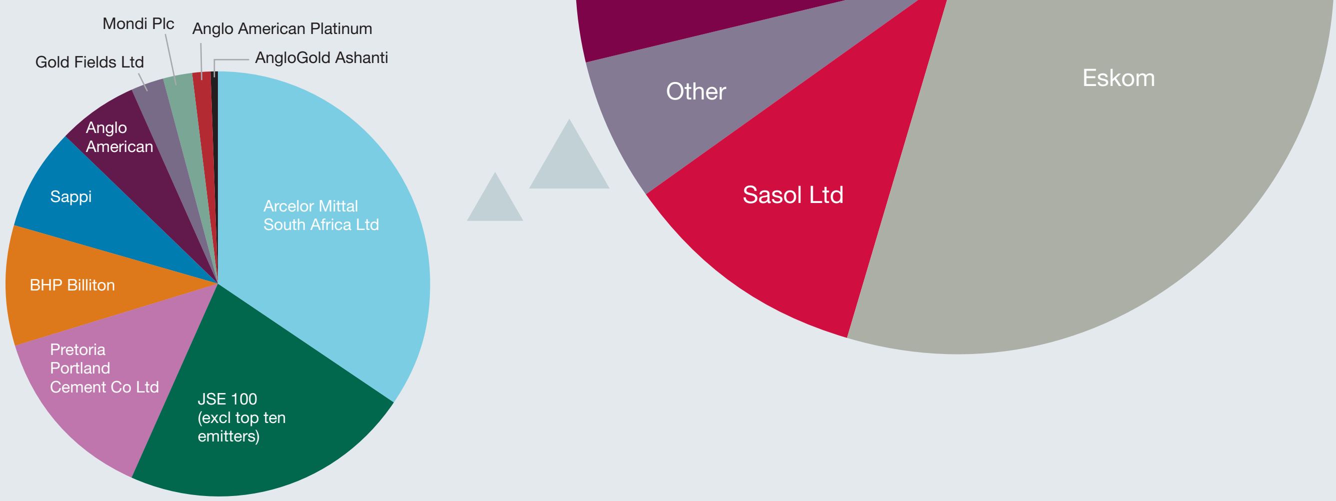
33 This figure is drawn from the World Resource Institute (WRI) Climate Data Explorer at http://cait2.wri.org/. It is in line with projections from the Department of Environmental Affairs, who are currently updating the national GHG inventory for 2001-2010. An updated figure for 2011-2013 cannot be provided (Witi, J. 2011. DEA, personal communication, 9 October 2013).

Figure 19: South African Scope 1 emissions for 2013 (metric tons of CO_2e)

- SA Scope 1 (excl JSE 100, Eskom & Transnet): 239 166 956
- Eskom: 227 900 000
- Sasol Ltd: 59 880 000
- Other (see below)

Other

- Arcelor Mittal South Africa Ltd: 11 318 077
- JSE 100 (excl top ten emitters): 7 279 498
- Pretoria Portland Cement Co Ltd: 4 437 330
- BHP Billiton: 2 947 000
- Sappi: 2 620 570
- Anglo American: 1 954 091
- Gold Fields Ltd: 792 618
- Mondi Plc: 733 832
- Anglo American Platinum: 524 028
- AngloGold Ashanti: 96 000



Guest comment:
Prof Guy Midgley and Ms Petra DeAbreu, LTAS research team

The implications of the slow progress internationally ramify across the social and economic fabric of southern Africa, with effects increasingly likely on water and food security, human health, rural and urban settlements, and a vast array of socio-economic assets.

Anticipating the physical impacts of climate change in southern Africa

The latest results from the Intergovernmental Panel on Climate Change (IPCC) have doubled the scientific certainty that human activities have caused recent warming of the global climate system. There is now less than a 5% chance that the changes observed are due to some unexplained phenomenon. The impacts of extreme climate events are making themselves increasingly felt, and every passing of a record event provides an ever clearer warning of the escalation in risks that we face if we neither reduce emissions globally, or fail to plan to adapt.

The Long-Term Adaptation Scenarios Flagship Research Programme (LTAS), under the Department of Environmental Affairs (DEA) in collaboration with technical research partner the South African National Biodiversity Institute (SANBI) and with technical and financial assistance from Deutsche Gesellschaft für Internationale Zusammenarbeit (German GIZ), engaged with local and international climate modellers to simulate future climate conditions of southern Africa and develop a consensus set of climate scenarios representing different future global emission pathways.

Future climate simulations indicate that without strong greenhouse gas emission reductions, it is likely that the global mean temperature will increase by more than 2° Centigrade globally, and could increase by more than 4°. This translates to regional and local warming of at least 3° Centigrade in southern Africa up to 2050 and beyond to 2100, and possibly more than 5° for central parts of southern Africa by the end of this century. It also means significantly adverse effects on surface water supplies both because of increasing evaporation rates due to the higher temperatures, and reductions in rainfall.

A climate trends analysis undertaken by the LTAS revealed that many changes in the national climate have already been observed, most notably in the form of local increases in temperature from 1960 to 2010 that are up to and more than double the global average observed warming to date. Some indications of increases in the intensity of rainfall events are also starting to emerge in the observed data, though the short duration of the record limits making a clear conclusion about this trend.

With international negotiations having made very slow headway since initial mitigation efforts via the Kyoto Protocol came into force it is now virtually certain that we face a period of changing climate over the next few decades. So-called ‘bottom-up’ processes such as those represented by the CDP’s climate change programme are thus playing a more and more important role in building local will and capacity to reduce emissions, and showing the way towards what must ultimately be a global effort.

The implications of the slow progress internationally ramify across the social and economic fabric of southern Africa, with effects increasingly likely on water and food security, human health, rural and urban settlements, and a vast array of socio-economic assets. For this reason it is crucial that we understand the risks of climate change impacts in southern Africa and in South Africa, because these risks will be an ever-present backdrop to all aspects of human development in this region.

This is where a focus on adaptation responses offers some hope for local and regional solutions to reduce risks, even as mitigation responses struggle to scale up from local to national to international level. It is often stated that adaptation is implemented locally, and therefore there are opportunities for adaptation to succeed because it is in the local interest. Of course, it is also important for local adaptation actions to be guided by national frameworks, to ensure that these efforts do not pull in different directions.

A good example of this exists in the area of water resource management. Many sectors depend directly on surface water supplies, and it will obviously not be possible for all sectors to adapt through increasing their water use. Adaptation through increasing water use efficiency offers great opportunities for sustainable development. Such efforts go hand in hand with more holistic management of water catchments to enhance surface water supply delivery.

South Africa stands at the forefront of such efforts, having initially developed a world-leading public works programme to clear water-hungry invasive alien plant species from our catchments, and secure greater supply of clean water with the benefit of creating thousands of jobs and building new skills. This visionary programme can now be seen as a pre-emptive move that anticipated the climate crisis, and can be immediately applied as a key principle for building resilience of water supplies in parts of South Africa. There are many such opportunities in the 'adaptation space', including for business, which will reduce risks and build resilience.

The emphasis in the UNFCCC negotiations has switched to a more balanced focus between mitigation and adaptation responses. Both areas are crucial if we are to hold onto our development gains, and continue to develop sustainably into the future. Business interests have a key role to play in both areas.

At present, the LTAS is developing national and sub-national adaptation scenarios for South Africa under future climates with a focus on water and food security. The scenario planning undertaken will assist policy and decision makers and a range of other stakeholders to perceive the consequences and benefits of different development pathways for the national economy and for society under future climate scenarios. It is important that business interests are included in this scenario planning as this will serve to guide business investments under future climate scenarios and development pathways.

CDP 2013: Voluntary respondents outside the JSE 100 sample

This year, 13 companies outside of the JSE 100 sample voluntarily submitted responses through the CDP online response system. This compares with 13 voluntary respondents in 2012, and three in 2011. This year's voluntary respondents were Basil Read, Caxton and CTP Publishers and Printers, Distell Group Ltd, Group Five Ltd, Hulamin, Industrial Development Corporation, JSE Ltd, KPMG South Africa, NBI, Raubex Group Limited, Scaw Metals Group, South African Post Office and Transnet. The NBI and Scaw Metals Group both submitted responses for the first time.

The data submitted by these organisations has not been included in the main analysis, and these organisations were not scored for carbon disclosure, or performance.

Table 5: Overview of voluntary company responses outside the JSE 100 sample

Company	Sector	Sub-Sector	2013 Response	2012 Response	Scope 1 South Africa (tCO_2e)	Scope 1 Global (tCO_2e)	Scope 2 Global (tCO_2e)	Scope 1 & 2 Global (tCO_2e)	Scope 3 (tCO_2e)	Number of Scope 3 Categories Reported	Verification/ Assurance Status Reported	Targets Reported
Basil Read	Industrials	Capital Goods	Voluntary	Voluntary		69,852	23,282	93,134	3,448	1		Int
Caxton and CTP Publishers and Printers	Consumer Discretionary	Media	Voluntary (non-public)	Voluntary								
Distell Group Ltd	Consumer Staples	Food, Beverage & Tobacco	Voluntary	Voluntary		76,021	69,140	145,161	400,856	4	VAA, S1, S2, S3	
Group Five Ltd	Industrials	Capital Goods	Voluntary	Voluntary	42,678	50,593	62,071	112,664	791,743	6	VAA S1, S2	
Hulamin	Materials	Materials	Voluntary	Voluntary		104,704	257,525	362,229	11,508	1	VAR, S1, S2, S3	
Industrial Development Corporation	Financials	Diversified Financials	Voluntary (non-public)	Voluntary (non-public)								
JSE Ltd	Financials	Diversified Financials	Voluntary	AQ		22	10,396	10,418	185	2		
KPMG South Africa	Financials	Diversified Financials	Voluntary	Voluntary		112	11,852	11,964	3,231	1		Int
National Business Initiative	N/A	N/A	Voluntary		0	0	130,3	130,3	61,84	3		
Raubex Group Limited	Industrials	Capital Goods	Voluntary	Voluntary		152,006	16,227	168,233	0	0		
Scaw Metals Group	Materials	Steel	Voluntary			340,644		340,644		0		
South African Post Office	Industrials	Transportation	Voluntary	Voluntary		13,140	44,507	57,647	0	0		Abs
Transnet	Industrials	Transportation	Voluntary	Voluntary		648,660	3,654,884	4,303,544	11,596	1		Abs , Int

Table 6: Emissions reductions targets for voluntary respondents outside the JSE 100 sample

Company	Sub-sector	Type	Scope	Target Year	Base Year	Target
Basil Read	Industrials	Int	Scope 1 + 2 + 3	2012	2009	10% reduction from base year. Actual achievement emissions measured in 2012 was 4.35% below the allowed threshold of 100,972 tCO_2e per unit revenue.
KPMG South Africa	Financials	Int	Scope 1 + 2 + 3	2010	2015	Scope 1 emissions include natural gas consumption, diesel consumed in generators and refrigerant gas consumption. Scope 2 emissions include electricity consumption. Scope 3 emissions include business travel in employee-owned cars and air travel. This target equates to a reduction of 15% from a baseline intensity of 4.87 tCO_2.
South African Post Office	Industrials	Abs	Scope 1 + 2		2009	Our target is continous, we aim to reduce 2.5% of our emissions over prior fiscal year with 2008/2009 being the baseline. We have not reduced our emissons but instead they increased by 18.5%; there has been an increase in data acquisition which resulted in more buildings' consumption being captured for this fiscal year.
Transnet	Industrials	Abs	Scope 2	2013	2012	In 2012/13, Freight Rail Real Estate had an energy efficiency target of 3% against 2011/12 base year; it exceeded its target by 2.4%. In 2012/13, Property had an energy efficiency target of 5% against 2011/12 base year; it exceeded its target by 33%.
		Int	Scope 1 + 2	2013	2012	Different Transnet divisions had different intensity targets relevant to their business activities. Full details can be found in the submission on CDP's website.

The CDP 2013 Leaders

2013 Leadership Criteria

Each year, company responses are analysed and scored against two parallel scoring schemes: disclosure and performance.

The disclosure score assesses the completeness and quality of a company's response. Its purpose is to provide a summary of the extent to which companies have answered CDP's questions in a structured format. A high disclosure score signals that a company provided comprehensive information about the measurement and management of its carbon footprint, its climate change strategy and risk management processes and outcomes.

The performance score assesses the level of action, as reported by the company, on climate change mitigation, adaptation and transparency. Its intent is to highlight positive climate action as demonstrated by a company's CDP response. A high performance score signals that a company is measuring, verifying and managing its carbon footprint, for example by setting and meeting carbon reduction targets and implementing programmes to reduce emissions in both its direct operations and supply chain.

The highest scoring companies for disclosure and/or performance are included in the Climate Disclosure Leadership Index (CDLI) and/or Climate Performance Leadership Index (CPLI). Public scores are available in CDP reports, through Bloomberg Terminals, Google Finance and Deutsche Boerse's website.

What are the CDLI and CPLI criteria?

To enter the CDLI, a company must:

- Make its response public and submit via CDP's Online Response System
- Achieve a score within the top 10% of the total Global 500 population (59 companies in 2013)

To enter the CPLI (Performance Band A), a company must:

- Make its response public and submit via CDP's Online Response System
- Attain a performance score greater than 85
- Score maximum performance points on question 12.1a for greenhouse gas emissions reductions due to emission reduction actions over the past year (4% or above in 2013)
- Disclose gross global Scope 1 and Scope 2 figures
- Score maximum performance points for verification of Scope 1 and Scope 2 emissions
- Furthermore, CDP reserves the right to exclude any company from the CPLI if there is anything in its response or other publicly available information that calls into question its suitability for inclusion.

Note: Companies that achieve a performance score high enough to warrant inclusion in the CPLI, but do not meet all of the other CPLI requirements are classed as Performance Band A- but are not included in the CPLI.

How are the CDLI and CPLI used by investors?

Good disclosure and performance scores are used by investors as a proxy of good climate change management or climate change performance of companies.

Investors identify and then engage with companies to encourage them to improve their score. The 'Aiming for A' initiative which was initiated by CCLA Investment Management is driven by a coalition of UK asset owners and mutual fund managers. They are asking 10 major UK-listed utilities and extractives companies to aim for inclusion in the CPLI. This may involve filing supportive shareholder resolutions for Annual General Meetings occurring after September 2013.

Investors are also using CDP scores for the creation of financial products. For example, Nedbank in South Africa developed the Nedbank Green Index. Disclosure scores are used for selecting stocks and performance scores for assigning weight.

For further information on the CDLI and the CPLI and how scores are determined, please visit **www.cdp.net/guidance**

Table 7: The JSE 100 Climate Performance Leadership Index (CPLI)

Company (in alphabetical order)	Sector	2013 Performance Band	2012 Performance Band	2011 Performance Band
Anglo American	Energy & Materials	A	A	C
Barloworld	Industrials	A	A	B
FirstRand Ltd	Financials	A	A	B
Growthpoint Properties	Financials	A	B	C
Harmony Gold Mining Co Ltd	Energy & Materials	A	B	B
Nampak Ltd	Energy & Materials	A	B	B
Pick n Pay Holdings Ltd	Consumer Staples	A	B	A-
Remgro	Financials	A	B	A-

Incite undertook the scoring of all the JSE 100 companies, other than those JSE-listed companies that also fall within the Global 500; these were scored by PwC as part of their international review.[34]

The JSE 100 2013 Climate Performance Leadership Index (CPLI)

All companies that received a disclosure score of more than 50[35] are rated for their climate management performance. Companies' performance is grouped into five bands: A, B, C, D and E. These bands are defined on the CDP website (www.cdproject.net). Companies that achieve the required performance score, but that do not meet the other CPLI requirements, are classed as Performance Band A- and are not included in the CPLI.[36] For the most informed understanding of a company's performance it is important to consult individual company disclosures (available on the CDP website).

Table 7 lists those companies that qualified for an A performance band. This year eight companies qualified for the CPLI: Anglo American, Barloworld, FirstRand Ltd, Growthpoint Properties, Harmony Gold Mining Co Ltd, Nampak Ltd, Pick n Pay Holdings Ltd and Remgro (listed alphabetically). This is up from six companies in 2012 (listed alphabetically: Anglo American, Barloworld, FirstRand Limited, Gold Fields Ltd, Mondi Plc and Woolworths Holdings Ltd).

34 The following 17 JSE-listed companies also included in the Global 500 sample scored by PwC: Anglo American, BHP Billiton, British American Tobacco, Capital & Counties Properties, Compagnie Financière Richemont SA, FirstRand Ltd, Intu Properties Plc, Kumba Iron Ore, Lonmin, Mondi PLlc, MTN Group, Naspers, Old Mutual Plc, SABMiller, Sasol Ltd, Standard Bank Group and Vodacom Group.

35 Disclosure scores of less than 50 do not necessarily indicate poor carbon management performance. It is in some cases, indicative of insufficient information to adequately evaluate performance. It is, however, reasonable to assume that companies that do not disclose well are not likely to be the best performers in terms of taking action on climate change

36 This year, Anglo American Platinum, Gold Fields and Investec Ltd fell into the A- category

The JSE 100 2013 Climate Disclosure Leadership Index (CDLI)

In assessing the companies that have qualified for the CDLI, it is important to note that the scoring is based solely on the information disclosed in the company's CDP response; it does not consider other carbon or wider sustainability disclosures provided by companies through their sustainability reports, annual reports, or through meetings and engagement with stakeholders and policymakers.

The South African 2013 CDLI is presented in Table 8.[37]

- The results demonstrate a continuing improvement in disclosure across the responding companies. This year the median carbon disclosure score of all publicly responding companies is 83, as compared with 82 in 2012, 76 in 2011 and 75 in 2010. The range of scores for the top 10% of companies (the CDLI) has also improved, to 97-100 from 95-100 in 2012, and 87-98 in 2011.
- The companies in the 2013 CDLI come from four different sectors: Energy & Materials (6), Financials (3), Health Care (1), and Industrials (1).

Recognising leadership on carbon performance and disclosure

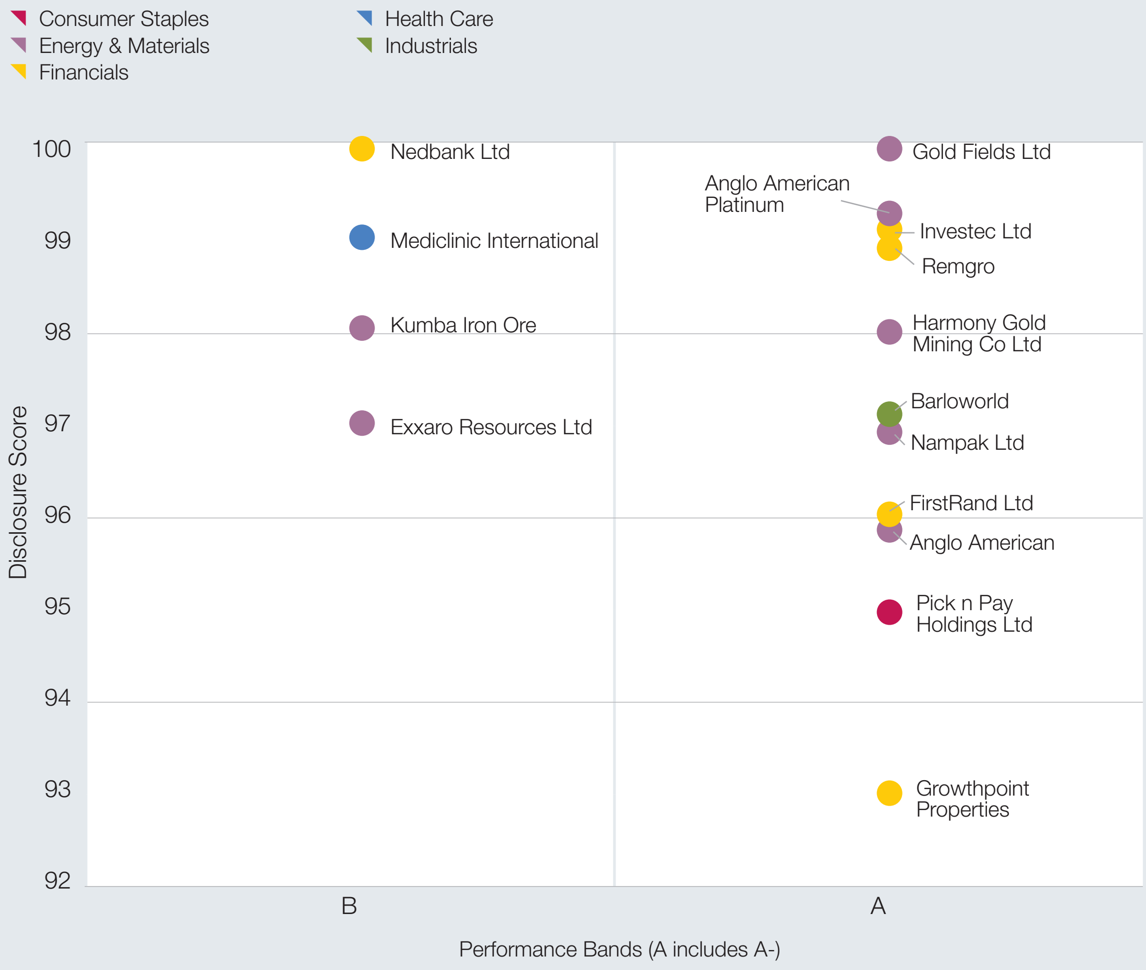
Figure 20 identifies those companies rated best in terms of disclosure and performance. Although the CDP scoring methodology does not provide a comprehensive assessment of companies' performance on climate change, the results are seen to be sufficiently robust to provide an indication of those companies leading the way.

37 The CDP recognises that not all questions are applicable to all companies. A normalised scoring approach was used whereby the number of points awarded to a company was divided by the number of points available depending on the route they took in answering the questionnaire. This score was normalised to produce a number out of 100 in order to enable comparison across all companies and sectors.

Table 8: The JSE 100 Climate Disclosure Leadership Index (CDLI), in alphabetical order

Company	Sector	2013 Score	2012 Score	2011 Score
Anglo American Platinum	Energy & Materials	99	96	85
Barloworld	Industrials	97	93	89
Exxaro Resources Ltd	Energy & Materials	97	100	94
Gold Fields Ltd	Energy & Materials	100	99	98
Harmony Gold Mining Co Ltd	Energy & Materials	98	98	91
Investec Ltd	Financials	99	90	79
Kumba Iron Ore	Energy & Materials	98	88	82
Mediclinic International	Health Care	99	97	74
Nampak Ltd	Energy & Materials	97	95	85
Nedbank Ltd	Financials	100	92	96
Remgro	Financials	99	97	80

Figure 20: Top disclosure scores and top performance bands



Guest comment:
IDC

The IDC's escalating experience and catalytic participation in the green economy are proving invaluable for SIP 8, not only in renewable energy generation, where we have participated in 19 projects over the first two rounds of the Renewable Energy Independent Power Producer Procurement (REIPPP) programme, but also in the areas of energy efficiency and emissions and pollution mitigation.

The role of IDC in driving transformation toward a green economy

The imperative of economic inclusion in South Africa's growth and development trajectory was clearly brought to the fore by the South African government, our shareholder, during the year under review. Unacceptable levels of poverty and inequality underpinned popular manifestations of frustration and discontent in various parts of our country. The adverse implications were not only felt by the sectors directly affected, but also reverberated throughout the economy. It has become increasingly evident that growth in itself does not suffice.

Economic expansion must be unequivocally development-orientated, inclusive, employment-generating and, in light of South Africa's historical legacies, it must be transformational. Furthermore, a sustainable development path also relies on adopting environmentally-responsible practices, reducing our carbon emissions, among other environmental risks, to sustainable levels, and ensuring a just transition whereby national socio-economic objectives are not hindered.

