CDP South Africa JSE 100 Report 2011

Partnering for a low carbon future

On behalf of 551 investors with assets of US$ 71 trillion

Lead Partner
National Business Initiative

Report written by
Incite Sustainability

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2011 Carbon Disclosure Project 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 standardized 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 **www.cdproject.net/investormembers**

ABRAPP - Associação Brasileira das Entidades Fechadas de Previdência Complementar

AEGON N.V.

AKBANK T.A.S.

Allianz Global Investors Kapitalanlagegesellschaft mbH

ATP Group

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Bank of America Merrill Lynch

BlackRock

BP Investment Management Limited

California Public Employees' Retirement System

California State Teachers' Retirement System

Calvert Asset Management Company, Inc.

Catholic Super

CCLA Investment Management Ltd

Ethos Foundation

Generation Investment Management

HSBC Holdings plc

ING

KB Kookmin Bank

KLP

Legg Mason, Inc.

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Mitsubishi UFJ Financial Group (MUFG)

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National Australia Bank

NEI Investments

Neuberger Berman

Newton Investment Management Limited

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PFA Pension

Raiffeisen Schweiz

Royal Bank of Scotland Group

Robeco

Rockefeller & Co., Inc.

SAM Group

Schroders

Scottish Widows Investment Partnership

SEB

Sompo Japan Insurance Inc.

Standard Chartered

Sun Life Financial Inc.

TD Asset Management Inc. and TDAM USA Inc.

The Wellcome Trust

Zurich Cantonal Bank

Cover photo:

The simple home of Jean-Pierre and Tracey du Plessis set in a valley 26 kilometres outside Clanwilliam in the Western Cape, depicts the changing consumption and eco-living that society needs to embrace towards more sustainable living. A question for businesses and governments is how they can drive and support this lifestyle change. The design of the house includes passive air-conditioning, passive heating and cooling, a grey-water system that's used to irrigate the family vegetable patch, solar water heating and gas cooking. The family is also planning to install alternative energy sources such as wind turbines and solar systems, and have started designing a large-scale recycling project to cater for all the homes in the valley, which currently burn all their own refuse.

2011 Carbon Disclosure Project Investor Signatories

Carbon Disclosure Project 2011

551 financial institutions with assets of US$71 trillion were signatories to the CDP 2011 information request dated February 1st, 2011.

Aberdeen Asset Managers
Aberdeen Immobilien KAG mbH
ABRAPP - Associação Brasileira das Entidades Fechadas de Previdência Complementar
Active Earth Investment Management
Acuity Investment Management
Addenda Capital Inc.
Advanced Investment Partners
Advantage Asset Managers (Pty) Ltd
AEGON Magyarország Befektetési Alapkezelo Zrt.
AEGON N.V.
AEGON-INDUSTRIAL Fund Management Co., Ltd
AFP Integra
AIG Asset Management
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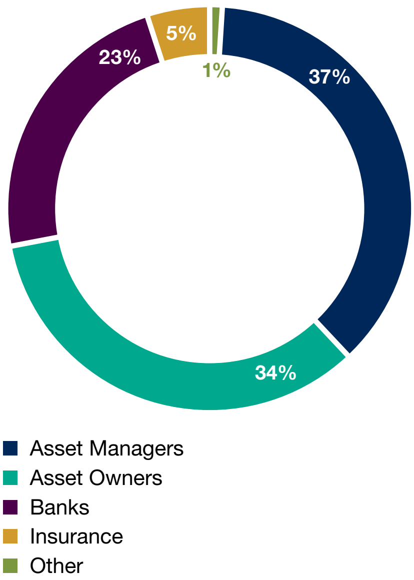
AKBANK T.A.S.
Alberta Investment Management Corporation (AIMCo)
Alberta Teachers Retirement Fund
Alcyone Finance
Allianz Elementar Versicherungs-AG
Allianz Group
Altira Group
Amalgamated Bank
AMP Capital Investors
AmpegaGerling Investment GmbH
Amundi AM
ANBIMA – Associação Brasileira das Entidades dos Mercados Financeiro e de Capitais
Antera Gestão de Recursos S.A.
APG Group
Aprionis
Aquila Capital
ARIA (Australian Reward Investment Alliance)
Arisaig Partners Asia Pte Ltd
ARK Investment Advisors Inc.
Arma Portföy Yönetimi A.S.
ASB Community Trust
ASM Administradora de Recursos S.A.
ASN Bank
Assicurazioni Generali Spa
ATP Group
Australia and New Zealand Banking Group Limited
Australian Central Credit Union incorporating Savings & Loans Credit Union
Australian Ethical Investment Limited
AustralianSuper
Aviva
Aviva Investors
AXA Group
Baillie Gifford & Co.
Bakers Investment Group (Australia) Pty Ltd
Banco Bradesco S/A
Banco de Credito del Peru BCP
Banco de Galicia y Buenos Aires S.A.
Banco do Brasil S/A
Banco Nacional de Desenvolvimento Econômico e Social - BNDES
Banco Santander
Banesprev – Fundo Banespa de Seguridade Social
Banesto (Banco Español de Crédito S.A.)
Bank of America Merrill Lynch
Bank of Montreal
Bank Sarasin & Cie AG
Bank Vontobel
Bankhaus Schelhammer & Schattera Kapitalanlagegesellschaft m.b.H.
BANKINTER S.A.
BankInvest
Banque Degroof
Barclays
Baumann and Partners S.A.
BAWAG P.S.K. INVEST GmbH
Bayern LB
BayernInvest Kapitalanlagegesellschaft mbH
BBC Pension Trust Ltd
BBVA
Bedfordshire Pension Fund
Bentall Kennedy
Beutel Goodman and Co. Ltd
BioFinance Administração de Recursos de Terceiros Ltda
BlackRock
Blumenthal Foundation
BNP Paribas Investment Partners
BNY Mellon
BNY Mellon Service Kapitalanlage Gesellschaft
Boston Common Asset Management, LLC
BP Investment Management Limited
Brasilprev Seguros e Previdência S/A.
British Columbia Investment Management Corporation (bcIMC)
BT Investment Management
Busan Bank
CAAT Pension Plan
Cadiz Holdings Limited
Caisse de dépôt et placement du Québec
Caisse des Dépôts
Caixa Beneficente dos Empregados da Companhia Siderurgica Nacional - CBS
Caixa de Previdência dos Funcionários do Banco do Nordeste do Brasil (CAPEF)
Caixa Econômica Federal
Caixa Geral de Depositos
Caja de Ahorros de Valencia, Castellón y Valencia, BANCAJA
Caja Navarra
California Public Employees' Retirement System
California State Teachers' Retirement System
California State Treasurer
Calvert Asset Management Company, Inc
Canada Pension Plan Investment Board
Canadian Friends Service Committee (Quakers)
Canadian Imperial Bank of Commerce (CIBC)
CAPESESP
Capital Innovations, LLC
CARE Super Pty Ltd
Carlson Investment Management
Carmignac Gestion
Catherine Donnelly Foundation
Catholic Super
Cbus Superannuation Fund
CCLA Investment Management Ltd
Celeste Funds Management Limited
Central Finance Board of the Methodist Church
Ceres
Christian Super
Christopher Reynolds Foundation
Church Commissioners for England
Church of England Pensions Board
CI Mutual Funds' Signature Global Advisors
Clean Yield Group, Inc.
Cleantech Invest AG
ClearBridge Advisors
Climate Change Capital Group Ltd
CM-CIC Asset Management
Colonial First State Global Asset Management
Comerica Incorporated
Comite syndical national de retraite Bâtirente
Commerzbank AG
CommInsure
Commonwealth Bank of Australia
Compton Foundation, Inc.
Concordia Versicherungsgruppe
Connecticut Retirement Plans and Trust Funds
Co-operative Financial Services (CFS)
Corston-Smith Asset Management Sdn. Bhd.
CRD Analytics
Crédit Agricole
Credit Suisse
Gruppo Credito Valtellinese
Daegu Bank
Daiwa Securities Group Inc.
de Pury Pictet Turrettini & Cie S.A.
DekaBank Deutsche Girozentrale
Deutsche Asset Management Investmentgesellschaft mbH
Deutsche Bank AG
Deutsche Postbank Vermögensmanagement S.A.
Development Bank of Japan Inc.
Development Bank of the Philippines (DBP)
Dexia Asset Management
Dexus Property Group
DnB NOR ASA
Domini Social Investments LLC
Dongbu Insurance
DWS Investment GmbH
Earth Capital Partners LLP
East Sussex Pension Fund
Ecclesiastical Investment Management
Ecofi Investissements - Groupe Credit Cooperatif
Edward W. Hazen Foundation
EEA Group Ltd
Elan Capital Partners
Element Investment Managers
ELETRA - Fundação Celg de Seguros e Previdência
Environment Agency Active Pension fund
Epworth Investment Management
Equilibrium Capital Group
Erste Asset Management
Erste Group Bank
Essex Investment Management Company, LLC
ESSSuper
Ethos Foundation
Eureko B.V.
Eurizon Capital SGR
Evangelical Lutheran Church in Canada Pension Plan for Clergy and Lay Workers
Evli Bank Plc
F&C Management Ltd
FAELCE – Fundacao Coelce de Seguridade Social
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
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 Swedish National Pension Fund (AP1)
Firstrand Limited
Five Oceans Asset Management Pty Limited
Florida State Board of Administration (SBA)
Folketrygdfondet
Folksam
Fondaction CSN
Fondation de Luxembourg
Fondiaria-SAI
Fonds de Réserve pour les Retraites – FRR
Fourth Swedish National Pension Fund (AP4)
FRANKFURT-TRUST Investment-Gesellschaft mbH
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 de Assistência e Previdência Social do BNDES - FAPES
FUNDAÇÃO ELETROBRÁS DE SEGURIDADE SOCIAL - ELETROS
Fundação Forluminas de Seguridade Social - FORLUZ
FUNDAÇÃO ITAUBANCO
Fundação Itaúsa Industrial
Fundação Promon de Previdência Social
Fundação Vale do Rio Doce de Seguridade Social - VALIA
Fundação Rede Ferroviaria de Seguridade Social – Refer
Fundação Sistel de Seguridade Social (Sistel)
FUNDIÁGUA - FUNDAÇÃO DE PREVIDENCIA COMPLEMENTAR DA CAESB
Futuregrowth Asset Management

Gartmore Investment Management Ltd
GEAP Fundação de Seguridade Social
Generali Deutschland Holding AG
Generation Investment Management
Genus Capital Management
Gjensidige Forsikring ASA
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
Green Cay Asset Management
Green Century Capital Management
Groupe Crédit Coopératif
Groupe Investissement Responsable Inc.
GROUPE OFI AM
Grupo Banco Popular
Grupo Santander Brasil
Gruppo Credito Valtellinese
Gruppo Montepaschi
Guardian Ethical Management Inc
Guardians of New Zealand Superannuation
Guosen Securities Co., LTD.
Hang Seng Bank
Harbourmaster Capital
Harrington Investments, Inc
Hauck & Aufhäuser Asset Management GmbH
Hazel Capital LLP
HDFC Bank Ltd
Health Super Fund
Healthcare of Ontario Pension Plan (HOOPP)
Henderson Global Investors
Hermes Fund Managers
HESTA Super
HSBC Global Asset Management (Deutschland) GmbH
HSBC Holdings plc
HSBC INKA Internationale Kapitalanlagegesellschaft mbH
Hyundai Marine & Fire Insurance. Co., Ltd.
Hyundai Securities Co., Ltd.
Ibgeana Society of Assistance and Security SIAS / Sociedade Ibgeana de Assistência e Seguridade (SIAS)
IDBI Bank Ltd
Ilmarinen Mutual Pension Insurance Company
Impax Group plc
IndusInd Bank Limited
Industrial Bank (A)
Industrial Bank of Korea
Industry Funds Management
Infrastructure Development Finance Company
ING
Insight Investment Management (Global) Ltd
Instituto de Seguridade Social dos Correios e Telégrafos- Postalis
Instituto Infraero de Seguridade Social - INFRAPREV
Instituto Sebrae De Seguridade Social - SEBRAEPREV
Insurance Australia Group
Investec Asset Management
Irish Life Investment Managers
Itau Asset Management
Itaú Unibanco Holding S A
Janus Capital Group Inc.
Jarislowsky Fraser Limited
JPMorgan Chase & Co.
Jubitz Family Foundation
Jupiter Asset Management
Kaiser Ritter Partner (Schweiz) AG
KB asset Management
KB Kookmin Bank
KBC Asset Management NV
KDB Asset Management Co., Ltd.
KEPLER-FONDS Kapitalanlagegesellschaft m. b. H.
KfW Bankengruppe
KlimaINVEST
KLP
Korea Investment Management Co., Ltd.
The Korea Teachers Pension (KTP)
Korea Technology Finance Corporation (KOTEC)
KPA Pension
La Banque Postale Asset Management
La Financiere Responsable
Lampe Asset Management GmbH
Landsorganisationen i Sverige
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.
Local Authority Pension Fund Forum
Local Government Super
Local Super
Lombard Odier Darier Hentsch & Cie
London Pensions Fund Authority
Lothian Pension Fund
Lupus alpha Asset Management GmbH
Macif Gestion
Macquarie Group Limited
MAMA Sustainable Incubation AG
Man
Maple-Brown Abbott Limited
Marc J. Lane Investment Management, Inc.
Maryland State Treasurer
Matrix Asset Management
McLean Budden
MEAG MUNICH ERGO Asset Management GmbH
Meeschaert Gestion Privée
Meiji Yasuda Life Insurance Company
Mendesprev Sociedade Previdenciária
Merck Family Fund
Meritas Mutual Funds
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 Co., Ltd.
Missionary Oblates of Mary Immaculate
Mistra, Foundation for Strategic Environmental Research
Mitsubishi UFJ Financial Group (MUFG)
Mizuho Financial Group, Inc.
Mn Services
Monega Kapitalanlagegesellschaft mbH
Morgan Stanley
Motor Trades Association of Australia Superannuation Fund Pty Ltd
Mutual Insurance Company Pension-Fennia
Natcan Investment Management
Nathan Cummings Foundation, The
National Australia Bank
National Bank of Canada
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)
NATIXIS
Nedbank Limited
Needmor Fund
NEI Investments
Nelson Capital Management, LLC
Nest Sammelstiftung
Neuberger Berman
New Amsterdam Partners LLC
New Mexico State Treasurer
New York City Employees Retirement System
New York City Teachers Retirement System
New York State Common Retirement Fund (NYSCRF)
New Zealand Earthquake Commission
Newton Investment Management Limited
NGS Super
NH-CA Asset Management
Nikko Asset Management Co., Ltd.
Nikko Cordial Securities
Nissay Asset Management Corporation
NORD/LB Kapitalanlagegesellschaft AG
Nordea Investment Management
Norfolk Pension Fund
Norges Bank Investment Management (NBIM)
North Carolina Retirement System
Northern Ireland Local Government Officers’ Superannuation Committee (NILGOSC)
Northern Trust
Nykredit
Oddo & Cie
OECO Capital Lebensversicherung AG
Old Mutual plc
OMERS Administration Corporation
Ontario Teachers’ Pension Plan
OP Fund Management Company Ltd
Oppenheim Fonds Trust GmbH
Opplysningsvesenets fond (The Norwegian Church Endowment)
OPSEU Pension Trust
Oregon State Treasurer
Orion Asset Management LLC
Parnassus Investments
Pax World Funds
Pensioenfonds Vervoer
Pension Denmark
Pension Fund for Danish Lawyers and Economists
Pension Protection Fund
Pensionsmyndigheten
PETROS - The Fundação Petrobras de Seguridade Social
PFA Pension
PGGM
Phillips, Hager & North Investment Management Ltd.
PhiTrust Active Investors
Phoenix Asset Management Inc.
Pictet Asset Management SA
PKA
Pluris Sustainable Investments SA
PNC Financial Services Group, Inc.
Pohjola Asset Management Ltd
Portfolio 21 Investments
Porto Seguro S.A.
PREVHAB PREVIDÊNCIA COMPLEMENTAR
PREVI Caixa de Previdência dos Funcionários do Banco do Brasil
PREVIG Sociedade de Previdência Complementar
Provinzial Rheinland Holding
Prudential Investment Management
Psagot Investment House Ltd
PSP Investments
PSS - Seguridade Social
Q Capital Partners Co. Ltd
QBE Insurance Group
Rabobank
Raiffeisen Schweiz
Railpen Investments
Rathbones / Rathbone Greenbank Investments
Real Grandeza Fundação de Previdência e Assistência Social
Rei Super
Reliance Capital Ltd
Resolution
Resona Bank, Limited
Reynders McVeigh Capital Management
RLAM
Robeco
Rockefeller Financial
Rose Foundation for Communities and the Environment
Royal Bank of Canada
Royal Bank of Scotland Group
RREEF Investment GmbH
SAM Group
SAMPENSION KP LIVSFORSIKRING A/S
SAMSUNG FIRE & MARINE INSURANCE
Samsung Securities
Sanlam
Santa Fé Portfolios Ltda
SAS Trustee Corporation
Sauren Finanzdienstleistungen GmbH & Co. KG
Schroders
Scotiabank
Scottish Widows Investment Partnership
SEB

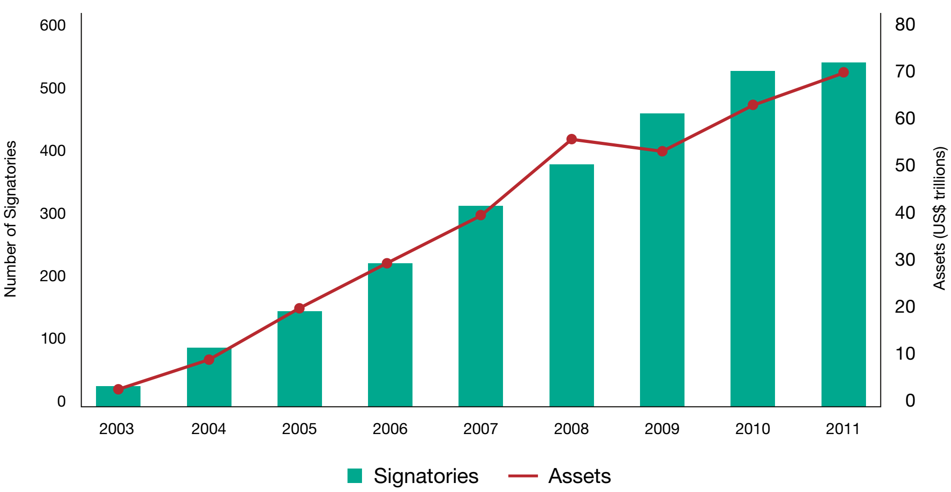
SEB Asset Management AG
Second Swedish National Pension Fund (AP2)
SEIU Master Trust
Seligson & Co Fund Management Plc
Sentinel Investments
SERPROS - Fundo Multipatrocinado
Seventh Swedish National Pension Fund (AP7)
Shinhan Bank
Shinhan BNP Paribas Investment Trust Management Co., Ltd
Shinkin Asset Management Co., Ltd
Siemens Kapitalanlagegesellschaft mbH
Signet Capital Management Ltd
SMBC Friend Securities Co., LTD
Smith Pierce, LLC
SNS Asset Management
Social(k)
Sociedade de Previdencia Complementar da Dataprev - Prevdata
Solaris Investment Management Limited
Sompo Japan Insurance Inc.
Sopher Investment Management
SPF Beheer bv
Sprucegrove Investment Management Ltd
Standard Chartered
Standard Chartered Korea Limited
Standard Life Investments
State Bank of India
State Street Corporation
StatewideSuper
StoreBrand ASA
Strathclyde Pension Fund
Stratus Group
Sumitomo Mitsui Banking Corporation
Sumitomo Mitsui Card Company, Limited
Sumitomo Mitsui Finance & Leasing Co., Ltd
Sumitomo Mitsui Financial Group
The Sumitomo Trust & Banking Co., Ltd.
Sun Life Financial Inc.
Superfund Asset Management GmbH
SUSI Partners AG
Sustainable Capital
Svenska Kyrkan, Church of Sweden
Swedbank AB
Swiss Re
Swisscanto Holding AG
Syntrus Achmea Asset Management
T. Rowe Price
T. SINAI KALKINMA BANKASI A.S.
T.GARANTI BANKASI A.S.
Tata Capital Limited
TD Asset Management Inc. and TDAM USA Inc.
Teachers Insurance and Annuity Association – College Retirement Equities Fund (TIAA-CREF)
Telluride Association
Tempis Asset Management Co. Ltd
Terra Forvaltning AS
TerraVerde Capital Management LLC
The Brainerd Foundation
The Bullitt Foundation
The Central Church Fund of Finland
The Collins Foundation
The Co-operative Asset Management
The Co-operators Group Ltd
The Daly Foundation
The GPT Group
The Hartford Financial Services Group, Inc.
The Japan Research Institute, Limited
The Joseph Rowntree Charitable Trust
The Local Government Pensions Institution
The Pension Plan For Employees of the Public Service Alliance of Canada
The Pinch Group
The Presbyterian Church in Canada
The Russell Family Foundation
The Shiga Bank, Ltd.
The Standard Bank Group
The United Church of Canada - General Council
The University of Edinburgh Endowment Fund
The Wellcome Trust
Third Swedish National Pension Fund (AP3)
Threadneedle Asset Management

Tokio Marine & Nichido Fire Insurance Co., Ltd.
Toronto Atmospheric Fund
Trillium Asset Management Corporation
Triodos Investment Management
Tryg
UBS
UniCredit Group
Union Asset Management Holding AG
Unipension
UNISON staff pension scheme
UniSuper
Unitarian Universalist Association
United Methodist Church General Board of Pension and Health Benefits
United Nations Foundation
Universities Superannuation Scheme (USS)
Vancity Group of Companies
VCH Vermögensverwaltung AG
Veris Wealth Partners
Veritas Investment Trust GmbH
Vermont State Treasurer
Vexiom Capital, L.P.
VicSuper Pty Ltd
Victorian Funds Management Corporation
VietNam Holding Ltd.
Vision Super
VOLKSBANK INVESTMENTS
Waikato Community Trust Inc
Walden Asset Management, a division of Boston Trust & Investment Management Company
WARBURG - HENDERSON Kapitalanlagegesellschaft für Immobilien mbH
WARBURG INVEST KAPITALANLAGEGESELLSCHAFT MBH
Wells Fargo & Company
West Yorkshire Pension Fund
WestLB Mellon Asset Management (WMAM)
Westpac Banking Corporation
White Owl Capital AG
Winslow Management, A Brown Advisory Investment Group
Woori Bank
Woori Investment & Securities Co., Ltd.
YES BANK Limited
York University Pension Fund
Youville Provident Fund Inc.
Zegora Investment Management
Zevin Asset Management
Zurich Cantonal Bank

2011 Signatory investor breakdown



CDP Investor signatories & assets over time



Government is committed to implementing strategies towards cleaner technology and transition towards a low carbon future. South Africa has gazetted the National Climate Change Response Policy that embodies our commitment to addressing climate change while serving as our roadmap for effective climate change response and transition to a climate resilient and low-carbon economy.

Minister's foreword

We welcome the fifth Carbon Disclosure Report that illuminates business' commitment to achieving disclosure of their carbon footprint and pro-actively working towards its reduction.