Green Economy

The IDC's escalating experience and catalytic participation in the green economy are proving invaluable for Strategic Integrated Project (SIP) 8 – Green Energy, not only in renewable energy generation, where we have participated in 19 projects over the first two rounds of the Renewable Energy Independent Power Producer Procurement (REIPPP) programme, but also in the areas of energy efficiency and emissions and pollution mitigation.

Carbon footprint

The bulk of our staff is based in the Sandton offices and our relative footprint is small when compared to some of our business partners. Nonetheless, we look at ways to better understand our resource consumption and how to manage it.

We have been reporting on our carbon footprint for three years. We calculate our carbon footprint in order to guide the formulation of an emission-reduction strategy, to respond positively to the climate change challenge and to show responsible leadership particularly to our business partners that have a considerable carbon output.

In a bid to build capacity and influence our business partners, we calculate footprints for our business partners and help them in devising strategies to reduce their impact. Going forward we will look at setting targets as well as increasing transparency by continuing to be involved in projects such as the Carbon Disclosure Project. Information about carbon emissions at the IDC Head Office, Foskor and SCAW are available from our 2013 Integrated Report: http://www.idc.co.za/IR2013/ne-direct.php

Green building

We plan to introduce green building aspects to the head office in order to meet the requirements of both the Green Star SA rating system and the United States- based tool for existing buildings, operations and maintenance (LEED-EBOM). The objective of following a two-pronged approach is to cover all possible aspects within the envelope of the prospective rating tool.

Mvuleni Geoffrey Qhena
CEO, IDC

Guest comment:
South African Post Office (SAPO)

The low-carbon future in the postal industry has already begun in SAPO. Multiple hybrid mail facilities are being used to strategically print, package and deliver bulk mail closer to destination as opposed to central processing.

A postal services provision for a low-carbon world

The current functions of the South African Post Office (SAPO) are fossil-fuel intensive. Fossil fuel is used as a source for electrifying our buildings and as fuel for our fleet. With responsibility for approximately 2,000 buildings, SAPO is an infrastructure-dependant business. Realising our goal of a low-carbon future in immobile structures will require changes in user behaviour as well as access to support technology such as smart-meters. From an efficiency and economic point of view, SAPO has made progress by switching from old incandescent lights technology to LEDs and CFLs wherever possible.

The low-carbon future in the postal industry has already begun in SAPO. Multiple hybrid mail facilities are being used to strategically print, package and deliver bulk mail closer to destination as opposed to central processing. This has drastically reduced the cost of transportation and reduced our carbon emissions. We envisage that in a low-carbon world, customer needs should be met with adjacent infrastructure. In addition, customer needs will be modelled for speedy delivery using local facilities that have minimal carbon emissions.

Apart from initiatives that focus on indirect emissions, SAPO is looking into products that will significantly change the direct emissions from fuel combustion. The visualised fuel mix in our logistical service business will include electric vehicles, biogas, hydrogen fuel cells, compressed natural gas, liquefied petroleum gas, as well as conventional diesel and petrol. It is anticipated that the introduction of gas vehicles in the South African market will make a significant impact in the coming years. SAPO has already started utilising gas products and dual fuels as an alternative to conventional fuel in our fleet; a panel van which is operable on gas has been procured in line with SAPO's preparation for shifting to a cleaner fuel source. In recent years the move from petrol to diesel vehicles has resulted in an important decline in our carbon emissions.

The limitations of innovative technology for reducing carbon in the postal sector will eventually prevail. When all the low-hanging fruits have been exhausted, alternative strategies will be required to progress. SAPO has begun to look at ways to offset carbon emissions and has targeted net-zero carbon emissions by 2020. At this stage, investments in carbon offsetting initiatives are already employed; trees are planted all over South Africa in conjunction with Food & Trees for Africa (FTFA).

In conclusion, for a possible and sustainable low-carbon world in the postal sector, the combination of per item reduction in carbon emissions in mobile and immobile assets, coupled with carbon offsetting initiatives, will contribute to a low-carbon future. Other methods requiring attention to ensure a sustainable low-carbon world include environmentally friendly product life cycle assessments, recycling initiatives, and employee and customer awareness and behaviour change.

Serame Kotsi
Group Executive: Mail Business

Sector analysis

Understanding the sectoral context in which each company operates – its unique impacts, the regulatory constraints and specific risks and opportunities it faces – enables a more useful assessment of company disclosure and performance. It also facilitates more meaningful comparison between companies.

This section reviews the CDP 2013 results in the context of the following sectors and associated sub-sectors:

- *Consumer Discretionary* – Apparel & Luxury Goods, Apparel Retail, Apparel, Accessories & Luxury Goods, Department Stores, Home Furnishing Retail, Publishing;
- *Consumer Staples* – Beverages, Brewers, Food Distributors, Food Products, Food Retail, Personal Products, Tobacco;
- *Energy & Materials* – Chemicals, Construction Materials, Energy, Gold, Metals & Mining, Paper Packaging, Paper Products, Precious Metals & Minerals, Steel;
- *Financials* – Diversified Banks, Diversified Financial Services, Insurance Brokers, Real Estate;
- *Health Care* – Pharmaceuticals, Health Care;
- *Industrials* – Construction & Engineering, Electrical Components & Equipment, Industrial

Figure 21: Sectoral analysis of response rate and performance band by sector (%)

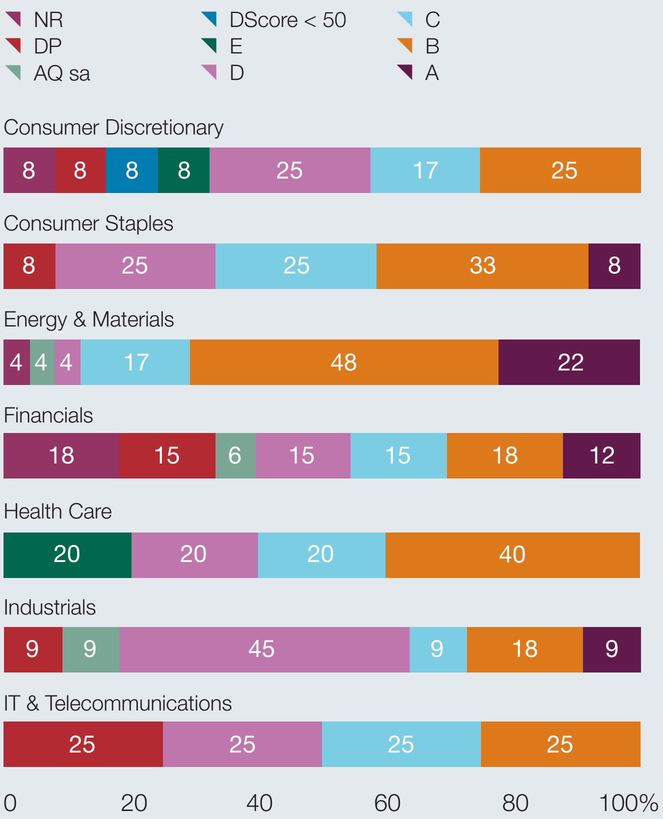
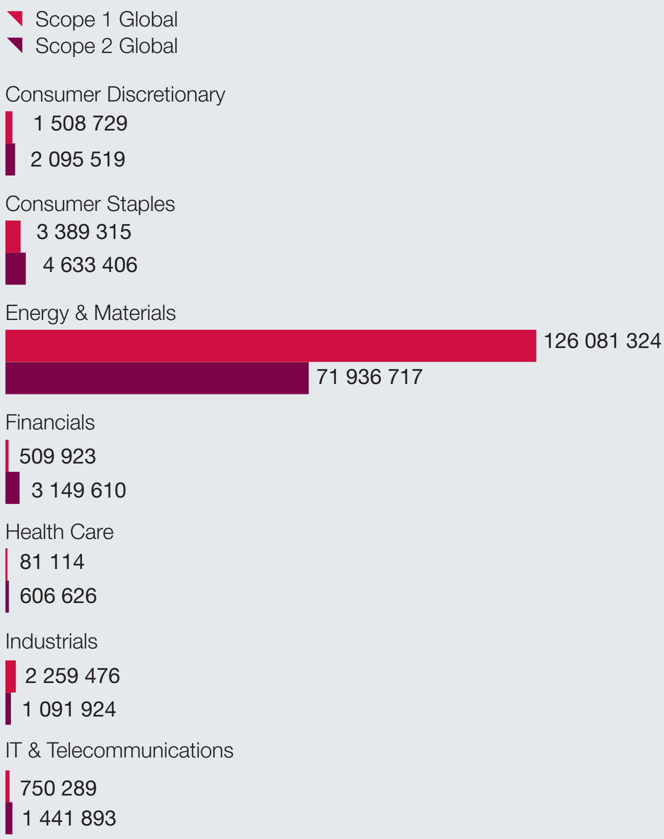


Figure 22: Global Scope 1 and Scope 2 disclosed emissions by sector, and also showing top two individual Scope 1 and Scope 2 emitters (metric tons of CO_2e)



Conglomerates, Industrial Machinery, Trading Companies & Distributors; and
- *Information Technology & Telecommunications* – Electronic Equipment & Instruments, Wireless Telecommunication Services, Integrated Telecommunication Services.

Each of these "sector snapshots" contains:
- A brief assessment of the broad implications of climate change for that sector (this analysis reflects the judgement of the authors of this report, and not the responses of the companies).
- A summary of the key risks and opportunities reported by companies within a sector (this reflects what the companies reported and is not intended to be a detailed account of the actual sectoral risks and opportunities).
- The CDP sectoral response rate over the past four years.
- A breakdown of the sectoral disclosure scores by questionnaire section, comparing the sector against the JSE 100 average and the CDLI.
- A graphical representation of individual company disclosure scores and performance bands.
- A brief review of the Scope 3 categories reported, plotted against total emissions reported for each category.
- A summary of the company response type, emissions data (Scope 1 South Africa, Scope 1 Global, Scope 2 Global and emissions intensity) and information on targets and verification.

Global 500 and JSE 100: a sectoral comparison

- South Africa's JSE 100 companies compare favourably with the Global 500 in terms of response rates across all sectors except Consumer Staples and Financials (Table 9).
- For the JSE sample, Health Care showed the highest levels of participation (100%), and Consumer Staples, Energy & Materials and Industrials had response rates over 90%. The Financials sector again had the lowest response rate, largely due to the consistently low participation of the property sub-sector.
- The Energy & Materials sector for the JSE 100 sample had the highest median disclosure score at 90.

Table 9: Global 500 and JSE 100 response rates and disclosure scores by sector

Sectors		Response rate	Mean Disclosure Score
Consumer Discretionary	JSE 100	83%	74
	Global 500	77%	83
Consumer Staples	JSE 100	83%	80
	Global 500	88%	81
Energy & Materials	JSE 100	91%	90
	Global 500	78%	81
Financials	JSE 100	61%	84
	Global 500	75%	79
Health Care	JSE 100	100%	79
	Global 500	83%	82
Industrials	JSE 100	82%	83
	Global 500	77%	83
IT & Telecoms	JSE 100	75%	82
	Global 500	75%	80
Utilities	JSE 100	/	/
	Global 500	74%	91
JSE 100 total sample	**JSE 100**	**83%**	**83**
Global 500 total sample	**Global 500**	**81%**	**81**

Consumer Discretionary

RESPONSE RATE

83%

(10 of 12)

Response of industries within the sector:

Consumer Services *(0 of 1)*
Distributors *(1 of 1)*
Hotels, Restaurants & Leisure (*1 of 1)*
Household Durables (*1 of 1)*
Media (*1 of 1)*
Multiline Retail *(2 of 2)*
Specialty Retail *(3 of 4)*
Textiles, Apparel & Luxury Goods *(1 of 1)*

3 604 248 metric tons CO_2e

Total Scope 1+2 emissions 2013

8%
Market capitalisation

27,3%

Increase in Scope 1+2 emissions since 2012

1,6%
of total JSE 100 emissions

74/C Average disclosure score / performance band

Climate change and the Consumer Discretionary sector

Most companies in this sector have relatively limited direct carbon-related impacts. Impacts are concentrated predominantly in their supply chain and logistics networks and in the consumer use of products. Due to their relative size, most local companies have limited influence on international supplier behaviour. There is a small market for green products in South Africa, generally restricted to higher income customers. The primary internal focus is on optimising logistics and energy efficiency. There are various opportunities for sourcing more sustainable resources and sourcing locally.

Reported risks and opportunities

Risks: The principal reported risks for the sector include implementation of a carbon tax, changes in precipitation, and increased emissions-reporting obligations. The risk management responses for the proposed carbon tax, focus on energy efficiency and carbon footprint measurement. Reported longer-term risks include the carbon tax, future regulation of fuel use and the impact of international climate change agreements.

Opportunities: The most often reported opportunity lies in meeting changing consumer demand for products. Companies also identify water efficiency initiatives and building resilience into supply chains as opportunities driven by climate change.

> Reporting the embedded emissions from transportation of goods is an issue raised by stakeholders. Truworths has recognised the need to track and manage these emissions. To this end, we have developed a tool that can deduce the carbon emissions for every kg of freight transported by Truworths. The tool, the first of its kind in South Africa, takes into account the distance from origin to destination and the mode of transportation.
>
> **Truworths International**

Figure 23: Response rate by year: Consumer Discretionary

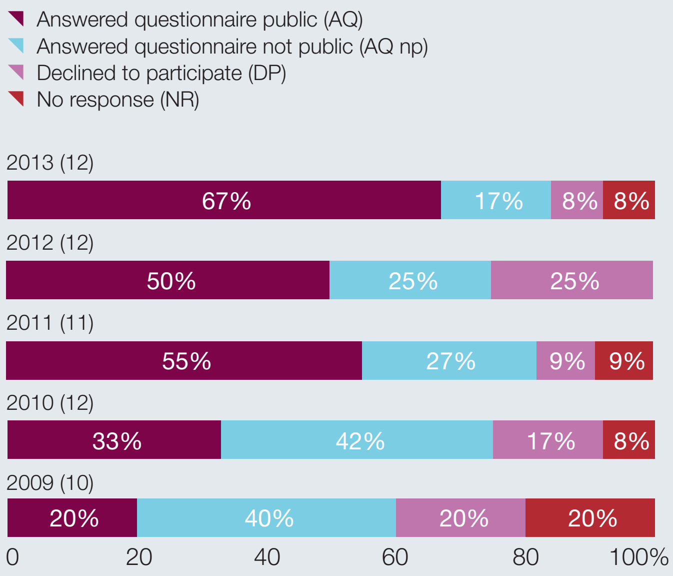


Figure 24: Disclosure score breakdown: Consumer Discretionary

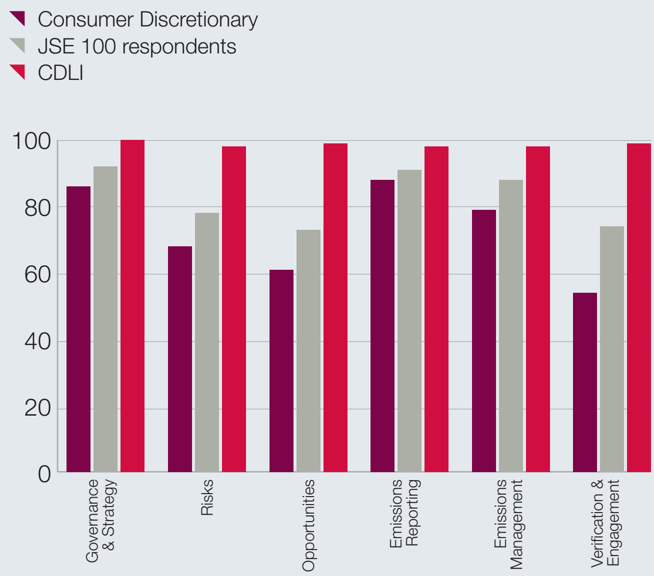
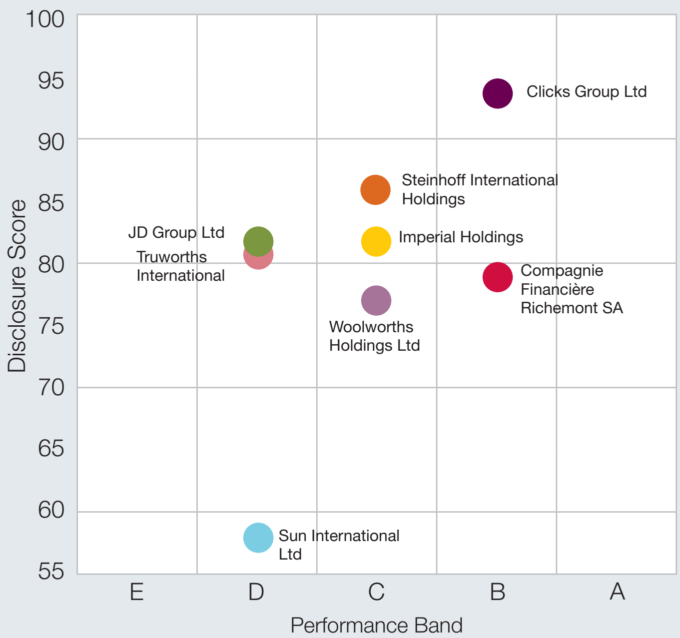
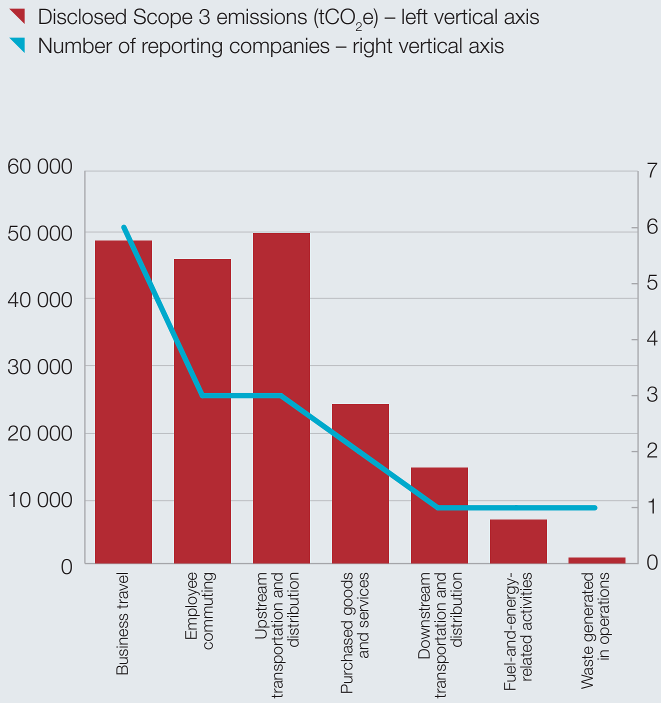


Figure 25: Disclosure and performance bands: Consumer Discretionary



Reason for exclusion of companies from the above graph:			
No response (NR)	Declined to participate (DP)	Answered Questionnaire, not public (AQ np)	Answered Questionnaire via parent company (AQ sa)
Famous Brands Ltd	Mr Price Group Ltd	Foschini Group Ltd	
		Naspers	

Figure 26: Scope 3 disclosed emissions by category and number of companies reporting: Consumer Discretionary



Consumer Staples

RESPONSE RATE

92% **(11 of 12)**

Response of industries within the sector:

Beverages *(1 of 1)*
Food & Staples Retailing *(5 of 5)*
Food Products *(4 of 5)*
Tobacco *(1 of 1)*

8 022 721 metric tons CO_2e

Total Scope 1+2 emissions 2013

22%
Market capitalisation

8,1%

Increase in Scope 1+2 emissions since 2012

3,7%
of total JSE 100 emissions

80/C Average disclosure score / performance band

Climate change and the Consumer Staples sector

The principal area for retailers to address climate change is in their supply chain, distribution networks and stores. Primary producers, who have a greater direct impact than retailers in this sector, have scope to implement more extensive emissions and water management initiatives, and to explore opportunities for onsite power generation, particularly from bio-fuels generated from waste. This sector is vulnerable to climate-driven price fluctuation from food commodity prices. Best practice includes cooperation through industry bodies to explore adaptation initiatives such as crop innovation, as well as exploring opportunities to address food security issues through value chains. While there are potential green product development opportunities, consumers tend to associate these goods with higher prices.

Reported risks and opportunities

Risks: Principal risks cited by Consumer Staples include changes in precipitation extremes, the proposed carbon tax, changes in consumer behaviour, fuel taxes, and emissions reporting obligations. Risk management strategies include building more resilient supply chains, disaster management initiatives, energy efficiency initiatives, and carbon reporting processes. Some companies are moving production areas, changing product packaging and are utilising fuel-switching technologies.

Opportunities: Many companies are implementing energy efficiency and fuel-switching projects. Opportunities for product development have also been reported, although there is a common understanding that the market for green products is still in its infancy. Companies are investigating opportunities throughout their supply chains to incorporate energy efficiency into product design and logistics. Some companies are creating closed loop systems, converting waste into energy or other useful input products.

> Our absolute emissions reduced by 9% as a result of emissions reduction activities. This figure includes decreases from energy efficiency (7%) and reduction in the use of HFCs (2%).
>
> **Pick n Pay Holdings Ltd**

Figure 27: Response rate by year: Consumer Staples

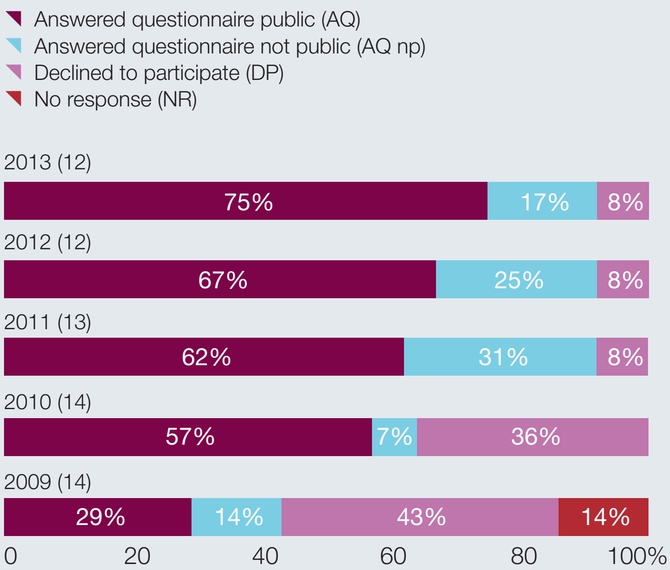


Figure 28: Disclosure score breakdown: Consumer Staples

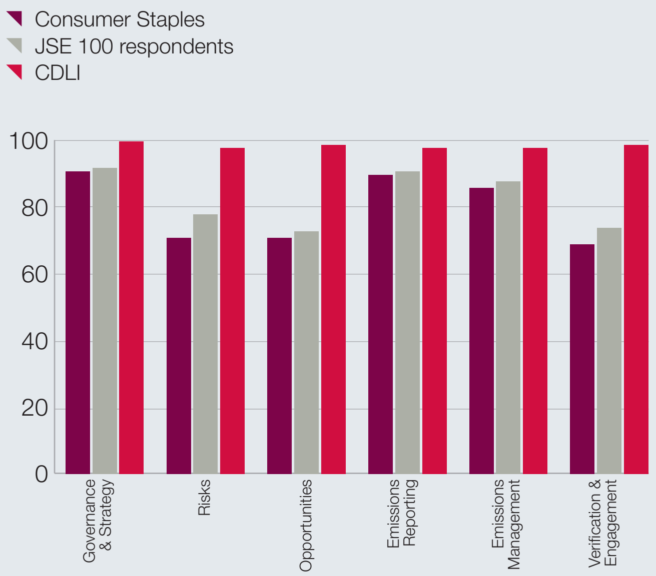
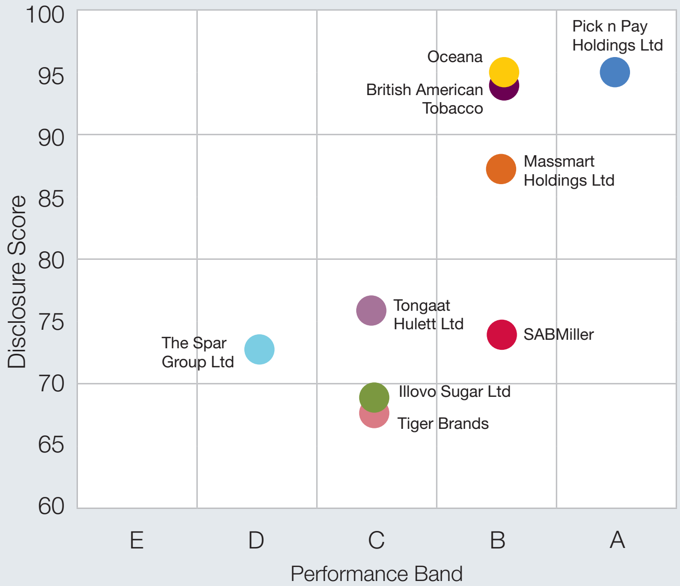
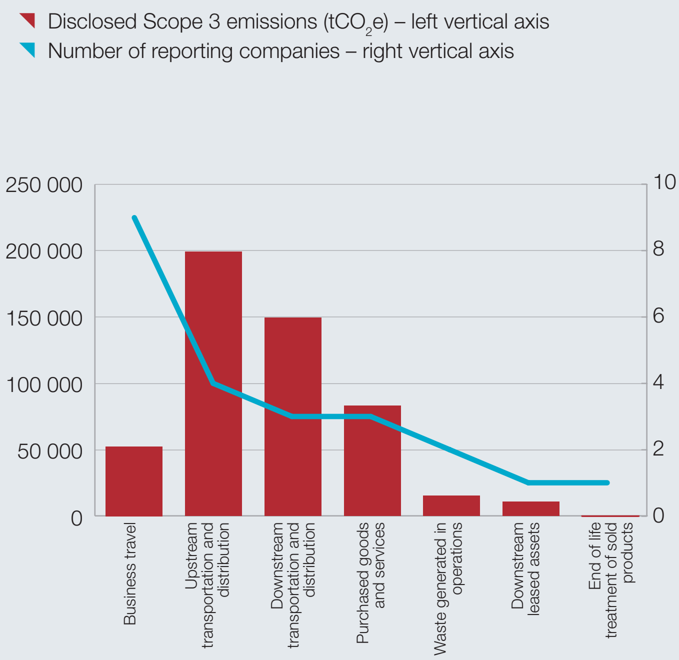


Figure 29: Disclosure and performance bands: Consumer Staples



Reason for exclusion of companies from the above graph:			
No response (NR)	Declined to participate (DP)	Answered Questionnaire, not public (AQ np)	Answered Questionnaire via parent company (AQ sa)
	Avi Ltd	Pioneer Foods	
		Shoprite Holdings Ltd	

Figure 30: Scope 3 disclosed emissions by category and number of companies reporting: Consumer Staples



Energy & Materials

RESPONSE RATE

95% (21 of 22)

Response of industries within the sector:

Chemicals *(1 of 2)*
Construction Materials *(1 of 1)*
Containers & Packaging *(1 of 1)*
Metals & Mining *(15 of 15)*
Oil, Gas & Consumable Fuels *(1 of 1)*
Paper & Forest Products *(2 of 2)*

198 018 041 metric tons CO_2e

Total Scope 1+2 emissions 2013

42%
Market capitalisation

-1,5%

Decrease in Scope 1+2 emissions since 2012

90/B Average disclosure score / performance band

90,2%
of total JSE 100 emissions

In this reporting year, Harmony implemented eight demand side management (DSM) projects. Eskom, through its DSM programme, contributed a total of R89 million to the implementation of these projects (62% of the total capital cost). The projects resulted in a total annual energy saving of 123 GWh.

Harmony Gold Mining Co Ltd

Climate change and the Energy & Materials sector

The sector has significant direct impacts, as well as high levels of vulnerability to the physical and policy effects of climate change. Climate change policy, including the proposed carbon tax in South Africa, poses significant risks, highlighting the need for engaging constructively with government. There is a growing expectation that companies invest significantly in energy and water efficiency initiatives, and to explore technologies such as carbon capture and storage. There are opportunities and business benefits associated with helping neighbouring vulnerable communities with adaptation. Recent labour issues in the sector have cast further emphasis on risks and opportunities with respect to communities.

Reported risks and opportunities

Risks: Carbon taxes present potentially significant negative economic impacts, with consequent risks to companies' abilities to operate. With increasing energy and compliance expenditure driving operating costs up, companies are responding by implementing energy efficiency programmes. Further risks the sector reports include both water scarcity and flooding. In some cases, companies report that these risks have already materialised, which has prompted implementation of improved flood response plans as well as carbon emissions mitigation activities. Increasing consumer focus on energy efficiency of products is also seen as a potential risk, as is reputational risk associated with being energy intensive. Potential consequences of reputational risk include compromised ability to partner with stakeholders and undermining companies' social licence to operate.

Opportunities: Energy efficiency initiatives reportedly present the primary opportunities for cost saving and securing continuity of operations. Onsite power generation (including through renewables) is seen to provide energy security, possible savings by avoiding increasing electricity costs, revenue opportunities associated with selling power to the national grid, and enhanced reputation. Clean Development Mechanism (CDM) projects present opportunities for revenue generation. There is an anticipated increase in demand for certain metals (such as PGMs and uranium) resulting from the transition to a low-carbon economy.

Figure 31: Response rate by year: Energy & Materials

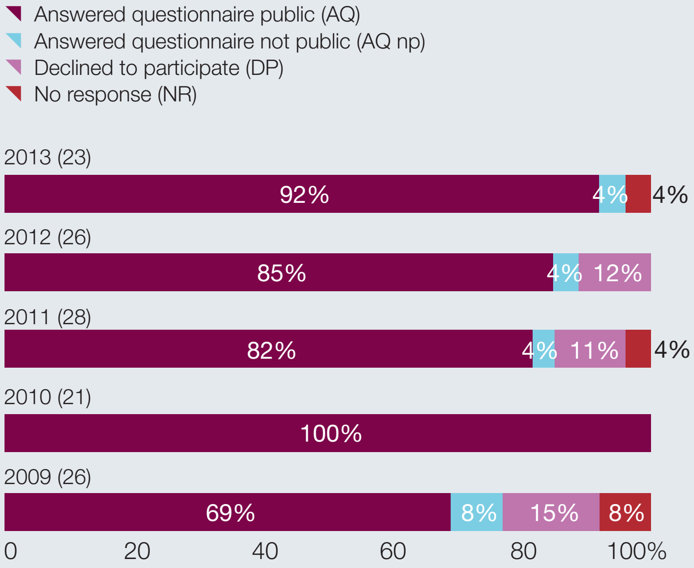


Figure 32: Disclosure score breakdown: Energy & Materials

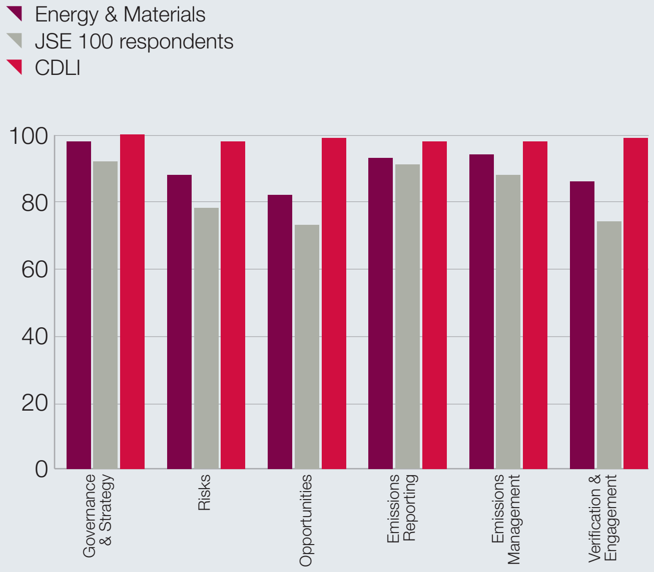
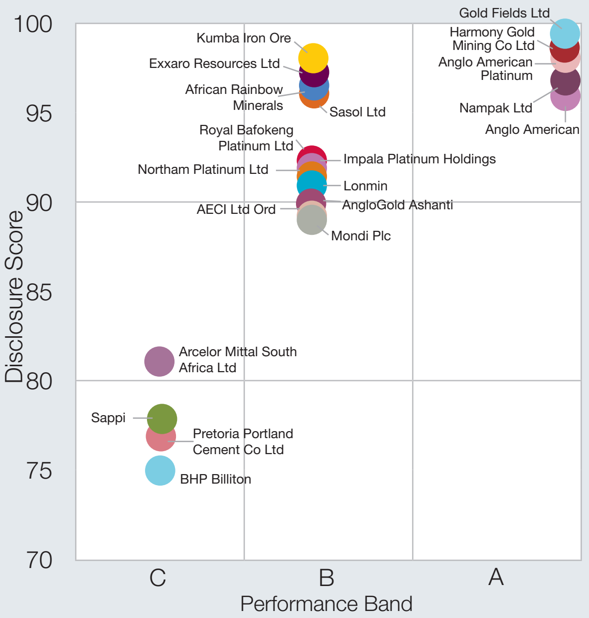
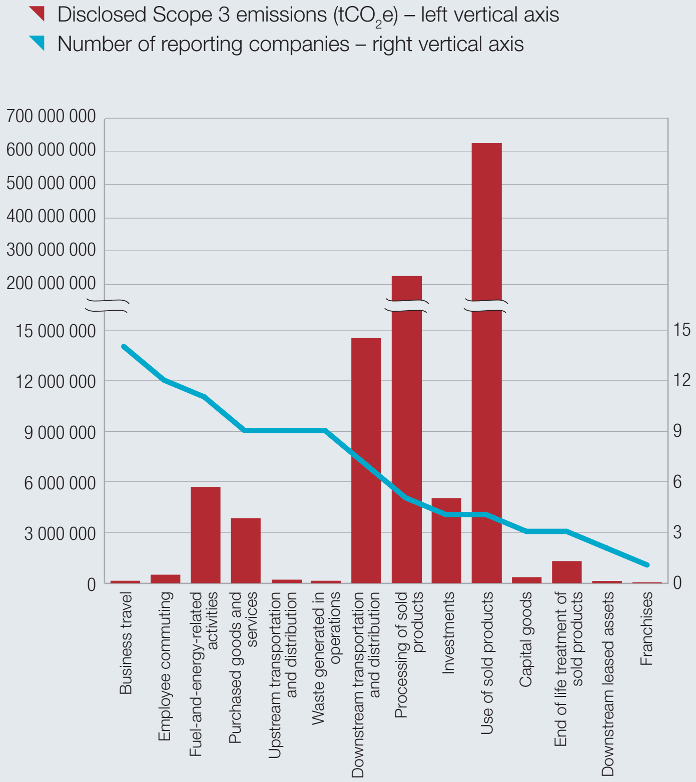


Figure 33: Disclosure and performance bands: Energy & Materials



Reason for exclusion of companies from the above graph:			
No response (NR)	Declined to participate (DP)	Answered Questionnaire, not public (AQ np)	Answered Questionnaire via parent company (AQ sa)
Omnia Holdings Ltd		Assore Ltd	Mondi Ltd - see Mondi Plc

Figure 34: Scope 3 disclosed emissions by category and number of companies reporting: Energy & Materials



Financials

RESPONSE RATE

65% **(20 of 31)**

Response of industries within the sector:

Capital Markets *(1 of 1)*
Commercial Banks *(4 of 4)*
Diversified Financial Services *(4 of 7)*
Insurance *(6 of 7)*
Real Estate Investment Trusts *(2 of 6)*
Real Estate Investment Trusts *(1 of 1)*
Real Estate Management & Development *(2 of 5)*

3 659 533 metric tons CO_2e

Total Scope 1+2 emissions 2013

16%
Market capitalisation

12,5%

Increase in Scope 1+2 emissions since 2012

84/B Average disclosure score / performance band

1,7%
of total JSE 100 emissions

While Discovery is not currently exposed to mandatory reduction targets it does believe it will be bound to such targets in the short to medium term. With this in sight the company has embarked on energy savings so that it does not expose itself to financial penalties.
Discovery Holdings Ltd

Climate change and the Financials sector

The Financials sector is a key enabler of a low-carbon economy through its capacity to fund and incentivise new technologies, solutions and infrastructure that can reduce emissions and promote adaptation. Current regulatory uncertainty has not completely dampened the appetite of the sector for investment support, although, expectations are that the sector will increase investment once regulatory frameworks are established. Increasing opportunities for new products will emerge in areas such as carbon trading, infrastructure, mobile banking products, environmental liability insurance products and 'green' property developments. The development of accurate risk-pricing models is a significant challenge. The sector is affected by the overall economy and the wellbeing of its clients, both of which may be adversely affected by tightening regulations and mitigation policies, and by increasing energy and materials costs.

Reported risks and opportunities

Risks: Banks and other investment companies face risks associated with exposure of investments. The insurance sector reports that risks due to extreme weather events could increase in future. Damage to infrastructure could impact the operations of the companies and their ability to transact with their customers. As most companies in this sector rely on Eskom for electricity, the increase in tariffs and the exposure to the pass-through of the proposed carbon tax are concerns.

Opportunities: Most companies highlight opportunities related to cost savings from energy efficiency. Energy efficiency is also seen as having reputational benefit. Some companies identify more significant opportunities in developing the carbon market, financing green projects, managing socially responsible funds, and green product innovation and rollout. Opportunities exist for new insurance product development, but these still require rigorous risk analysis and quantification.

Figure 35: Response rate by year: Financials

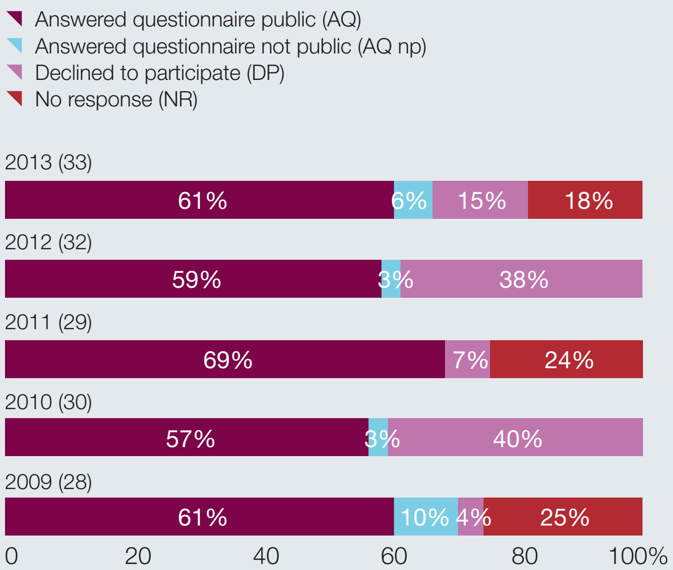


Figure 36: Disclosure score breakdown: Financials

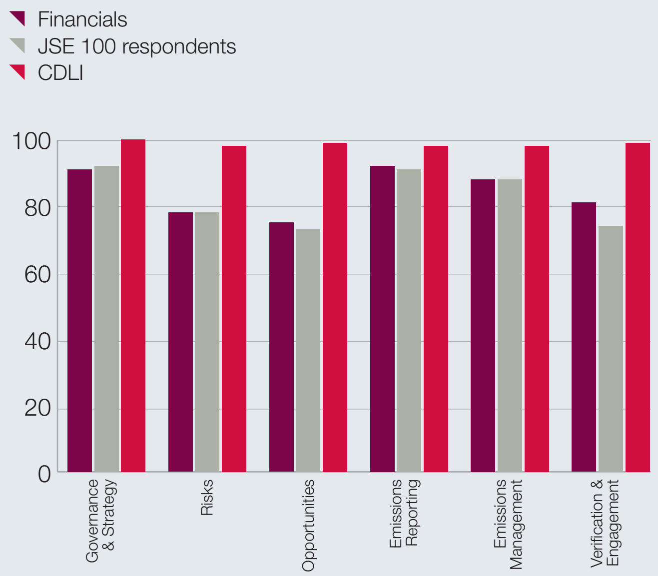
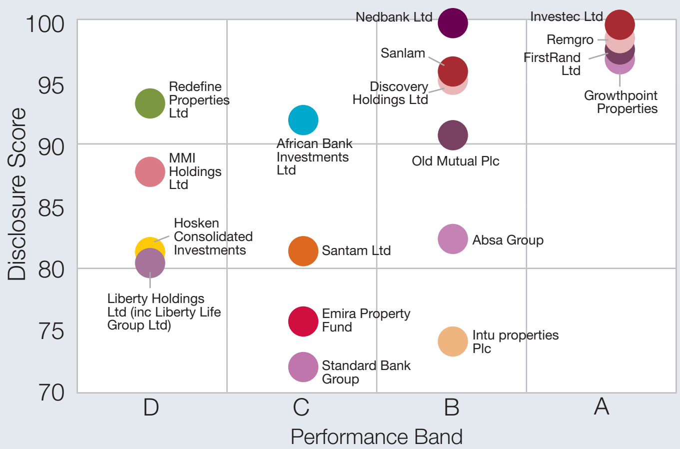
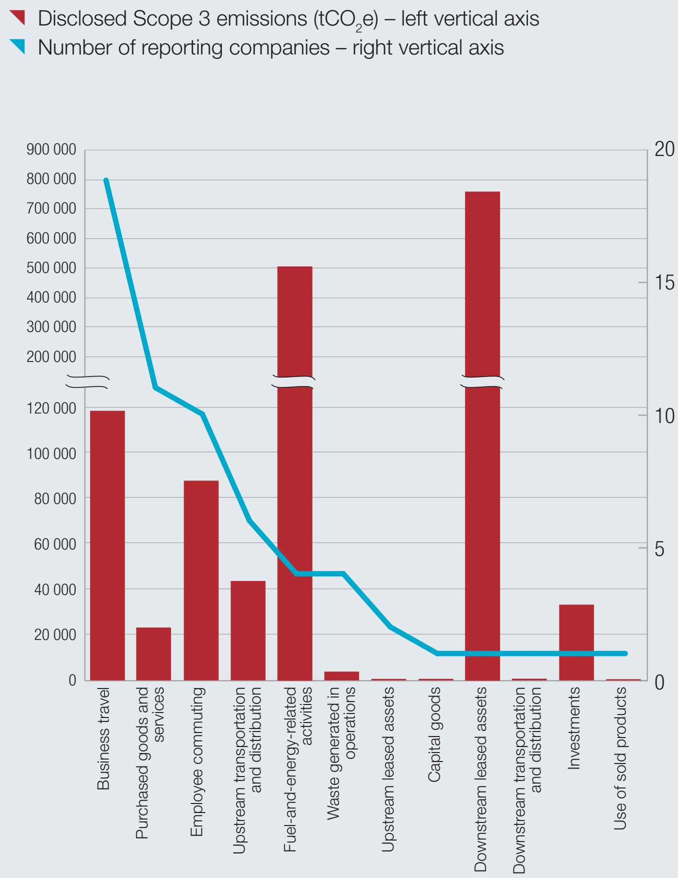


Figure 37: Disclosure and performance bands: Financials



Reason for exclusion of companies from the above graph:			
No response (NR)	Declined to participate (DP)	Answered Questionnaire, not public (AQ np)	Answered Questionnaire via parent company (AQ sa)
Capital Property Fund	Acucap	Capital & Counties Properties	Investec Plc - see Investec Ltd
Coronation Fund Managers Ltd	Brait SE	Capitec Bank Holdings Ltd	Rmb Holdings Ltd - see FirstRand
Fountainhead Property Trust	Hyprop Investments Ltd		
Resilient Prop Inc	Reinet Investments		
SA Corporate Real Estate Fund	RMI Holdings		
	Vukile Property Fund		

Figure 38: Scope 3 disclosed emissions by category and number of companies reporting: Financials



Health Care

RESPONSE RATE

100% (5 of 5)

Response of industries within the sector:

Health Care Providers & Services *(3 of 3)*
Pharmaceuticals *(2 of 2)*

687 740 metric tons CO_2e

Total Scope 1+2 emissions 2013

2%
Market capitalisation

32,2%
Increase in Scope 1+2 emissions since 2012

0,3%
of total JSE 100 emissions

79/C Average disclosure score / performance band

Climate change may cause a secondary increase in the need for healthcare. Examples could include that an increase in storm activity will result in increased road accidents that may lead to an increased need for healthcare. Droughts and increase in temperature would have an increased requirement for healthcare due to heat related conditions.

Netcare Ltd

Climate change and the Health Care sector

The sector does not have a large direct impact in terms of carbon emissions. Reduced access to raw materials due to climate impacts on agriculture pose a potential risk to pharmaceutical drug production, potentially leading to increased costs and fluctuating supply. Opportunities for health care providers include increased demand for emergency medical care due to extreme weather related injuries. Changes in weather patterns are also likely to change bacterial and viral distributions, leading to increased disease loads and the resultant demand for medical care and treatment drugs. As suppliers of drugs, ensuring continued access and affordability to more vulnerable population groups is a key expectation.

Reported risks and opportunities

Risks: Companies in this sector report the proposed carbon tax and the associated emissions reporting obligations to be the major risk factors for the sector. They also identify risks pertaining to energy and water security as well as the increased cost of these resources. Variable security of energy supply presents risks for health care providers, requiring investment in back-up generators. Hospitals and particularly pharmaceutical companies have strict regulated temperature requirements that may require increased energy consumption in future. Risks associated with access to and increasing costs of raw materials are seen to be a longer-term risk for pharmaceutical supply chains.

Opportunities: Principal opportunities reported are cost savings from efficiency initiatives, and resource-efficient products by pharmaceutical companies. Companies also identify increasing demand for health care services associated with changing disease vectors and increased extreme weather events. Further opportunities exist for energy savings in refrigeration of medicines.