The various indicators of exponential improvement in not only the response rate, but the improving quality and scope of data, rising levels of strategic importance given to this process and the increasing refinement in the identification of risks and opportunities, are all signs of the progressive significance that companies are attaching to the impacts of climate change.

Climate change is the foremost threat to South Africa's long term sustainable development, economic growth and quality of life. Government alone cannot win this battle without the support and commitment of business. Government is committed to implementing strategies towards cleaner technology and transition towards a low carbon future.

South Africa has gazetted the National Climate Change Response Policy that embodies our commitment to addressing climate change while serving as our roadmap for effective climate change response and transition to a climate resilient and low-carbon economy.

The policy, *inter alia*, deals with jobs and aims to limit job contraction to those areas of the economy where excessive carbon intensity is unsustainable, whilst promoting and expanding the green economy sectors. The policy also aims to promote investment in human and productive resources that will grow the green economy. To do this, government will assess the vulnerability of the different economic sectors to climate change and develop Sector Job Resilience Plans.

We also welcome the commitment shown by South African businesses that have seen the importance of giving attention to their own impacts on climate change as well assessing their own exposure to risks and opportunities to climate change and understand the need to manage reputational risk especially with regard to investors and consumers of their goods and services.

It also reaffirms that South Africa is capable of playing a leading role on the continent and among emerging economies in contributing to and benefitting from opportunities to mitigate and adapt to climate change.

It is also worth noting that as companies reach greater levels of reporting, the Carbon Disclosure Project has had transformational value in improving efficiencies, data gathering, shaping business opportunities and improved competitiveness.

Given that this is a journey within a context of many competing socioeconomic challenges, there is no doubt that an 83% response rate by leading South African companies must be applauded. As they continue on their journey however, greater focus and monitoring of improved performance is still required.

The setting of targets and implementation of actions to progress against these targets as well as the further premium that needs to be placed on measurement and verification, are areas in which companies can apply greater effort to entrench their capability in leading the way while at the same time sustaining their businesses.

The 2011 report also highlights that the next step of the journey is for more companies to move beyond identification of risks to risk mitigation and to prioritise strategies and implementation plans to seize opportunities that have been identified.

For companies who have not elevated their strategic focus and intent sufficiently through allocation of company leadership responsibility and investment in the necessary human resources and appropriate alignment of their internal structures and capacity, responding to risk and opportunities will prove more difficult.

Finally, the South African Carbon Disclosure Project Report remains a significant barometer and driver of change towards a low carbon economy and is accessed by a host of institutions who can support the transition to a low carbon economy through technological support, research and development, enabling legislative environments and investment opportunities. It is a stage that prepares us well for the carbon market process.

As South Africa hosts COP 17 and CMP 7 in Durban this year, the message is clear that business has an important role in providing leadership and solutions as they increasingly feel the impacts of climate change and resource scarcity. The time to act in response to climate change is now in order to save our future.

Minister Edna Molewa, MP
Minister of Water and Environmental Affairs

"As a significant contributor to GHG emissions and effective climate change response actions, business and industry have a fundamental role in South Africa's climate change response. Government will continue to forge and maintain effective partnerships with business and industry to ensure that their capacity is harnessed in driving the transition to a climate-resilient, equitable and internationally competitive, lower-carbon economy and society...

Government will also continue to encourage voluntary reporting initiatives established and maintained by a variety of organised business associations."

National Climate Change Response White Paper

Forewords

Foreword by Paul Simpson, CEO Carbon Disclosure Project

Corporations, investors and governments today are faced with a choice: to compete aggressively for finite resources, or to advance towards a low-carbon economy that enables sustainable, profitable growth, whilst reducing reliance on increasingly scarce materials.

Last year global energy-related carbon dioxide emissions reached a record high. The International Energy Agency estimates made for bleak reading but compounded the necessity to take bold and decisive action if we are to have any chance of limiting temperature increase to the 2°C level agreed by world leaders to protect against catastrophic climate change.

What's more, rising energy demands are competing for a limited supply of fossil fuels. The competition for increasingly scarce natural resources is putting pressure on commodity prices and having a growing impact both socially and economically. It is clear that today, more than ever, we must build momentum to decouple economic growth from emissions.

Managing carbon emissions and protecting the business from climate change impacts is fundamental to achieving sustainable and strong shareholder returns. Earlier this year, investment consultancy Mercer released a report concluding that the best way for institutional investors to manage portfolio risk associated with climate change may be to shift 40% of their portfolios into climate-sensitive assets with an emphasis on those that can adapt to a low-carbon environment.

An important part of an investor's strategy should be to engage with the companies in which they invest to encourage performance improvement. Carbon Action is a new initiative launched by CDP this year. It is driven by a leading group of investors to encourage their portfolio companies to reduce emissions by investing in emissions reducing activities with a satisfactory payback period. Carbon Action reflects a growing recognition that there is a huge range of carbon reducing activities that companies can undertake that have a very clear business case. It is therefore in the interests of all investors and not just the more active owners of investments to ensure these actions are taken.

As the management of carbon continues to move into companies' core business strategies and mainstream investment thinking, demand for primary corporate climate change information grows around the world. As well as working on behalf of 551 CDP signatory investors to gather relevant information from large corporations around the world, CDP is also working with global businesses and governments to strengthen the resilience and sustainability of their supply chains through the CDP Supply Chain programme. CDP Cities has been launched to help the world's major cities reduce climate change risk and bolster economic growth; and CDP Water Disclosure is now in its second year of working with major global companies to improve water management. A key part of CDP's strategy is to ensure the effective use of data collected. To assist with this companies are able to obtain tools that help them to measure, report and manage carbon more effectively, through CDP Reporter Services.

It is through partnerships that CDP can achieve the largest impact. In South Africa we are delighted to be working with our local partner, the National Business Initiative (NBI). In addition, we highly value the continued support of our Global Advisor, PwC, as well as that of Accenture, Microsoft, SAP and Bloomberg. These and our other partners around the world are integral to the acceleration of CDP's mission.

Whilst we wait patiently for much needed global regulation, business must continue to forge ahead, innovate and seek out opportunities by doing more with less. The decisions that perpetuate a legitimate, low-carbon and high growth economy will bring considerable value to those that have the foresight to make them. The information contained in this report and the companies' responses assist in illuminating that path.

P Simpson

Paul Simpson

CEO, Carbon Disclosure Project

National Business Initiative

The context to the release of the JSE 100 CDP report in 2011 is significant. South Africa and the City of Durban are hosting, and are party to, the 17th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP17) and the 7th Meeting of the Parties to the Kyoto Protocol (CMP 7). Mitigating climate change to minimise disruption to human and natural systems can only be achieved through a concerted and coherent global response. That global response is informed by country positions which are in turn informed by key sectors of those societies with the business sector being pivotal in many cases. Business might perpetuate the impacts on climate change or be the provider of solutions and in some cases be subject to significant economic restructuring.

The CDP in South Africa has assisted in demarcating the contribution to carbon emissions of various industry sectors. This supports appropriate prioritisation of strategies to combat climate change from both a government and business perspective. The CDP has also been a catalyst for action, in driving business to integrate climate change into strategy and in the identification of risks and opportunities, promoting the link between environmental, economic and social imperatives. Although the execution of strategy and realisation of opportunities is the next great challenge, the CDP disclosure provides encouraging evidence of revised business models and a significant investment in mitigation activities.

Achieving the policy aspirations in South Africa's recently released White Paper on Climate Change would require close cooperation between Government and Business and would mean major challenges for both. The theme of this report – "Partnering for a low carbon future" is apposite in this context. In order for government to realise its ambitions there will have to be sustained effort and cooperation from all spheres of government, the private sector and civil society alongside the dedication of individual citizens of South Africa.

A key area in the COP17 negotiations will be work that will progress a framework for measurement, reporting and verification (MRV). The Government of South Africa intends establishing a country-wide MRV system to measure climate variables and enable the identification of successful interventions. A level of MRV within the business community is essential in the implementation of market based mechanisms in the pursuit of a low-carbon growth trajectory. While the CDP report has undoubtedly provided a framework for improved disclosure and performance for South African Companies, it has also illustrated the need for further efforts required by companies in more robust verification of their data and activities.

Companies who have consistently and sincerely participated in the CDP will be well positioned to lead the transition to a green economy. They will be better positioned to mitigate their carbon emissions and respond to Government's aspirations. However there is still much to be done and we cannot do it alone. The theme of partnerships is echoed by Government in their COP17 mantra – "Working together we can save tomorrow today".

J. Yawitch.

Joanne Yawitch

Chief Executive Office, NBI

Incite Sustainability

It is more than six years since we first approached the National Business Initiative with the proposal to partner with the Carbon Disclosure Project in London to engage South African business on climate change. From the outset, our aim was to contribute to a more informed appreciation amongst businesses, investors and the financial media of the strategic investment implications of climate change, and to further encourage the proactive involvement of business in identifying solutions to this significant economic, social and environmental challenge.

Following those early conversations we have seen the publication of five annual CDP reports, each of which has shown an encouragingly high level of South African business participation by global standards. While the response has always been comparatively high – with this year's 83% response rate being the second highest globally – there has been a profound shift in the nature of the business contribution since the first CDP report in 2007. This is demonstrated in particular by the significant increase in the number of South African companies that are now assessing and reporting on their carbon footprints and that are voluntarily committing to emissions reduction targets.

Although we believe that the CDP has played a valuable role in increasing corporate awareness and action on climate change, it is evident that much still needs to be done if we are to limit the global temperature increase to the 2°C level agreed by world leaders. This will require active leadership from the business and investment community, informed by an understanding that responding to climate change is fundamental to ensuring the sustained creation of value, both for shareholders and society at large. Hopefully the analysis provided in this year's report, and the shifts prompted by the process of reporting, will further contribute to this understanding.

Jonathan

Jonathon Hanks

Director, Incite Sustainability

KPMG

The latest Carbon Disclosure Project (CDP) report for South Africa highlights a welcome trend of an increasingly proactive response to climate change by the private sector. With an impressive 83%, South Africa has the second highest CDP response rate in the world – definitely something for us all to be proud of.

As a lead sponsor and enthusiastic participant of the CDP in South Africa, KPMG is proud to be involved with the launch of the 2011 CDP report, timed to coincide with the 17th United Nations Conference of the Parties on Climate Change. COP17 is a highly significant milestone in international climate negotiations, with the existing agreement in the form of the Kyoto Protocol expiring in 2012. As the host Nation of COP17 and in the spirit of the negotiations, it therefore seems fitting for South Africa's CDP report to be launched at this time.

An overarching theme of this year's CDP report is that of Government and organisations working together. The private sector plays an important role in achieving our national carbon reduction ambitions, with Government's role to facilitate this through sound climate policy and incentivising the transition to a low carbon economy. It is most encouraging to note that in the National Development Plan (presented to President Jacob Zuma by Minister Trevor Manuel on behalf of the National Planning Commission on 11 November 2011), matters around climate change (in the context of the use of natural resources) feature prominently. In short, the Government is saying that "we need to act in a way that protects our environment" – something that we all readily subscribe to.

It is clear that as South Africa continues on its path of introducing sustainable climate change policy, the need for constructive engagement between Government and organisations in the private sector remains crucial. KPMG will continue to play a key role in facilitating this.

South Africa's very high CDP response rate, in itself an increase on previous years, is a positive sign as measurement and disclosure is the first step to effectively managing carbon emissions. Top organisations have taken this further by also increasing their reporting on identified risks and opportunities – the next crucial step towards a good carbon management framework. As expected, there are clearly still areas for improvement, including the need for more organisations to verify their measured emissions, and for the robust sensible analysis of risks and opportunities.

Organisations that are at the forefront of the measurement and disclosure of carbon emissions, and that develop and implement sound carbon management strategies, are better equipped to deal with the risks and opportunities in an increasingly complex carbon, energy and water regulatory environment.

We commend the many organisations that have already taken this important visionary step and encourage all organisations to do likewise. By pro-actively tackling the issues of climate change – and seizing the opportunities – business can reasonably ensure that they are equipped to drive value, responsibly and sustainably, through effective carbon management programmes.

The CDP is ultimately about much more than a report – it's a reflection of how we see our world and what we're doing about this to positively shape a sustainable future. We have a shared responsibility for securing the future – as individuals, for our own organisations and for future generations.

Moses Kgosana

Chief Executive, KPMG in South Africa

Chairman and Senior Partner, KPMG Africa

Element Investment Managers

We make long-term investment decisions on behalf of our clients and investors. Climate policy and resulting regulation can have a material impact on the economy and the underlying different investment asset classes over the long-term. Investors require policy certainty so they can make the best possible investment decisions on behalf of their clients.

Element Investment Managers (Element) has been a Carbon Disclosure Project (CDP) signatory investor and sponsor because it is a powerful tool to enhance awareness of climate change, help companies to identify potential risks and opportunities due to climate change and encourage action to mitigate these risks and take advantage of the opportunities. It is concerning that a few companies have still not taken advantage of the CDP programme to develop measurement processes and plans to reduce emissions. In discussions with investee companies, we understand that it takes approximately three years to develop accurate management emission information processes.

Element has engaged with a number of South African companies to carefully consider climate change risks and opportunities and improve disclosure. While most companies have become aware of the link between energy consumption, emissions and operating costs, some are still not taking the opportunity to reduce long-term costs through the use of more energy efficient technology and practices.

Element is also participating in the global CDP Water Disclosure Project and a collaborative PRI engagement with companies that did not respond to CDP Water Disclosure in 2010.

David Couldridge

Investment Analyst, Element Investment Managers

Industrial Development Corporation

Post Office
We deliver, whatever it takes.

Webber Wentzel
Attorneys

Industrial Development Corporation

The Industrial Development Corporation (IDC) has a long and proud history in the development of the South African economy and the rest of the continent.

Combating climate change is a challenge that will require a multi-pronged approach in order to achieve a resilient economy, realising the opportunity presented by the development of a green economy. It is against this background that the IDC has set aside R22,4 –billion, the largest allocation of the IDC funds to date, towards the development of the green economy.

The green economy is one of the priority sectors outlined in the government's key initiatives: New Growth Path and the Industrial Policy and Action Plan.

Energy efficiency and savings should be a strategic priority for companies, particularly given the fact that South Africa is moving to higher, cost-reflective electricity pricing.

To realise this, the IDC, in collaboration with the German Development Bank (Kfw) has launched a Green Energy Efficiency Fund (GEEF), specifically aimed at providing increased access to energy efficiency and renewable energy across all industry sectors.

The IDC is proud to be associated with the Carbon Disclosure Project and is looking forward to increased participation in this regard.

MG Qhena

CEO, IDC

The South African Post Office

On 1 November 2011, mankind symbolically celebrated the birth of the 7th billion human being alive on earth. Taking steps to sustain an inhabitable planet for the seven billion people on earth has become the responsibility of all, especially industry, being a major cause of greenhouse gases.

Importantly, climate change can be addressed only through coordinated joint action. And this is where the National Business Initiative is so important, by presenting a forum where business can share information and success stories.

The South African Post Office reduced its carbon emissions by 6.3% over the past two financial years. This, it achieved by switching to vehicles with lower emissions, rationalising transport routes, switching to low-energy light bulbs in all its facilities, and introducing a programme to reduce paper use and recycle the paper we do use.

Moreover, the company offset 6.5% of its carbon footprint by planting 1 107 trees at schools during the past financial year.

These steps are simple and easy to implement and in all cases where less resources were used, costs were saved.

As issues of climate change become more important, environmental policies may become a vital component of continuing business. It is encouraging to see more companies joining the NBI and the SA Post Office is therefore proud to be a state-owned entity that executes the targets set by government's mandate on the environment.

Nick Buick

Acting CEO, SA Post Office

Webber Wentzel

2011 is a momentous year for South Africa's response to climate change, predominantly due to the publication of the National Climate Change Response White Paper (the "Paper") and the 17th Conference of the Parties to the UN Framework Convention on Climate Change ("COP 17"), both of which have and still will significantly affect South African businesses and the South African economy.

At the outset, we should commend South African businesses for making a commitment towards reducing and more effectively monitoring and disclosing their carbon emissions, which trend is clearly illustrated in the 2011 Carbon Disclosure Project ("CDP") report. In the wake of COP 17, business should continue such enthusiasm for negating the effects of climate change and reducing carbon emissions.

It is imperative for business to place increased focus on reducing carbon emissions, not only to avoid tax and other forms of liability, but also to remain competitive and participate in the benefits of South Africa's transition to a low carbon economy. Although the implementation of such practices will require massive restructuring and will be costly, it is predicted that such costs will far outweigh the costs of delay or inaction.

Webber Wentzel's Climate Change and Carbon Trading Unit continues to lead the market throughout these significant changes in the industry and remains committed to support businesses in their journey towards a climate-resilient and lower carbon economy and society. We commend the CDP for its influence in achieving this important goal and are proud once again to sponsor the CDP.

Johann Scholtz

Partner and Head, Webber Wentzel Climate Change and Carbon Trading Practice Group

Executive summary

Introduction

Since 2000, the Carbon Disclosure Project (CDP) has, on behalf of its signatory investors, challenged the world's largest companies to measure and report their carbon emissions, integrating the long-term value and cost of climate change into their assessment of the financial health and future prospects of their business.

This year, CDP – backed by 551 institutional investors holding US$71 trillion in assets under management – sent questionnaires to the world's largest companies asking them to measure and report what climate change means for their business. These responses provide a valuable insight into how companies are preparing for an increasingly resource constrained world, and show a shift in company strategy to prepare better for a low-carbon economy and act on the business opportunities.

South Africa has signalled its intention to follow a low-carbon growth path and to play a leadership role among developing countries. The country is hosting the 17th Conference of the Parties (COP17) to the United Nations Framework Convention on Climate Change (UNFCCC) and the 7th Session of the Conference of the Parties serving as the meeting of the parties (CMP7) to the Kyoto Protocol, to negotiate global climate change policy. The national government is developing a climate change response strategy, and a carbon tax is being mooted to help achieve the country's mitigation objectives. South African business is also arguably demonstrating leadership by raising the profile of the importance of climate change action.

This report, prepared by Incite Sustainability on behalf of the National Business Initiative (NBI), analyses the responses from the 83 of the 100 largest corporations on the South African JSE that voluntarily participated in CDP 2011. It provides insight into how these major South African companies are recognising and responding to the strategic risks and opportunities that climate change presents. While it is very encouraging that both performance and disclosure has improved across most of the indicators, more remains to be done to adequately address the nature and scale of the challenge.

The CDP questionnaire

An underlying objective of the CDP is to review and assess the disclosure and action of companies and sectors against what is seen as a best practice response to the challenges of climate change. The CDP questionnaire focuses on three key areas: climate change management, risks and opportunity identification, and GHG emissions accounting and performance. These questions provide companies with an opportunity to identify the strengths and current challenges in their management of climate change issues.

CDP 2011 Highlights

Improved response rate in South Africa

- **South Africa's fifth CDP information request generated a response rate of 83%** (as compared with last year's 74%), ranking the South African response rate as the second highest CDP response rate internationally. This suggests that, notwithstanding short-term concerns and the pressures associated with the economic downturn, climate change remains high on the South African corporate agenda.

- **General improvement in response rate across most sectors.** The response rates of all sectors improved except for Energy & Materials (due to new companies entering the sample for the first time). Consumer Staples and IT & Telecoms shows the greatest level of improvement.

- **Fewer concerns remain regarding the poor response rate of certain sectors.** Certain sub-sectors continue to have fairly low response rates, including most noticeably, Real Estate (only three out of nine companies responded, although this represents an improvement on the two companies that responded in 2010); and Hotels & Resorts (the single company in the sample did not respond for the fifth consecutive year). Previous poorly responding sectors have improved, notably in the Food Products sub-sector where all companies responded. All companies in the Industrials and IT & Telecoms sectors responded.

Improved levels of disclosure is evident on most key issues

- **The level of disclosure on most issues has improved since 2009, including most significantly in the identification of risks and opportunities.** Disclosure levels have improved across all key issues – namely risks and opportunities, GHG emissions, GHG reduction targets and activities, and climate governance practices. The identification of risks and opportunities has shown the greatest year-on-year improvement.

- **99% of responding companies disclosed their GHG emissions.** This is an increase on last year's 94% disclosure rate (87% in 2009), and is accompanied by an increase in the disclosure of Scope 3 emissions across most sectors, increased reporting of emissions intensity data and more transparency on climate change issues in annual and/or sustainability reports.

- **The number of companies verifying their emissions has remained static.** This year, 30 companies (38% of respondents) have verified or are in the process of verifying elements of their Scope 1 or 2 emissions; this compares with 29 (41%) companies in 2010.

- **There is growing awareness among South African companies of the risks and opportunities of climate change, although often at a general level.** While most responding companies recognise that climate change will entail potentially significant regulatory, physical and other risks and opportunities for their operations, few companies show evidence of being rigorous in quantifying the potential financial implications of climate change. Some questions remain regarding the extent to which companies are responding at a sufficiently strategic level to the risks and opportunities that they identify.

- **Increase in number of companies with GHG emissions reduction targets.** This year, 40 companies (including almost all of the high emitting companies) reported having emissions reduction targets; this compares with 31 companies in 2010 and 20 in 2009. These targets comprise a mix of both absolute and intensity-based reduction targets, with significantly varying levels of ambition and time frame.

- **There has once again been an increase in disclosure on emissions reduction initiatives, with the greatest focus being on energy efficiency initiatives.** Most energy efficiency initiatives relate to processes and building services. Behavioural change is the second most common approach to reducing emissions. Reported levels of investment in emission reductions activities have increased from R 9.5 billion to R 17.9 billion. This increase is likely due to both increased investment as well as increased disclosure of investment figures.

- **Limited evidence of climate adaptation strategies.** It appears that local companies are insufficiently advanced in their adaptation initiatives; while this may be partly a result of the nature of the CDP questionnaire, which focuses predominantly on mitigation activities, there is scope for a more structured focus on adaptation opportunities. Most companies that have implemented adaptation initiatives are in the Energy & Materials and Financials sectors.

Increased evidence of partnerships and climate change governance practices

- **Climate change issues appear to be increasingly integrated in companies' governance activities.** Sixty-eight companies (90% of respondents) report having a board committee or executive body with responsibility for climate change; forty companies (51% of responding companies) report that they have made provision for monetary management performance incentives relating to the achievement of climate change goals and objectives. While 77% of responding companies report that climate change risks and opportunities are integrated into their overall business strategy, only 14% clearly indicate that climate change has influenced their short-term and long-term strategy.

- **Continuing evidence of business partnerships.** While it is encouraging to see evidence of South African businesses entering into partnerships – with peers, critics and competitors – there is nevertheless seen to be scope for further developments in this area along the lines of some of the progressive partnership initiatives that have been pursued for example in Europe.

South Africa's industrial GHG emissions continue to be dominated by a few companies

- **A few carbon-intensive companies continue to dominate South Africa's direct ('Scope 1') GHG emissions.** South Africa's total emissions level from all sources has been estimated at approximately 510 million metric tons of CO_2e.[1] For the 78 JSE companies that reported their emissions – including those companies whose emissions have not been made public – the total Scope 1 emissions (i.e. excluding emissions associated with electricity usage) for the South African operations is 100.4 million metric tons of CO_2e. In terms of direct local emissions, the data highlights the predominant contribution of *Sasol* (with reported annual Scope 1 emissions of 61.2 million metric tons of CO_2e), followed by *Arcelor Mittal SA* (11.9 million metric tons), *Pretoria Portland Cement Co* (4.8 million metric tons), *BHP Billiton* (3.1 million metric tons), *Evraz Highveld Steel and Vanadium* (2.8 million metric tons), *Anglo American* (2.7 million metric tons), *Sappi* (2.7 million metric tons), *Harmony Gold Mining Co.* (1.5 million metric tons), *Mondi Group* (1.0 million metric tons) and *Gold Fields* (1.0 million metric tons). Placing this in context, *Eskom's* publicly reported calculated emissions of carbon dioxide for the year ending March 2011, is 230.3 million metric tons[2], representing 45% of South Africa's total emissions. All companies in the JSE 100 together with *Eskom* account for 65% of the country's emissions.

There are some encouraging signs regarding efforts to reduce emissions and promote adaptation within companies' spheres of influence. While it is important to track the performance of the larger

1 Witi, J. 2011. Department of Environmental Affairs. Personal communication, 26 September 2011.

2 Eskom Integrated Report 2011: Partnering for a Sustainable Future.

Disclosure scores are an assessment of the quality and completeness of a company's response; they are not a measure of a company's performance in relation to climate change management.

direct emitters, this should not be at the cost of losing focus on those companies that have the potential to inform the behaviour of organisations and individuals within their sphere of influence. Banks, for example, might have comparatively small direct emissions, but collectively they have the ability to exert a significant influence on the carbon performance of the broader business sector. Large purchasers often have a similar ability to effect change through their supply chain. Although there has been an encouraging increase in Scope 3 emissions accounting, and evidence of some companies including adaptation aspects in their community engagement initiatives, there remains further potential to promote mitigation and adaptation measures throughout organisations' spheres of influence.

The 2011 CDP leaders

This year all companies that responded to the CDP questionnaire using the CDP's Online Response System (ORS) and that made their responses publicly available have been scored according to the CDP's 2011 scoring methodology developed with guidance from PricewaterhouseCoopers LLP (PwC) in its capacity as Global Advisor and report-writer.[3] In the past the methodology scored disclosure only, assessing the comprehensiveness of a company's response to CDP. Since 2010, performance scoring has been incorporated in the methodology. This has resulted in companies receiving a disclosure score and, where there is sufficient disclosure, a performance band. Incite Sustainability undertook the scoring of the South African companies, following a strict application of the CDP's 2011 scoring methodology. Those South African companies that fall within the Global 500[4] were scored exclusively by PwC as part of their international review.

Recognising leadership in carbon disclosure in South Africa

The top 10% of the JSE 100 companies with the highest scores are included in the Carbon Disclosure Leadership Index (CDLI) (Table A). This index highlights leaders in terms of transparency and accountability regarding climate change related issues and the quality of their internal data management practices.

In considering the disclosure scoring and the list of companies in the CDLI, it is important to bear in mind the following issues:

- 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 corporate responsibility reporting, environmental statements in annual reports, or through meetings and engagement with stakeholders and policymakers.

- The focus of the scoring is on a company's *disclosure*: while a high score suggests good internal data management practices, and is an indication of the company's transparency and accountability, it is *not* a metric of a company's performance in relation to climate change management; the scoring does not make any judgement over absolute levels of emissions, emission reduction achievements, or carbon intensity.

When comparing this year's CDLI (11 companies) to the top 10% of companies in last year's CDLI

3 The methodology is explained at www.cdproject.net/en-US/Pages/guidance.aspx#2011methodology. All the respondents in the JSE 100 responded using the ORS.

4 The following companies fall within the Global 500 sample and were scored by PwC: *Anglo American; Anglo Platinum; AngloGold Ashanti; Aquarius Platinum; BHP Billiton; British American Tobacco; Capital Shopping Centres Group; Compagnie Financière Richemont SA; Firstrand; Impala Platinum Holdings; Kumba Iron Ore; Lonmin; Mondi PLC; MTN Group; Naspers; Old Mutual; SABMiller; Sasol;* and *Standard Bank Group.*

Table A: The JSE 100 CDLI

Rank	Company	Sector	Score
1	Gold Fields	Energy & Materials	98
2	Nedbank	Financials	96
3	Exxaro Resources	Energy & Materials	94
4	British American Tobacco	Consumer Staples	91
	Harmony Gold Mining Co	Energy & Materials	91
6	Barloworld	Industrials	89
	Woolworths Holdings	Consumer Staples	89
8	Firstrand	Financials	88
	Sanlam	Financials	88
10	The Bidvest Group	Industrials	87
	Group Five	Industrials	87

Companies highlighted in green are those that have been in the JSE CDLI[5] for three consecutive years

Companies highlighted in orange were not in the JSE 100 CDLI in 2010

The performance scoring provides an indication of the extent to which companies are addressing the potential opportunities and risks presented by climate change. The carbon performance band simply recognises evidence of action, and is not a measure of how "low-carbon" a company is, an assessment of the extent to which a company's actions have reduced carbon intensity relative to other companies in its sector, or an assessment of how material a company's actions are relative to the business.

(12 companies)[6] the results are remarkably different. This year the companies included in the CDLI are considerably more balanced across the different sectors. Energy & Materials, Financials and Industrials each represent three of the top 11 companies, with the remaining two companies coming from Consumer Staples. Last year there were no companies from Consumer Staples and Industrials represented in the top 10%. The shift in sector representation is primarily a result of improved disclosure in these new sectors.

Recognising the JSE 100 best performers

The CDP has adapted the performance scoring to focus on the change in corporate performance rather than to measure the extent to which a company has a framework in place to address carbon management (which was the focus in 2010). This year, performance focuses more on measuring the ambition and success of a company's short- and long-term actions to mitigate climate change. For the second time, all companies with disclosure score of 50 or above received a performance band. Companies that received an A and A- performance rating are listed in Table B. This year the CDP applied more stringent criteria[7] for qualification on the Carbon Performance Leadership Index (CPLI), as a result of which only *British American Tobacco* and *Gold Fields* qualified for inclusion in the JSE 100 CPLI.

Table B: The JSE 100 best performance scores

Company	Sector	Carbon Performance Score
British American Tobacco	Consumer Staples	A
Gold Fields	Energy & Materials	
Exxaro Resources	Energy & Materials	A- *(Companies listed alphabetically)*
Nedbank	Financials	
Pick n Pay Holdings	Consumer Staples	
Remgro	Financials	
Woolworths Holdings	Consumer Staples	

5 The CDLI in 2009 included the top 16 companies and in 2010 included all those companies that scored above 50 normalised points. For the purposes of comparison, the CDLI in this analysis refers to the top 10% of companies according to their carbon disclosure scores.

6 The reason why the top 10% of the JSE100 companies included 12 companies last year and 11 companies this year is due to the fact that many companies tied on the same score within the top 10% bracket. See Table 3 in the full report.

7 These are explained in more detail in Box 6 on page 37.

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1 CDP 2010 (South Africa): Introduction and overview

"Absa Group supports the move to price greenhouse gases; however the mechanism to do so still needs much clarification and comments (on the Treasury tax paper) have been provided to this effect."

Absa Group

"The proposed carbon tax for South Africa is very onerous as it will result in between a 100 and 200% increase in the Scope 1 costs for our South African operations. For example, our Ngodwana Mill operation purchases coal at R250 per ton. The proposed low and high emission taxes will increase the costs to R550 and R750 per ton respectively. Because our South African operations have a high dependence on fossil energy (Eskom power is 98.5% fossil-fuel based) the net effect of this will cause some if not all operations to run at a loss."

Sappi

Since 2000 the Carbon Disclosure Project (CDP) has challenged the world's largest companies to disclose their greenhouse gas emissions, identify the perceived risks and opportunities that climate changes presents for their business, and describe their strategic responses to these risks and opportunities. This year CDP acts on behalf of 551 CDP signatory investors holding US$71 trillion in assets, as well as a further 50 purchasing organisations such as *Dell*, *PepsiCo* and *Wal-Mart*. More than 3,500 organisations in 60 countries disclose their greenhouse gas emissions, water management and climate change strategies through CDP.

The CDP reporting process provides companies with a framework through which to assess their current climate change management. It also provides a benchmark of company actions and best practice across and within specific sectors. This encourages knowledge sharing, the setting of informed reduction targets and uptake of best practice initiatives. The data from the CDP reporting process is made available to a wide audience including institutional investors, corporations, policymakers and advisors, public sector organisations, government bodies, academics and the public, with the aim of facilitating more informed engagement with business on climate change.

This is the fifth South African CDP report. It is run through a partnership between the National Business Initiative (NBI) and the CDP headquartered in London. The NBI manages the partnership with the CDP and all other stakeholders, including businesses, government, sponsors and the JSE. Company participation continues to grow since the initial engagement facilitated by Incite Sustainability in 2007. The CDP South Africa 2011 report is supported by KPMG, Element Investment Management, the Industrial Development Corporation, the South African Post Office and Webber Wentzel Attorneys.

Incite Sustainability undertook the analysis and authoring of this report.

This report focuses primarily on presenting an objective and largely quantitative account of the corporate responses – and leaves the numbers and responses to speak for themselves. It pulls together the information in a manner that will assist investors, policy-makers, climate change practitioners and other interested parties to undertake their own analysis, to draw their own conclusions, and to adopt their own approach in seeking to foster corporate accountability.

While a more detailed analysis of each company – based on an appreciation of their individual business models and value drivers – would give the most robust evaluation of performance, it is not within the scope of this report to provide such analysis. Although the report provides broad indications of climate-related performance and trends, it does not provide independent critical commentary on the quality and nature of performance.

Box 1: The CDP 2011 report objectives

The information and structure of this report is intended to achieve four key objectives:

- To facilitate transparency around companies' climate-related impacts and actions and to encourage improved understanding, management and actions related to risks and opportunities in this field;
- To provide investors and other stakeholders with the information necessary to understand global best practice, the response of business in general, as well as particular company responses;
- To provide contextual commentary on industry sector-specific key material issues and expectations;
- To provide decision makers with information on particular corporate sustainability practices, challenges, concerns and outlooks in relation to government's climate change policy.

The structure of this year's report has been designed to support these objectives:

- Chapter 1: outlines the purpose, structure and regulatory context of the report.
- Chapter 2: sketches an overview of the sample, response rates and overall performance.
- Chapter 3: provides an overview of leaders on disclosure and performance.
- Chapter 4: provides a snapshot of each sector with relevant commentary on performance and disclosure in the context of sector-specific expectations and challenges.
- Chapter 5: provides some closing conclusions based on the findings of this year's CDP submissions.

"Carbon taxation or emissions taxation will increase operational cost for the business, reduce company profitability, reduce shareholder dividends, reduce IRR on business expansion ventures and indirectly result in job losses."

Exxaro Resources

"Gold Fields advocates the carbon tax to be ring fenced and all income generated to be used for renewable energy projects."

Gold Fields

"While we do not believe that it is possible for the South African industry and business to achieve our government's target, outlined in the 2009 Copenhagen Climate Change Summit, to reduce CO_2 emissions by 34% by 2020, we remain fully committed to engaging with key stakeholders to set realistic targets."

Arcelor Mittal South Africa

Box 2: The climate change policy context

South Africa's emissions in context

- South Africa has an energy-intensive economy with a high level of GHG emissions relative to GDP. With over 90% of South Africa's electricity generated from coal, the country emits approximately 510 million tonnes of CO_2-e per year, and is one of the world's least energy efficient economies.[8] As a large emitting developing country, South Africa has acknowledged that it must act to mitigate its emissions.

International negotiations

- The United Nations Framework Convention on Climate Change (UNFCCC) aims to stabilise concentrations of GHG emissions in the atmosphere "at a level that would prevent dangerous anthropogenic interference with the climate system" (Article 2). The Kyoto Protocol to the UNFCCC establishes legally binding and economy wide emission reduction targets for developed countries. The first commitment period of the Kyoto Protocol ends in December 2012. Current negotiations are considering a second commitment period beyond 2012, as well as action for enhanced implementation of the Convention. South Africa is hosting the 17th Conference of the Parties (COP17) to the UNFCCC and the 7th Session of the Conference of the Parties serving as the meeting of the parties (CMP7) to the Kyoto Protocol.

- Implementation of the agreements of the international negotiations will take place through national and regional initiatives. For the foreseeable future national climate change policies will have a more important and immediate bearing on business.[9]

South Africa's international commitment

- As a developing country, South Africa is not currently required to take on mandatory emissions reduction targets.

- At the UNFCCC's fifteenth conference of the parties (COP15) in Copenhagen in December 2009, South Africa made a voluntary commitment to reduce emissions by 34% from a business-as-usual trajectory by 2020, and 42% by 2025, conditional on an international deal and technological and financial assistance.

South African climate change policy

- South Africa is currently developing climate policies that will underpin its efforts to meet its voluntary commitment. The nature of the final policy will be impacted by the outcomes of the international climate negotiations. Importantly, this policy will need to be aligned with government's priority focus on job creation, poverty alleviation and ensuring energy security.

- In November 2011, the Government published the National Climate Change Response White Paper, which presents the Government's vision for an effective climate change response and for the country's long-term transition to a climate resilient and low carbon society.

- Government has indicated that a carbon tax would be a key mitigation policy instrument. National Treasury released a discussion paper on carbon taxes in December 2010. The paper discusses the economics of climate change, reviews the role of carbon taxes in reducing emissions at the least cost possible, and evaluates the comparative benefits of regulatory and market based policy measures as well as carbon taxes and emissions trading schemes.[10] Business has expressed concerns around the potential impacts of the tax.

The implications of reducing South Africa's GHG emissions on the structure of the economy and the direction of investment needs to be further researched; however it is clear that GHG emissions constraints are likely to play a role in the medium and long term future of South Africa's economy. Business will need to find ways to respond effectively to this and will need to have a clear understanding of what is possible and what support would be needed to underpin efforts to achieve this.

8 International Energy Agency, 2009, *CO_2 emissions from Fuel Combustion*, www.iea.org/co2highlights/

9 Trollip, H & Tyler, E. 2011. *Is South Africa's Economic Policy aligned with our National Mitigation Policy Direction and a Low Carbon Future: an Examination of the Carbon Tax, Industrial Policy, New Growth Path and Integrated Resource Plan* Research Paper for the National Planning Commission.

10 Ibid.

2 The JSE 100 sample and brief analysis

The JSE 100 sample for CDP 2011 was identified on the basis of market capitalisation as at 30 December 2010. At the time of selection, the list included 100 companies from 41 different industry sectors (see Table 2), identified using the Global Industry Classification Standards (GICS).

To facilitate a higher level of sectoral analysis, and to maintain comparability with the previous year's reporting, the companies have been clustered into the following seven top-level sectors[11] (the associated sub-sectors are identified in parenthesis):

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

11 In the CDP 2010 report the Consumer sector was reported as one group. In 2011 it has been separated into two sectors: Consumer Discretionary and Consumer Staples. This is a result of differences in some of the key climate change risks and opportunities experienced by companies in the two sectors.

By number of companies, the JSE is dominated by the Financials (29), Energy & Materials (28) and Consumer Staples (13) sectors (Figure 1). By market capitalisation, it is dominated by Energy & Materials (41%), followed by Consumer Staples (20%) and Financials (17%) (Figure 2). The following companies are new to the CDP this year, and were not included in either the 2010 or 2009 samples: *Capitec Bank Holdings, Eastern Platinum, Great Basin Gold, Life Healthcare Group Holdings, Mvelaphanda Resources, PSG Group* and *Royal Bafokeng Platinum*. Only one of the new entrants on the JSE 100 responded (*Royal Bafokeng Platinum*) and they chose not to make their response public. Table 2 provides an indication of the participation of this year's sample companies in previous JSE 100 CDP reports.

The following companies are no longer on the JSE 100 (either due to a change in market capitalisation or delisting) and are thus no longer included in the sample: *Acucap, Astral Foods, Datatec, Dimension Data, Gold Reef Resorts, Oceana, Rainbow Chicken, Raubex, SA Corporate Real Estate Fund, Sycom, The Blue Label Telecomms* and *Trencor.* The samples are comparable in terms of the composition of companies per sector. Other than the Energy & Materials sector, which comprises a larger share of the JSE 100, the churn from sample to sample is spread across all the sectors.

The following JSE-listed companies are also included in the Global 500 sample: *Anglo American; Anglo American Platinum; AngloGold Ashanti; Aquarius Platinum; BHP Billiton; British American Tobacco; Capital Shopping Centres Group; Compagnie Financière Richemont SA; Firstrand; Impala Platinum Holdings; Kumba Iron Ore; Lonmin; Mondi PLC; MTN Group; Naspers; Old Mutual; SABMiller; Sasol; Standard Bank Group.*

As the South Africa 100 sample is limited to companies that are listed

Fig 1: Composition of JSE 100 by number of companies per sector (outer) and number of respondents per sector (inner)

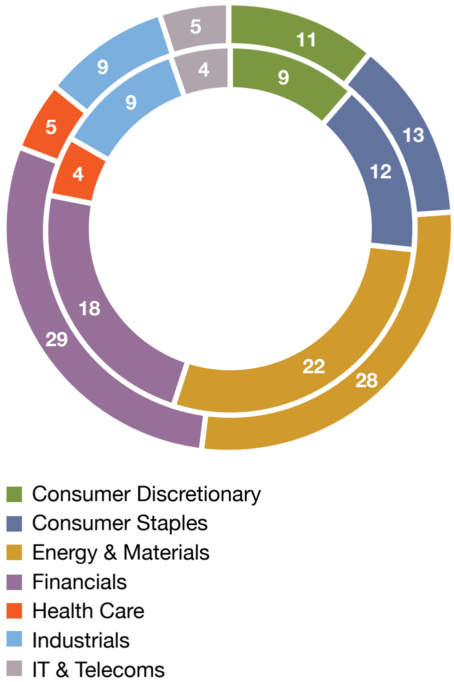
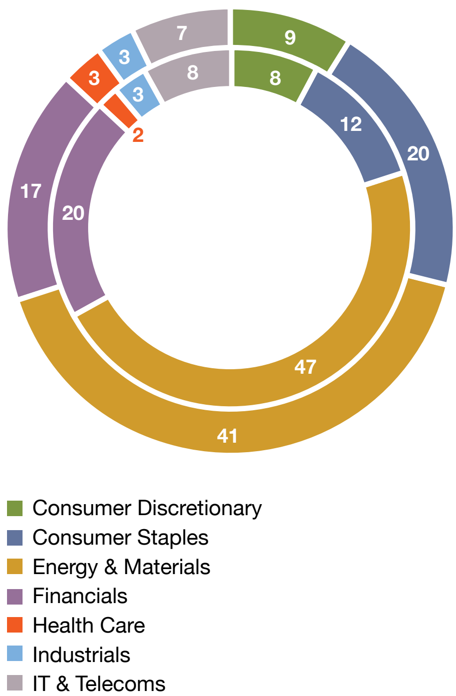


Fig. 2: Composition of JSE 100 by market capitalisation – outer wheel 2011, inner wheel 2010



"Absa Group has the opportunity to develop climate change products such as short-term insurance offerings that can protect clients against the risk of damage caused by extreme negative weather effects of climate change."

Absa Group

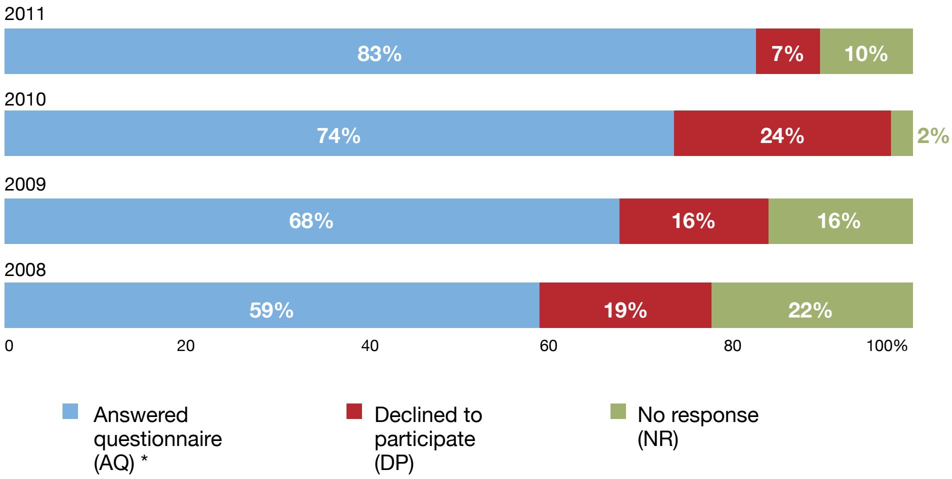
"The major part of our energy cost is managed on behalf of tenants through service charges. Increases in taxation could compromise shareholder value if occupational costs are weighted away from rental income. Likewise, if our properties are perceived to be energy inefficient, and therefore costly to operate, it could affect rental value."

Capital Shopping Centres Group

"The most important components of our long-term strategy that are influenced by climate change are market and financial risks (and opportunities) associated with the investments we hold and the policies we underwrite. Understanding to what extent, and how, climate change will impact or enhance the value of investments is crucial if we are to protect shareholder value, respond to customers' increasing demands and remain competitive."

Old Mutual

Fig. 3: JSE 100 response rate – CDP 2011 vs. CDP 2010, 2009 and 2008



*Includes "SA" which denotes "See Another" i.e. one company that responded via their parent company not listed on the JSE (*African Oxygen*); and five companies that responded via a parent company listed on the JSE 100 (*Allied Technologies (Altech)*, *Investec plc, Mondi, RMB Holdings*).

on the JSE it does not include large parastatal emitters such as *Eskom* or *Transnet*, nor does it include potentially large emitters from non-listed private companies.

The CDP 2011 response rate

An overview of the response status of each JSE 100 company is provided in Table 2.

- Of the 100 companies that were sampled, 83 answered the questionnaire, seven declined to participate[12], while 10 companies did not respond in any manner. The South African CDP 2011 thus achieved an overall response rate of 83%, a significant increase on last year's 74% (Figure 3). This ranks South Africa as the second highest CDP response rate internationally, following the Europe 300 which has a response rate of 89% (Appendix I).
- Globally, the CDP response rates are led by the Europe 300 (91%), South Africa (83%), and the Global 500 (81%). South Africa compares very positively in comparison with the developing region samples such as Brazil 80 (67%), China 100 (11%) and India 200 (28%). A breakdown of our performance by sector against the Global 500 is provided in Table 1. This table highlights the positive engagement of the South African corporate sector, particularly when compared with the leading emerging market (BRICS) countries of Brazil, Russia, India, and the People's Republic of China.
- Of the 83 companies that answered the questionnaire, eight elected to have their response 'not public', as compared with ten last year, and 15 in 2009 – this continues the trend of increasing transparency rates. Four of these were first time respondents. For the purposes of this report, the data from these companies will only be used in aggregate trends and will not be reflected by company name.

12 Reasons given by the companies that declined to participate: three had only begun the data collecting process, but were eager to participate in the future and one was in the process of unbundling. Three companies declined to give reasons for not participating.