Figure 39: Response rate by year: Health Care

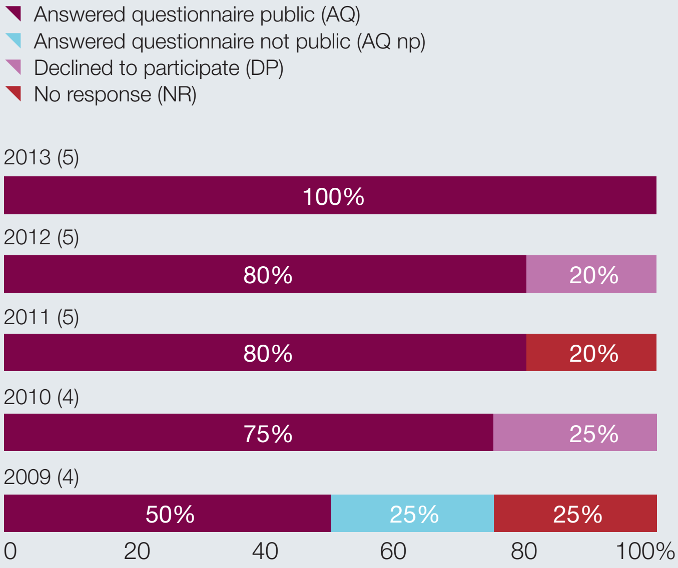


Figure 40: Disclosure score breakdown: Health Care

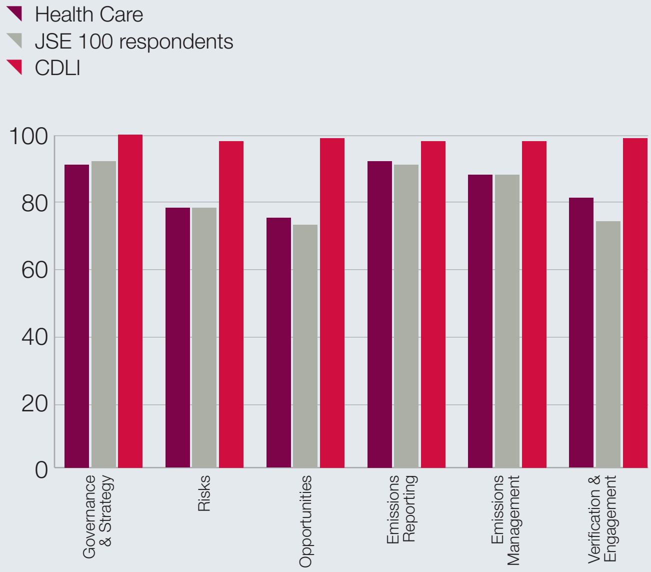
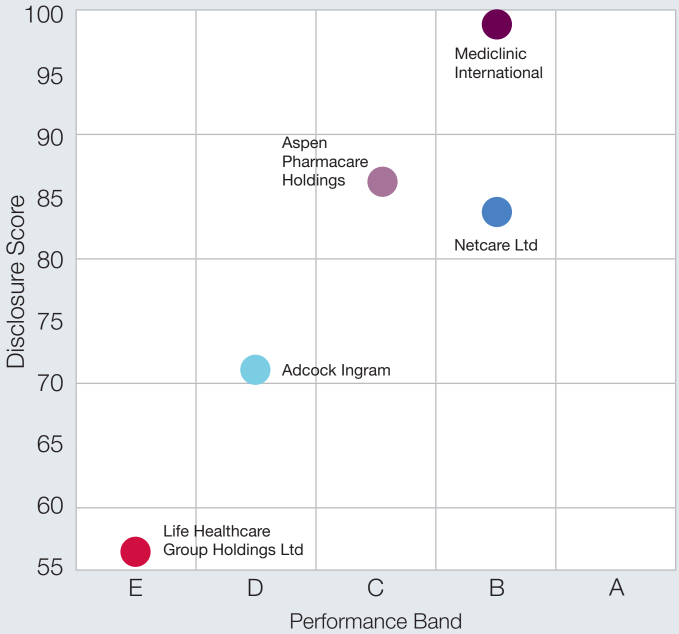
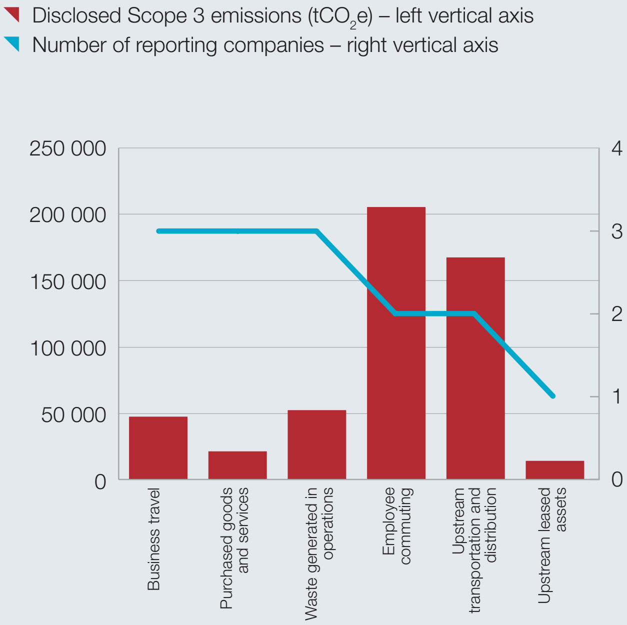


Figure 41: Disclosure and performance bands: Health Care



Reason for exclusion of companies from the above graph:			
No response (NR)	Declined to participate (DP)	Answered Questionnaire, not public (AQ np)	Answered Questionnaire via parent company (AQ sa)
none	none	none	none

Figure 42: Scope 3 disclosed emissions by category and number of companies reporting: Health Care



Industrials

RESPONSE RATE

90% (9 of 10)

Response of industries within the sector:

Construction & Engineering *(3 of 3)*
Industrial Conglomerates *(4 of 4)*
Marine *(1 of 2)*
Trading Companies & Distributors *(1 of 1)*

3 351 400 metric tons CO_2e

Total Scope 1+2 emissions 2013

41,2%

Increase in Scope 1+2 emissions since 2012

83/C Average disclosure score / performance band

2%
Market capitalisation

1,5%
of total JSE 100 emissions

Our ability to recycle products that previously would have been sent to landfill is becoming an opportunity which will have a positive impact on our bottom line. An example from our work in the motor industry is where we are taking offcuts of carpets and converting them back into new carpets using a powdering process.

KAP Industrial Holdings

Climate change and the Industrials sector

The Industrials sector will be exposed to significant new costs in its value chain including: increased input costs for carbon-intensive materials (such as cement and steel), as well as water, fuels and electricity; increased taxes on direct emissions from its manufacturing processes; and increased transport and logistics costs due to climate-related policy measures. The sector is vulnerable to extreme weather events that can lead to business disruptions and damage to assets. Opportunities exist for investments in new technologies, skills development and product diversification, all to meet growing customer demand for climate change mitigation and adaptation products and infrastructure.

Reported risks and opportunities

Risks: Companies in the sector report significant exposure to increasing costs associated with energy and resource consumption, and potential carbon taxes. Increasing energy costs, variable security of energy supply and the physical impacts of climate change (such as increased extreme weather events and changing precipitation patterns) are reportedly linked to unavoidable project delays, particularly for construction companies. Uncertainty in the regulatory environment remains a major concern for companies.

Opportunities: Significant opportunities in energy efficiency are reported for the sector. Companies are exploring opportunities for developing CDM projects, investing in renewables, and developing carbon-neutral products and services. Several companies report significant research and development budgets, of which many focus on exploring green business opportunities. Opportunities to diversify companies' energy mix to include low-carbon and renewable technologies are also reported. Companies see opportunities to contribute to 'green economy' infrastructure, including green building technologies in the future.

Figure 43: Response rate by year: Industrials

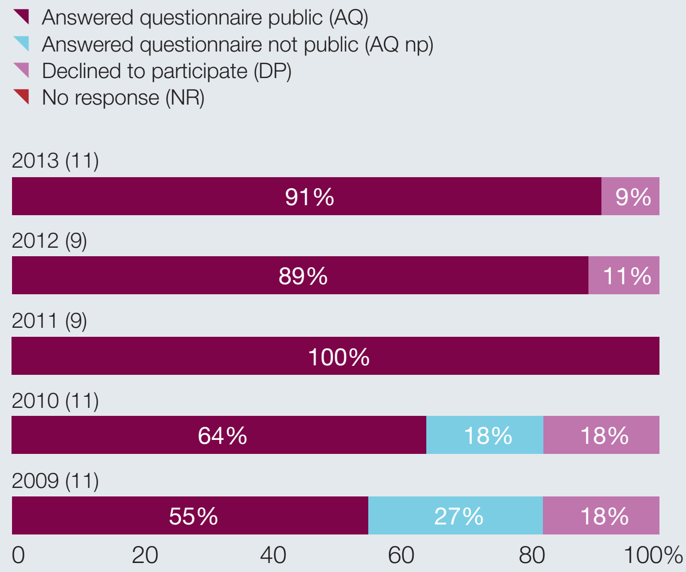


Figure 44: Disclosure score breakdown: Industrials

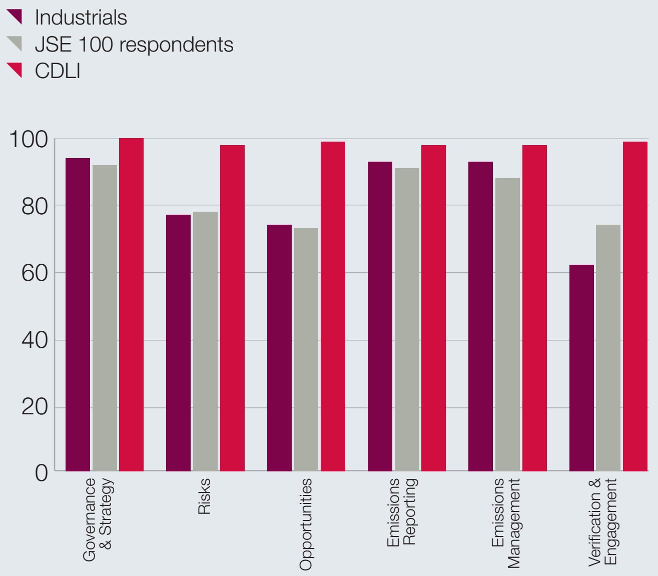
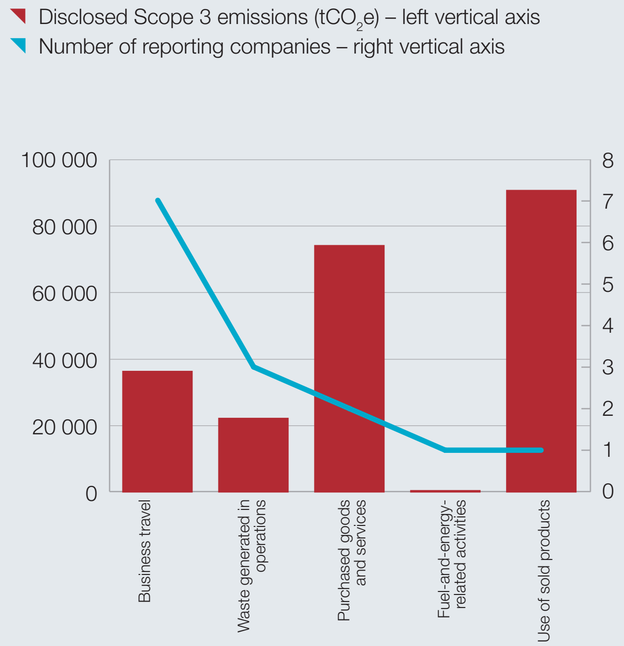


Figure 45: Disclosure and performance bands: Industrials

Reason for exclusion of companies from the above graph:			
No response (NR)	Declined to participate (DP)	Answered Questionnaire, not public (AQ np)	Answered Questionnaire via parent company (AQ sa)
	Trencor		African Oxygen Ltd Ord

Figure 46: Scope 3 disclosed emissions by category and number of companies reporting: Industrials



IT & Telecoms

RESPONSE RATE

75% (3 of 4)

Response of industries within the sector:

Diversified Telecommunication Services *(1 of 1)*
Software & Services *(0 of 1)*
Wireless Telecommunication Services *(2 of 2)*

2 192 182 metric tons CO_2e

Total Scope 1+2 emissions 2013

6%
Market capitalisation

4,8%
Increase in Scope 1+2 emissions since 2012

1%
of total JSE 100 emissions

82/C Average disclosure score / performance band

Climate change and the IT & Telecoms sector

This sector has the potential to enable significant carbon savings across many sectors. It has been estimated that in Europe the sector could contribute to a 15% reduction in GHG emissions against business-as-usual by 2020.[38] Leverage is in 'smart' product and service offerings that reduce energy, fuel and paper consumption, and associated emissions for customers in the public and private sectors. There are also opportunities to develop solutions to climate-related social challenges such as increasing natural disasters and food insecurity. Technological solutions to these problems can be implemented at scale across Africa. A significant challenge remains regarding the required changes in consumer behaviour.

Reported risks and opportunities

Risks: Principal reported risks include increasing compliance and reporting costs, and greater energy costs, particularly for power for network infrastructure. Companies also report damage to infrastructure resulting from physical climate change as a risk, often in remote areas, leading to energy shortages at base stations resulting in interruptions of service. Finally, the need for increased cooling at base station sites and data centres is seen as a possible risk.

Opportunities: Opportunities that companies identify in this sector include continued cost and carbon savings from energy efficiency initiatives. Also identified is increased demand for communications technologies such as video conferencing and remote data access to enable decreased travel by customers. Some opportunities for alternative energy use and CDM development have already been taken up. Further opportunities have been identified in innovative product offerings meeting adaptation requirements of communities throughout Africa.

> To give a small farming community in the Vleiland Valley in the Western Cape cellphone coverage, Vodacom has installed base stations that operate on solar tracking and wind power. Not only do the farmers benefit from normal everyday communication to get information on the industry or to improve productivity, but the network can also be used to automate farm-operated pumps, dam levels and irrigation systems. This will give both farmers and the community the ability to farm more effectively.
>
> **Vodacom Group**

38 The Climate Group's SMART2020 report (2008): http://www.theclimategroup.org/publications/2008/6/19/smart2020-enabling-the-lowcarbon-economy-in-the-information-age/

Figure 47: Response rate by year: IT & Telecoms

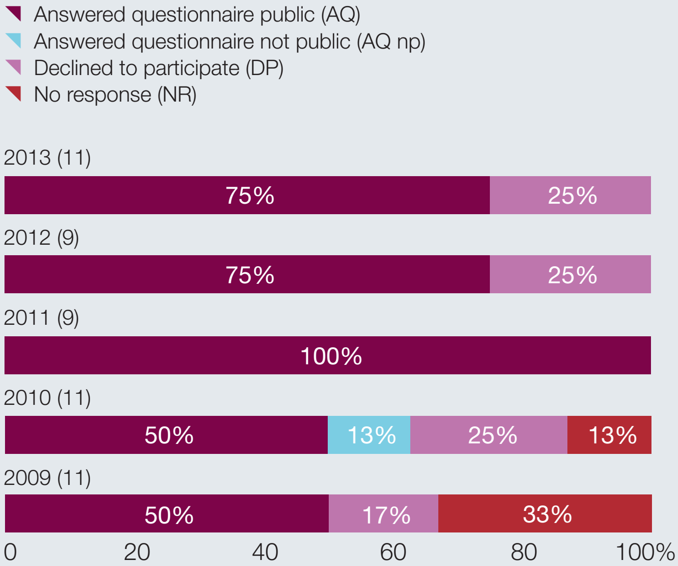


Figure 48: Disclosure score breakdown: IT & Telecoms

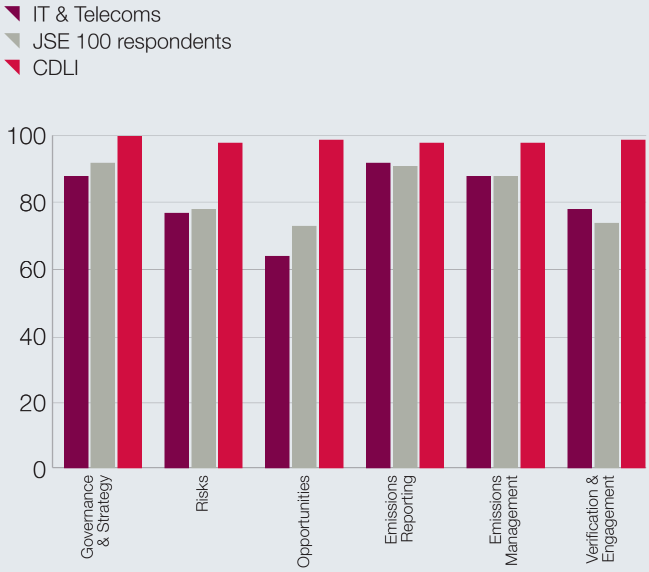
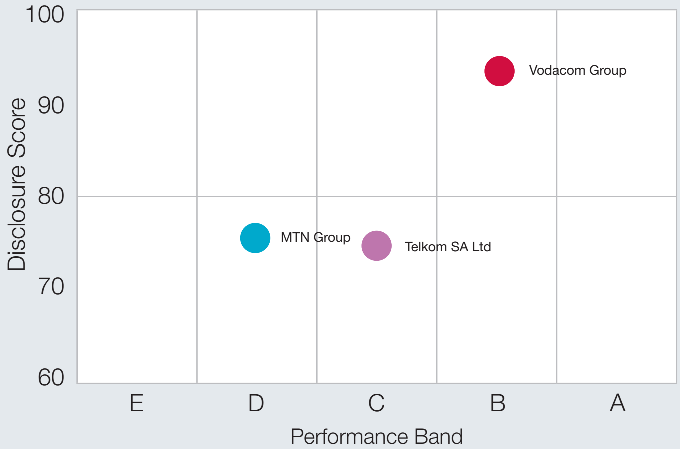
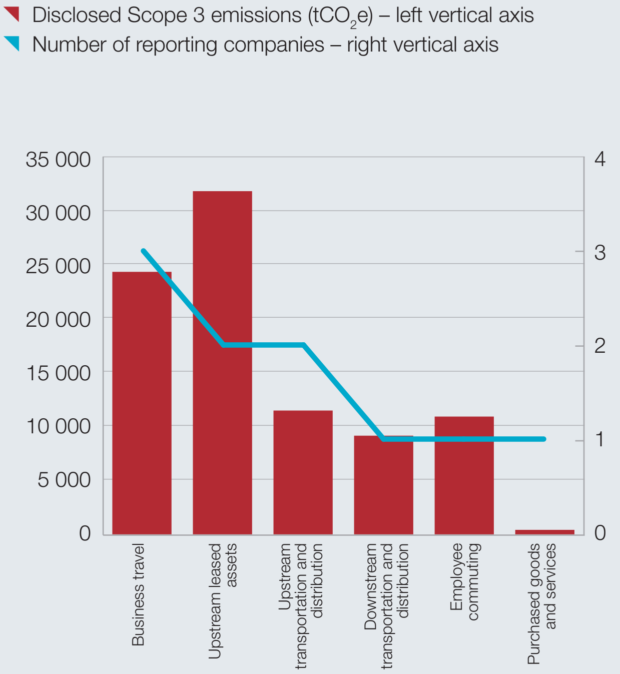


Figure 49: Disclosure and performance bands: IT & Telecoms



Reason for exclusion of companies from the above graph:			
No response (NR)	Declined to participate (DP)	Answered Questionnaire, not public (AQ np)	Answered Questionnaire via parent company (AQ sa)
	Datatec		

Figure 50: Scope 3 disclosed emissions by category and number of companies reporting: IT & Telecoms



Appendix 1: Global key trends

Statistic	Asia ex-Japan	Australia ASX 200	Benelux	Bonds	Brazil	Canada	Central & Eastern Europe	China	Emerging Markets	Electric Utilities (Global)	Europe	France
Number of companies in sample	400	200	150	180	100	200	100	100	800	250	300	250
% sample answering CDP 2013[39]	33	50	34	86	56	58	27	19	37	37	90	38
Number of companies answering CDP 2013[40]	131	99	51	154	56	115	27	19	296	92	271	94
% of responders reporting Board or other senior management responsibility for climate change	91	94	96	99	88	90	100	68	93	96	99	98
% responders reporting incentives for the management of climate change issues	71	57	73	92	61	64	75	42	74	74	85	70
% of responders reporting climate change as being integrated into their business strategy	93	87	90	97	82	85	100	84	91	98	95	89
% of responders reporting engagement with policymakers on climate issues to encourage mitigation or adaptation	83	73	90	88	84	80	75	58	86	94	92	83
% of responders reporting emission reduction targets[41]	73	52	71	87	55	49	75	26	73	74	90	76
% of responders reporting absolute emission reduction targets[42]	32	30	48	58	27	28	50	26	39	48	56	39
% of responders reporting active emissions reduction initiatives in the reporting year	88	77	94	98	80	88	75	84	91	93	99	96
% of responders indicating that their products and services directly enable third parties to avoid GHG emissions	73	55	75	72	78	68	75	58	65	89	78	80
% of responders seeing regulatory risks	81	82	83	82	80	78	75	37	88	93	89	86
% of responders seeing regulatory opportunities	84	71	83	80	80	70	75	47	85	91	90	84
% of responders whose absolute emissions (Scope 1 and 2) have decreased compared to last year due to emission reduction activities	21	30	54	65	8	25	75	11	25	24	53	37
% of responders reporting any portion of Scope 1 emissions data as independently verified[43]	57	55	67	79	55	40	50	11	64	66	85	82
% of responders reporting any portion of Scope 2 emissions data as independently verified[44]	57	51	69	73	57	27	50	11	64	54	84	81
% of responders reporting emissions data for 2 or more named Scope 3 categories[45]	27	33	35	40	59	25	25	5	35	39	53	38

The statistics presented in this key trends table may differ from those in other CDP reports for two reasons:

(1) the data in this table is based on all responses received by 28 August 2013;

(2) it is based on binary data (e.g. Yes/No or other drop down menu selection) reported to CDP and does not incorporate any validation of the follow up information provided or reflect the scoring methodology. The latter, in particular, is likely to lead to an over-reporting of data in this key trends table.

39 & 40 This statistic includes those companies that respond by referencing a parent or holding company's response. However the remaining statistics presented do not include these responses.

41 & 42 Companies may report multiple targets. However, in these statistics a company will only be counted once.

43 & 44 This takes into account companies reporting that verification is complete or underway, but does not include any evaluation of the verification statement provided.

DACH (DE, AUT, CH)	Global 500	Iberia (ES, PT)	India	Ireland	Italy	Japan	Korea	Latin America	New Zealand NZX 50	Nordic	Russia	South Africa	Switzerland	Turkey	Transport (Global)	United Kingdom FTSE 350	United States S&P 500	Overall[46]
350	500	125	200	30	100	500	250	80	50	260	50	100	100	100	100	350	500	N/A
52	81	44	27	40	46	45	36	53	42	59	18	83	64	28	55	74	68	N/A
182	403	55	54	12	46	225	89	42	21	153	9	83	64	28	55	260	342	2465
86	97	92	98	92	89	97	89	95	86	93	100	99	94	85	91	95	91	91
48	85	77	76	67	59	80	73	64	48	62	43	72	48	65	78	66	75	65
77	95	94	95	83	77	92	89	95	81	90	86	87	75	77	89	83	86	85
71	90	90	79	75	86	87	75	92	67	84	57	87	67	65	89	77	80	78
57	83	81	79	75	66	94	79	62	38	71	57	68	64	46	76	68	75	68
33	50	54	10	42	50	69	48	31	33	34	43	37	36	38	28	37	43	40
86	97	94	93	75	84	98	78	92	62	87	100	97	95	73	93	89	93	87
70	74	85	67	42	73	80	62	77	67	76	43	58	64	58	76	60	64	66
62	84	88	86	83	77	95	88	92	71	89	43	99	63	88	87	85	73	80
73	83	92	88	83	86	89	83	82	52	82	29	92	66	85	78	76	70	76
29	47	42	14	58	34	34	36	8	24	47	0	41	34	27	35	38	52	35
50	78	79	60	75	70	54	73	62	38	52	29	70	53	35	65	58	57	53
43	75	73	57	67	70	51	73	64	38	48	29	68	48	35	57	54	53	50
37	45	63	33	25	34	43	20	56	33	40	0	53	39	15	20	28	29	32

45 Only companies reporting Scope 3 emissions using the Greenhouse Gas Protocol Scope 3 Standard named categories have been included below. Whilst in some cases "Other upstream" or "Other downstream" are legitimate selections, in most circumstances the data contained in these categories should be allocated to one of the named categories. In addition, only those categories for which emissions figures have been provided have been included.

46 Includes responses across all samples as well as responses submitted by companies not included in specific geographic or industry samples in 2013.