Table 1: Comparison of Global 500 and JSE 100 response rates, disclosure scores and performance bands by sector

	Full sample		Consumer Discretionary		Consumer Staples		Energy & Materials		Financials		Health Care		Industrials		IT & Telecoms	
	Global 500	JSE 100	Global 500	JSE 100	Global 500	JSE 100	Global 500	JSE 100	Global 500	JSE 100	Global 500	JSE 100	Global 500	JSE 100	Global 500	JSE 100
Average response rates	81%	83%	80%	82%	89%	92%	78%	79%	77%	62%	91%	80%	76%	100%	85%	100%
Average disclosure scores	68	74	64	63	73	73	69	78	68	77	69	76	70	71	64	76
Average performance bands	C	C	B-C	C	C	C	B	C	C	B	C	E	C	D	C	D

- There were no companies that participated last year that declined to participate this year. This is a significant improvement from the previous year, in which six companies chose not to participate, despite having done so previously.

For the purposes of quantitative analysis, although 83 companies answered the questionnaire, five companies submitted a response via their parent company. Four of these (*Allied Technologies (Altech), Investec plc, Mondi and RMB Holdings*) have parent companies also listed in the Top100 JSE. One company (*African Oxygen*) reported via its FTSE-listed parent company (*Linde AG*). As *Linde AG* is not listed on the JSE, in this report their submission is reviewed quantitatively only. Thus, although the overall response rate is 83%, for the purposes of this report, a total number of 78 questionnaires were quantitively analysed.

"The continuing shift towards assessing profits in the context of resource depletion, and monetising natural capital (e.g. establishing more accurate values for delivered water and energy, and managing waste) presents opportunities, in that management of these will require more efficient civil infrastructure which will utilise Barloworld's products and services."

Barloworld

"We are developing and maintaining information and partnerships in the alternative energy, carbon capture and sequestration (CCS) and other applicable emerging fields. CCS studies in various project locations have been conducted and we are a partner in the Technology Centre Mongstad in Norway."

Sasol

Table 2: Overview of company responses (listed by company in alphabetical order)

Company	Sector	Sub-sector	CDP 2011	CDP 2010	CDP 2009	Scope 1 (tCO_2-e)	Scope 2 (tCO_2-e)	Scope 3	Verified	GHG Target	Disclosure Score (2010)	Performance Band
Absa Group	Financials	Diversified Banks	AQ	AQ	AQ	15,242	390,635	Yes	Underway	No	74 (64)	B
Adcock Ingram	Health Care	Pharmaceuticals	AQ	AQ	NR	29,931	27,744	Yes	No	No	80 (68)	E
AECI	Energy & Materials	Chemicals	AQ	AQ	AQ np	310,892	216,305	Yes	Yes	No	83 (36)	C
African Bank Investments	Financials	Diversified Banks	AQ	DP	AQ np	24,328	61,303	Yes	No	No	74	D
African Oxygen - see Linde AG	Energy & Materials	Industrial Gases	AQ	AQ	AQ	583,000	9,520,000	Yes	Yes	Yes	63 (71)	C
African Rainbow Minerals	Energy & Materials	Metals & Mining	AQ	AQ	NR	896,529	1,979,020	Yes	No	No	48 (37)	-
Allied Electronics Corporation (Altron)	IT & Telecoms	Electronic Equipment & Instruments	AQ	AQ	AQ	8,400	222,917	Yes	No	No	72 (81)	D
Allied Technologies - see Allied Electronics Corporation (Altron)	IT & Telecoms	Telecommunication Services	AQ	DP	NR							
Anglo American	Energy & Materials	Metals & Mining	AQ	AQ	AQ	9,809,076	10,190,815	Yes	Yes	Yes	81 (85)	C
Anglo American Platinum	Energy & Materials	Precious Metals & Minerals	AQ	AQ	AQ	457,336	5,154,402	Yes	Yes	Yes	85 (89)	B
AngloGold Ashanti	Energy & Materials	Gold	AQ	AQ	AQ	1,215,000	3,482,000	No	Yes	Yes	74 (79)	C
Aquarius Platinum	Energy & Materials	Precious Metals & Minerals	AQ	/	AQ	56,720	519,367	Yes	No	No	65	C
Arcelor Mittal SA	Energy & Materials	Steel	AQ	AQ	AQ	11,938,852	4,443,096	Yes	No	Yes	82 (63)	D
Aspen Pharmacare Holdings	Health Care	Pharmaceuticals	AQ	DP	AQ np	13,110	34,934	No	No	No	64	E
Assore	Energy & Materials	Steel	NR	/	DP							
Aveng	Industrials	Construction & Engineering	AQ	AQ np	AQ np	146,412	49,306	No	No	No	66	D
Avi	Consumer Staples	Packaged Foods & Meats	DP	DP	DP							
Barloworld	Industrials	Industrial Machinery	AQ	AQ	AQ	108,864	92,869	Yes	Yes	Yes	89 (80)	B
BHP Billiton	Energy & Materials	Metals & Mining	AQ	AQ	AQ	19,591,969	26,139,168	Yes	Yes	Yes	73 (71)	B
Bidvest Group	Industrials	Industrial Conglomerates	AQ	AQ	AQ	367,092	316,079	Yes	Yes	Yes	88 (77)	C
British American Tobacco	Consumer Staples	Tobacco	AQ	/	DP	371,610	371,989	Yes	Yes	Yes	91	A
Capital Property Fund	Financials	Real Estate	NR	DP	/							
Capital Shopping Centres Group	Financials	Real Estate	AQ	AQ	AQ	6,047	38,504	No	Yes	Yes	63 (49)	C
Capitec Bank Holdings	Financials	Diversified Banks	NR	/	/							
Caxton CTP Publishers & Printers	Consumer Discretionary	Publishing	AQ	AQ	AQ	15,663	113,298	No	No	Yes	77 (72)	C
Clicks Group	Consumer Discretionary	Department Stores	AQ	AQ	AQ np	3,226	91,098	Yes	Yes	No	84 (83)	B
Compagnie Financière Richemont SA	Consumer Discretionary	Apparel & Luxury Goods	AQ np	AQ np	AQ np							
Discovery Holdings	Financials	Diversified Financial Services	AQ	AQ	AQ	4,172	30,295	Yes	No	No	70 (70)	D
Distell Group	Consumer Staples	Beverages	AQ	/	DP	25,854	32,112	No	No	No	77	C
Eastern Platinum	Energy & Materials	Precious Metals & Minerals	DP	/	/							
Emira Property Fund	Financials	Real Estate	AQ	DP	AQ np	9	300,478	Yes	No	No	70	D
Evraz Highveld Steel and Vanadium	Energy & Materials	Steel	AQ	AQ	DP	2,799,579	1,811,503	No	No	Yes	73 (65)	D
Exxaro Resources	Energy & Materials	Metals & Mining	AQ	AQ	AQ	502,594	2,107,933	Yes	Yes	Yes	94 (87)	A-
Firstrand	Financials	Diversified Financial Services	AQ	AQ	AQ	12,220	309,008	Yes	Yes	Yes	88 (93)	B
Fountainhead Property Trust	Financials	Real Estate	NR	DP	AQ np							
Gold Fields	Energy & Materials	Gold	AQ	AQ	AQ	1,377,194	5,164,897	Yes	Yes	Yes	98 (93)	A
Great Basin Gold	Energy & Materials	Gold	DP	/	/							
Grindrod	Industrials	Trading Companies & Distributors	AQ	AQ	DP	261,561	19,170	Yes	Yes	Yes	63 (61)	E
Group Five	Industrials	Construction & Engineering	AQ	AQ	/	69,464	84,484	Yes	No	No	87 (74)	B
Growthpoint Properties	Financials	Real Estate	AQ	AQ	AQ	26	856	Yes	No	Yes	83 (46)	C
Harmony Gold Mining Co	Energy & Materials	Gold	AQ	AQ	AQ	2,103,211	3,422,823	Yes	Underway	Yes	91 (74)	B
Hosken Consolidated Investments	Financials	Diversified Financial Services	AQ	AQ	DP	107,978	251,740	Yes	No	No	78 (78)	D
Hyprop Investments	Financials	Real Estate	NR	DP	NR							
Illovo Sugar	Consumer Staples	Food Products	AQ np	DP	DP							
Impala Platinum Holdings	Energy & Materials	Precious Metals & Minerals	AQ	AQ	AQ	584,504	3,108,473	Yes	Yes	Yes	80 (79)	C
IMPERIAL Holdings	Industrials	Trading Companies & Distributors	AQ	AQ	AQ	811,934	158,626	No	No	No	55 (71)	D
Investec	Financials	Diversified Banks	AQ	AQ	AQ	1,306	34,305	Yes	Yes	Yes	81 (45)	B
Investec plc - see Investec	Financials	Diversified Banks	AQ	AQ	AQ							
JD Group	Consumer Discretionary	Homefurnishing Retail	DP	DP	NR							
JSE	Financials	Diversified Financial Services	AQ	AQ np	AQ	0	12,535	No	No	No	58	E
Kumba Iron Ore	Energy & Materials	Metals & Mining	AQ	AQ	AQ	329,906	507,567	Yes	Yes	Yes	82 (82)	B

Company	Sector	Sub-sector	CDP 2011	CDP 2010	CDP 2009	Scope 1 (tCO_2-e)	Scope 2 (tCO_2-e)	Scope 3	Verified	GHG Target	Disclosure Score (2010)	Performance Band
Lewis Group	Consumer Discretionary	Homefurnishing Retail	AQ	AQ np	DP	23,800	26,500	No	No	No	52	D
Liberty Holdings	Financials	Insurance Brokers	AQ	AQ	AQ	2,218	41,150	Yes	Yes	No	71 (76)	C
Life Healthcare Group Holdings	Health Care	Health Care	NR	/	/							
Lonmin	Energy & Materials	Metals & Mining	AQ	AQ	AQ	102,130	1,428,156	Yes	Yes	Yes	65 (77)	C
Massmart Holdings	Consumer Discretionary	Department Stores	AQ	AQ	AQ	12,164	297,134	Yes	No	Yes	72 (76)	C
Mediclinic International	Health Care	Health Care	AQ	AQ	AQ	15,652	154,298	Yes	Yes	Yes	74 (89)	C
MMI Holdings	Financials	Insurance Brokers	AQ	AQ	AQ	1,700	34,595	Yes	Yes	No	73 (72)	D
Mondi - See Mondi Group	Energy & Materials	Paper Products	AQ	AQ	AQ							
Mondi Group	Energy & Materials	Paper Products	AQ	AQ	AQ	4,450,294	1,413,659	Yes	Yes	Yes	84 (87)	B
Mr Price Group	Consumer Discretionary	Apparel Retail	AQ	AQ np	DP	3,038	144,554	No	No	No	63	D
MTN Group	IT & Telecoms	Wireless Telecommunication Services	AQ	AQ	AQ	744,074	378,888	Yes	No	No	75 (71)	D
Murray & Roberts Holdings	Industrials	Construction & Engineering	AQ	AQ	AQ	301,839	325,114	Yes	Underway	No	77 (84)	D
Mvelaphanda Resources	Energy & Materials	Metals & Mining	DP	/	/							
Nampak	Energy & Materials	Paper Packaging	AQ	AQ	AQ np	137,320	570,855	Yes	No	Yes	82 (63)	B
Naspers	Consumer Discretionary	Publishing	AQ np	AQ np	NR							
Nedbank	Financials	Diversified Banks	AQ	AQ	AQ	1,668	165,313	Yes	Yes	Yes	96 (88)	A-
Netcare	Health Care	Health Care	AQ	AQ	AQ	29,436	242,089	Yes	Yes	Yes	85 (81)	B
Northam Platinum	Energy & Materials	Precious Metals & Minerals	AQ	AQ	AQ	14,258	634,165	Yes	Underway	No	84 (85)	B
Old Mutual	Financials	Insurance Brokers	AQ	AQ	AQ	10,364	672,612	Yes	Yes	Yes	85 (82)	B
Pangbourne Properties	Financials	Real Estate	NR	DP	NR							
Pick 'n Pay Holdings	Consumer Staples	Food Retail	AQ	AQ	AQ	70,092	545,860	Yes	No	Yes	86 (77)	A-
Pioneer Food Group	Consumer Staples	Food Products	AQ np	DP	NR							
Pretoria Portland Cement Co	Energy & Materials	Construction Materials	AQ	AQ	AQ	4,765,280	575,369	Yes	Yes	Yes	76 (73)	C
PSG Group	Financials	Diversified Financial Services	DP	/	/							
Redefine Properties	Financials	Real Estate	NR	DP	AQ							
Reinet Investments	Financials	Asset Management & Custody Banks	DP	DP	/							
Remgro	Financials	Diversified Financial Services	AQ	AQ	AQ np	324,241	300,613	Yes	No	Yes	80 (85)	A-
Resilient Property Income Fund	Financials	Real Estate	NR	DP	NR							
Reunert	Industrials	Electrical Components & Equipment	AQ	AQ np	AQ	9,772	63,700	No	No	No	38	-
RMB Holdings - see Firstrand	Financials	Diversified Banks	AQ	AQ	AQ							
Royal Bafokeng Platinum	Energy & Materials	Precious Metals & Minerals	AQ np	/	/							
SABMiller	Consumer Staples	Brewers	AQ	AQ	AQ	1,144,901	1,208,967	Yes	Yes	Yes	63 (65)	C
Sanlam	Financials	Insurance Brokers	AQ	AQ	AQ	41	44,535	Yes	Yes	Yes	88 (86)	B
Santam	Financials	Insurance Brokers	AQ	AQ	AQ	28	6,999	Yes	Yes	Yes	80 (79)	B
Sappi	Energy & Materials	Paper Products	AQ	AQ	AQ	4,648,669	2,288,258	Yes	Underway	Yes	80 (75)	C
Sasol	Energy & Materials	Energy	AQ	AQ	AQ	64,166,000	10,815,000	Yes	Yes	Yes	79 (84)	C
Shoprite Holdings	Consumer Staples	Food Retail	AQ np	DP	DP							
Standard Bank Group	Financials	Diversified Banks	AQ	AQ	AQ	11,195	149,366	Yes	Yes	No	74 (74)	C
Steinhoff International Holdings	Consumer Staples	Personal Products	AQ np	AQ np	AQ np							
Sun International	Consumer Discretionary	Hotels, Resorts & Cruise Lines	NR	DP	NR							
Telkom SA	IT & Telecoms	Integrated Telecommunication Services	AQ	DP	AQ late	50,517	721,969	Yes	Yes	No	76	D
The Foschini Group	Consumer Discretionary	Apparel, Accessories & Luxury Goods	AQ np	AQ np	AQ np							
The Spar Group	Consumer Staples	Food Retail	AQ	AQ	NR	30,729	41,449	Yes	No	Yes	85 (73)	C
Tiger Brands	Consumer Staples	Food Distributors	AQ	AQ	DP	302,072	296,114	Yes	No	No	68 (68)	C
Tongaat Hulett	Consumer Staples	Food Products	AQ	AQ	AQ	710,379	409,447	Yes	Yes	Yes	71 (64)	D
Truworths International	Consumer Discretionary	Apparel, Accessories & Luxury Goods	AQ	AQ	AQ np	462	75,022	Yes	No	No	69 (73)	E
Vodacom Group	IT & Telecoms	Wireless Telecommunication Services	AQ	AQ	/	39,510	306,401	Yes	No	Yes	81 (85)	B
Wilson Bayly Holmes-Ovcon	Industrials	Construction & Engineering	AQ	AQ	AQ np	43,275	7,843	Yes	No	No	77 (65)	D
Woolworths Holdings	Consumer Staples	Food Retail	AQ	AQ	AQ	29,266	338,240	Yes	Yes	Yes	89 (83)	A-

Note: The emissions data must be read with the explanatory information provided in Appendix II.

AQ
Answered Questionnaire

AQ np
Answered Questionnaire but declined permission to make this public

DP
Declined to Participate

NR
No Response

" / "
Company not included in the JSE 100 sample

Assessing the performance of the JSE 100: brief review

This section provides a brief review of some of the key findings from the JSE 100 responses across all sectors. This review is not a substitute for reading the individual corporate responses, but is intended simply to highlight some of the principal trends and developments since the previous CDP reports. A more detailed review on a sector-by-sector basis is provided in Chapter 4.

Continuing dominance of a few emitters

Figure 4 provides a breakdown of the GHG emissions of the top ten direct emitters, as ranked according to their South African Scope 1 emissions; details are also provided of their global Scope 1 and 2 emissions, and their combined South African Scope 1 and 2 emissions. These companies are all in the Energy & Materials and Industrials sectors.

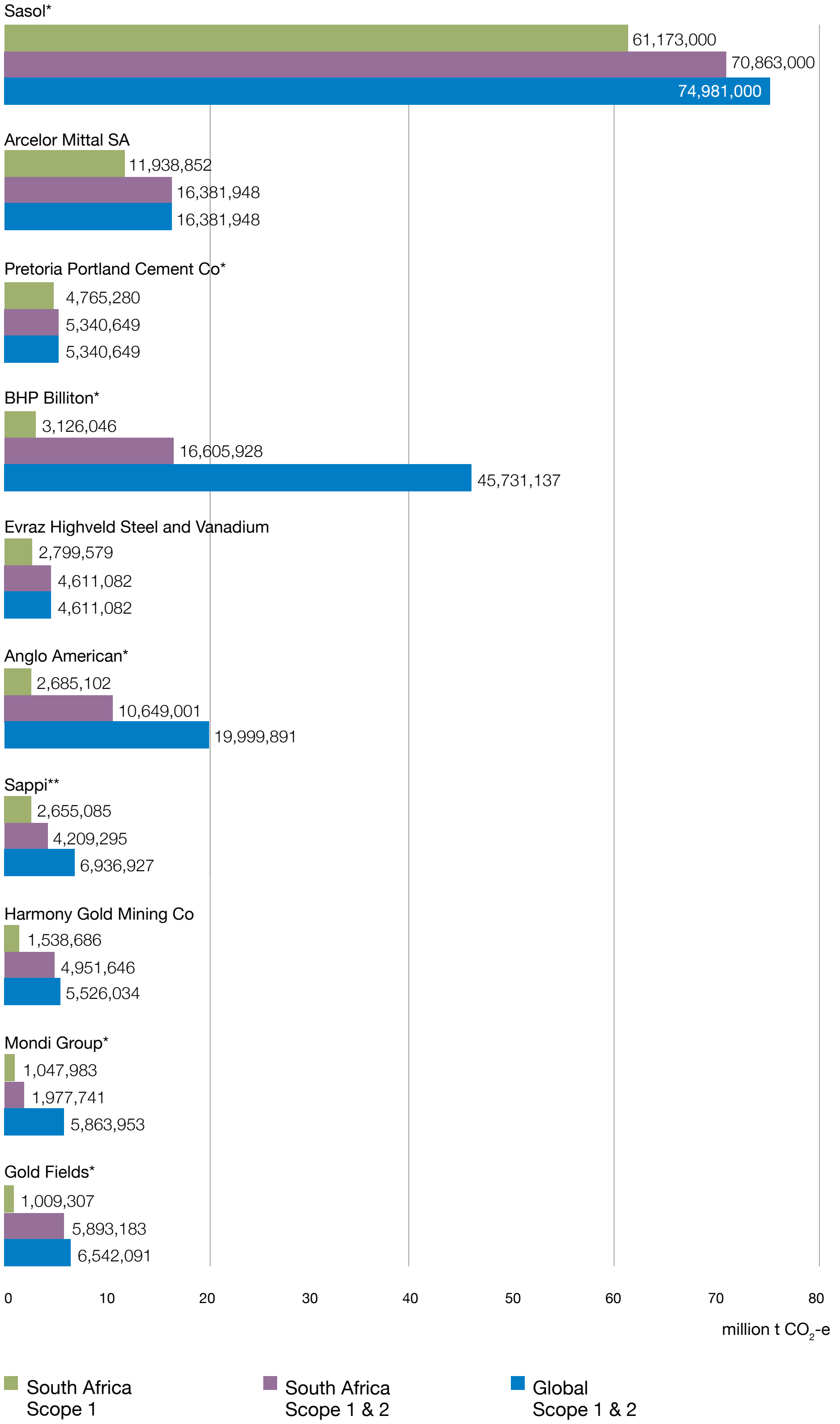
As in CDP 2010, *Sasol's* Scope 1 South African emissions (61.2 million metric tons, up from 60 million metric tons in CDP 2010) outweigh the other companies' contributions. These figures should be seen in the context of the total estimated emissions in South Africa. Although official figures are not yet available, the Department of Environmental Affairs suggests[13] that South Africa's most recent total GHG emissions from all sources is approximately 510 million metric tons.

This year 40 responding companies provided a breakdown of their total emissions by region.[14] The total reported Scope 1 emissions in South Africa for all the reporting companies in CDP 2011 amounts to 100.4 million metric tons of CO_2e; this is an increase of approximately 2.4 million metric

13 Witi, J. 2011. Department of Environmental Affairs. Personal communication, 26 September 2011.

14 Of the 40 companies that provided detail of their emissions data at the regional level, this was led by Energy & Materials (12) and Consumer Staples (8). Thirty-eight companies provided a break-down by business division, and 25 by facility.

Fig. 4: Company emissions by scope and location (Top 10 emitters, listed in order of SA Scope 1 emissions)



Company data that is externally verified is denoted by *

Data that is in the process of being externally verified is denoted by ** tons of CO_2e compared to last year.[15] These direct emissions amount to 20% of total national emissions. *Sasol's* emissions alone contribute 12%. *Eskom* publicly reported emissions of 230.3 million metric tons, 45% of South Africa's total emissions.[16]

Changes in response rates on key performance issues

Figure 5 provides a comparison between the overall response rates of the participants in CDP 2011 and CDP 2010 on three key performance trend indicators: Scope 3 emissions, external verification of climate data, and the presence of emissions reduction targets.

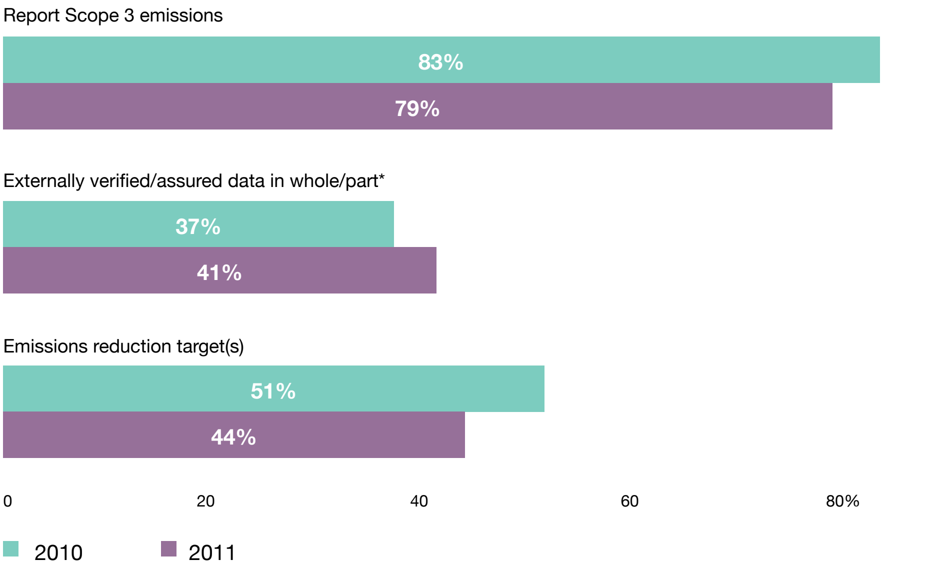
Greater disclosure on Scope 3 emissions: Building on previous trends, there has been a further increase in the number of companies reporting their Scope 3 emissions. Understanding and addressing the indirect emissions (as well as the associated risks and opportunities) is of particular importance for those companies – such as those in the services sector – that have limited direct emissions, but a significant ability to exert influence on others.