Appendix 2: JSE 100 company response by summary sector

Company	Sub-Sector	2013 Response	Scope 1 South Africa (tCO_2e)	Scope 1 Global (tCO_2e)	Scope 2 South Africa (tCO_2e)	Scope 2 Global (tCO_2e)	Scope 1 & 2 South Africa (tCO_2e)
Consumer Discretionary							
Clicks Group Ltd	Multiline Retail	AQ	1,899	1,899	91,447	91,447	93,346
Compagnie Financière Richemont SA	Textiles, Apparel & Luxury Goods	AQ		18,600		45,200	
Famous Brands Ltd	Consumer Services	NR					
Foschini Group Ltd	Specialty Retail	AQ np					
Imperial Holdings	Distributors	AQ		913,784		203,725	
JD Group Ltd	Specialty Retail	AQ	27,352	27,352	206,035	206,035	233,387
Mr Price Group Ltd	Speciality Retail	DP					
Naspers	Media	AQ np					
Steinhoff International Holdings	Household Durables	AQ	436,931	491,000	479,424	569,719	916,355
Sun International Ltd	Hotels, Restaurants & Leisure	AQ	20,564	33,941	278,036	304,716	298,600
Truworths International	Specialty Retail	AQ	434	434	64,829	64,829	65,263
Woolworths Holdings Ltd	Multiline Retail	AQ	4,245	4,245	299,958	299,958	304,203
CD summary	**Companies: 12**	**AQ: 10**	**507,861**	**1,508,729**	**1,724,299**	**2,095,519**	**2,232,160**
Consumer Staples							
Avi Ltd	Food Products	DP					
British American Tobacco	Tobacco	AQ		359,184		387,168	
Illovo Sugar Ltd	Food Products	AQ	169,817	290,644	194,881	259,857	364,698
Massmart Holdings Ltd	Food & Staples Retailing	AQ	25,674	25,674	298,522	298,522	324,196
Oceana	Food Products	AQ	85,969	150,234	56,060	61,685	142,029
Pick n Pay Holdings Ltd	Food & Staples Retailing	AQ	64,967	64,967	512,322	512,322	577,289
Pioneer Foods	Food Products	AQ np					
SABMiller	Beverages	AQ	224,702	1,009,825	258,855	997,465	483,557
Shoprite Holdings Ltd	Food & Staples Retailing	AQ np					
The Spar Group Ltd	Food & Staples Retailing	AQ	41,360	41,360	61,053	61,053	102,413
Tiger Brands	Food & Staples Retailing	AQ	243,615	247,169	244,490	253,167	488,105
Tongaat Hulett Ltd	Food Products	AQ	763,578	885,976	242,649	360,258	1,006,227
CS summary	**Companies: 12**	**AQ: 11**	**1,933,964**	**3,389,315**	**3,310,741**	**4,633,406**	**5,244,705**
Energy & Materials							
AECI Ltd Ord	Chemicals	AQ	276,809	281,888	194,873	224,365	471,682
African Rainbow Minerals	Metals & Mining	AQ	475,977	480,420	1,329,769	1,329,785	1,805,746
Anglo American	Metals & Mining	AQ	1,954,091	8,470,754	7,266,477	9,403,534	9,220,568
Anglo American Platinum	Metals & Mining	AQ	524,028	532,649	5,153,339	5,253,513	5,677,367
AngloGold Ashanti	Metals & Mining	AQ	96,000	1,245,000	3,039,000	3,344,000	3,135,000
Arcelor Mittal South Africa Ltd	Metals & Mining	AQ	11,318,077	11,318,077	3,898,531	3,898,531	15,216,608
Assore Ltd	Metals & Mining	AQ np					
BHP Billiton	Metals & Mining	AQ	2,947,000	20,200,000	12,410,000	20,000,000	15,357,000
Exxaro Resources Ltd	Metals & Mining	AQ	343,405	345,401	1,100,822	1,117,409	1,444,227
Gold Fields Ltd	Metals & Mining	AQ	792,618	1,220,651	4,340,001	4,607,613	5,132,619
Harmony Gold Mining Co Ltd	Metals & Mining	AQ	33,652	100,336	2,929,656	2,929,656	2,963,308
Impala Platinum Holdings	Metals & Mining	AQ	462,004	487,911	2,887,903	3,170,280	3,349,907
Kumba Iron Ore	Metals & Mining	AQ	448,274	448,274	516,315	516,315	964,589
Lonmin	Metals & Mining	AQ	97,452	97,452	1,470,773	1,470,773	1,568,225
Mondi Ltd - see Mondi Plc	Paper & Forest Products	AQ sa					
Mondi Plc	Paper & Forest Products	AQ	733,832	4,329,585	693,211	1,267,224	1,427,043
Nampak Ltd	Containers & Packaging	AQ	128,568	203,733	577,785	628,483	706,353
Northam Platinum Ltd	Metals & Mining	AQ	15,134	15,134	602,314	602,314	617,448
Omnia Holdings Ltd	Chemicals	NR					
Pretoria Portland Cement Co Ltd	Construction Materials	AQ	4,437,330	4,437,330	594,110	594,110	5,031,440
Royal Bafokeng Platinum Ltd	Metals & Mining	AQ	3,336	3,336	316,681	316,681	320,017
Sappi	Paper & Forest Products	AQ	2,620,570	4,539,831	1,127,718	1,700,923	3,748,288
Sasol Ltd	Oil, Gas & Consumable Fuels	AQ	59,880,000	66,895,000	7,504,000	8,553,000	67,384,000
E&M summary	**Companies: 23**	**AQ: 22**	**88,016,718**	**126,081,324**	**58,961,486**	**71,936,717**	**146,978,204**
Financials							
Absa Group	Commercial Banks	AQ	15,626	15,626	316,407	316,407	332,033
Acucap	Real Estate Management & Development	DP					
African Bank Investments Ltd	Diversified Financial Services	AQ	24,345	24,345	80,632	80,632	104,977

Scope 1 & 2 Global (tCO_2e)	Scope 3 No of Categories Reported	Verification/ Assurance Status	Targets Reported	Emissions intensity per FTE employee	Emissions intensity (tCO_2e per unit total revenue)	Emissions intensity (tCO_2e per business aprropriate metric)
93,346	3	VAA S1 S2 S3	Abs & Int	5.8		0,206 tCO_2e per square meter
63,800	1	VAR S1 S2 S3	Intensity	2.31		
1,117,509	2			22.68		
233,387				8.72		0,19 tCO_2e per square meter
1,060,719			Intensity	13.24		0,39 tCO_2e per megawatt hour
338,657						
65,263	3			21.19		0,22 tCO_2e per square meter
304,203	4	VAA S1 S2 S3	Intensity	13.54	10.63	0,4 tCO_2e per square meter
3,604,248						
746,352	4	VAA S1 S2 S3	Intensity	13.26		0,64 tCO_2e per million cigarettes
550,501	1		Absolute	18.51		0,3153 tCO_2e per sugar produced
324,196	5	VAA S1 S2	Abs & Int	10.08	5.28	0,199 tCO_2e per square meter
211,919	3	VAA S1 S2 S3	Intensity	123.66		275,9 tCO_2e per metric tonne of product
577,289	3	VAA S1 S2 S3	Absolute	15.34	9.74	0,4 tCO_2e per square meter
2,007,290		VAA S1 S2	Intensity	28.48		0,111 tCO_2e per hectoliter of product
102,413	3			33.4		0,00052326 tCO_2e per unit of production
500,336	1		Intensity	55.74	22.04	0,19 tCO_2e per metric tonne of product
1,246,234	2	VAA S1 S2 VAF S3	Abs & Int	31.8	86.7	3,25 tCO_2e per megawatt hour
8,022,721						
506,253		VAA S1 S2	Absolute	73.42		2,36 tCO_2e per megawatt hour
1,810,205	6	VAA S1 S2		146.3		0,19 tCO_2e per unit of production
17,874,288	11	VAA S1 S2 S3	Absolute	186		0,065 tCO_2e per tonne ore mined
5,786,162	9	VAA S1 S2 S3	Intensity	113.74		0,05395778 tCO_2e per Rock broken
4,589,000		VAA S1 S2	Intensity	69.7		1,11 tCO_2e per ounce of gold
15,216,608	2	VAR S1 S2	Intensity	1678		2,98 tCO_2e per tonne of steel
40,200,000	2	VAA S1 S2	Intensity	867		
1,462,810	11	VAA S1 S2 S3	Absolute	192		18,5 tCO_2e per kilo tonnes coal produced
5,828,264	9	VAA S1 S2 S3		106	112.4	1,05 tCO_2e per ounce of gold
3,029,992	3	VAA S1 S2 S3	Abs & Int	90.65		2,37647 tCO_2e per ounce of gold
3,658,191	3	VAA S1 S2	Absolute	58.1		2,52 tCO_2e per ounce of platinum
964,589	9	VAA S1 S2 S3	Absolute	128		0,003923 tCO_2e per tonne mined
1,568,225	3	VAA S1 S2 S3	Intensity	55.6		1,162 tCO_2e per ounce of PGM produced
5,596,809		VAA S1 S2	Intensity	217.4		0,799 tCO_2e per metric tonne of product
832,216	3	VAA S1 S2 S3	Absolute	81.29		0,5578545008 tCO_2e per square meter
617,448	2	VAA S1 S2	Absolute	89		0,25 tCO_2e per tonne milled
5,031,440		VAA S1 S2	Intensity	1630		1007 tCO_2e per metric tonne of product
320,017	2	VAA S1 S2		39.9	0.1	0,124 tCO_2e per tonne ROM delivered to concentrate
6,240,754	1		Intensity	445		0,81 tCO_2e per tonne of sales US$
75,448,000	8	VAA S1 S2	Abs & Int	2570		3,02 tCO_2e per metric tonne of product
198,018,040						
332,033	1	VAA S1 S2 S3	Absolute	9.6	7.1	0,24 tCO_2e per square meter
104,977	4	VAA S1 S2 S3	Absolute	8.43	0.01	49,3 tCO_2e per branch

Company	Sub-Sector	2013 Response	Scope 1 South Africa (tCO_2e)	Scope 1 Global (tCO_2e)	Scope 2 South Africa (tCO_2e)	Scope 2 Global (tCO_2e)	Scope 1 & 2 South Africa (tCO_2e)
Brait SE	Diversified Financial Services	DP					
Capital & Counties Properties	Real Estate Investment Trusts	AQ np					
Capital Property Fund	Real Estate Investment Trusts	NR					
Capitec Bank Holdings Ltd	Commercial Banks	AQ np					
Coronation Fund Managers Ltd	Diversified Financial Services	NR					
Discovery Holdings Ltd	Insurance	AQ	752	752	32,164	32,164	32,916
Emira Property Fund	Real Estate Investment Trusts	AQ	1,205	1,205	187,107	187,107	188,312
FirstRand Ltd	Diversified Financial Services	AQ	11,572	11,572	257,172	257,172	268,744
Fountainhead Property Trust	Real Estate Investment Trusts	NR					
Growthpoint Properties	Real Estate Management & Development	AQ	58	58	1,864	1,864	1,922
Hosken Consolidated Investments	Diversified Financial Services	AQ	101,580	110,744	375,938	403,103	477,518
Hyprop Investments Ltd	Real Estate Management & Development	DP					
Intu Properties Plc	Real Estate Investment Trusts	AQ	5,458	5,458	41,857	41,857	47,315
Investec Ltd	Capital Markets	AQ	1,476	2,261	31,561	39,183	33,037
Investec Plc - see Investec Ltd	Capital Markets	AQ sa					
Liberty Holdings Ltd (incorporating Liberty Life Group)	Insurance	AQ	2,309	2,309	44,743	44,743	47,052
MMI Holdings Ltd	Insurance	AQ	739	739	62,932	62,932	63,671
Nedbank Ltd	Commercial Banks	AQ	848	848	154,023	164,804	154,871
Old Mutual Plc	Insurance	AQ	3,231	10,200	614,155	655,638	617,386
Redefine Properties Ltd	Real Estate Management & Development	AQ	635	635	50,627	50,627	51,262
Reinet Investments	Diversified Financial Services	DP					
Remgro	Diversified Financial Services	AQ	311,450	311,450	367,713	367,713	679,163
Resilient Prop Inc	Real Estate Management & Development	NR					
Rmb Holdings Ltd - see FirstRand	Diversified Financial Services	AQ sa					
RMI Holdings	Insurance	DP					
SA Corporate Real Estate Fund	Real Estate Investment Trusts	NR					
Sanlam	Insurance	AQ	42	42	41,540	41,540	41,582
Santam Ltd	Insurance	AQ	54	54	8,109	8,109	8,163
Standard Bank Group	Commercial Banks	AQ		9,198		363,916	
Vukile Property Fund	Real Estate Investment Trusts	DP					
FIN summary	**Companies: 33**	**AQ: 22**	**483,809**	**509,923**	**2,698,645**	**3,149,610**	**3,182,453**
Health Care							
Adcock Ingram	Pharmaceuticals	AQ	10,822	12,195	31,196	34,934	42,018
Aspen Pharmacare Holdings	Pharmaceuticals	AQ	3,394	6,774	83,410	88,008	86,804
Life Healthcare Group Holdings Ltd	Health Care Providers & Services	AQ			135,970	135,970	135,970
Mediclinic International	Health Care Providers & Services	AQ	20,214	20,214	150,200	150,200	170,414
Netcare Ltd	Health Care Providers & Services	AQ	41,931	41,931	197,513	197,513	239,444
HC summary	**Companies: 5**	**AQ: 5**	**76,361**	**81,114**	**598,289**	**606,626**	**674,650**
Industrials							
African Oxygen Ltd Ord	Industrial Conglomerates	AQ sa					
Allied Electronics Corporation Ltd	Industrial Conglomerates	AQ	12,503	15,091	125,910	131,372	138,413
Aveng Ltd	Construction & Engineering	AQ	393,374	439,373	129,792	139,605	523,166
Barloworld	Trading Companies & Distributors	AQ		118,335		79,154	
Bidvest Group Ltd	Industrial Conglomerates	AQ	172,075	397,674	225,939	309,031	398,014
Grindrod Ltd	Marine	AQ	124,266	384,011	17,114	23,199	141,380
KAP Industrial Holdings	Industrial Conglomerates	AQ	409,579	409,579	273,389	273,389	682,968
Murray & Roberts Holdings Ltd	Construction & Engineering	AQ	344,785	455,104	66,001	68,107	410,786
Reunert	Industrial Conglomerates	AQ	10,535	10,535	56,480	56,575	67,015
Trencor	Marine	DP					
Wilson Bayly Holmes-Ovcon Ltd	Construction & Engineering	AQ	29,774	29,774	11,492	11,492	41,266
IND summary	**Companies: 11**	**AQ: 10**	**1,496,891**	**2,259,476**	**906,117**	**1,091,924**	**2,403,008**
IT & Telecoms							
Datatec	Software & Services	DP					
MTN Group	Wireless Telecommunication Services	AQ	3,674	652,790	192,187	384,725	195,861
Telkom SA Ltd	Diversified Telecommunication Services	AQ	51,648	51,648	655,465	655,465	707,113
Vodacom Group	Wireless Telecommunication Services	AQ	12,118	45,851	367,366	401,703	379,484
IT&T summary	**Companies: 4**	**AQ: 3**	**67,440**	**750,289**	**1,215,018**	**1,441,893**	**1,282,458**

Scope 1 & 2 Global (tCO_2e)	Scope 3 No of Categories Reported	Verification/ Assurance Status	Targets Reported	Emissions intensity per FTE employee	Emissions intensity (tCO_2e per unit total revenue)	Emissions intensity (tCO_2e per business aprropriate metric)
32,916	2	VAA S1 S2 S3	Abs & Int	4.09		0,4 tCO_2e per square meter
188,312	4			0		0,1611 tCO_2e per square meter
268,744	2	VAA S1 S2 S3		8.35		0,24 tCO_2e per square meter
1,922	9	VAA S1 S2	Absolute	4.2	0.38	0,18 tCO_2e per square meter of occupied property
513,847	1			17.4		
47,315		VAR S1 S2	Absolute	74.16	90	
41,444	4	VAA S1 S2 S3	Absolute	5.11		0,281 tCO_2e per square meter
47,051	3	VAA S1 S2 S3		5.59	12.49	0,25 tCO_2e per square meter
63,671	1	VAA S1 S2 S3		4.04	20.57	0,27 tCO_2e per square meter
165,651	3	VAA S1 S2 S3	Abs & Int	5.77		0,34 tCO_2e per square meter
665,837	3	VAA S1 S2 S3	Intensity	3.92	33.64	0,22 tCO_2e per square meter
51,262	3	VAA S1 S2 S3	Intensity	223	23.2	0,02 tCO_2e per square meter
679,163	3	VAA S1 S2 S3	Absolute	70.59		0,0047683467 tCO_2e per square meter
41,581	5	VAA S1 S2	Intensity	8.34		0,3425 tCO_2e per square meter
8,163	6	VAF S1 S2 S3	Intensity	3.12		0,22 tCO_2e per square meter
373,114	4	VAA S1 S2 S3	Absolute	8.4	0.01	
3,659,535						
47,130	5			22.44	10.28	0,362 tCO_2e per square meter
94,782	3	VAA S1 S2		38.59		0,590721 tCO_2e per megawatt hour
135,970				9.6		0,067 tCO_2e per unit of service provided
170,415	5	VAA S1 S2 S3	Intensity	11.88		0,097 tCO_2e per per bed-day sold
239,444	1	VAA S1 S2 S3	Intensity	10.99		0,114 tCO_2e per patient day
687,741						
146,463	2	VAF S1 S2 S3	Absolute	11.51	5.85	
578,978		VAR S1		17		0,69 tCO_2e per square meter
197,489	2	VAA S1 S2	Intensity	10.27	3.4	0,0184 tCO_2e per rental days
706,705	2	VAA S1 S2	Abs & Int	6.72	5.29	0,51 tCO_2e per tonne of fish catch
407,210	3	VAA S1 S2	Abs & Int	55.82		0,0000119 tCO_2e per ship per tonne per nautical mile
682,968				28.83		0,371 tCO_2e per megawatt hour
523,211	1			11.7		0,00004 tCO_2e per value created
67,110	3			11.54		0,21 tCO_2e per square meter
41,266	1			6.99		0,32 tCO_2e per megawatt hour
3,351,400						
1,037,515	1			42.6		0,0055 tCO_2e per number (not given) of subscribers
707,113	4	VAA S1 S2 S3		33.34		0,1167 tCO_2e per subscriber to fixed access line
447,554	5	VAA S1 S2 S3	Intensity	75.99		
2,192,182						

Appendix 3: Emission reductions targets

Company	Sub-sector	Type	Scope	Base year	Base year emissions	Metric	Target year	Reduction from base year	Progress against target
Consumer Discretionary									
Clicks Group Ltd	Multiline Retail	Absolute	Scope 3 (Downstream transportation and distribution)	2008	13 941	tCO_2e	2015	10%	100%
Clicks Group Ltd	Multiline Retail	Intensity	Scope 2	2008	0.29	tCO_2e per square meter	2015	10%	0%
Clicks Group Ltd	Multiline Retail	Intensity	Scope 1+2	2008	6.2	tCO_2e per unit hour worked	2015	5%	100%
Clicks Group Ltd	Multiline Retail	Intensity	Scope 1+2	2013	110.9	tCO_2e per square meter	2018	0%	0%
Compagnie Financière Richemont SA	Textiles, Apparel & Luxury Goods	Intensity	Scope 3 (Business travel)	2013	1 680	tCO_2e per FTE employee	2018	0%	0%
Compagnie Financière Richemont SA	Textiles, Apparel & Luxury Goods	Intensity	Scope 1+2	2013	20.11	tCO_2e per square meter	2018	0%	0%
Compagnie Financière Richemont SA	Textiles, Apparel & Luxury Goods	Intensity	Scope 2	2011	4.29	tCO_2e per FTE employee	2012	5%	100%
Foschini Group Ltd	Specialty Retail	Absolute	Scope 1+2	2012	5 297 961.95	tCO_2e	2016	13%	13.5%
Steinhoff International Holdings	Household Durables	Intensity	Scope 2	2010	0.12	tCO_2e per square meter	2014	10%	0%
Woolworths Holdings Ltd	Multiline Retail	Intensity	Scope 1+2	2007	0.81	tCO_2e per square meter	2015	40%	92%
Consumer Staples									
British American Tobacco	Tobacco	Intensity	Scope 1+2+3	2000	1.38	tCO_2e per unit of production	2030	50%	83%
British American Tobacco	Tobacco	Intensity	Scope 1+2+3	2000	1.38	tCO_2e per unit of production	2050	80%	52%
Illovo Sugar Ltd	Food Products	Absolute	Scope 1+2	2010	478 682	tCO_2e	2020	10.7%	0%
Illovo Sugar Ltd	Food Products	Absolute	Scope 2	2008	2 699 297	tCO_2e	2020	5%	3.1%
Massmart Holdings Ltd	Food & Staples Retailing	Absolute	Scope 2	2010	271 534	tCO_2e	2013	0%	0%
Massmart Holdings Ltd	Food & Staples Retailing	Intensity	Scope 2	2008	0.163	tCO_2e per square meter	2012	12%	0%
Massmart Holdings Ltd	Food & Staples Retailing	Intensity	Scope 2	2008	0.125	tCO_2e per square meter	2011	3%	100%
Massmart Holdings Ltd	Food & Staples Retailing	Intensity	Scope 2	2008	0.255	tCO_2e per square meter	2012	7%	100%
Oceana	Food Products	Intensity	Scope 1+2	2009	334.14	tCO_2e per metric tonne of product	2013	2.5%	100%
Oceana	Food Products	Intensity	Scope 1+2	2009	1 545.82	tCO_2e per metric tonne of product	2012	2.5%	0%
Oceana	Food Products	Intensity	Scope 1+2	2009	82.72	tCO_2e per metric tonne of product	2012	2.5%	100%
Oceana	Food Products	Intensity	Scope 1+2	2009	1 158.55	tCO_2e per metric tonne of product	2012	2.5%	100%
Oceana	Food Products	Intensity	Scope 1+2	2009	1 179.81	tCO_2e per metric tonne of product	2012	2.5%	13%
Oceana	Food Products	Intensity	Scope 1+2	2010	1 152.61	tCO_2e per metric tonne of product	2012	2.5%	100%
Pick n Pay Holdings Ltd	Food & Staples Retailing	Absolute	Scope 1+2	2010	642 350	tCO_2e	2015	15%	66%
Pioneer Foods	Food Products	Absolute	Scope 1+2	2012	410 160.76	tCO_2e	2017	14%	0%
SABMiller	Beverages	Intensity	Scope 1+2	2008	15	$kgCO_2e/hl$	2020	50%	26%
Tiger Brands	Food & Staples Retailing	Intensity	Scope 1+2	2009	2011	tCO_2e per metric tonne of product	2012	53%	2%
Tongaat Hulett Ltd	Food Products	Absolute	Scope 1+2	2011	1 119 826	tCO_2e	2020	0%	0%
Tongaat Hulett Ltd	Food Products	Absolute	Scope 3 (Business travel)	2011	808	tCO_2e	2020	0%	0%
Tongaat Hulett Ltd	Food Products	Intensity	Scope 1+2	2011	28	tCO_2e per FTE employee	2020	0%	0 %
Energy & Materials									
AECI Ltd Ord	Chemicals	Absolute	Scope 1+2	2010	527 197	tCO_2e	2015	15%	27%
Anglo American	Metals & Mining	Absolute	Scope 1+2	2012	21 200 000	tCO_2e	2012	6%	100%
Anglo American Platinum	Metals & Mining	Intensity	Scope 1+2	2004	5 634 910	tCO_2e per unit of production	2015	10%	0%
AngloGold Ashanti	Metals & Mining	Intensity	Scope 1+2	2007	0.77	tCO_2e per ounce of gold	2022	30%	0%
Arcelor Mittal South Africa Ltd	Metals & Mining	Intensity	Scope 1+2	2007	2007	tCO_2e per metric tonne of product	2020	8%	3%
BHP Billiton	Metals & Mining	Intensity	Scope 1+2	2006	100	0	2012	6%	100%

Comment
No additional comment provided.
No additional comment provided.
Please note that this intensity metric is expressed as tonnes CO_2e per 1000 man hours worked.
Boutiques and offices. Target details have not been disclosed at this early stage. The base year is 2013 and the baseline is the average of 2012 and 2013.
Business Travel. Target details have not been disclosed at this early stage. The base year is 2013 and the baseline is the average of 2012 and 2013.
Manufacturing facilities and operational sites (excluding offices and boutiques). Target details have not been disclosed at this early stage. The base year is 2013 and the baseline is the average of 2012 and 2013.
Note as this intensity target is a year-on-year rolling target the baseline given is the previous reporting period. The full carbon footprint baseline is considered the 2010/11 assessment period. Discovery is investigating putting in place an absolute target/s. This has been delayed while focus on data quality and accuracy continues. Discovery expects to have absolute targets in place in the next 2 years.
Gold Fields has set a voluntary target of 13% carbon emission reductions against its 'business as usual' carbon emissions by 2016. Business as usual emissions will be calculated both ex-ante as well as ex-post to ensure that any unforeseen changes in operations are accounted for. The first year this target is applicable is 2012, which makes the base year 2012. The emission reduction in every subsequent year will be calculated based on the combined emission savings of the projects implemented in that specific year and added to the previous emission savings (starting from 2012) which is still impacting on the 'business as usual' emissions. This approach is in line with the 'Greenhouse Gas Protocol – Mitigation Goals Accounting and Reporting Standard' (currently being pilot tested). This target covers Scope 1 and 2 emissions, but excludes methane.
This target is for Conforama (part of Europe Retail) and is based on a 10% reduction per m^2 of electricity consumption based on 2010's average consumption from 1 January 2012 to the 31 December 2014. The percentages are based on Scope 2 electricity (i.e. excluding a small proportion of heat from Scope 2 total). Importantly, this target and information noted is only for Steinhoff International operations (Scope 2 electricity only, excluding heat) and, therefore, also excludes Scope 2 from KAP Industrial and JD Group. The 18% reflects Conforama's proportion of Steinhoff International Operations electricity consumption.
No additional comment provided.
This is a publicly declared target to aim to reduce our emissions on 2000 baseline by 50% per million cigarettes equivalent by 2030, to achieve 0.69 CO_2e per million cigarettes equivalent.
This is a publicly declared target to aim to reduce our emissions on 2000 baseline by 80% per million cigarettes equivalent by 2050, to achieve 0.28 CO2e per million cigarettes equivalent.
In terms of our strategy we aim to reduce GHG emissions from energy consumption across the group by 10.7% (relative to 2010 emissions levels) by 2020. Based on the projected increase in sugar production the effective emissions reduction will be 34%.
The company has a growth strategy and hence absolute emissions will continue to increase in the future. The reduction strategy utilises 2007/2008 as baseline year and is aligned with the projected growth profile. The baseline year info does however not include CO_2 equivalents. The baseline year will be expanded to include equivalents.
Our interim target is to cap our absolute Scope 2 emissions at the 2010 baseline level until 2013, while we review Group energy consumption and develop divisional energy intensity targets by retail format.
This intensity target is specifically for the Builders Warehouse stores within the Massbuild division.
This intensity target is specifically for the Builders Express stores within the Massbuild division.
This intensity target is specifically for the Game stores within the Massdiscounters division.
This is an intensity target for all of Oceana's operations. Oceana also has year on year intensity targets at a business unit level.
This is an intensity target specific to Oceana Brands. The 25% refers to the percentage of Oceana's total emissions that Oceana Brands contributes towards.
This is an intensity target specific to Commercial Cold Storage. The 15% refers to the percentage of Oceana's total emissions that Commercial Cold Storage contributes towards.
This is an intensity target specific to Blue Continent Products. The 47% refers to the percentage of Oceana's total emissions that Blue Continent Product contributes towards.
This is an intensity target specific to OLSF. The 11% refers to the percentage of Oceana's total emissions that OLSF contributes towards.
This is an intensity target specific to Etosha. The 2% refers to the percentage of Oceana's total emissions that Etosha contributes towards.
We are in the process of recalculating our base year emissions due to significant boundary and methodology changes.
We have set a target of 14% reduction on Scope 1 & 2 emissions (as measured in our 2011/2012 financial year) over the next 5 years.
By 2020 we aim to halve our fossil fuel emissions from on-site energy use per hectoliter of beer produced, compared with 2008.
A year on year GHG reduction is targeted up to 2012. Beyond 2013, a target of 5% a year is targets for both Scope 1 and 2 year on year to 2016.
Tongaat Hulett is committed to reducing its greenhouse gas emissions by 5% per annum for the next 5 years and is targeting at least 20% reduction by 2020 from a baseline of 2011.
There was an increase in this area due to increased business activity.
This is based on 39,314 employees and base emissions of 1,119,826 metric tons CO_2 -e. In 2013 it was 1,246,234 metric tons CO_2 -e over 39 246.
The bulk of reductions in emissions have been observed over the past 18 months due to a concerted effort being made in terms of increasing efficiency and reducing resource consumption. It is anticipated that as more projects are approved and implemented, more significant savings will be realised.
The Group's short term target was set to achieve its longer term objective against projected business as usual curve using known business growth, changes and demands. To achieve this target projects were identified. For example our methane management programmes at Metallurgical Coal in Australia.
Unit of production is refined ounce of PGMs and Gold. The 2004 data presented was reported in 2005. This target was set on an anticipated production profile up to 2015 that has changed due to changes in the South African mining landscape.
Because gold grades are reducing over time, an intensity target has the effect of reducing absolute emissions over time.
At a Group and Company level, the goal is to reduce CO_2 emissions by 8% (230) kg/tonne of liquid steel produced by 2020.
The target is calculated as the difference in percentage between actual emissions in the assessment year versus the emissions that would have occurred if the same unit rate of emissions for each product from the base year was applied in the assessment year. The normalised base year emissions are therefore expressed as 100 to denote the starting point for the intensity index. None of the 'Metric' column drop down options cater for this methodology.

Company	Sub-sector	Type	Scope	Base year	Base year emissions	Metric	Target year	Reduction from base year	Progress against target
Exxaro Resources Ltd	Metals & Mining	Absolute	Scope 1+2+3	2008	371 450	tCO_2e	2020	34%	67.6%
Gold Fields Limited	Metals & Mining	Absolute	Scope 2	2011	20 869	tCO_2e	2014	10%	50%
Harmony Gold Mining Co Ltd	Metals & Mining	Intensity	Scope 1+2	2005	0.249	tCO2e per tonne of ore processed	2013	15%	100%
Harmony Gold Mining Co Ltd	Metals & Mining	Absolute	Scope 1: South African operations	2009	109 171	tCO_2e	2017	25%	0%
Impala Platinum Holdings	Metals & Mining	Absolute	Scope 1+2	2011	51 930	tCO_2e	2014	30%	9%
Kumba Iron Ore	Metals & Mining	Absolute	Scope 1+2	2012	964 638	tCO_2e	2012	2.86%	92%
Lonmin	Metals & Mining	Intensity	Scope 1+2	2007	1.14	tCO_2e per PGMoz	2012	5%	0%
Mondi PLC	Paper & Forest Products	Intensity	Scope 1+2	2004	6 962 455	tCO_2e per metric tonne of product	2014	15%	100%
Nampak Ltd	Containers & Packaging	Absolute	Scope 2	2008	714 815	tCO_2e	2013	10%	100%
Northam Platinum Ltd	Metals & Mining	Absolute	Scope 1+2	2012	627 460	tCO_2e	2015	5%	0%
Pretoria Portland Cement Co Ltd	Construction Materials	Intensity	Scope 1+2	2011	5 311 112	tCO_2e per unit of production	2017	5%	13%
Pretoria Portland Cement Co Ltd	Construction Materials	Intensity	Scope 2	2011	582 841	%kwh/15 years	2017	10%	0%
Sappi	Paper & Forest Products	Intensity	Scope 1+2	2007	0.69	tCO_2e per metric tonne of product	2012	40%	100%
Sappi	Paper & Forest Products	Intensity	Scope 1+2	2011	0.556	tCO_2e per metric tonne of product	2012	1%	100%
Sappi	Paper & Forest Products	Intensity	Scope 1+2	2000	2.44	tCO_2e per metric tonne of product	2015	15%	8.2%
Sasol Ltd	Oil, Gas & Consumable Fuels	Absolute	Scope 1+2	2005	3 000 000	tCO_2e	2020	20%	30%
Sasol Ltd	Oil, Gas & Consumable Fuels	Absolute	Scope 1+2	2005	3 000 000	tCO_2e	2030	30%	0%
Sasol Ltd	Oil, Gas & Consumable Fuels	Intensity	Scope 1+2+3	2005	82 000 000	tCO_2e per unit of production	2020	15%	0%
Sasol Ltd	Oil, Gas & Consumable Fuels	Intensity	Scope 1+2	2000	0	GJ per ton of production	2015	15%	0%
Financials									
Absa Group	Commercial Banks	Absolute	Scope 1+2+3	2010	450 624	tCO_2e	2013	12.5%	100%
African Bank Investments Ltd	Diversified Financial Services	Absolute	Scope 1+2	2010	110 786	tCO_2e	2014	10%	5.24%
Capital & Counties Properties	Real Estate Investment Trusts	Absolute	Scope 1	2011	13 560	tCO_2e	2012	5%	0%
Discovery Holdings Ltd	Insurance	Absolute	Scope 1+2	2009	2 505 219	tCO_2e	2012	10%	100%
FirstRand Limited	Diversified Financial Services	Absolute	Scope 2	2007	354 865	tCO_2e	2015	15%	100%
FirstRand Limited	Diversified Financial Services	Intensity	Scope 1+2	2011	0.26	tCO_2e per square meter	2014	10%	60%
Growthpoint Properties	Real Estate Management & Development	Absolute	Scope 2	2012	3 249 166	tCO_2e	2013	4.6%	100%
Intu Properties Plc	Real Estate Investment Trusts	Absolute	Scope 2	2010	91 098	tCO_2e	2017	5%	100%
Investec Ltd	Capital Markets	Absolute	Scope 2	2009	5 535	tCO_2e	2020	34%	80.3%
Nedbank Ltd	Commercial Banks	Absolute	Scope 3 (Purchased goods & services)	2010	4 156.24	tCO_2e	2016	3.44%	100%
Nedbank Ltd	Commercial Banks	Intensity	Scope 1+2+3	2007	9.15	tCO_2e per FTE employee	2015	12%	0%
Old Mutual plc	Insurance	Intensity	Scope 1+2	2010	3.69	tCO_2e per FTE employee	2020	20%	0%
Old Mutual plc	Insurance	Intensity	Scope 1+2	2010	0.24	tCO_2e per square meter	2020	20%	43.75%

Comment
During the 2011/2012 year, FirstRand had to review and recalculate the absolute emission reduction targets due to the completion of the previous emission reduction targets of 11% by 2012. A new absolute emissions reduction target for the South African operations was calculated using a 2007/2008 financial year baseline for Scope 1, 2 and 3 emissions. Due to FirstRand exceeding their carbon emissions reduction target and saving 24% against the Baseline Year of 2007/2008 FY, a decision was made, after reviewing operations and projected emissions reductions projects, to increase the absolute emissions reduction target to 34% by 2020, in line with the South African government commitment at COP15 in Copenhagen. This will primarily be achieved with a continued focus on energy efficiency and energy reduction initiatives, due to the materiality of energy consumption to the FirstRand carbon footprint.
This is a short-term target that applies to southern African-based Freight Services Division (which comprises 87% of the group's total electricity emissions) and is aimed at driving down electricity usage in buildings identified as operating inefficiently. With the likelihood of acquisitions in the future it is probable that the group absolute emissions from electricity will increase (and focus will shift completely to intensity targets).
This target is applicable to Harmony's South African operations, as the Papua New Guinea (PNG) operations were acquired after this target was set. (In this reporting year, Harmony's South African operations contributed to 98% of the group's overall GHG inventory, with the remaining 2% attributable to Hidden Valley and Wafi-Golpu in PNG.) Since the target reached completion in this reporting year, Harmony has since reviewed its strategy and will be publishing new emission reduction targets to be achieved by 2018, commencing in 2014. These targets account for Harmony's growth in Africa and Papua New Guinea, and the deepening of the company's current operations.
A broad scale Performance Optimisation Plan (POP) has been employed to improve energy efficiencies at an operational level within the South African mills, with the aim to reduce GHG emission generated by the consumption of grid purchased electricity and coal. Illovo SA aims to reduce coal consumption by 25% during the crushing season by 2017.
No additional comment provided.
A Business-As-Usual (BAU) baseline projection has been established based on energy consumption/carbon emissions from 2011 to 2020. This takes into consideration factors such as life-of-mine plans and growth projects. Every year Kumba sets a BAU baseline based on the current mining conditions and calculates performance against the target. In 2012 the target was 27,974 tCO_2e (2.86%) out of a BAU forecast of 964,638 tCO_2e.
Governed by our Safety and Sustainable Development Policy and informed by the principal risk we identify; we have targets in place in order to direct adequate resources to the effective management of those risks. Lonmin has faced the dual challenge over the period of operational circumstance and that the electricity grid emissions factor has been increasing.
Mondi has implemented the 15% reduction target on specific CO_2e emissions for its material operations only, which are responsible for 96.1% of group´s total CO_2e emissions. Due to non-uniform dimensions of production volume for our converter operations (such as [sqm], [pcs]) converters' CO_2 emissions have to been included in this intensity target.
Nampak's target is in line with Eskom's target to reduce electricity consumption by 10% over a 5 year period against a 2007/8 MWh baseline as per Eskom's records.
Northam's carbon emissions profile for the purpose of target-setting comprises: • Scope 1 and 2 emissions at the Zondereinde mining and smelting complex; and • Scope 1 and 2 emissions at the Booysendal mine. As this mine is currently under development, its emissions will only be included in Northam's objectives from FY2015.
The targets as indicated are internal targets based on the PPC Energy Policy.
PPC Energy Policy internal target.
The region had exceeded this goal by 2012, achieving a reduction in greenhouse gas emissions by 53% over the five year period to 0.32 ton CO_2e per ton of product.
Europe's target is to reduce specific direct fossil CO_2 emissions (tons of CO_2 per ton of manufactured pulp and saleable paper), including purchased power emissions (calculated at 400g/KW) by 1% per annum. We achieved 11.4% reduction to 0.470 ton CO_2e per air dry ton in FY 2012 due to energy efficiency improvements at our mills. We have gradually certified the energy management systems at our European mills. Stockstadt, Kirkniemi, Nijmegen, Alfeld, Gratkorn and Ehingen are all ISO 50001 certified. Maastricht and Lanaken will follow by 2014. During low price periods we buy more external power. The low price is a consequence of unstable renewable power (wind/solar) in the grid. By reducing/idling our own power generation we are helping to stablise the grid.
The South African target follows an SA industry initiative: to achieve a 15% reduction in specific purchased fossil fuels by 2015. 88.4% of purchased power is fossil based (that orginating from the sole electricity utility in SA, Eskom(ref: Eskom Annual Report for 2011). Steam is also purchased but the bulk of this originates from electrode boilers at our Cape Kraft Mill, which draws power solely from Eskom. In 2012 we reduced our specific purchased energy by 13.5%. We achieved an emission of 2.14 ton CO_2e per ton of product in 2012. There was an error in the data submitted last year for the base when we stated 1.70 ton CO_2e per ton of product.
On-going - this is applicable to all new CTL plants commissioned before 2020 (with the average 2005 CTL design as the baseline).
On-going for plants commissioned before 2030 (with the average 2005 CTL design as the baseline).
On-going. We have set ourselves clear carbon-intensity reduction targets over the medium and long term and are exploring opportunities for lowering the carbon intensity of our products taking into account the entire product lifecycle. Lower-carbon electricity and energy efficiency options are being pursued by Sasol New Energy and the BUs in order to achieve this target.
Sasol has voluntarily committed to a government strategy for energy efficiency of our utilities. Base year = 21GJ/t.
This target relates to reduction in energy consumption in the Group.
The 2010 financial year baseline was recalculated because the Scope 1 and 2 emissions were based on projections and assumptions as all data was not available. The rebaseline calculation was based on trading space. 2011 was ABIL's first year of reporting. Since then processes have been put in place to collect actual electricity consumption. The Scope 1 emissions reported include non-Kyoto gases namely R22.
The total emission figure from 2011 has changed. This is due to a change in electricity ownership from landlord to tenant at the Jubilee Hall building, Covent Garden. This meant that a proportion of emissions were not applicable to Capco as originally calculated.
Exxaro Resources, at Exco on the 21st of July 2010, committed to an absolute emissions reduction of 10% to be achieved by 31 December 2012. This emissions reduction target was allocated over a three year period from 2010 to 2012. Exxaro's 2012 emission reduction target was to reduce absolute emissions by 3% from the 2009 emissions baseline. As part of this target, Exxaro also committed to a 10% increase in energy efficiency from the 2009 baseline by the end of the 2012 calendar year. The 2009 baseline was adjusted during 2012 to account for the effect of a revision to the Eskom grid emission factor (GEF). The revised conversion factor of 0.94 (previously 1.03) excludes grid transmission losses which are now included for reporting in Scope 3 indirect emissions.
This target specifically relates to the Scope 2 electricity consumption by the operations of FirstRand, and was set as a result of the South African Energy Efficiency Accord, developed by the Department of Energy. FirstRand is a signatory to this accord, and as such monitors performance against the set targets in the accord.
We have targeted an annual reduction of electricity consumed /kw/h per m^2 of space utilised.
Harmony has a year-on-year rolling target to reduce electricity consumption of its operations by 5%. Since the South African grid emission factor from 2012 to 2013 increased by 0.4%, this electricity reduction target equates to a Scope 2 emission reduction target of 4.6%. (Harmonys Papua New Guinea operations are connected to a grid with a base load of 100% hydropower, and therefore there are no Scope 2 emissions associated with the use of electricity in PNG.)
No additional comment provided.
The Gresham Street office in the UK has a target of reducing energy consumption and carbon emissions by 34% in 2020 with the 2009 financial year as base year.
Nedbank has set a 10% reduction target based on absolute tonnage paper consumption using 2010 as the base year. In 2010 (base and start year) the usage amounted to 1917 tonnes of paper. Progress to the 2012 reporting year was 1851 tonnes of paper used. This equates to a 3.44% reduction from the 2010 base year. By 2016 (target year) a value of 1725 tonnes of paper was set as target. This will imply a 10% reduction from the 2010 base.
Nedbank has set a 12% GHG emissions reduction target per FTE, based on the 2007 emissions report. In 2007 (base and start year) the pollution rate was 9.15 tCO_2e per FTE. Progress to the 2012 reporting year was 7.89 tCO_2e per FTE. This equates to a 13.81% reduction from the 2007 base year. By 2015 (target year) a value of 7.67 tCO_2e per FTE was set as target. This will imply a 12% reduction from the 2007 base.
Employee occupied properties include all locations where Old Mutual employees are based and operate from. In our employee occupied properties in 2010 Scope 1 and 2 emissions were 177,834tCO_2e with 48,139 employees.
The investment property portfolio includes the property asset management business and properties invested in and managed to create value and client returns. In 2010 Scope 1 and 2 emissions were 589,131tCO_2e with 2,413,630m^2.

Company	Sub-sector	Type	Scope	Base year	Base year emissions	Metric	Target year	Reduction from base year	Progress against target
Redefine Properties Ltd	Real Estate Management & Development	Intensity	Scope 1+2+3	2012	0	tCO_2e per square meter	2017	0%	0%
Remgro	Diversified Financial Services	Absolute	Scope 1	2010	11 544	tCO_2e	2020	10%	0%
Remgro	Diversified Financial Services	Absolute	Scope 2	2010	236 625	tCO_2e	2020	30%	0%
Sanlam	Insurance	Intensity	Scope 1+2+3	2010	11.77	tCO_2e per FTE employee	2015	15%	70.3%
Sanlam	Insurance	Intensity	Scope 2	2010	0.37	tCO_2e per square meter	2015	20%	35.72%
Sanlam	Insurance	Intensity	Scope 3 (Business travel)	2010	0.77	tCO_2e per FTE employee	2015	5%	100%
Santam Ltd	Insurance	Intensity	Scope 1+2+3	2010	6.32	tCO_2e per FTE employee	2015	15%	0%
Standard Bank Group	Commercial Banks	Absolute	Scope 2	2009	0	tCO_2e	2015	15%	0%
Standard Bank Group	Commercial Banks	Absolute	Scope 3 (Purchased goods & services)	2009	0	tCO_2e	2015	10%	0%
Health Care									
Mediclinic International	Health Care Providers & Services	Intensity	Scope 2	2012	0.089	tCO_2e per bed day sold	2013	3.09%	100%
Netcare Ltd	Health Care Providers & Services	Intensity	Scope 1+2+3	2008	0.000	tCO_2e per unit revenue	2012	38.5%	100%
Netcare Ltd	Health Care Providers & Services	Intensity	Scope 1+2+3	2008	0.147	tCO_2e per number of patient days	2012	21.1%	100%
Industrials									
Allied Electronics Corporation Ltd (Altron)	Industrial Conglomerates	Absolute	Scope 1	2012	14 900	tCO_2e	2013	1.98%	10%
Allied Electronics Corporation Ltd (Altron)	Industrial Conglomerates	Absolute	Scope 2	2012	134 223	tCO_2e	2013	2.93%	10%
Allied Electronics Corporation Ltd (Altron)	Industrial Conglomerates	Absolute	Scope3 (Business Travel & Paper)	2012	13 228	tCO_2e	2013	1.7%	15%
Barloworld	Trading Companies & Distributors	Intensity	Scope 1+2	2009	4.4	tCO_2e per unit revenue	2014	12%	100%
Bidvest Group Ltd	Industrial Conglomerates	Absolute	Scope 1+2	2007	102 862	tCO_2e	2050	2.5%	0%
Bidvest Group Ltd	Industrial Conglomerates	Absolute	Scope 2	2010	24 557	tCO_2e	2012	9.3%	0%
Bidvest Group Ltd	Industrial Conglomerates	Absolute	Scope 1	2012	213 445	tCO_2e	2013	2.5%	100%
Bidvest Group Ltd	Industrial Conglomerates	Absolute	Scope 2	2012	36 404	tCO_2e	2013	2.5%	100%
Bidvest Group Ltd	Industrial Conglomerates	Absolute	Scope 1+2	2008	26 280	tCO_2e	2015	20%	0%
Bidvest Group Ltd	Industrial Conglomerates	Intensity	Scope 1+2	2007	67	tCO_2e per unit revenue	2050	2.5%	28%
Bidvest Group Ltd	Industrial Conglomerates	Intensity	Scope 1+2	2007	16.6	metric tonnes CO_2e per FTE employee	2050	2.5%	0%
Bidvest Group Ltd	Industrial Conglomerates	Intensity	Scope 2	2012	346.1	tCO_2e per new and used vehicles sold	2013	2.5%	100%
Bidvest Group Ltd	Industrial Conglomerates	Intensity	Scope 1	2012	206	tCO_2e per new and used vehicle sold	2013	2.5%	100%
Bidvest Group Ltd	Industrial Conglomerates	Intensity	Scope 1+2	2008	115.4	tCO_2e per metric tonne of product	2015	20%	0%
Grindrod Ltd	Marine	Intensity	Scope 1+2	2010	9.8	gCO_2-e per unit revenue - because of size of number	2020	10%	30%
Grindrod Ltd	Marine	Intensity	Scope 1	2010	10.44	gCO2e per tonne-NM - as per IMO guidelines	2020	10%	0%
Grindrod Ltd	Marine	Intensity	Scope 1	2011	1.47	$kgCO_2e$ per km	2020	10%	0%
Grindrod Ltd	Marine	Intensity	Scope 2	2011	3.54	tCO_2e per FTE employee	2020	20%	40%
Grindrod Ltd	Marine	Absolute	Scope 1+2	2011	2 053.65	tCO_2e	2016	10%	64%
IT & Telecoms									
Vodacom Group	Wireless Telecommunication Services	Intensity	Scope 1+2	2012	42.39	tCO_2e per base station site	2013	5%	100%