Decrease in verification: The number of companies verifying their emissions has remained relatively static. This year, 29 companies (37% of respondents) have verified or are in the process of verifying elements of their Scope 1 or 2 emissions; this compares with 29 companies (41%) in 2010. While the level of verification of emissions data in South Africa is still low in comparison with international peers (Appendix I), it is important to recognise that the measurement and reporting of GHG emissions is a relatively new activity for most South African companies. Many have expressed their preference to firmly establish internal measurement and reporting systems before seeking external verification. Box 3 describes the increasing demand for assured and reliable climate data.

15 Not all companies have separated their direct South African emissions from their global emissions; it is suggested, that for most companies that have not done so this is unlikely to have a significant impact on their general emissions levels reported here. This figure includes data from companies that have replied to the questionnaire, but have chosen not to make their data publicly available. The data is subject to the caveats provided in Appendix 1.

16 Eskom Integrated Report 2011: Partnering for a Sustainable Future.

Fig. 5: Response rates for performance related trends



*This includes the percentage of companies who verify either Scope 1 or 2. CDP's more stringent criteria have been applied; the data does not reflect the information included in Table 2 and in the sector emissions summaries, which report verification based on company disclosure.

Increased commitment to emissions reduction targets: There has been an encouraging increase in the number of companies that report on having GHG emissions reduction targets. This year, 40 companies (including almost all of the high emitting companies) reported having emissions reduction targets, as compared with 31 companies in 2010 and 20 in 2009. A detailed description of these company targets is provided in the sector snapshots in Chapter 5. While this increase is commendable, particularly considering the current lack of legislated national emissions reduction targets, it is useful to assess these targets in the context of the conditional national emissions reduction commitments, as well as against the reductions that are seen to be required to avoid the 2°C rise in temperature on pre-industrial levels that has been set as the global ambition.

"Group Five are early movers in the green buildings and renewable energy field. Development of in-house skills and the company strategy to accommodate climate change gives Group Five a competitive advantage in these fields."

Group Five

"We have a long-established, valued and constructive relationship with the WWF. This relationship has been further reinforced, with great support from the Wildlife and Environmental Society of South Africa (WESSA), through the WESSA-WWF-Mondi-Wetlands programme, the global WWF New Generation Plantation Project and the WWF Silver Taiga HCV project in North-west Russia."

Mondi Group

Box 3: Increasing focus on verification

CDP is committed to motivating an increase in the level of verification of emissions disclosures to improve the quality of the information submitted by companies globally. This will build trust in carbon reporting and lead to an increase in the use of the data in analysis and decision making. Key drivers for verification include the increasing market demand from investors, customers, regulators, non-governmental organisations and other stakeholders for assured and reliable climate data. Improving internal management processes that can be harnessed for competitive advantage is a key benefit of verification. To support this drive, CDP rewards verification highly in both disclosure and performance scoring in 2011 and it is one of the criteria for entry into the CPLI.

Verification levels in 2011

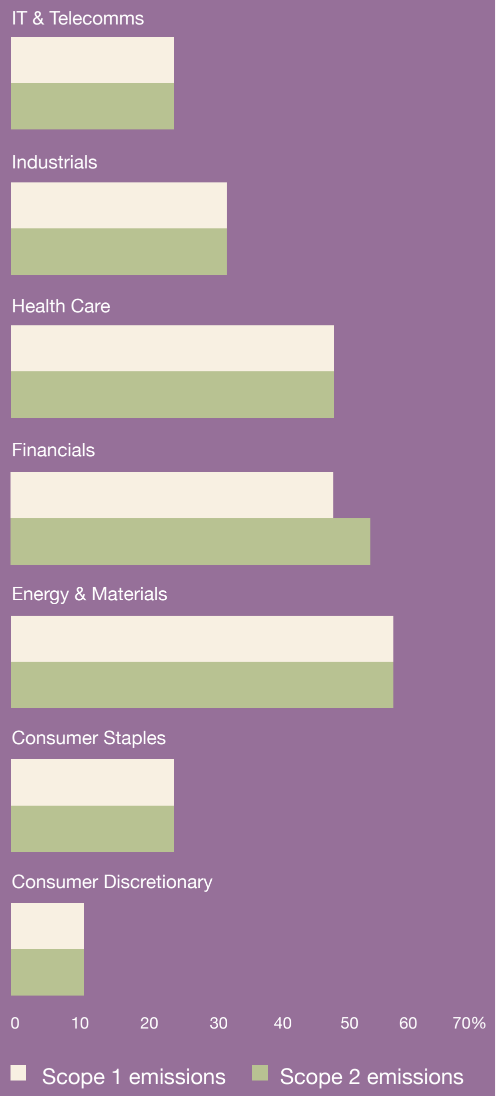
In 2011, criteria were introduced to determine what is accepted as verification within CDP's scoring methodology. These criteria require that a verification statement is related to the relevant emission scope, clearly states the type of verification that has been given and the standard used, covers the current reporting year, and is undertaken by an independent third party.

Verification of emissions has decreased in the year-on-year analysis in this report because CDP strengthened its criteria to reflect the importance of verification. Whilst 50% (39) of respondents stated that they had gained or were in the process of gaining verification of Scope 1 or 2 emissions (an apparent increase of 9% compared with 2010), only 37% (29) met all criteria noted above for Scope 1 or 2 emissions, resulting in an overall decrease of 4%. CDP sees this higher standard as a key strategic priority to enhance the quality and reliability of the data reported by companies for the use of investors and consumers, both now and in the future. The sector breakdown of companies verifying their Scope 1 and Scope 2 emissions is shown in Figure 6.

What is CDP doing to support reporting companies?

For 2012, CDP is providing further clarity on what constitutes an acceptable verification process. This was communicated as part of the questionnaire consultation process in September 2011. Looking further ahead, CDP has launched a verification white paper and consultation on a verification roadmap (2013-2018) aiming to encourage more companies to verify their climate data. Visit https://www.cdproject.net/verification to find out more.

Fig. 6: Percentage of companies in each sector with verification complete for at least a portion of emissions



"One of our Mining and Technology Department's core priorities is to develop a low-carbon technology pathway for our business. This is a critical part of our long-term business strategy aimed at preventing limitations in terms of future growth."
Anglo American

"Steel making is energy and emissions intensive, but because of their durability and strength, steel products can help to save energy and hence emissions over the longer term. Steel will play a major role in any adaptation measures needed in future."
Arcelor Mittal South Africa

"We need to have agreement on the process that will be used for reporting, verifying and agreeing to targets which must include sector level [responsibilities] as well."
Pretoria Portland Cement Co

Taking action to mitigate climate change

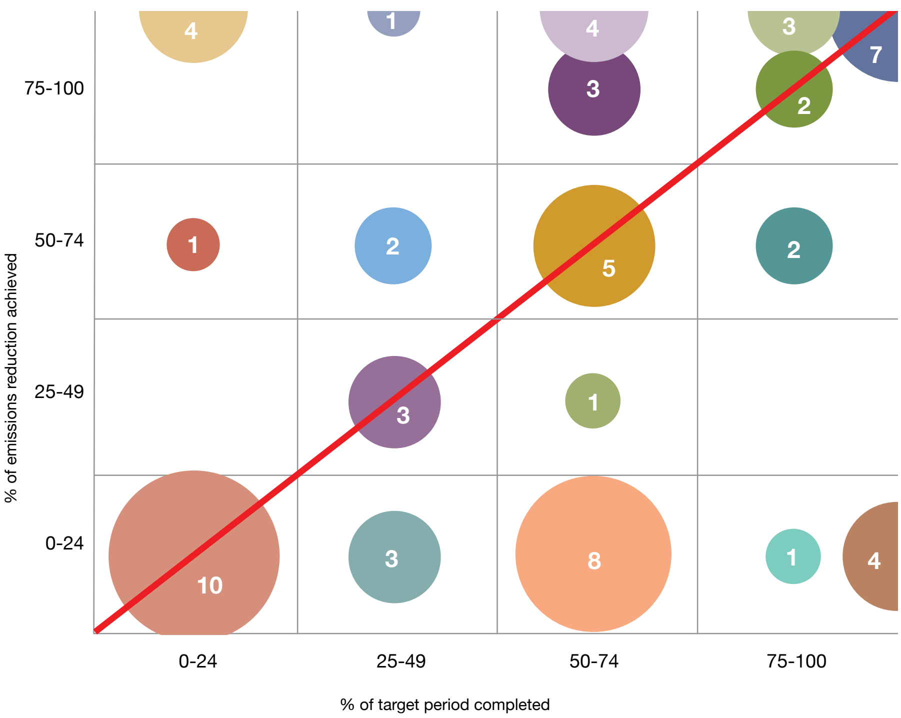
As in 2010, energy efficiency initiatives relating to processes and building services is the most common emission reduction activity type. Behavioural change is the second most common approach to reducing emissions. Figure 8 suggests that the popularity of these activities may relate to their short payback periods, with 47% of behavioural change activities having a payback period of less than one year. These behavioural-change activities include: awareness-raising aimed at reducing energy consumption; recycling; and switching from paper to electronic communication.

Reported investments in emission reductions activities have increased from R 9.5 billion to R 17.9 billion this year. This increase is likely due to both increased investment as well as increased disclosure of investment figures. A total of 462 emissions reduction activities were reported in the CDP's information request, of which 382 specified a payback period.

Progress in meeting emissions reduction targets

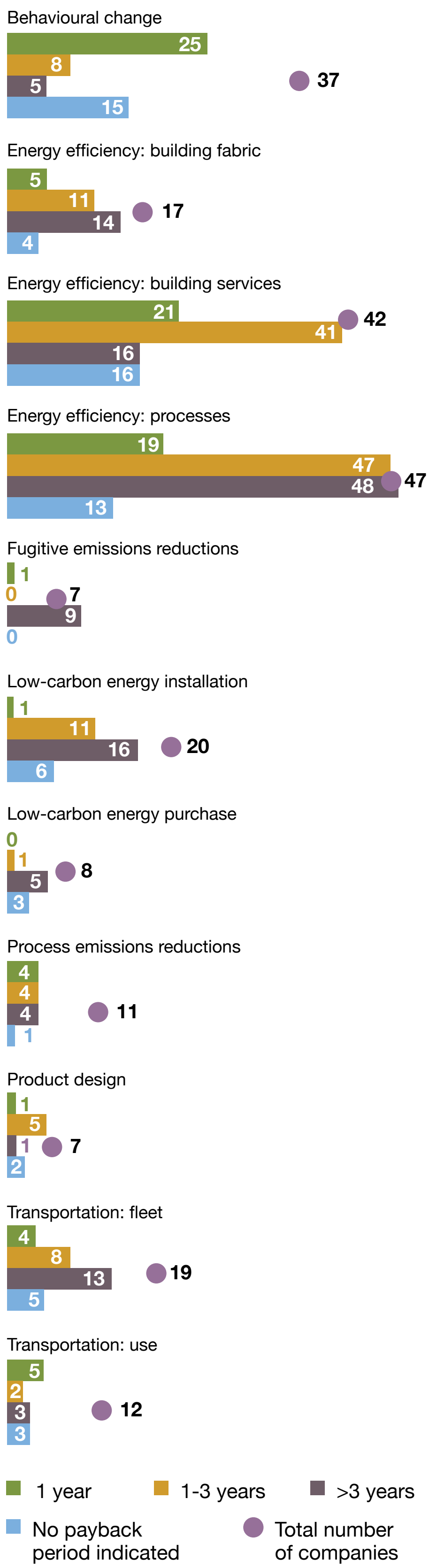
Figure 8 illustrates the progress that companies have made in achieving their targets. On the assumption that there would be linear progression in meeting targets (in other words, for a four-year target it is assumed that 25% progress is made each year), then those targets above the line are on schedule, while those below the line are behind schedule. Of course this graphic does not indicate the level of ambition of the respective targets, nor does it provide for the fact that achievement of targets is often not a linear process. This graphic is provided simply for broad indicative

Fig. 8: Emission reduction target progress



Note: the bubbles indicate the number of targets disclosed by companies according to the percentage achievement of target reductions relative to the percentage completion of the target time period.

Fig. 7: Payback period breakdown of reported active emissions reduction initiatives by activity type



purposes. For a more critical review of the nature and quality of the targets, it is necessary to review each of them individually. A description of each company's targets is provided in Appendix III.

Recognising the important caveat that the achievement or non-achievement of a target is not necessarily an indication of the nature of the performance at that company (some companies can achieve very unambitious targets, while others might narrowly miss the achievement of a more significant stretch target), it is nevertheless important to hold companies to account on their publicly stated ambitions. *Anglo American, BHP Billiton, Gold Fields, Growthpoint Properties, Harmony Gold Mining Co, Investec, Mondi Group, Nampak* and *Netcare* all achieved one or more of their emission reduction targets ahead of schedule. *Capital Shopping Centres Group, Medi-Clinic, Remgro, Sanlam, Santam, Sappi* and *The Spar Group* all achieved at least one of their reduction targets on time. *Caxton CTP Publishers & Printers* and *Sanlam* all failed to achieve at least one of their targets on time. See Chapter 4 for further details.

Identifying and managing risks and opportunities

South Africa has the highest proportion of companies identifying climate driven risks and opportunities out of all countries participating in the CDP. Only two out of the 78 responding companies identify no risks, and five companies identify no opportunities. Sixty-two companies identified risks across all three categories (regulatory, physical and other) and 54 companies identified opportunities across all three categories.

Figure 9 shows the number of companies *identifying* risks driven by regulatory, physical and other climate change factors, as well as the number of companies that were awarded full performance points[17] for managing risks in each risk category. The performance points give an indication of companies that have disclosed risk management activities and implemented these activities. Companies that are taking a monitoring or 'wait and see' approach were not awarded performance points. The figure shows that there is a significant gap between companies that say they identify material risks and those that are actually taking management action.

Fig. 9: Number of companies identifying risks and implementing risk management methods

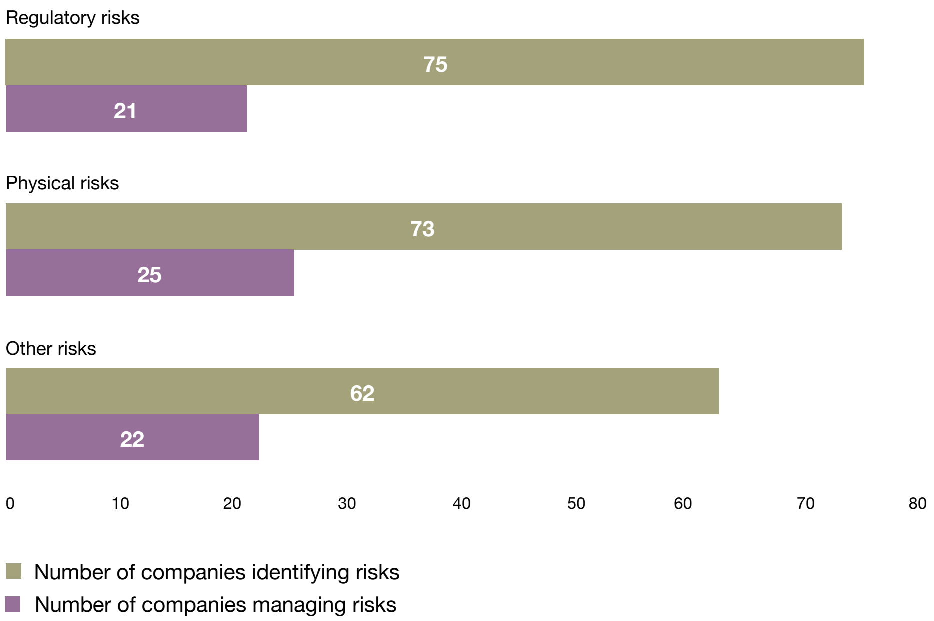


Figure 10 shows a similar situation for climate driven opportunities. The number of companies *identifying* opportunities across regulatory, physical and other categories is considerably higher than companies implementing measures to realise and *manage* these opportunities for each category. There was a significant overlap of companies (26) who performed well in terms of both risk and opportunity management.

Towards improved climate change governance

The CDP 2011 questionnaire asks companies to indicate whether climate change is integrated into their business strategy. Seventy seven percent of responding companies report that climate change risks and opportunities are integrated into their overall business strategy; however only 14% scored maximum performance points for the question relating to the integration of climate change into the core business strategy (question 2.2). To score maximum performance points for this question it must be clear that climate change has influenced companies' short-term and long-term strategy, and that the strategy is linked to an emissions reduction target and to reported climate change risks and opportunities. As is often the case, it is the execution of the strategy rather than its development that is proving a challenge for companies.

Ninety percent of the responding companies report having a board or executive body with responsibility for climate change. Twenty-one of these companies are in the Energy & Materials sector, representing 95% of the responding companies in this

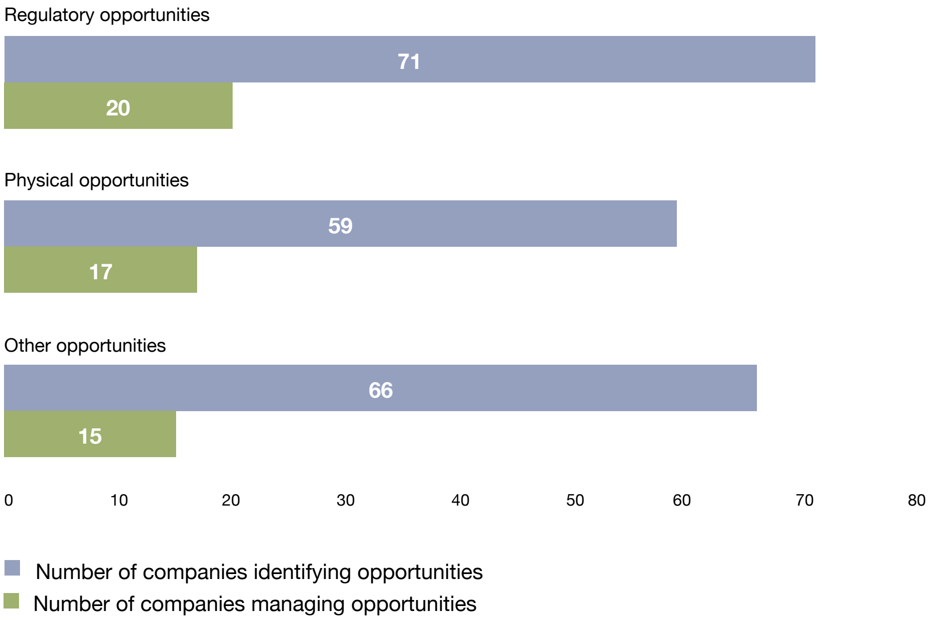
17 A full description of the performance scoring approach and results is presented in Box 6.

sector. All responding companies in the Health Care and IT & Telecoms sectors report having a board or executive body with responsibility for climate change. While this trend would suggest an encouraging level of executive engagement on climate issues, it is not possible from the response to meaningfully assess the nature and extent of the executive bodies' engagement specifically on climate change issues. Most companies have established 'sustainability' and/or 'transformation' committees of some sort. The extent to which such committees actually engage in climate change and related risks is not always clear from the responses. Forty companies report that they have made provision for monetary management performance incentives relating to the achievement of climate change goals and objectives.

In assessing these responses the following issues need to be considered:

- Few companies articulate what their actual business strategy is. Most simply disclose information regarding the existence of a climate change/sustainability/ environmental or related strategy, which makes it difficult to assess the degree to which any strategically significant climate change elements have sufficiently influenced companies' business strategies.
- In many cases companies claim that what could be regarded as normal business activities, such as optimisation and cost reduction, are driven by climate change.
- Many companies also disclose that climate change is integrated into their risk management procedures, yet this is not clearly indicated in company responses; specific detail on the assessment and management of climate change risks is often not provided.

Fig. 10: Number of companies identifying opportunities and implementing opportunity management methods



Linking strategy, target setting and risk/opportunity management

Sixty companies claim to integrate climate change into their business strategies. Of these companies, more than half (38 companies) have set targets. Of the 18 companies that state that they do not integrate climate change into the business strategy, only two have emission reduction targets in place.

Although most companies claim to identify climate-related risks and opportunities, there is a correlation between companies who score maximum performance points for risk management and opportunity management for at least one category (regulatory, physical and other), and those companies that have included climate change in their business strategies and have set targets. Of these 27 companies who score maximum risks and/or opportunity points, 24 disclose having integrated climate change into their business strategies. A significant majority (20 companies) also report having either

"Although Massmart Holdings has not achieved its 12% Absolute Scope 2 energy reduction target, the business has, as a result of this process, gained invaluable insight into the factors that influence energy consumption and the difficulties associated with achieving long-term reduction goals."
Massmart Holdings

"Management were sensitised about reducing carbon emissions, but no official targets were set in the reporting period."
Reunert

"The group has embarked on a strategy to record and report on emissions in all its businesses and to translate the factors so identified into targets."
IMPERIAL Holdings

absolute or intensity targets in place (Figure 11).

Increasing communication around climate change issues

Companies are increasingly publishing information about their responses to climate change in places other than their CDP responses. This year 74 companies (95% of respondents) indicate that they report on climate change in their annual reports. Sixty-five companies (92% of respondents) published climate change issues in their annual report in 2010. An encouraging number of companies (32 or 41% of respondents) report on climate change outside of CDP and their annual reports.

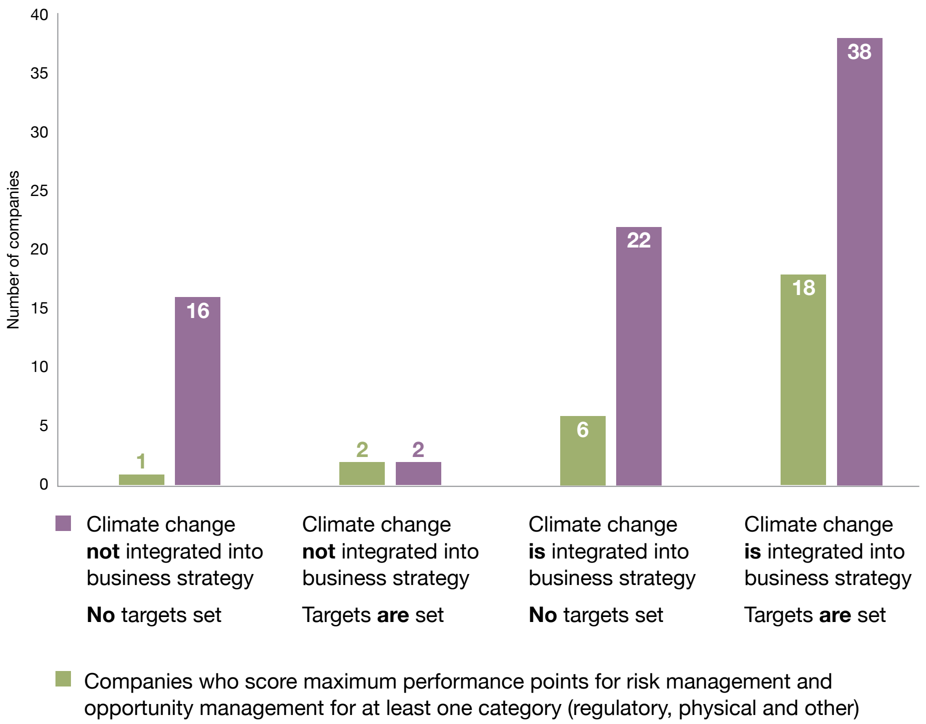
Many of the respondents in the Energy & Materials sector (52%) and the Industrials Sector (50%) provide information through media other than the CDP. This often includes information on targets, significant investments in energy efficiency and renewable energy, innovation and research and development. A smaller proportion of the Financials (39%) and the Consumer Staples (33%) provide this level of detail outside of their responses to the CDP. Respondents in the Consumer Discretionary and Health Care sectors only provide basic information (such as footprints and energy reduction initiatives).

Increasing climate-related business partnerships

There is increasing evidence of companies entering into climate-related partnerships. These include:

- business-to-business climate initiatives, such as those administered by the World Business Council on Sustainable Development (WBCSD) or national business associations such as the NBI or Business Unity South Africa (BUSA);
- business/NGO partnerships;
- business/academic partnerships; and
- business/government initiatives.

Fig. 11: Linking integration of climate change into business strategy with target setting and management of risks and opportunities



Most companies disclosed partnerships with associations such as BUSA or the NBI. Many companies report having partnered with NGOs such as WWF. Other partnerships include those with academic and research institutions, intergovernmental organisations such as UNEP, utilities (such as *Eskom*, particularly through their demand side management programme), governmental agencies (in the form of public private partnerships), and technology service providers or other companies.

"It is anticipated that absolute emissions will increase by 30.7% over the target period, 2009 to 2014 but at a substantially lesser rate than a 'business as usual' scenario due to Barloword's aspirational efficiency targets."
Barloworld

"Surveys conducted during the recession indicated a decrease in consumer interest in instances where environmentally responsible products are associated with a higher price. Consequently, it is important that environmentally responsible products are offered at an equitable price."
Massmart Holdings

Companies on climate risk

"Climate change is ranked fourth out of the top twenty principal risks at corporate level. ARM regards this as a catastrophic risk with a moderate likelihood."
African Rainbow Minerals

"Climate change and greenhouse effects have been determined to be a material risk that could negatively impact our results and performance. The identification and management of risk is vital to achieving the corporate objective of delivering long-term value to shareholders."
BHP Billiton

"An example of the outcome of the operational risk assessment process was the development of a storm water channeling project at Grootegeluk. The risk of an increasing frequency of extreme precipitation events causing storm water flooding and the probability of more drought events was identified by the business operation. This resulted in the Grootegeluk storm water channel expansion project. The project was planned in 2010, to be implemented in 2011 at a cost of ZAR 50 Million."
Exxaro Resources

"Failure to correctly price the risks of climate change in Liberty Holding's updated risk-evaluation models could result in Liberty experiencing substantial losses."
Liberty Holdings

"It is necessary for companies to identify, assess and quantify the potential physical risks brought about by climate change and develop an appropriate adaptation response. Water is becoming a major cost item for mining companies as global fresh water resources are under increasing stress."
Impala Platinum Holdings

"Risk in lending or investment is considered by Investec to be the greatest risk that climate change poses to the organisation. In early 2010 Investec commissioned an external analysis on the risks and opportunities relating to climate change for the South African business."
Investec

"For the most significant climate change risks, low, medium and high scenarios were developed based on available historical weather data and scientific climate change models. In order to understand the potential implication of these risks a financial model was developed. This has provided financial quantification and associated implications of amongst others the potential carbon tax and certain physical climate change risks such as flooding and lightning on our operations."
Lonmin

"A large section of our business is targeted at the lower socio-economic level of the market, and these are the individuals and groups that will most be affected by climate change and the increased costs of energy and imposition of taxes, with the resultant loss of disposable income."
MMI Holdings

"We have not as yet been in a position to assess the financial implications of our climate risk exposures on a full book basis, and such a complete assessment is to be commenced."
Nedbank

"In previous years, the price of electricity contributed to about 5% of our costs, and has now crept up to about 8%. It is expected that this cost may grow to about 10% of operational costs."
Pretoria Portland Cement Co

"Increased ambient temperature on land could be associated with a higher incidence or spread of diseases in either crops or chickens. This increase in diseases will not only put additional pressure on current disease management, but could impact negatively on the ability to conduct operations and the demand for Rainbow's and Tsb Sugar's product in South Africa."
Remgro

Companies on climate opportunities

"Platinum is used in the manufacture of fuel cells which hold vast potential as an alternative energy source. Over the next few decades this new age technology could replace today's conventional combustion engines and stationary power systems. Approximately 40% of platinum and around 57% of palladium demand globally was used for the production of autocatalysts in 2010."

Northam Platinum

"Government is required to invest in maintenance and renewal of existing infrastructure to adapt to climate change. This will increase government spending in acquiring construction materials, including cement and aggregates. Mitigation options will require more resilient structures to extreme weather conditions which will also influence spending on infrastructure."

Pretoria Portland Cement Co

"We do not have a climate change specific policy or individual or committee designated responsibility for climate change in our company. Instead, we regard climate change as an opportunity for us to provide both thought leadership and potentially market based solutions."

JSE

"We believe that consumer demand for products that are more sustainable and produced in an environmentally and socially responsible manner will grow in South Africa over the next two years, as recovery from the recession continues. As such, if we fail to respond appropriately by supplying such goods and services, we will lose the connection and trust that we would like customers to have with the Woolworths Holdings brand."

Woolworths Holdings

"It is envisaged that the effect of climate change on viral and bacterial distribution will impact on population health. This could result in increased need for treatment for diseases and ailments caused by these distribution shifts."

Netcare

"Long term strategy influenced by climate change is the possibility of renewable energy generation and the associated carbon credit income streams generated. Both Tsb Sugar and Rainbow are investigating generating electricity from bagasse and chicken litter respectively and to register the projects for carbon credits."

Remgro

"A decrease in energy consumption associated with a Growthpoint Properties owned & managed property results in a decrease in 'cost of occupancy' for the tenant. This can result in an increase in the willingness of the tenant to, firstly, pay rental for the space which has a lower cost of occupancy, and secondly, improve tenant retention and therefore impacts vacancies. As energy costs are rising, so the 'cost of occupancy' increasingly impacts demand, so much so that there is potential for a rental premium for efficient space. Thus energy efficiency, and associated reduction in CO_2, contributes to income and capital growth, our core strategy, directly correlating with our climate change strategy of reduction of CO_2."

Growthpoint Properties

"Long term strategy changes relates to business opportunities by way of technological solutions that have the potential to replace traditional, carbon-intensive methods of doing business such as video conferencing and machine-to-machine transactions."

Vodacom Group

Box 4: CDP voluntary responses

Two companies responded voluntarily outside of the JSE 100 sample this year: *Oceana*, *Rainbow Chicken* and *Mix Telematics*. Their data has not been included in the main analysis, and they were not scored for carbon disclosure or performance.

Sector	Sub-sector	Company	CDP 2011	Scope 1 (tCO_2e)	Scope 2 (tCO_2e)	Scope 3	GHG Target	Emissions intensity (CO_2e per FTE)	Emissions intensity (other)
Consumer Staples	Packaged Foods & Meats	Oceana	Voluntary	149,639*	65,816*	Yes	Yes	44.59	1,366.4 t CO_2e per metric ton of product (Oceana Brands division)
									1,293.6 t CO_2e per metric ton of product (Lobster Squid & Friess division)
									75.29 t CO_2e per metric ton of product (Blue Continent Product division)
									1,166.1 t CO_2e per metric ton of product (Commercial Cold Storage division)
Consumer Staples	Food Products	Rainbow Chicken	Voluntary	125,928	309,643	Yes	Yes	56.97	0.92 t CO_2e per m²
Industrials	Support Services	Mix Telematics	Voluntary	769	3050	Yes	NO	5.68	0.27 t CO_2e per m²

Reported risks: As companies in the Consumer Staples sector, Rainbow Chicken and Oceana face many of the same risks in terms of rising electricity and fuel costs as well as future water shortages and increased cooling needs. Rainbow also anticipates increased rates of disease in poultry while Oceana points to increased danger for employees as well as temperature variation impacting biodiversity and fishing stocks. Mix Telematics identifies greater compliance and operational costs associated with new regulations. Damage to transport networks could affect customers choice of transport mode, affecting revenue generating opportunities.

Reported opportunities: There are opportunities for increased resource efficiency and management as well as significant opportunities for CER and CDM development for Rainbow, using waste. For Oceana, there are significant opportunities for building partnerships to ensure sustainable sourcing. Mix Telematics offers services for road users to reduce their emissions. Generating credits from emissions reductions is also presented as a good opportunits.

Emission reduction targets

Company	Type	Target Year	Baseline	Scope	Target
Oceana	Intensity	2013	2009	Scope 1 & 2	2.5% reduction from base year per metric ton of product for all operations. (334.14 t CO_2e reported in base year). 0% of target emissions reductions achieved.
	Intensity	2010	2009	Scope 1 & 2	2.5% reduction from base year per metric ton of product for Oceana Brands. (1,545.80 t CO_2e reported in base year). Target emissions reduction achieved.
	Intensity	2010	2009	Scope 1 & 2	2.5% reduction from base year per metric ton of product for Commercial Cold Storage. (82.72 t CO_2e reported in base year). Target emissions reductions achieved.
Rainbow Chicken	Absolute	2010	2009	Scope 1	10% reduction year-on-year in the tonnes of coal used. (64,619 t CO_2e reported in base year). Target reduction achieved.
	Absolute	2010	2009	Scope 2	5% reduction year-on-year of the kWhs of electricity consumed (300,975 t CO_2e reported in base year). Target emissions reductions not achieved.
Mix Telematics	-	-	-	-	This was the first year of estimation. Target emissions reductions not yet set.

"Our long-term strategy involves finding alternative energy sources and research has been kicked off with regards to wind power generation and a waste-to-energy project."

Rainbow Chicken

"We sought to demonstrate leadership in the industry by commissioning a study on the fishing industry's role in adaptation to climate change. The report highlights the impact of climate change on the fishing industry and also suggests options for adaptation initiatives."

Oceana

"We offer our clients offset opportunities through our strategic partnership with Sterling Waterford."

Mix Telematics

3 The CDP 2011 leaders

"Historical studies have shown significant correlation between work place temperatures and productivity on Gold Fields operations. Higher ambient temperatures impacts Gold Fields' operations in two ways. The first is direct impacts: when temperatures pass a certain limit, work is disrupted. The second impact is indirect through the performance of the chilling plants used to cool down the underground workings: the higher the temperature, the more cooling and therefore energy is required."

Gold Fields

Each year, company responses are reviewed, analysed and scored for the quality of disclosure and performance on actions taken to mitigate climate change. Leading companies are included on the CDP's Carbon Disclosure Leadership Index (CDLI) and the Carbon Performance Leadership Index (CPLI).

This year all companies that responded to the CDP questionnaire using the CDP's Online Response System (ORS)[18] and that made their responses publicly available have been scored according to the CDP's 2011 scoring methodology. Originally, the methodology scored disclosure only, assessing the comprehensiveness of a company's response to CDP. In 2009, CDP piloted the assessment of a company's performance in relation to climate change. South Africa was among the four CDP samples to apply performance scoring in 2009. The pilot led to performance scoring being incorporated in the 2010 scoring methodology and has developed further in 2011. Therefore, in 2011 companies receive a disclosure score and, where sufficient disclosure exists, a performance band. Carbon disclosure scores and carbon performance bands for all eligible companies are included in Table 2 and in the sector snapshots (Chapter 4).

Incite Sustainability undertook the scoring of the South African companies, following a strict application of the CDP 2011 scoring methodology.[19] Those South African companies that fall within the Global 500[20] were scored exclusively by PwC.

18 All South African companies that responded did so using the ORS.

19 The methodology is explained at https://www.cdproject.net/en-US/Pages/guidance.aspx#2011methodology. The CDP provided training as well as a level of quality assurance on a sample of the final scores. This was done to ensure consistent application of the scoring methodology across the CDP's various samples.

20 The following companies fall within the Global 500 sample and were scored by PwC: *Anglo American; Anglo Platinum; AngloGold Ashanti; Aquarius Platinum; BHP Billiton; British American Tobacco; Capital Shopping Centres Group; Compagnie Financière Richemont SA; Firstrand; Impala Platinum Holdings; Kumba Iron Ore; Lonmin; Mondi PLC; MTN Group; Naspers; Old Mutual; SABMiller; Sasol; Standard Bank Group*

Recognising leadership in carbon disclosure

This year the top 10% of JSE 100 companies with the highest carbon disclosure scores have been included in the CDLI. This index highlights leaders in terms of transparency and accountability regarding climate change related issues and good internal data management practices.

Understanding the carbon disclosure scores

A summary of how disclosure is assessed is provided below. A description of what these scores represent is provided in Box 5.

- Disclosure scores are an assessment of the quality and completeness of a company's response; they are not a measure of a company's performance in relation to climate change management.
- Scores are plotted over a 100-point normalised scale.
- Companies are assessed based on the level of disclosure of their carbon emissions measurement techniques and subsequent public disclosure of their data.

Assessing leading disclosers

In considering the disclosure scores and the list of companies in the CDLI, it is important to bear in mind the following issues:

- 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 corporate responsibility reporting, environmental statements in annual reports, or through meetings and engagement with stakeholders and policymakers.
- The focus of the scoring is on a company's *disclosure*: while the high scores suggests good internal

Box 5: What does a disclosure score represent?

Generally, companies scoring within a particular range exhibit similar levels of commitment to, and experience of, disclosure. The indicative description of each level is provided below for guidance only; investors should read individual company responses to understand the context for each business.

Fig. 12: Carbon disclosure elements

Low (<50)	Midrange (50-70)	High (>70)
Limited or restricted ability to measure and disclose climate related risks, opportunities and overall carbon emissions	Increased understanding and measurement of company-specific risks and opportunities related to climate change	Senior management understand the business issues related to climate change and are building climate related risks and opportunities into core business

Disclosure score (Max. 100)

The journey to leadership

Compliance → **Managing for value** → **Strategic advantage**

How is the disclosure score determined?

In determining the disclosure score for each company, the following elements were assessed:

- The level of understanding and disclosure of company-specific exposure to climate-related risks and opportunities.
- The level of strategic focus and commitment to understanding the business issues related to climate change, emanating from the top of the organisation.
- The extent to which a company has measured its carbon emissions.
- The extent of the internal data management practices for understanding GHG emissions, including energy use.
- The frequency and relevance of disclosure to key corporate stakeholders.
- Whether the company uses third party or external verification of emissions data to promote greater confidence and usage of the data.

Eligibility for the CDLI

In order to be included in the CDLI companies must:

- Respond using the Online Reporting System (ORS) prior to the deadline.
- Provide a public response.
- Score within the top 10% of the reporting population: a total of 11[21] companies are included in the 2011 JSE 100 CDLI.

More information on the CDLI can be found in CDP's information request, supporting methodology and reporting guidance documents at **www.cdproject.net**

21 This year two companies scored 87 (the 10th highest score) which took the total number of companies in the CDLI to 11.

data management practices, and is an indication of the company's transparency and accountability, it is *not* a metric of a company's performance in relation to climate change management; the scoring does not make any judgement over absolute levels of emissions, emission reduction achievements, or carbon intensity.

The South African CDLI is presented in Table 3. Last year the South African CDLI consisted of all those companies that scored more than 50 normalised points[22] for disclosure. This year the CDLI mirrors the CDP's approach to include only the top 10% of the sampled companies (the JSE 100).

- This year *Gold Fields* qualified as the overall leader with 98 normalised points. *Gold Fields* shared this position with *Firstrand* in 2010. *Nedbank* came second with 96 points and *Exxaro Resources* third with 94 points.

- When comparing this year's CDLI (11 companies) to the top 10% of companies in last year's CDLI (12 companies)[23] the results are remarkably different. This year, the companies included in the CDLI are a lot more balanced across the different sectors. Energy & Materials, Financials and Industrials each represent three of the top 11 companies, with the remaining two companies coming from Consumer Staples. Last year there were no companies from the Consumer Staples and Industrials sectors represented in the top 10%. In contrast to last year, no companies from the Health Care and IT & Telecoms sectors are represented in the top 10%.

22 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 multiplied by 100 to obtain a rating that is comparable across all sectors.

23 This allows for a more appropriate comparison as last year's CDLI included 56 companies.

Table 3: The JSE 100 Carbon Disclosure Leadership Index

Rank	Company	Sector	Score
1	Gold Fields	Energy & Materials	98
2	Nedbank	Financials	96
3	Exxaro Resources	Energy & Materials	94
4	British American Tobacco	Consumer Staples	91
	Harmony Gold Mining Co	Energy & Materials	91
6	Barloworld	Industrials	89
	Woolworths Holdings	Consumer Staples	89
8	Firstrand	Financials	88
	Sanlam	Financials	88
10	The Bidvest Group	Industrials	87
	Group Five	Industrials	87

Companies highlighted in green are those that have been in the JSE CDLI[24] for three consecutive years

Companies highlighted in orange were not in the JSE 100 CDLI in 2010

- Last year's top 10% of companies were dominated by the Energy & Materials (six companies) and the Financials (four companies) sectors. The more even spread across sectors is an encouraging development as it suggests that all sectors are taking climate change seriously, devoting time and resources to managing data, assessing risks and opportunities and disclosing climate change related information. Historically, those sectors more directly exposed to climate change related risks, such as the Energy & Materials sector, have been best performers in terms of disclosure. Other companies are catching up. Although there are fewer Energy & Materials sector companies in this year's top 10% of companies, the best disclosers still tend to come from this sector (three out of the top five companies).

- Companies in this year's CDLI that were also in the top 10% of companies last year include *Exxaro Resources, Firstrand, Gold Fields, Nedbank* and *Sanlam*. New entries into the CDLI (i.e. that were not included in the top 10% of companies last year) include *Barloworld, Bidvest Group, British American Tobacco, Group Five, Harmony Gold Mining Co* and *Woolworths Holdings*.

- The results indicate that the quality and depth of responses continues to improve, despite the increasing stringency of the scoring mechanism year on year. Although the scoring methodology and questionnaires have changed slightly, it is worth comparing scores each year. This year the average carbon disclosure score of all publicly responding companies is 76, up from 74 in 2010 (and 62 in 2009).

Recognising leadership in carbon performance

The CDP has adapted the performance scoring to focus on the change in corporate performance rather than measuring the extent to which a company has a framework in

24 The CDLI in 2009 included the top 16 companies and in 2010 included all those companies that scored above 50 normalised points. For the purposes of comparison, the CDLI in this analysis refers to the top 10% of companies according to their carbon disclosure scores.

Box 6: What does a performance band represent?

This year, for the second time, all companies with a sufficiently high disclosure score received a performance band. The qualifying threshold to receive a performance band was a disclosure score of 50. Disclosure scores of less than 50 do not necessarily indicate poor performance. Rather, they indicate 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.

Performance is grouped in six bands: A, A-, B, C, D and E, defined using the characteristics outlined in Figure 13.

The Carbon Performance Leadership Index (CPLI) includes the companies in the highest performance band (A) and provides a valuable perspective on the range and quality of activities being performed by the Global 500 in response to climate change.

Eligibility for the Carbon Performance Leadership Index

To be eligible for the Carbon Performance Leadership Index, companies must:

- Attain a disclosure score of 50 or above;
- Attain a performance score greater than 70;
- Score maximum performance points on question 13.1a (absolute emissions performance);
- Achieve at least a 2.65%[25] reduction in carbon emissions as a result of emissions reduction activities over the last year;
- Disclose gross global Scope 1 and Scope 2 figures; and
- Score maximum performance points for verification of Scope 1 and Scope 2.

Notes:

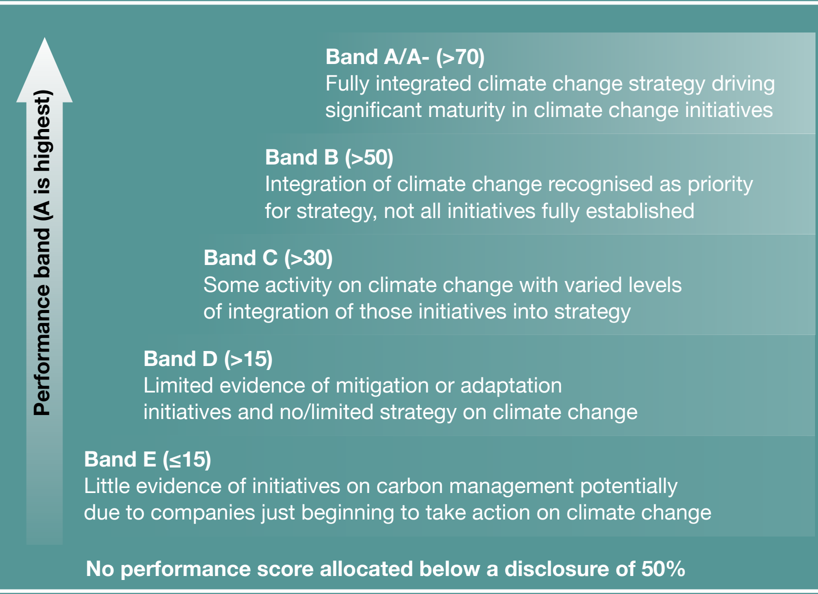
- Band A- companies are not in the CPLI. They are strong performers, with a performance score high enough to warrant inclusion in the CPLI, but they did not meet all other CPLI requirements.
- CDP reserves the right to exclude a company from the CPLI if there is anything in its response that calls into question its suitability for inclusion.

Performance scoring is an instructive exercise for all stakeholders. The score provides an indication of the extent to which companies are addressing the potential opportunities and risks presented by climate change. CDP recognises that this is a process that will evolve over time. It is important for investors to keep in mind that the carbon performance band simply recognises evidence of action, and is not:

- A measure of how "low carbon" a company is;
- An assessment of the extent to which a company's actions have reduced carbon intensity relative to other companies in its sector; or
- An assessment of how material a company's actions are relative to the business.

For the most informed understanding of a company's performance, it is important to consider the individual company disclosures, and not simply its performance rankings. A listing of companies and their bands is included in Table 2. Companies that did not qualify for a performance band appear in Table 2 with a dash (-) in the performance band column. More information can be found in CDP's information request, supporting methodology and reporting guidance documents, as well as within individual company responses at **www.cdproject.net.**

Fig. 13: Carbon performance elements



25 The Intergovernmental Panel on Climate Change (IPCC) has set a target of 80% reduction in emissions by 2050, based on 1990 levels. This equates to a 2.65% annual reduction.

place to address carbon management (which was the focus in 2010). This year, performance focuses more on measuring the ambition and success of a company's short- and long-term actions to mitigate climate change.