Comment
This was Redefine's first carbon footprint and thus 2012 will be considered to be the baseline year. Redefine, being a property company, buy and sell properties constantly and this affects the absolute footprint of the company. The company has decided to use the intensity target of metric tonnes CO_2e per square meter as this can ensure the target can be tracked year on year accurately.
Rainbow targets GHG emissions in line with Governments's target of a 34% reduction by 2020. Fuel used in vehicles is targeted to reduce by 10% by 2020.
Rainbow targets GHG emissions in line with Governments's target of a 34% reduction by 2020. kWhs consumed from the grid is targeted to reduce by 30% by 2020.
Measures for energy efficiency, travelling and paper, will bring down levels of carbon emissions.
Electricity consumption to be reduced through energy efficiency initiatives.
Air and road travel as well as overnight accommodation will be reduced by using video- and tele-conferencing where appropriate instead of travelling.
Applies to Santam Head Office (Western Cape), Auckland Park, Illovo, Bruma, Bedfordview and Garsfontein (all Gauteng) - which covers 83 percent of all Santam full-time employees.
We set a target on reducing electricity consumed in kwhwhich effectively would reduce the carbon emmissions by the same %.
We set a target for paper consumption in tons which would effectively reduce carbon emissions of paper by the same %. The 2015 target would be 3003 tons.
The carbon emission reduction target of 3.09% per year was set for Scope 2 emissions for the 52 hospitals of Mediclinic Southern Africa only. Administration offices and other buildings are excluded from the target.
0,0000166 tonne CO_2(e) per R1 revenue was recorded which is below the target of 0,000025 and well below the base year. It is higher than 2011 due to the addition of gases in the Scope 1 inventory and additional Scope 3 waste recording data. Scope 2 emissions are also higher due to data integrity issues that were addressed with this year's review. The higher CO_2(e) was therefore expected.
The target is 0,150 metric tonnes CO_2(e) per number of patient days and the target allows for 1,93% increase over 3 years. This is to allow for the anticipated increase due to more accurate and comprehensive reporting while at the same time lowering the real carbon footprint due to optimisation of facilities. Scope 1 and 3 reporting is expected to increase due to expansion of the inventory and Scope 2 is also expected to increase due to correction of data integrity issues. 2012 recorded 0,116 metric tonnes of CO_2(e) per patient day.
2013 reported Scope 1: 15 091 = 1.26% increase from the base year. The reduction targets set in the % reduction from base year relates to the normalised target across the entire Altron group - i.e. an average of all the targets agreed upon with the management of each operation. In some cases the target could be as low as 0% or as high as 3% per annum - depending on the measure and taking into account future expansion and growth or even consolidation of companies.
2013 reported Scope 2: 131 372 = 2.17% reduction from the base year. The reduction targets set in the % reduction from base year relates to the normalised target across the entire Altron group - i.e. an average of all the targets agreed upon with the management of each operation. In some cases the target could be as low as 0% or as high as 3% per annum - depending on the measure and taking into account future expansion and growth or even consolidation of companies.
2013 reported Scope 3: 11 637 = 13.67% reduction from base year. The reduction targets set in the % reduction from base year relates to the normalised target across the entire Altron group - i.e. an average of all the targets agreed upon with the management of each operation. In some cases the target could be as low as 0% or as high as 3% per annum - depending on the measure and taking into account future expansion and growth or even consolidation of companies.
It is an aspirational target and based on a "business as usual" scenario which tracks turnover as a proxy for business activity. It is not anticipated that the target will be achieved in a linear manner on an annual basis, but will be reached by the end of 2014. The intention is to focus attention and drive commitment to improving energy and emission efficiency with concomitant benefits of positively contributing to climate change and realising cost savings.
3663 (UK): Annual target of 2.5% reduction in absolute emissions with a goal to achieve an 80% reduction by 2050 (which mirrors the UK government target). This target applies to 3663 which accounts for 17% of Bidvest's turnover in the 2013 financial year. 3663 issued its greenhouse gas policy in 2009, which has subsequently been incorporated into the overall sustainability policy. This links in with the organisation's ISO 14001 certified EMS, which states the reduction target of 2.5% year on year up to 2050, against a baseline of 2007. In 2010, 3663 obtained the Carbon Trust Standard, an external assessment of the organisation's carbon emissions reductions with external certification renewed through Carbon Saver. To date, 3663 is ahead of its target.
3663 (UK): achieved a 9.3% electricity reduction against a target of 10% over a two year period.
Bidvest Automotive has set targets for reducing fuel consumption. 2013 target = 2.5% reduction, 2015 = 5.0%, 2017 = 7.5%. The implementation was delayed by a year due to management changes (it was reported last year already), but have now commenced. Reduction figures indicated reflect 3 quarters of the current year and have been extrapolated for the full year.
Bidvest Automotive has set targets for reducing electricity consumption. 2013 target = 2.5% reduction and 2015 = 5.0%. The implementation was delayed by a year due to management changes (it was reported last year already), but have now commenced. Reduction figures indicated reflect 3 quarters of the current year and have been extrapolated for the full year.
Bidvest Deli XL (part of Bidvest Foodservice in Europe) has set targets to reduce Scope 1 and 2 emissions by 20% per ton of product by 2015, compared to 2008 levels. Projects that will result in an estimated 20% carbon emissions saving have been initiated. They have developed a monitoring tool that generates quarterly management reviews.
Annual target of 2.5% reduction to 2050.
Annual target of 2.5% reduction to 2050.
Bidvest Automotive has set targets for reducing electricity consumption. 2013 target = 2.5% reduction, and 2015 = 5.0%. The implementation was delayed by a year due to management changes (it was reported last year already), but has now commenced. Reduction figures indicated reflect 3 quarters of the current year and have been extrapolated for the full year.
Bidvest Automotive has set targets for reducing fuel consumption. 2013 target = 2.5% reduction, 2015 = 5.0%, 2017 = 7.5%. The implementation was delayed by a year due to management changes (it was reported last year already), but has now commenced. Reduction figures indicated reflect 3 quarters of the current year and have been extrapolated for the full year.
Please note that this target relates to Deli XL. Their carbon emissions per ton of product have fallen by about 10% since 2008.
Grindrod uses gCO_2-e per Rand revenue. Normalised GHG emissions intensity using this metric has risen since the base year. A 23% increase in total shipping emissions in 2012 (from new acquisitions) combined with challenging market conditions in shipping (i.e. ships operating less efficiently) has been a major contributing factor to not meeting this target in 2012. This was offset by a 25% improvement in Freight Services GHG emissions intensity. The company is confident that measures being put in place (see AR) will bring this intensity figure down by 2020 and to meet the 10% reduction target.
Average per-ship CO_2 emissions efficiency (as per IMO guidelines). (gCO_2-e per tonne-NM).
Heavy vehicle diesel emissions efficiency - kg CO_2 per km used (as opposed to g or tonnes).
No additional comment provided.
We have chosen to keep 2011 as our baseline upon which we measure our progress against our target of a 10% reduction by 2016 (as per 2011 CDP response). We have made minor amendments to our 2011 footprint, given that we had erroneously left out a small % of Scope 2 emissions in 2011. We consulted with KPMG and corrected the mistake, and these corrections were verified. We have chosen to combine Scope 1 and 2 emissions in our target of reducing Scope 1 and 2 emissions by 10% by 2016.
This target relates to fuel and electricity consumption per base station site taking growth into account. Previously the target related to 2G & 3G base stations only, but now incorporate all physical sites.

Appendix 4: Exclusions and qualifying remarks[47]

Company	Sub-sector	Scope	Source
Consumer Discretionary			
JD Group Ltd	Specialty Retail	Scope 1 and 2	Uncertain sources at this stage, Geographies
		Scope 1	Non-Kyoto direct emissions
Naspers	Media	Scope 1 and 2	Buscape
Steinhoff International Holdings	Household Durables	Scope 1	Non-Kyoto direct emissions
		Scope 1 and 2	Geographies
Truworths International	Specialty Retail	Scope 2	Distribution centres
Woolworths Holdings Ltd	Multiline Retail	Scope 1 and 2	Facilities outside SA
			Phumelele Park
			SA Franchise Stores
Consumer Staples			
Illovo Sugar Ltd	Food Products	Scope 1	Drainage & tillage of soil
			Land use change
			Onsite solid waste disposal
			Onsite effluent treatment & disposal
			Refrigerants
			Agroproducts application to field
Massmart Holdings Ltd	Food & Staples Retailing	Scope 2	Botswana
Pick n Pay Holdings Ltd	Food & Staples Retailing	Scope 1 and 2	2 Autocentres
			5 corporate stores in Zambia
			Boxer branded stores
Pioneer Foods	Food Products	Scope 1	Refrigerant gases
			Lubricants used in vehicles and machinery
			The Ceres Beverage Company, Nulaid and Bokomo: emissions from waste water treated onsite
			Sasko Bakeries in-house fleet
			Tydstroom & Nulaid: Methane from Chicken Manure
		Scope 1 and 2	Sasko Bakeries Depots
			All Corporate offices other than Pioneer Foods Head Office
			Bokomo Vinegar Plant Strand
			Bokomo Vinegar Plant Alberton JHB.
			Ceres Springwater, RBI and Continental Beverages.
SABMiller	Beverages	Scope 1 and 2	Non brewing facilities
Shoprite Holdings Ltd	Food & Staples Retailing	Scope 1	General Scope 1,Non-Kyoto substances
		Scope 2	Electricity
		Scope 1 and 2	Geographical
The Spar Group Ltd	Food & Staples Retailing	Scope 1	Refrigerant leakage
			Vehicle AC
			Fuel consumption at Corporate stores
Tiger Brands	Food & Staples Retailing	Scope 1 and 2	Logistics
Energy & Materials			
AECI Ltd Ord	Chemicals	Scope 2	AECI Head Office
Anglo American	Metals & Mining	Scope 1	F-gasses
			N2O
Anglo American Platinum	Metals & Mining	Scope 2	Head Office
		Scope 1 and 2	Exploration activities outside South Africa and some Greenfields exploration within South Africa
AngloGold Ashanti	Metals & Mining	Scope 1	Land clearance
			Explosives
			Process emissions
Exxaro Resources Ltd	Metals & Mining	Scope 1	Coal Discard Dumps
Gold Fields Ltd	Metals & Mining	Scope 1	Mine methane (all operations apart from Beatrix)
Harmony Gold Mining Co Ltd	Metals & Mining	Scope 1	Fugitive methane emissions
Impala Platinum Holdings	Metals & Mining	Scope 1	Nitrous oxide
			Industrial Gas
Kumba Iron Ore	Metals & Mining	Scope 1 and 2	Exploration
Lonmin	Metals & Mining	Scope 1 and 2	Lonmin Johannesburg and London corporate offices
			Exploration portfolio
Nampak Ltd	Containers & Packaging	Scope 1 and 2	Geographies – Ethiopia, Mozambique and Zimbabwe excluded from carbon footprint
		Scope 1	Activity – refrigerants and/or air conditioning gases
Northam Platinum Ltd	Metals & Mining	Scope 1 and 2	Corporate office in Johannesburg
Pretoria Portland Cement Co Ltd	Construction Materials	Scope 1 and 2	Zimbabwe, PPC Aggregates
			Botswana
Sappi	Paper & Forest Products	Scope 2	Sappi Fine Paper Europe head office
			Sappi Fine Paper North America head office
			Sappi SA forests contractors
			Sappi SA forests regional offices
Financials			
Absa Group	Commercial Banks	Scope 1 and 2	Refrigerants
			Absa Botswana, Mozambique, Tanzania
African Bank Investments Ltd	Diversified Financial Services	Scope 1 and 2	Non-South African operations
			24 cross docks
			Roodekop and Cape Town Distribution Centre
			Roodefurn Assembly plant

47 This table provides information not included within the Scope 1 and/or Scope 2 emissions provided in Table 1 and the Sector Summary tables.

Company	Sub-sector	Scope	Source
Discovery Holdings Ltd	Insurance	Scope 1	All Scope 1 sources
		Scope 1 and 2	Electricity
Emira Property Fund	Real Estate Investment Trusts	Scope 1	Refrigerant gases
FirstRand Ltd	Diversified Financial Services	Scope 1 and 2	FirstRand EMA Holdings Limited (Non-South African Operations of the FirstRand Group)
Growthpoint Properties	Real Estate Management & Development	Scope 1 and 2	Australia
Growthpoint Properties	Real Estate Management & Development	Scope 1 and 2	V&A Waterfront
Hosken Consolidated Investments	Diversified Financial Services	Scope 1	GHG Emissions from Air Condintioning
		Scope 1 and 2	Emissions from New Acquisition
MMI Holdings Ltd	Insurance	Scope 1 and 2	Diesel, Refrigerant gas and Electricity
		Scope 1	Refrigerant gas
			Diesel, refrigerant gas and company owned car fuel
Nedbank Ltd	Commercial Banks	Scope 2	Certain electronic banking service devices like: ATM, SST and POS
			Bancassurance and Wealth Financial Advisors
			Pick n Pay in store Nedbank outlets
Old Mutual Plc	Insurance	Scope 1 and 2	South Africa Branches
			Property Portfolios
			Nedbank non-SA countries
			Skandia International
		Scope 2	Selected Nedbank electronic banking services like ATM, SST and POS
			Bancassurance and Wealth Financial Advisors
			Pick n Pay in store Nedbank outlets
Redefine Properties Ltd	Real Estate Management & Development	Scope 1 and 2	Facilities
Remgro	Diversified Financial Services	Scope 1	Activity – refrigerants and/or air conditioning gases
		Scope 1 and 2	Geographies – Remgro International (Jersey)
Sanlam	Insurance	Scope 1 and 2	Geographies – Rest of Africa, India, Australia, United States of America (USA), United Kingdom (UK) excluded from carbon footprint
			Facilities – only 69% of South African staff included in carbon footprint
			Subsidiary – Santam
		Scope 1	Activity – vehicle fleet
Santam Ltd	Insurance	Scope 1 and 2	Emissions from facilities other than Head Office, Auckland Park, Illovo, Garsfontein, Bruma, Bedfordview
Standard Bank Group	Commercial Banks	Scope 1 and 2	Rest of Africa and International operations
Investec Ltd	Capital Markets	Scope 1	Geographies – Scope 1 activities for Australia and Mauritius are excluded from the carbon footprint
Liberty Holdings Ltd (inc Liberty Life Group Ltd)	Insurance	Scope 1 and 2	Liberty's operations outside of South Africa
Health Care			
Adcock Ingram	Pharmaceuticals	Scope 1 and 2	Facility in Zimbabwe, Facility in Kenya
		Scope 1	Mobile machinery fuels
			Stationary fuels
			Refrigerant gases
Aspen Pharmacare Holdings	Pharmaceuticals	Scope 1 and 2	Woodmead and Durban Office Parks
Life Healthcare Group Holdings Ltd	Health Care Providers & Services	Scope 1	Anaesthetic gas
			LPG
			Fuel
			CO_2 and N_2O
Mediclinic International	Health Care Providers & Services	Scope 1 and 2	Geographies – Hospitals belonging to Mediclinic International that are located outside of South Africa and Namibia, i.e. in the Middle East and Switzerland are excluded from the carbon footprint.
Netcare Ltd	Health Care Providers & Services	Scope 1	Refrigerant gasses
Industrials			
Allied Electronics Corporation Ltd (Altron)	Industrial Conglomerates	Scope 1 and 2	Facilities under control of the parent
Aveng Ltd	Construction & Engineering	Scope 1	Direct emission sources (petrol, coal, LPG, natural gas, HFO and fugitive emissions)
		Scope 1 and 2	On-site construction emissions
Bidvest Group Ltd	Industrial Conglomerates	Scope 1	Greenhouse gas refills of air conditioning and refrigeration equipment owned or operated by Bidvest
			Emissions from Bidvest Car Rental operations generated by customer usage of vehicles
KAP Industrial Holdings	Industrial Conglomerates	Scope 1	Non-Kyoto substances (gases)
Reunert	Industrial Conglomerates	Scope 1	Fugitive emissions
Wilson Bayly Holmes-Ovcon Ltd	Construction & Engineering	Scope 1 and 2	African (other than South Africa) and Australian operations
Murray & Roberts Holdings Ltd	Construction & Engineering	Scope 1	Acetylene
IT & Telecoms			
MTN Group	Wireless Telecommunication Services	Scope 1 and 2	Facilities
Telkom SA Ltd	Diversified Telecommunication Services	Scope 1 and 2	I-Way Africa
Vodacom Group	Wireless Telecommunication Services	Scope 1	Activity – Air-conditioning and refrigeration gases from the Lesotho operations are excluded from the carbon footprint

Investor members

CDP works with investors globally to advance the investment opportunities and reduce the risks posed by climate change by asking almost 6,000 of the world's largest companies to report on their climate strategies, GHG emissions and energy use in the standardised Investor CDP format. To learn more about CDP's member offering and becoming a member, please contact us or visit the CDP Investor Member section at **https://www.cdproject.net/investormembers**

- ABRAPP - Associação Brasileira das Entidades Fechadas de Previdência Complementar
- ATP Group
- Aviva Investors
- Bank of America
- Bendigo and Adelaide Bank
- BlackRock
- Boston Common Asset Management, LLC
- California Public Employees' Retirement System (CalPERS)
- California State Teachers' Retirement System (CalSTRS)
- Calvert Group, Ltd.
- Capricorn Investment Group
- Catholic Super
- CCLA Investment Management Ltd
- Daiwa Asset Management Co. Ltd.
- Generation Investment Management
- Goldman Sachs Group Inc.
- Henderson Global Investors
- HSBC Holdings plc
- Legg Mason, Inc.
- KLP
- London Pensions Fund Authority
- Mobimo Holding AG
- Mongeral Aegon Seguros e Previdência S.A.
- Morgan Stanley
- National Australia Bank
- Neuberger Berman
- Newton Investment Management Limited
- Nordea Bank
- Norges Bank Investment Management (NBIM)
- Northwest and Ethical Investments L.P. (NEI Investments)
- PFA Pension
- Robeco
- RobecoSAM AG
- Rockefeller Asset Management
- Royal Bank of Scotland Group
- Sampension KP Livsforsikring A/S
- Schroders
- Scottish Widows Investment Partnership
- Skandinaviska Enskilda Banken AB (SEB AB)
- Sompo Japan Insurance Inc.
- Standard Chartered
- Sun Life Financial Inc
- Sustainable Insights Capital Management
- TD Asset Management
- The Wellcome Trust

Figure 51: 2013 Investor Signatory Breakdown - Region

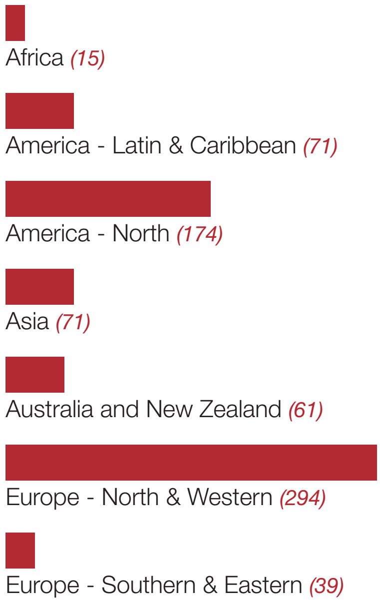


Figure 52: CDP Investor Signatories & Assets (US$) against time

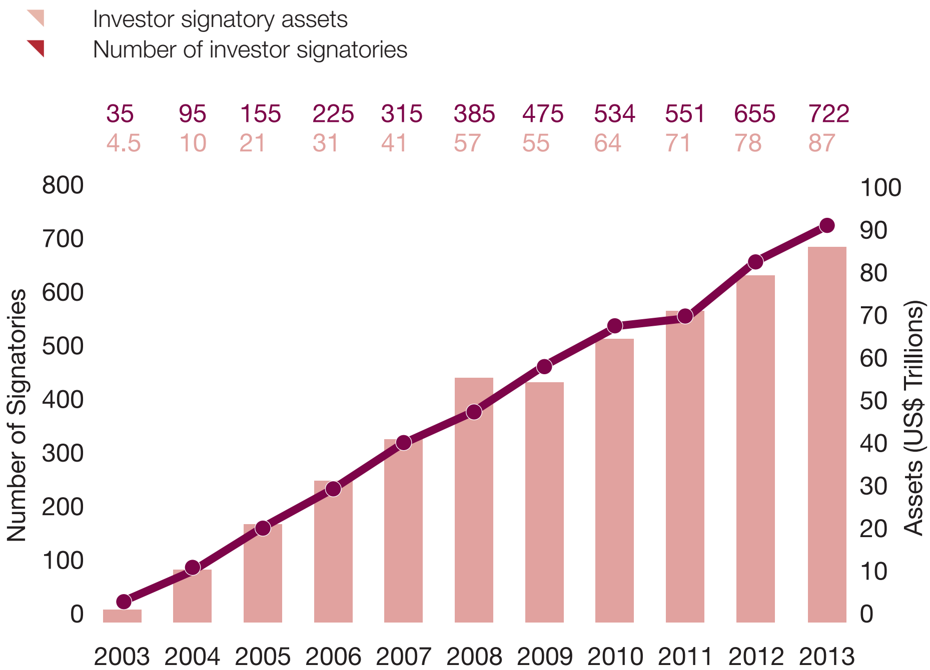
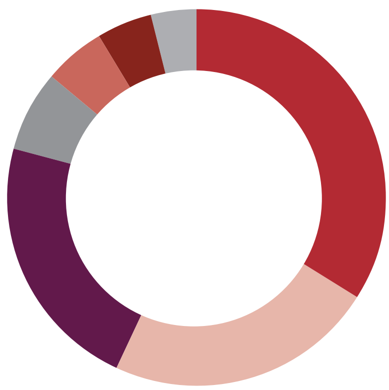


Figure 53: Signatory investor breakdown

247	Mainstream Asset Managers
167	Pension funds
160	Banks
51	Insurance
39	SRI Asset Managers
34	Foundations
27	Other



Investor signatories

722 financial institutions with assets of US$87 trillion were signatories to the CDP 2013 climate change information request dated February 1st 2013

3Sisters Sustainable Management LLC
Aberdeen Asset Management
Aberdeen Immobilien KAG mbH
ABRAPP - Associação Brasileira das Entidades Fechadas de Previdência Complementar
Achmea NV
Active Earth Investment Management
Acuity Investment Management
Addenda Capital Inc.
Advanced Investment Partners
Advantage Asset Managers (Pty) Ltd
Aegon N.V.
AEGON-INDUSTRIAL Fund Management Co., Ltd
AFP Integra
AIG Asset Management
AK PORTFÖY YÖNETİ Mİ A.İ .
AKBANK T.A.İ .
Alberta Investment Management Corporation (AIMCo)
Alberta Teachers Retirement Fund
Alcyone Finance
AllenbridgeEpic Investment Advisers
Alliance Trust
Allianz Elementar Versicherungs-AG
Allianz Global Investors AG
Allianz Group
Altira Group
Amalgamated Bank
Amlin
AMP Capital Investors
AmpegaGerling Investment GmbH
Amundi AM
ANBIMA – Associação Brasileira das Entidades dos Mercados Financeiro e de Capitais
Antera Gestão de Recursos S.A.
APG Group
AQEX LLC
Aquila Capital
Arisaig Partners
Arkx Investment Management
ARMA PORTFÖY YÖNETİ Mİ A.İ .
Armstrong Asset Management
ASM Administradora de Recursos S.A.
ASN Bank
Assicurazioni Generali
ATI Asset Management
Atlantic Asset Management
ATP Group
Auriel Capital Management
Australia and New Zealand Banking Group
Australian Ethical Investment
AustralianSuper
Avaron Asset Management AS
Aviva
Aviva Investors
AXA Group
Baillie Gifford & Co.
BaltCap
Banco Bradesco S/A
Banco Comercial Português SA
Banco de Credito del Peru BCP
Banco de Galicia y Buenos Aires S.A.
Banco do Brasil Previdência
Banco do Brasil S/A
Banco Espírito Santo SA
Banco Nacional de Desenvolvimento Economico e Social (BNDES)
Banco Popular Espanol
Banco Sabadell
Banco Santander
Banesprev – Fundo Banespa de Seguridade Social
Banesto
BANIF SA
Bank Handlowy w Warszawie SA
Bank Leumi Le Israel
Bank of America Merrill Lynch
Bank of Montreal
Bank of Nova Scotia (Scotiabank)
Bank Sarasin & Cie AG
Bank Vontobel
Bankhaus Schelhammer & Schattera Kapitalanlagegesellschaft m.b.H.
Bankia
Bankinter
BankInvest
bankmecu
Banque Degroof
Banque Libano-Francaise
Barclays
Basellandschaftliche Kantonalbank
BASF Sociedade de Previdência Complementar
Basler Kantonalbank
Bâtirente
Baumann and Partners S.A.
Bayern LB
BayernInvest Kapitalanlagegesellschaft mbH
BBC Pension Trust Ltd
BBVA
Bedfordshire Pension Fund
Beetle Capital
Befimmo SA
Bendigo and Adelaide Bank
Bentall Kennedy
Berenberg Bank
Berti Investments
BioFinance Administração de Recursos de Terceiros Ltda
BlackRock
Blom Bank SAL
Blumenthal Foundation
BNP Paribas Investment Partners
BNY Mellon
BNY Mellon Service Kapitalanlage-Gesellschaft mbH
Boston Common Asset Management, LLC
Brasilprev Seguros e Previdência S/A.
Breckinridge Capital Advisors
British Airways Pensions
British Coal Staff Superannuation Scheme
British Columbia Investment Management Corporation (bcIMC)
Brown Advisory
BT Financial Group
BT Investment Management
Busan Bank
CAAT Pension Plan
Cadiz Holdings Limited
CAI Corporate Assets International AG
Caisse de dépôt et placement du Québec
Caisse des Dépôts
Caixa de Previdência dos Funcionários do Banco do Nordeste do Brasil (CAPEF)
Caixa Econômica Federal
Caixa Geral de Depósitos
CaixaBank
California Public Employees' Retirement System (CalPERS)
California State Teachers' Retirement System (CalSTRS)
California State Treasurer
Calvert Investment Management, Inc
Canada Pension Plan Investment Board (CPPIB)
Canadian Imperial Bank of Commerce (CIBC)
Canadian Labour Congress Staff Pension Fund
CAPESESP
Capital Innovations, LLC
Capricorn Investment Group
CARE Super
Carmignac Gestion
Caser Pensiones E.G.F.P
Cathay Financial Holding
Catherine Donnelly Foundation
Catholic Super
CBF Church of England Funds
CBRE Group, Inc.
Cbus Superannuation Fund
CCLA Investment Management Ltd
Celeste Funds Management
Central Finance Board of the Methodist Church
Ceres
CERES-Fundação de Seguridade Social
Change Investment Management
Chinatrust Financial Holding Co Limited
Christian Brothers Investment Services Inc.
Christian Super
Christopher Reynolds Foundation
Church Commissioners for England
Church of England Pensions Board
CI Mutual Funds' Signature Global Advisors
City Developments Limited
ClearBridge Investments
Climate Change Capital Group Ltd
CM-CIC Asset Management
Colonial First State Global Asset Management
Comerica Incorporated
Comgest
Commerzbank AG
CommInsure
Commonwealth Bank of Australia
Commonwealth Superannuation Corporation
Compton Foundation, Inc.
Concordia Versicherungs-Gesellschaft a.G.
Connecticut Retirement Plans and Trust Funds
Conser Invest
Co-operative Asset Management
Co-operative Financial Services (CFS)
Credit Suisse
Daegu Bank
Daesung Capital Management
Daiwa Asset Management Co. Ltd.
Daiwa Securities Group Inc.
Dalton Nicol Reid
Danske Bank A/S
de Pury Pictet Turrettini & Cie S.A.
DekaBank Deutsche Girozentrale
Delta Lloyd Asset Management
Desjardins Financial Security
Deutsche Asset Management Investmentgesellschaft mbH
Deutsche Bank AG
Deutsche Postbank AG
Development Bank of Japan Inc.
Development Bank of the Philippines (DBP)
Dexia Asset Management
Dexus Property Group
DLM INVISTA ASSET MANAGEMENT S/A
DNB ASA
Domini Social Investments LLC
Dongbu Insurance
Doughty Hanson & Co.
DWS Investments
DZ Bank
Earth Capital Partners LLP
East Sussex Pension Fund
Ecclesiastical Investment Management
Ecofi Investissements - Groupe Credit Cooperatif
Edward W. Hazen Foundation
EEA Group Ltd
Eko
Elan Capital Partners
Element Investment Managers
ELETRA - Fundação Celg de Seguros e Previdência
Environment Agency Active Pension fund
Epworth Investment Management
Equilibrium Capital Group
equinet Bank AG
Erik Penser Fondkommission
Erste Asset Management
Erste Group Bank AG
Essex Investment Management Company, LLC
ESSSuper
Ethos Foundation
Etica SGR
Eureka Funds Management
Eurizon Capital SGR S.p.A.
Evangelical Lutheran Church in Canada Pension Plan for Clergy and Lay Workers
Evangelical Lutheran Foundation of Eastern Canada
Evli Bank Plc
F&C Asset Management
FACEB – Fundação de Previdência dos Empregados da CEB
FAELCE – Fundacao Coelce de Seguridade Social

Investor signatories *continued*

FAPERS- Fundação Assistencial e Previdenciária da Extensão Rural do Rio Grande do Sul
FASERN - Fundação COSERN de Previdência Complementar
Fédéris Gestion d'Actifs
FIDURA Capital Consult GmbH
FIM Asset Management Ltd
FIM Services
Financiere de l'Echiquier
FIPECq - Fundação de Previdência Complementar dos Empregados e Servidores da FINEP, do IPEA, do CNPq
FIRA. - Banco de Mexico
First Affirmative Financial Network, LLC
First Commercial Bank
First State Investments
First State Superannuation Scheme
First Swedish National Pension Fund (AP1)
FirstRand Limited
Five Oceans Asset Management
Florida State Board of Administration (SBA)
Folketrygdfondet
Folksam
Fondaction CSN
Fondation de Luxembourg
Forma Futura Invest AG
Fourth Swedish National Pension Fund, (AP4)
FRANKFURT-TRUST Investment Gesellschaft mbH
Friends Fiduciary Corporation
Fubon Financial Holdings
Fukoku Capital Management Inc
FUNCEF - Fundação dos Economiários Federais
Fundação AMPLA de Seguridade Social - Brasiletros
Fundação Atlântico de Seguridade Social
Fundação Attilio Francisco Xavier Fontana
Fundação Banrisul de Seguridade Social
Fundação BRDE de Previdência Complementar - ISBRE
Fundação Chesf de Assistência e Seguridade Social – Fachesf
Fundação Corsan - dos Funcionários da Companhia Riograndense de Saneamento
Fundação de Assistência e Previdência Social do BNDES - FAPES
FUNDAÇÃO ELETROBRÁS DE SEGURIDADE SOCIAL - ELETROS
Fundação Forluminas de Seguridade Social - FORLUZ
Fundação Itaipu BR - de Previdência e Assistência Social
FUNDAÇÃO ITAUBANCO
Fundação Itaúsa Industrial
Fundação Promon de Previdência Social
Fundação Rede Ferroviaria de Seguridade Social – Refer
FUNDAÇÃO SANEPAR DE PREVIDÊNCIA E ASSISTÊNCIA SOCIAL - FUSAN
Fundação Sistel de Seguridade Social (Sistel)
Fundação Vale do Rio Doce de Seguridade Social - VALIA
FUNDIÁGUA - FUNDAÇÃO DE PREVIDENCIA COMPLEMENTAR DA CAESB
Futuregrowth Asset Management
GEAP Fundação de Seguridade Social
General Equity Group AG
Generali Deutschland Holding AG
Generation Investment Management
Genus Capital Management
German Equity Trust AG
Gjensidige Forsikring ASA
Global Forestry Capital S.a.r.l.
GLS Gemeinschaftsbank eG
Goldman Sachs Group Inc.
GOOD GROWTH INSTITUT für globale Vermögensentwicklung mbH
Governance for Owners
Government Employees Pension Fund (“GEPF”), Republic of South Africa
GPT Group
Greater Manchester Pension Fund
Green Cay Asset Management
Green Century Capital Management
GROUPAMA EMEKLİ Lİ K A.İ .
GROUPAMA Sİ GORTA A.İ .
Groupe Crédit Coopératif
Groupe Investissement Responsable Inc.
GROUPE OFI AM
Grupo Financiero Banorte SAB de CV
Grupo Santander Brasil
Gruppo Bancario Credito Valtellinese
Gruppo Monte Paschi
Guardians of New Zealand Superannuation
Hang Seng Bank
Hanwha Asset Management Company
Harbour Asset Management
Harrington Investments, Inc
Hauck & Aufhäuser Asset Management GmbH
Hazel Capital LLP
HDFC Bank Ltd
Healthcare of Ontario Pension Plan (HOOPP)
Helaba Invest Kapitalanlagegesellschaft mbH
Henderson Global Investors
Hermes Fund Managers
HESTA Super
HIP Investor
Holden & Partners
HSBC Global Asset Management (Deutschland) GmbH
HSBC Holdings plc
HSBC INKA Internationale Kapitalanlagegesellschaft mbH
Humanis
Hyundai Marine & Fire Insurance Co., Ltd.
Hyundai Securities Co., Ltd.
IBK Securities
IDBI Bank Ltd
IDFC Ltd
Illinois State Board of Investment
Ilmarinen Mutual Pension Insurance Company
Impax Group plc
Independent Planning Group
Indusind Bank
Industrial Alliance Insurance and Financial Services Inc.
Industrial Bank
Industrial Bank of Korea
Industrial Development Corporation
Industry Funds Management
Inflection Point Partners
ING Group
Insight Investment Management (Global) Ltd
Instituto Infraero de Seguridade Social - INFRAPREV
Instituto Sebrae De Seguridade Social - SEBRAEPREV
Insurance Australia Group
IntReal KAG
Investec Asset Management
Investing for Good
Irish Life Investment Managers
Itaú Asset Management
Itaú Unibanco Holding S.A.
Janus Capital Group Inc.
Jarislowsky Fraser Limited
Jessie Smith Noyes Foundation
JOHNSON & JOHNSON SOCIEDADE PREVIDENCIARIA
JPMorgan Chase & Co.
Jubitz Family Foundation
Jupiter Asset Management
Kaiser Ritter Partner Privatbank AG (Schweiz)
KB Kookmin Bank
KBC Asset Management NV
KBC Group
KCPS and Company
KDB Asset Management Co., Ltd.
KDB Daewoo Securities Co. Ltd.
KEPLER-FONDS Kapitalanlagegesellschaft m. b. H.
KEVA
KeyCorp
KfW Bankengruppe
Killik & Co LLP
Kiwi Income Property Trust
Kleinwort Benson Investors
KlimaINVEST
KLP Insurance
Korea Investment Management
Korea Technology Finance Corporation
KPA Pension
La Banque Postale Asset Management
La Financiere Responsable
Lampe Asset Management GmbH
Landsorganisationen i Sverige
LaSalle Investment Management
LBBW - Landesbank Baden-Württemberg
LBBW Asset Management Investmentgesellschaft mbH
LD Lønmodtagernes Dyrtidsfond
Legal & General Investment Management
Legg Mason, Inc.
LGT Capital Management Ltd.
LIG Insurance Co., Ltd.
Light Green Advisors, LLC
Living Planet Fund Management Company S.A.
Lloyds Banking Group
Local Authority Pension Fund Forum
Local Government Super
LOGOS PORTFÖY YÖNETIMI A.İ .
London Pensions Fund Authority
Lothian Pension Fund
LUCRF Super
Macquarie Group
MagNet Magyar Közösségi Bank Zrt.
MainFirst Bank AG
Malakoff Médéric
MAMA Sustainable Incubation AG
Man Group plc
Mandarine Gestion
MAPFRE
Maple-Brown Abbott
Marc J. Lane Investment Management, Inc.
Maryland State Treasurer
Matrix Asset Management
Matrix Group
McLean Budden
MEAG MUNICH ERGO Asset Management GmbH
Mediobanca
Meeschaert Gestion Privée
Meiji Yasuda Life Insurance Company
Mendesprev Sociedade Previdenciária
Merck Family Fund
Mercy Investment Services, Inc.
Mergence Investment Managers
MetallRente GmbH
Metrus – Instituto de Seguridade Social
Metzler Investment Gmbh
MFS Investment Management
Midas International Asset Management
Miller/Howard Investments
Mirae Asset Global Investments Co. Ltd.
Mirae Asset Securities
Mirvac Group
Missionary Oblates of Mary Immaculate
Mistra, Foundation for Strategic Environmental Research
Mitsubishi UFJ Financial Group, Inc.
Mitsui Sumitomo Insurance Co.,Ltd
Mizuho Financial Group, Inc.
Mn Services
Momentum Manager of Managers (Pty) Ltd
Monega Kapitalanlagegesellschaft mbH
Mongeral Aegon Seguros e Previdência S.A.
Morgan Stanley
Mountain Cleantech AG
MTAA Superannuation Fund
Mutual Insurance Company Pension-Fennia
Nanuk Asset Management
Natcan Investment Management
Nathan Cummings Foundation, The
National Australia Bank
National Bank of Canada
National Bank Of Greece
National Grid Electricity Group of the Electricity Supply Pension Scheme
National Grid UK Pension Scheme
National Pensions Reserve Fund of Ireland
National Union of Public and General Employees (NUPGE)
Nativus Sustainable Investments
Natixis SA
Natural Investments LLC
Nedbank Limited
Needmor Fund
Nelson Capital Management, LLC
Nest Sammelstiftung
Neuberger Berman
New Alternatives Fund Inc.
New Amsterdam Partners LLC
New Forests
New Mexico State Treasurer
New York City Employees Retirement System
New York City Teachers Retirement System
New York State Common Retirement Fund (NYSCRF)
Newton Investment Management Limited
NGS Super
NH-CA Asset Management
Nikko Asset Management Co., Ltd.
Nipponkoa Insurance Company, Ltd
Nissay Asset Management Corporation
NORD/LB Kapitalanlagegesellschaft AG
Nordea Bank
Norfolk Pension Fund

Norges Bank Investment Management (NBIM)
North Carolina Retirement System
Northern Ireland Local Government Officers' Superannuation Committee (NILGOSC)
Northern Star Group
Northern Trust
Northward Capital
Northwest and Ethical Investments L.P. (NEI Investments)
Nykredit
OceanRock Investments Inc.
Oddo & Cie
oeco capital Lebensversicherung AG
ÖKOWORLD
Old Mutual plc
OMERS Administration Corporation
Ontario Pension Board
Ontario Teachers' Pension Plan
OP Fund Management Company Ltd
Oppenheim & Co Limited
Oppenheim Fonds Trust GmbH
Opplysningsvesenets fond (The Norwegian Church Endowment)
OPSEU Pension Trust (OP Trust)
Oregon State Treasurer
Orion Energy Systems
Osmosis Investment Management
Panahpur
Park Foundation
Parnassus Investments
Pax World Funds
Pensioenfonds Vervoer
Pension Denmark
Pension Fund for Danish Lawyers and Economists
Pension Protection Fund
Pensionsmyndigheten
Perpetual Investments
PETROS - Fundação Petrobras de Seguridade Social
PFA Pension
PGGM
Phillips, Hager & North Investment Management Ltd.
PhiTrust Active Investors
Pictet Asset Management SA
Pinstripe Management GmbH
Pioneer Investments
Piraeus Bank
PKA
Pluris Sustainable Investments SA
PNC Financial Services Group, Inc.
Pohjola Asset Management Ltd
Polden Puckham Charitable Foundation
Portfolio 21 Investments
Porto Seguro S.A.
POSTALIS - Instituto de Seguridade Social dos Correios e Telégrafos
Power Finance Corporation
PREVHAB PREVIDÊNCIA COMPLEMENTAR
PREVI Caixa de Previdência dos Funcionários do Banco do Brasil
PREVIG Sociedade de Previdência Complementar
Prologis
Provinzial Rheinland Holding
Prudential Investment Management
Prudential PLC
Psagot Investment House Ltd
PSP Investments
Q Capital Partners Co. Ltd
QBE Insurance Group
Rabobank
Raiffeisen Fund Management Hungary Ltd.
Raiffeisen Kapitalanlage-Gesellschaft m.b.H.
Raiffeisen Schweiz
Rathbone Greenbank Investments
RCM (Allianz Global Investors)
Real Grandeza Fundação de Previdência e Assistência Social
REI Super
Reliance Capital Ltd
Representative Body of the Church in Wales
Resolution
Resona Bank, Limited
Reynders McVeigh Capital Management
River Twice Capital Advisors, LLC
RLAM
Robeco
RobecoSAM AG
Robert & Patricia Switzer Foundation
Rockefeller Asset Management
Rose Foundation for Communities and the Environment
Rothschild
Royal Bank of Canada
Royal Bank of Scotland Group
RPMI Railpen Investments
RREEF Investment GmbH
Russell Investments
Sampension KP Livsforsikring A/S
Samsung Fire & Marine Insurance
Samsung Life Insurance
Samsung Securities
Sanlam
Santa Fé Portfolios Ltda
Santam Ltd
Sarasin & Partners
SAS Trustee Corporation
Sauren Finanzdienstleistungen GmbH & Co. KG
Schroders
Scottish Widows Investment Partnership
SEB Asset Management AG
Second Swedish National Pension Fund (AP2)
Seligson & Co Fund Management Plc
Sentinel Funds
SERPROS - Fundo Multipatrocinado
Service Employees International Union Benefit Funds
Servite Friars
Seventh Swedish National Pension Fund (AP7)
Shiga Bank, Ltd.
Shinhan Bank
Shinhan BNP Paribas Investment Trust Management Co., Ltd
Shinkin Asset Management Co., Ltd
Siemens Kapitalanlagegesellschaft mbH
Signet Capital Management Ltd
Skandia
Skandinaviska Enskilda Banken AB (SEB AB)
Smith Pierce, LLC
SNS Asset Management
Social(k)
Sociedade de Previdencia Complementar da Dataprev - Prevdata
Socrates Fund Management
Solaris Investment Management
Sompo Japan Insurance Inc.
Sonen Capital LLC
Sopher Investment Management
Soprise! LLP
SouthPeak Investment Management
SPF Beheer bv
Spring Water Asset Management, LLC
Sprucegrove Investment Management Ltd
Standard Chartered
Standard Chartered Korea Limited
Standard Life Investments
State Bank of India
State Street Corporation
StatewideSuper
Stockland
Storebrand ASA
Strathclyde Pension Fund
Stratus Group
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The United Church of Canada - General Council
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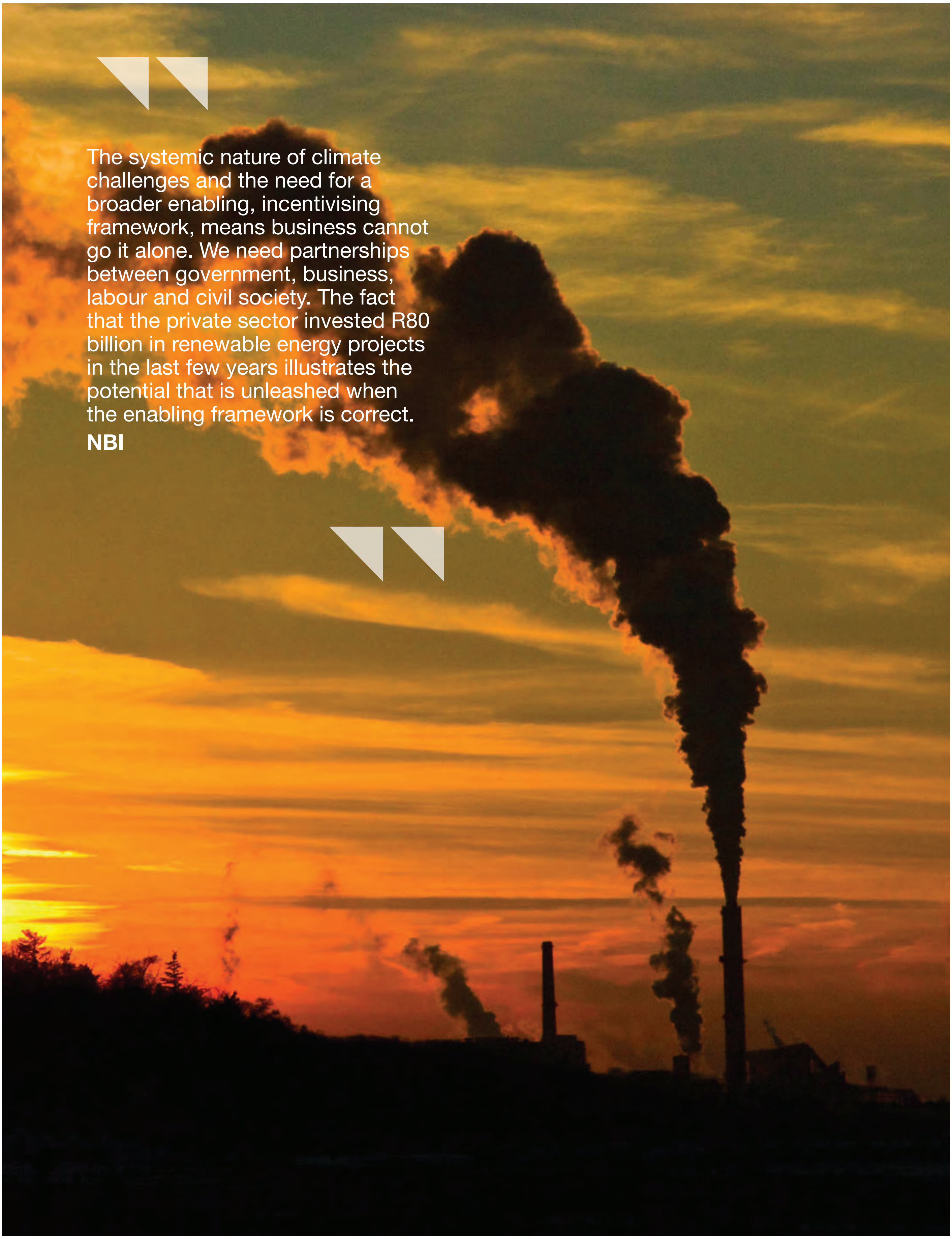
The systemic nature of climate challenges and the need for a broader enabling, incentivising framework, means business cannot go it alone. We need partnerships between government, business, labour and civil society. The fact that the private sector invested R80 billion in renewable energy projects in the last few years illustrates the potential that is unleashed when the enabling framework is correct.
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