Understanding the carbon performance bands

A summary of how performance is assessed is provided below:

- Where a company's disclosure score is 50 or more[26], its performance in mitigating carbon emissions is assessed and ranked in a performance band.
- For 2011 there are six performance bands (there were four bands in 2010).
- Companies with the highest performance bands that meet additional CPLI criteria are listed in the CPLI.

Assessing leading performers

While there is some provision in the CDP questionnaire[27] and the performance assessment process for reviewing a company's adaptation activities, the assessment of performance for the CPLI has a particular emphasis on emissions accounting and mitigation measures. The strong focus in the questionnaire on emissions accounting is intended to provide the necessary insight into the reported figures and thus, in turn, on the extent to which these figures can be used for comparative purposes. As taking action to reduce GHG emissions is expected of all companies, the performance scoring seeks to reflect this. To qualify for inclusion in this year's Carbon Performance Leadership Index (CPLI), a company must achieve a GHG emission reduction of at least 2.65% as a result of emissions reduction activities over the last year, and must measure, report and verify Scope 1 & 2 emissions.

Table 4: The JSE 100 best performance scores

Company	Sector	Carbon Performance Score
British American Tobacco	Consumer Staples	A
Gold Fields	Energy & Materials	
Exxaro Resources	Energy & Materials	A- *(Companies listed alphabetically)*
Nedbank	Financials	
Pick n Pay Holdings	Consumer Staples	
Remgro	Financials	
Woolworths Holdings	Consumer Staples	

As the 12th largest emitter in the world, South Africa has a responsibility to reduce its greenhouse gas emissions. Local business has an important role to play in this regard. As a country with significant developmental challenges and a high degree of exposure to predicted changes in climate, South Africa is particularly vulnerable to the impacts of climate change.

As a consequence of the more stringent CPLI entrance criteria on emissions reductions and verification (see Box 6), only *British American Tobacco* and *Gold Fields* qualified for inclusion in this year's JSE 100 CPLI. Table 4 indicates the companies that achieved the top performance scores. *Exxaro Resources, Nedbank* and *Woolworths Holdings* did not meet the CPLI criteria as they did not achieve a 2.65% reduction in carbon emissions as a result of emissions reduction activities over the last year. *Pick n Pay Holdings* and *Remgro* did not meet the CPLI criteria as they did not verify their Scope 1 and 2 emissions. The top performers in 2010 (those companies that achieved a performance score in band A) were *Barloworld, Gold Fields, Nedbank* and *Woolworths Holdings*.

The following observations can be made regarding the outcome of the 2011 CPLI process:

- This year the majority of top performers come from the Consumer Staples sector. The list of top performers does not include any companies from the IT & Telecoms sector. This is disappointing considering the great potential of the sector to provide the market with low carbon products.
- This year 74 companies received a performance band compared to 59 companies in 2010. This reflects the fact that more companies are responding to CDP's information request and that more companies are providing adequate information (obtaining a carbon disclosure score of more than 50) to assess their performance. The sector with the highest average performance band is the Financials sector, followed closely by the Materials sector. The sector with the lowest average performance band is the Health Care sector. Details on the CDLI scores by sectors are provided in Chapter 4 (and see Figures 15 and 16).

In considering the performance bands for each company, it is important to note that the bands are not directly comparable with those used in the 2010 report. For example, Band B includes companies scoring 51 – 70 normalised points. In 2010, Band B included companies scoring 51 – 80 normalised points. As companies improve their measurement (assessed in companies' disclosure scores) they will be in a position to improve

26 To receive a performance score, a company must achieve a minimum disclosure score of 50% as it is considered that below this level insufficient information has been provided on which to generate a performance score.

27 This is addressed in the sections on the strategic direction of the company, and on the risks and opportunities faced.

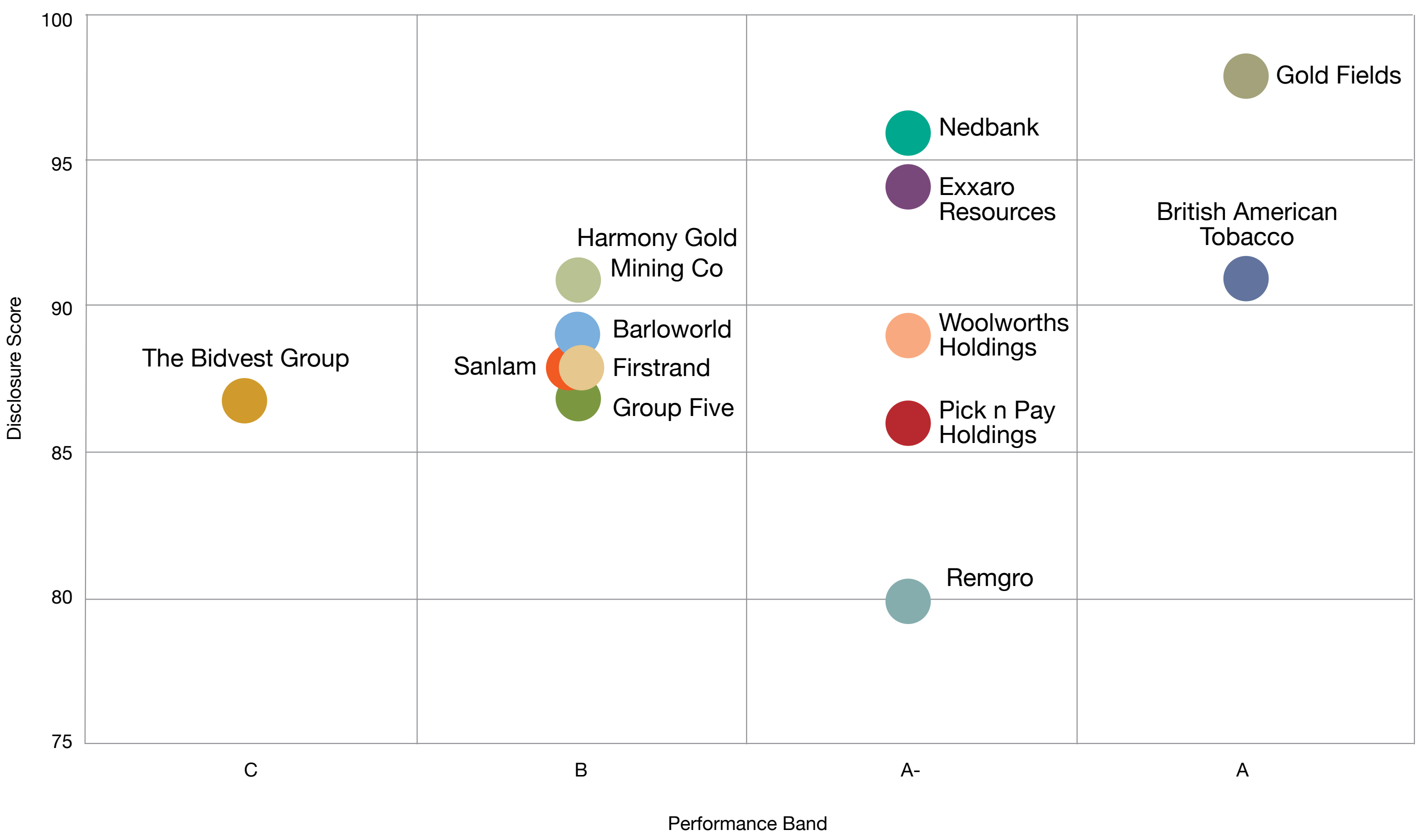
their performance. Based on the improvement in carbon disclosure scores over time it is expected that companies' performance will continue to improve over the coming years.

Recognising leadership on both disclosure and performance

Figure 14 identifies those companies on the JSE that have rated best in terms of disclosure and performance in terms of the CDLI and CPLI.

Although the CDP scoring methodology does not provide a comprehensive assessment of companies' performance with regard to climate change, the results do provide insight into those companies that are leading the way. Figure 14 plots the companies included in the JSE 100 CDLI and the companies that obtained a performance band of A- or A.

Fig. 14: Top disclosure scores and top performance bands for the JSE 100 sample



4 Industry perspectives: sector snapshots

"Woolworths Holdings supports long-term regulatory action around the setting of clear and mandatory, medium and long-term emission reduction targets, building on the existing framework, as well as adopting goals and incentives for renewable energy production."

Woolworths Holdings

In assessing company disclosure and performance on climate change issues, the context of the specific sectors in which companies operate is relevant. The nature and scale of impacts, the exposure to risks, and the ability to identify and seize opportunities, varies considerably across sectors. This has a bearing on risk assessment and quantification, resource allocation, and the nature of mitigation and adaptation initiatives. Presenting the results by sector also facilitates meaningful comparison between companies.

With this understanding, this chapter presents a succinct overview of the corporate responses on a sectoral basis, in which all companies are assessed using the same criteria. Each of these "sector snapshots" contains:

- A brief analysis of the broad implications of climate change for that sector (note: this analysis reflects the judgement of the authors of this report, and not the responses of the companies).
- A summary of the company response type and emissions data (Scopes 1 and 2, and emissions intensity).
- The sector's average carbon disclosure score against the JSE 100 overall and the JSE 100 CDLI.
- A graphical representation of the companies' disclosure and performance scores.
- A summary of the key risks and opportunities reported by the companies (note: this reflects what the companies reported and is not intended to be a detailed account of the actual sectoral risks and opportunities).
- A description of all of the reported individual corporate emissions reduction targets is presented in Appendix III.

Sectoral overview

Before assessing the performance of companies within each sector, it is useful to understand the nature of the performance between sectors.

Figure 15 provides an overview of the sectoral response rate for 2011, as compared with the response rates for CDP 2010 and CDP 2009. The nature of the varying sector- and company-specific response rates over the past three years is also reflected by the colour scheme used in Table 2. This shows a continuing general improvement in disclosure across most sectors, other than the Energy and Minerals sector which previously had a 100% public response rate. This year four companies from the sector did not participate (*Assore, Mvelaphanda Resources, Great Basin Gold* and *Eastern Platinum*), and one did not make its response public (*Royal Bafokeng Platinum*). These are all first-time participants as recent entrants to the JSE 100; all those that were in the sample last year responded publicly again this year.

The largest number of non-respondents comes from the financial sector, with seven companies not responding, five of which come from the Real Estate sub-sector. The Real Estate sub-sector has consistently been one of the poorest in terms of disclosure. The financial sector shows the greatest variance, with some of the best disclosures and some of the worst. Although there has been a continuing improvement in disclosure in the Consumer Staples and Consumer Discretionary sector, these sectors still show the lowest response rates.

Each sector snapshot includes an analysis of the sector's disclosure score against the scores of the JSE 100 sample as a whole and the disclosure of the CDLI. The disclosure scores for different parts of CDP's questionnaire are clustered into the following six areas:

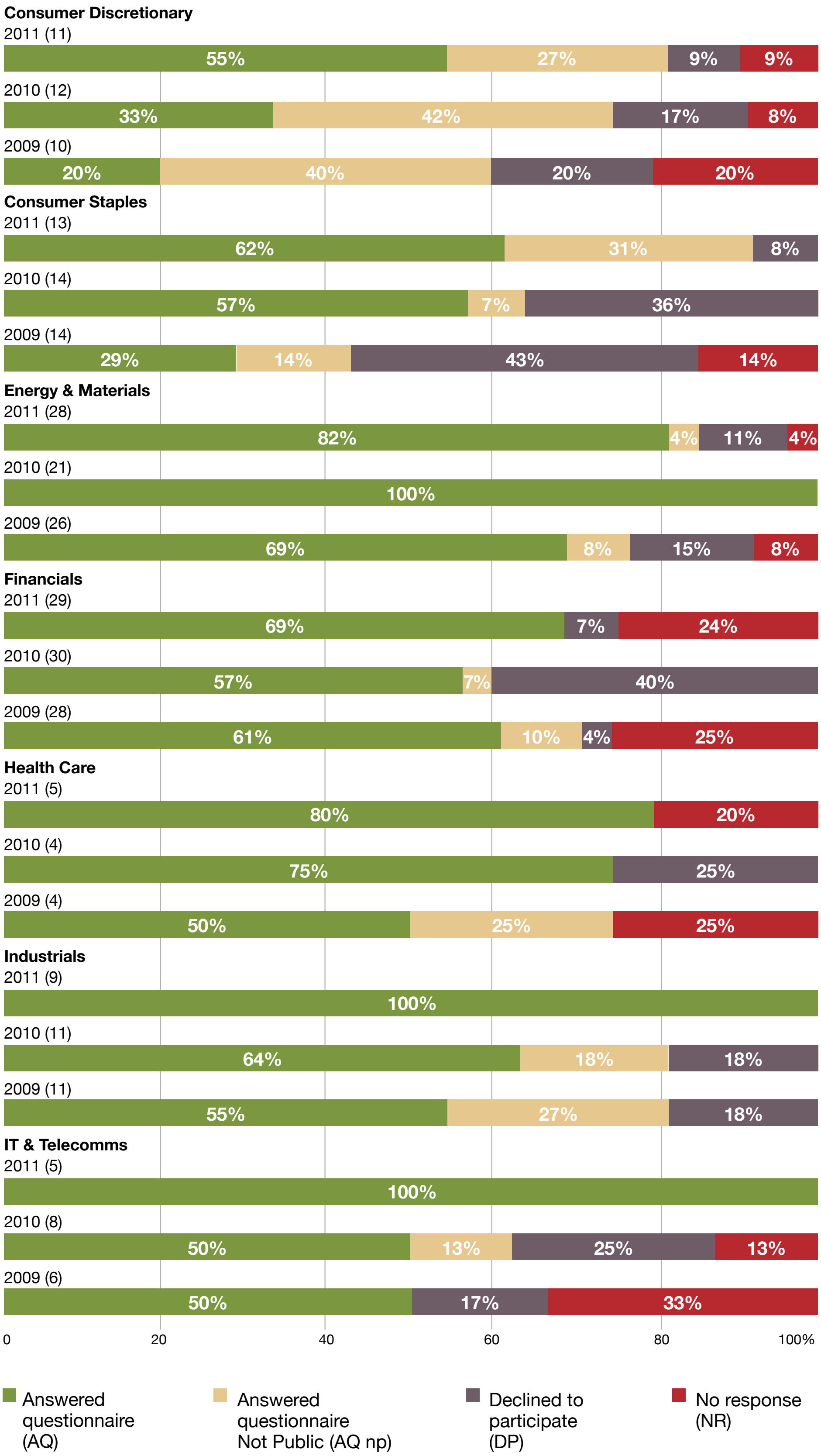
- *Governance & Strategy* – includes responsibility for climate change, incentives for the management of climate change issues, integration of climate change into the business strategy and participation in emissions trading schemes.

- *Risks* – includes the identification, implications and actions taken on regulatory, physical and other risks.
- *Opportunities* – includes the identification, implications and actions taken on regulatory, physical and other opportunities.
- *Emissions Reporting* – includes actual emissions reported (Scope 1, 2 and 3) and reporting parameters and methodology.
- *Emissions Management* – includes emission reduction targets, change in emissions over time, emission reduction initiatives and emissions intensity.
- *Engagement and verification* – includes engagement with policymakers, other climate change communication and verification and assurance.

The analysis shows a fairly even distribution of disclosure scores across all sectors except for the Consumer Discretionary sector, which performs relatively poorly. Stakeholder engagement is the area of greatest concern with regard to the quality of disclosure across all sectors. The main reason is the poor performance of many companies in terms of verification of emissions data. The JSE CDLI performs well with an average score of 86. In contrast the Consumer Discretionary, Consumer Staples and Health Care sectors all score below 50 due mostly to companies not verifying their emissions.

A review of the performance scores across the seven sectors is provided in Figure 16, which shows the performance bands A, A-, B, C, D and E for each sector, as well as those

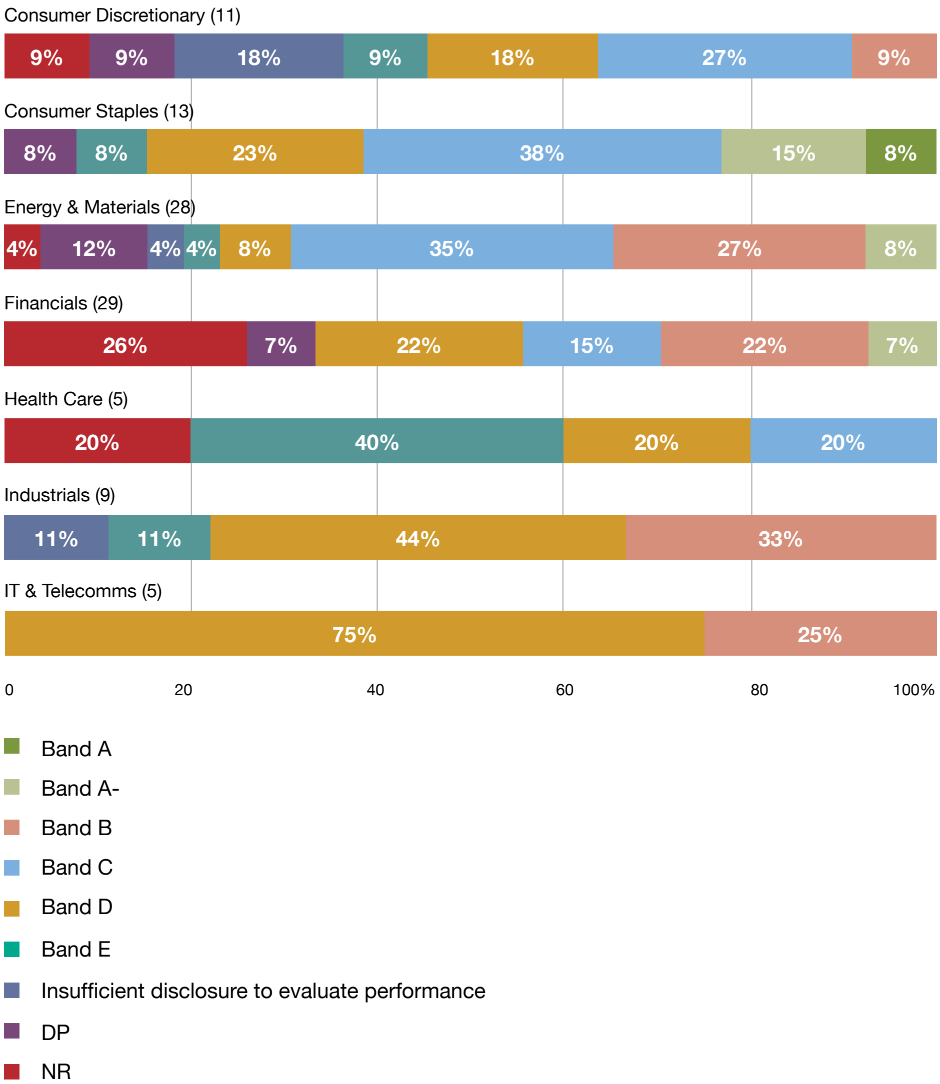
Fig. 15: JSE 100 response rate by sector – CDP 2011, CDP 2010 and CDP 2009



companies that did not qualify for a performance band – either because they did not submit a response or because there was insufficient information disclosed to evaluate performance[28]. The figure highlights the significant differences in performance between sectors. Consumer Staples has the only company in performance band A and it shares the highest number of companies in performance band A-, together with the Energy & Materials and Financials sectors. The Financials sector includes some of the best performers, but also some of the worst, with seven companies not responding, five of which come from the Real Estate sub-sector. The Energy & Materials sector continues to perform well with 64% of the companies falling into the C band or higher.

28 To receive a performance band, a company must achieve a minimum disclosure score of 50%; it is considered that below this level insufficient information has been provided on which to generate a performance score.

Fig. 16: Sectoral analysis of response rates and performance bands



Consumer Discretionary

Climate change and the Consumer Discretionary sector

Most companies in this sector have relatively limited direct energy and carbon-related impacts. Impacts are concentrated predominantly in the supply chain and in the consumer use of products, particularly in the case of clothing retailers. Due to their relative size, many South African companies in the sector have limited influence on international supplier behaviour. There is a small market for green products in South Africa, which is generally restricted to higher LSM[29] customers. The primary internal focus is on optimising logistics and energy efficiency. There are opportunities for sourcing more sustainable resources and sourcing locally.

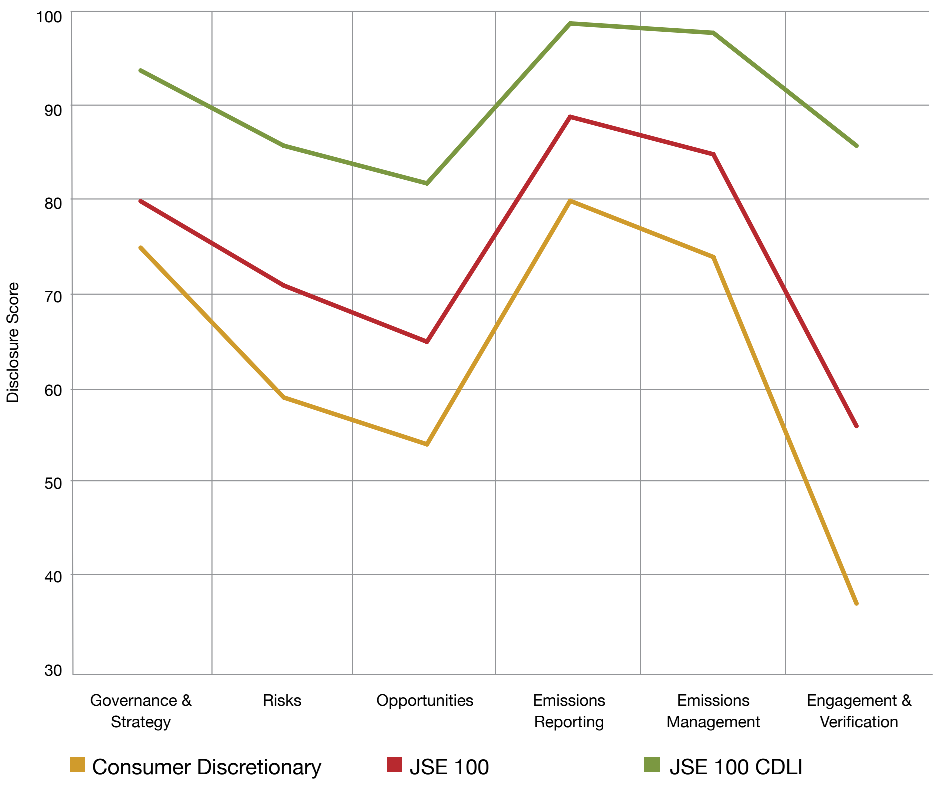
Reported risks and opportunities

Risks: The principal reported risks include increasing energy and fuel costs, risks to supply of certain raw materials and products, and increasing insurance costs. These are largely managed with internal optimisation efforts. Future risks include enforced product efficiency standards. Some products could face decreased demand in light of technological innovation, changing consumer preferences and higher prices driven by increasing commodity prices.

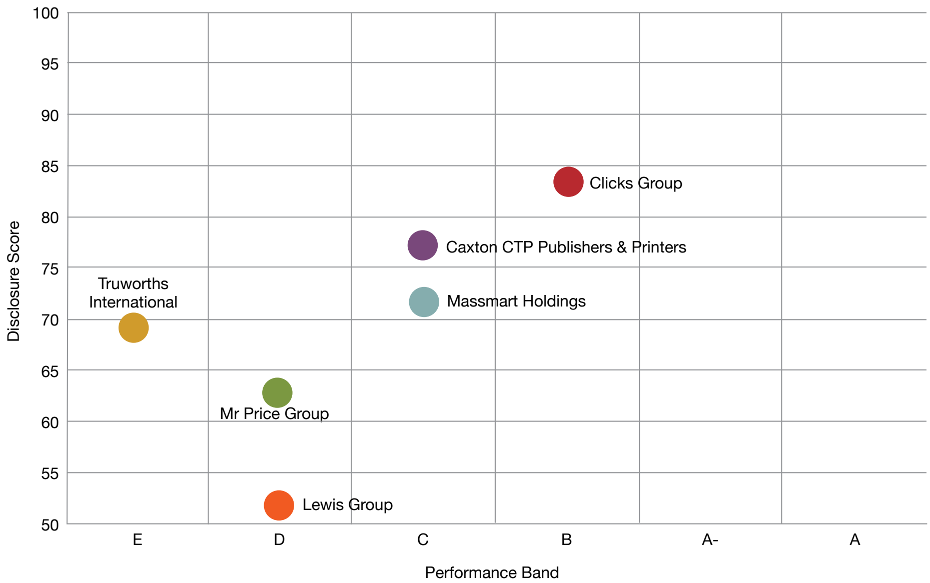
Opportunities: Several companies report significant energy and cost savings associated with optimisation in stores, offices and distribution networks. Some companies are looking into sustainable sourcing such as Forest Stewardship Council (FSC) certified wood products and paper from sustainable plantations. Some are looking into development of some green products or ranges, but these are largely limited and target niche markets.

29 The Living Standards Measure (LSM) is the most widely used marketing research tool in Southern Africa. It divides the population into 10 LSM groups – from 10 (highest) to 1 (lowest) – using criteria such as degree of urbanisation and ownership of cars and major appliances

Fig. 17: Carbon disclosure score breakdown for Consumer Discretionary sector vs. JSE 100 and JSE 100 CDLI



Top disclosure scores and top performance bands



Consumer Discretionary companies that are not represented in the above table for the following reasons:		
Not rated for performance (scored less than 50 on Carbon Disclosure)	Not eligible (response not public)	Did not participate in CDP 2011
None	Compagnie Financière Richemont SA Naspers The Foschini Group	JD Group Sun International

Consumer Discretionary sector summary

Sub-sector	Company	CDP 2011	Scope 1 (tCO_2e)	Scope 2 (tCO_2e)	Scope 3	Emissions intensity ($t\ CO_2e$ / FTE)	Emissions intensity ($t\ CO_2e$ / m^2 floor space)
Apparel & Luxury Goods	Compagnie Financière Richemont SA	AQ np					
Apparel Retail	Mr Price Group	AQ	3,038	144,554	No	8.52	
Apparel, Accessories & Luxury Goods	The Foschini Group	AQ np					
	Truworths International	AQ	462	75,022	Yes	11.43	
Department Stores	Clicks Group	AQ	3,226*	91,098*	Yes	6.07	0.31
	Massmart Holdings	AQ	12,164	297,134	Yes	11.93	0.22
Homefurnishing Retail	JD Group	DP					
	Lewis Group	AQ	23,800	26,500	No	7.56	0.22
Hotels, Resorts & Cruise Lines	Sun International	NR					
Publishing	Caxton CTP Publishers & Printers	AQ	15,663	113,298	No	22.82	0.45
	Naspers	AQ np					
Sector Summary	Companies: 11	AQ: 6	89,911	1,090,247	Yes: 67%		
JSE Summary	Companies: 100	AQ: 70	137,242,088	98,408,917	Yes: 83%		

Note: The emissions data must be read with the explanatory information provided in Appendix II. Summary information includes data for all responding companies (i.e. data not publicly reported is included in the aggregate totals / averages).

Company data that is externally verified is denoted by * Data that is in the process of being externally verified is denoted by **

"Massmart Holdings has prioritized a number of potential climate change risks. Although these risks are not considered to be of significance in the short to medium term, Massmart Holdings is aware that they could have a significant effect on the group in the long term."

Massmart Holdings

"Instead of switching over from summer to winter merchandise mid-season, as was previously done, Mr Price Group now stocks a limited range of summer merchandise throughout the year. In this way sales have been optimised as customers can always find something suitable in an unpredictable climate."

Mr Price Group

Consumer Staples

Climate change and the Consumer Staples sector

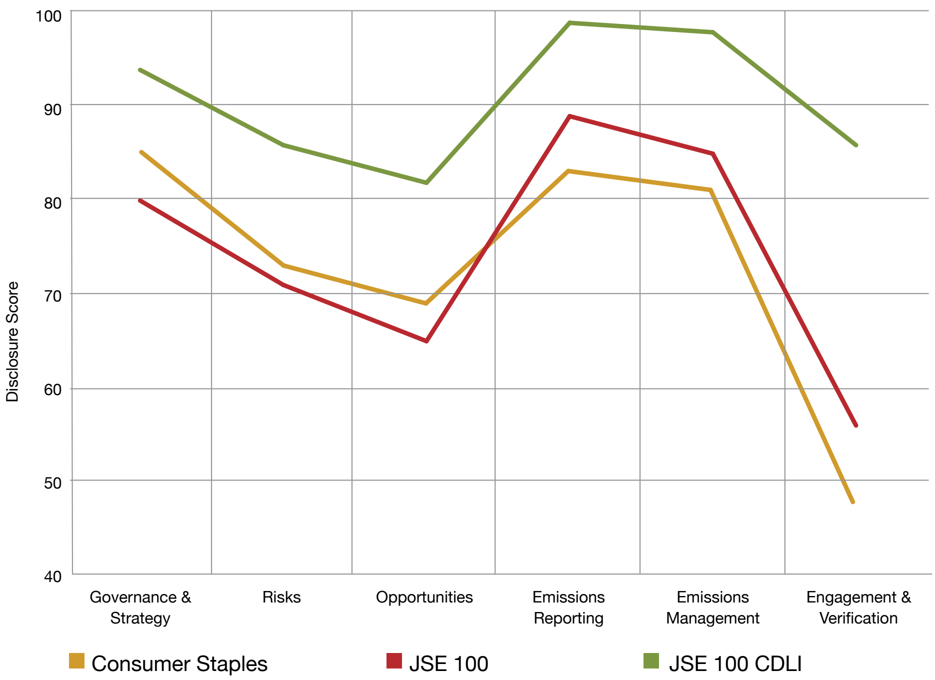
The principal areas for retailers to meaningfully address the climate change challenge is in their supply chain, distribution networks and stores. Primary producers, who have a greater direct impact than retailers in this sector, have scope to implement more extensive emissions and water management initiatives, and also to explore opportunities for onsite power generation, particularly from bio-fuels generated from waste. This sector is vulnerable to climate-driven price fluctuation of 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 their value chains. As with Consumer Discretionary, there are green product development opportunities, but consumers tend to associate these goods with high prices.

Reported risks and opportunities

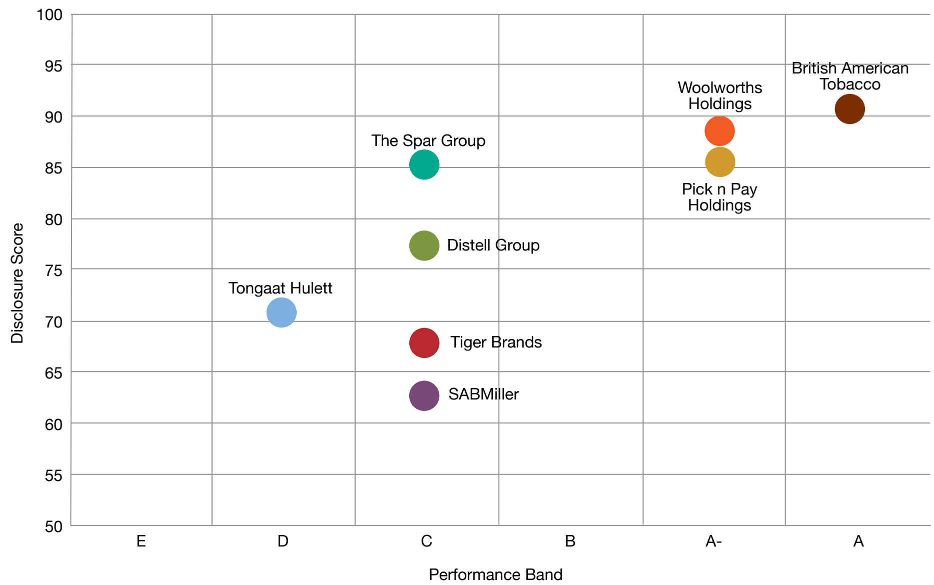
Risks: Energy security and increasing energy costs are reported as presenting a risk in terms of lighting, temperature control and refrigeration. Increasing fuel costs and unpredictable weather present risks for distribution networks. There are risks to agricultural supply chains for retailers and in agricultural production and supply for primary producers. The risks are associated with declining yield, changing geographical distribution of arable land suitable for specific crops and increasing pests. Water scarcity presents a risk in terms of growing and processing products. Some companies have begun to move production outside South Africa to less water-stressed regions.

Opportunities: Many companies are pursuing opportunities for supply chain engagement and sustainable sourcing. There is some industry cooperation to enable wide-scale research. For primary producers, onsite

Fig. 18: Carbon disclosure score breakdown for Consumer Staples sector vs. JSE 100 and JSE 100 CDLI



Top disclosure scores and top performance bands



Consumer Staples companies that are not represented in the above table for the following reasons:		
Not rated for performance (scored less than 50 on Carbon Disclosure)	Not eligible (response not public)	Did not participate in CDP 2011
None	Illovo Sugar Pioneer Food Group Shoprite Holdings Steinhoff International Holdings	Avi

electricity generation from biomass presents opportunities for cost-saving and new revenue streams. There are opportunities for cost savings in production and logistics optimisation to decrease energy intensity per unit of production. Opportunities for green product ranges are being explored.

"Spar acknowledges that the efficiencies gained through areas such as energy and waste management are unlikely to yield a significant competitive advantage, as most of the other industry players are driving out similar efficiencies. However, these efficiencies are critical to ensuring that Spar is able to remain competitive and to operate within acceptable margin boundaries for its shareholders."

The Spar Group

"Being ahead of the game in terms of emissions reductions and reputation will give us strategic advantage over our competitors. Emissions reductions will lower our cost base and reduce any future costs that may be incurred due to regulation."

Pick n Pay Holdings

Consumer Staples sector summary

Sub-sector	Company	CDP 2011	Scope 1 (tCO_2e)	Scope 2 (tCO_2e)	Scope 3	Emissions intensity (CO_2e per FTE)	Emissions intensity (other)
Beverages	Distell Group	AQ	25,854	32,112	No	13.39	
Brewers	SABMiller	AQ	1,144,901*	1,208,967*	Yes	31.9	0.01375 t CO_2e per hectolitre (production volume)
Food Distributors	Tiger Brands	AQ	302,072	296,114	Yes	66.6	0.23 t CO_2e per metric ton of product
Food Products	Illovo Sugar	AQ np					
	Pioneer Food Group	AQ np					
	Tongaat Hulett	AQ	710,379	409,447	Yes	28.5	0.62 t CO_2e per metric ton of product
Food Retail	Pick n Pay Holdings	AQ	70,092	545,860	Yes	16.26	0.34 t CO_2e per m^2 of floor space
	Shoprite holdings	AQ np					
	The Spar Group	AQ	30,729	41,449	Yes	26.75	0.574 t CO_2e per m^2 of floor space
	Woolworths Holdings	AQ	29,266*	338,240*	Yes	19.4	0.62 t CO_2e per metric ton of product
Packaged Foods & Meats	Avi	DP					
Personal Products	Steinhoff International Holdings	AQ np					
Tobacco	British American Tobacco	AQ	371,610*	371,989*	Yes	12.3	0.69 t CO_2e per million cigarettes equivalent
Sector Summary	Companies: 13	AQ: 8	3,319,448	4,991,853	Yes: 58%		
JSE Summary	Companies: 100	AQ: 70	137,242,088	98,408,917	Yes: 83%		

Note: The emissions data must be read with the explanatory information provided in Appendix II. Summary information includes data for all responding companies (i.e. data not publicly reported is included in the aggregate totals / averages).

Company data that is externally verified is denoted by * Data that is in the process of being externally verified is denoted by **

Energy & Materials

Climate change and the Energy & Materials sector

The sector has a significant climate change impact, as well as high levels of vulnerability to the physical and policy effects of climate change. As potential energy producers, companies in this sector are key role players in ensuring national energy security. This has to be achieved while transitioning to renewable energy and low-carbon energy alternatives. 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 on companies to invest significantly in energy and water efficiency initiatives, and to explore appropriate technologies, including around issues such as carbon capture and storage. There are opportunities and business benefits associated with helping neighbouring vulnerable communities with adaptation.

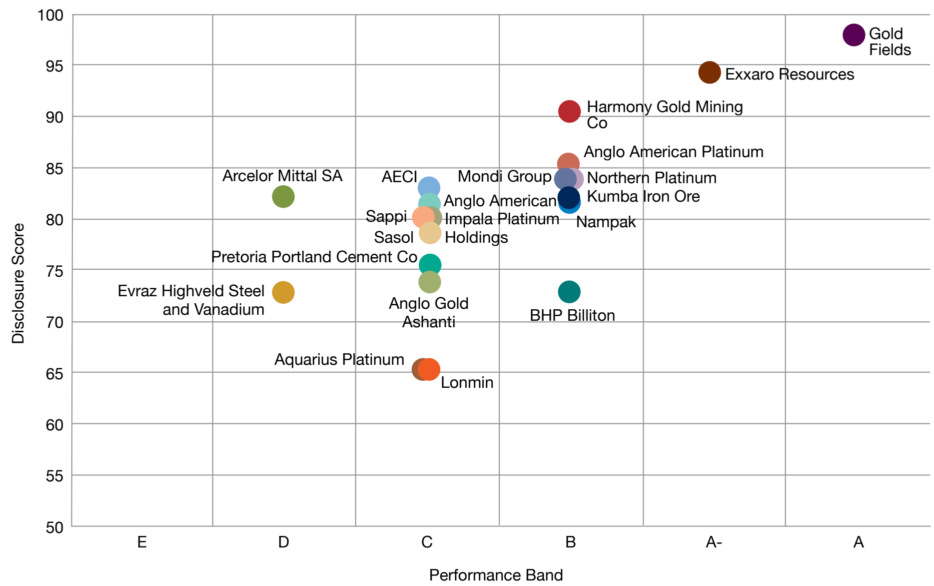
Reported risks and opportunities

Risks: Carbon taxes and international agreements present significant risks to companies' ability to operate, with potentially significant economic impacts including on job creation. Increasing energy and compliance costs are driving operational costs up, and significant risks are reported relating to water scarcity. Reputational risks are increasingly perceived as impacting project financing, possibly leading to disinvestment in the future. Significant resources are directed at accurately assessing, quantifying and reporting on risks.

Opportunities: Energy efficiency and water management initiatives reportedly present the primary opportunities for cost saving and securing continuity of operations. Onsite power generation (including through renewables) provides energy security, possible savings by avoiding increasing electricity costs, as well as revenue opportunities associated with selling to the national grid.

Fig. 19: Carbon disclosure score breakdown for Energy & Materials sector vs. JSE 100 and JSE 100 CDLI

Top disclosure scores and top performance bands



Energy & Minerals companies that are not represented in the above table for the following reasons:		
Not rated for performance (scored less than 50 on Carbon Disclosure)	Not eligible (response not public)	Did not participate in CDP 2011
African Rainbow Minerals	Royal Bafokeng Platinum	Assore Mvelaphanda Resources Great Basin Gold Eastern Platinum

CDM projects present opportunities for revenue generation. There is an anticipated increase in demand for certain metals (such as Platinum Group Metals and Uranium) as part of the move to a low-carbon economy.

"A Zimele Green Fund is being proposed and Amplats is considering whether this could be used to fund adaptation related businesses such as rainwater harvesting."
Anglo American Platinum

"Our longer term strategy is to spend US$300 million over the period 2008 to 2012 to support industry research, development and demonstration of low emissions technologies including collaborative research dedicated to accelerating the commercial uptake of promising technologies; and provide capital funding for internal energy projects with a greenhouse gas emissions reduction component that might not otherwise be competitive within our normal capital allocation processes."
BHP Billiton

"We will be looking to upscale and improve existing renewable energy technologies that could become viable businesses in their own right. These actions are in direct response to the potential opportunity that climate change presents."
Sasol

"Exxaro Resources will position itself as the leader in Renewable Energy generation field. The expected benefits of this decision is that we will be able to produce electricity with a low operational expense (OPEX) and maintenance costs, while the indication is that (through the IRP 2010) fossil fuel derived electricity will only be getting more expensive. The investment benefit is further improved due to forecasted decrease in the Capital Expense (CAPEX) costs of Renewable Energy."
Exxaro Resources

"Gold Fields is implementing a system whereby suppliers are requested as part of the standard conditions of contract to disclose the life cycle emissions of the products supplied."
Gold Fields

Energy & Materials sector summary

Sub-sector	Company	CDP 2011	Scope 1 (tCO_2e)	Scope 2 (tCO_2e)	Scope 3	Emissions intensity (CO_2e per FTE)	Emissions intensity (other)
Chemicals	AECI	AQ	310,892*	216,305*	Yes	78	
Construction Materials	Pretoria Portland Cement Co	AQ	4,765,280*	575,369*	Yes	1,705	0.96 t CO_2e per metric ton of product
Energy	Sasol	AQ	64,166,000*	10,815,000*	Yes	2,249	3.05 t CO_2e per metric ton of product
Gold	AngloGold Ashanti	AQ	1,215,000*	3,482,000*	No	76	0.97 t CO_2e per ounce of gold
	Gold Fields	AQ	1,377,194*	5,164,897*	Yes	119	1.3 t CO_2e per ounce of gold
	Great Basin Gold	DP					
	Harmony Gold Mining Co	AQ	2,103,211**	3,422,823**	Yes	156	0.269 t CO_2e per tonne of ore processed
Industrial Gases	African Oxygen - see Linde AG	AQ	583,000	9,520,000	Yes	326	
Metals & Mining	African Rainbow Minerals	AQ	896,529	1,979,020	Yes	221	
	Anglo American	AQ	9,809,076*	10,190,815*	Yes	221	0.05 t CO_2e per unit hour worked
	BHP Billiton	AQ	19,591,969*	26,139,168*	Yes	1,154	0.93 t CO_2e per unit of production
	Exxaro Resources	AQ	502,594*	2,107,933*	Yes	239	56 t CO_2e per kilo tons produced
	Kumba Iron Ore	AQ	329,906*	507,567*	Yes	131	0.02 t CO_2e per metric ton of product
	Lonmin	AQ	102,130*	1,428,156*	Yes	64	1.16 t CO_2e per ounce of PGM
	Mvelaphanda Resources	DP					
Paper Packaging	Mondi - See Mondi Group	AQ					
	Nampak	AQ	137,320	570,855	Yes	79	** t CO_2e per m^2
Paper Products	Mondi Group	AQ	4,450,294*	1,413,659*	Yes	204	0.899 t CO_2e per metric ton of product
	Sappi	AQ	4,648,669**	2,288,258**	Yes	440	0.998 t CO_2e per metric ton of product
Precious Metals & Minerals	Anglo American Platinum	AQ	457,336*	5,154,402*	Yes	104	1.14 t CO_2e per ounce of PGM
	Aquarius Platinum	AQ	56,720	519,367	Yes	41	1.36 t CO_2e per ounce of PGM
	Eastern Platinum	DP					
	Impala Platinum Holdings	AQ	584,504*	3,108,473*	Yes	68	2.14 t CO_2e per ounce of PGM
	Northam Platinum	AQ	14,258**	634,165**	Yes	73	
	Royal Bafokeng Platinum	AQ np					
Steel	Arcelor Mittal SA	AQ	11,938,852	4,443,096	Yes	1,561	2.89 t CO_2e tonne of steel
	Assore	NR					
	Evraz Highveld Steel and Vanadium	AQ	2,799,579	1,811,503	No	1,840	8.32 t CO_2e tonne of steel
Sector Summary	Companies: 28	AQ: 21	130,259,103	86,275,544	Yes: 86%		
JSE Summary	Companies: 100	AQ: 70	137,242,088	98,408,917	Yes: 83%		

Note: The emissions data must be read with the explanatory information provided in Appendix II. Summary information includes data for all responding companies (i.e. data not publicly reported is included in the aggregate totals / averages).

Company data that is externally verified is denoted by * Data that is in the process of being externally verified is denoted by **

Financials

Climate change and the Financials sector

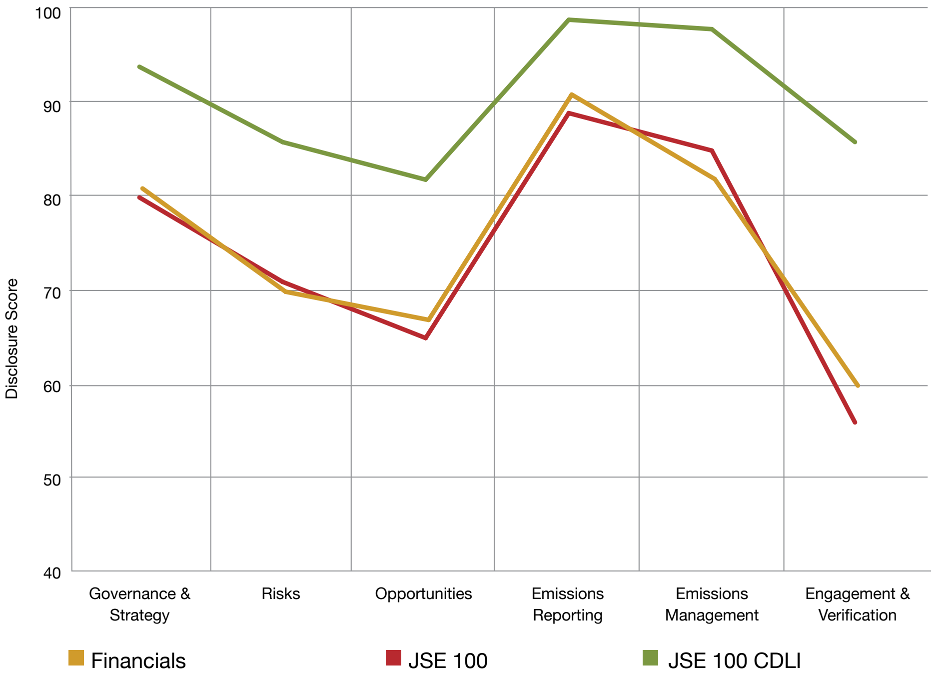
The financial sector is recognised as a key enabler of a low-carbon economy through its capacity to fund new technologies, solutions and infrastructure that can reduce emissions and promote adaptation. Increasing opportunities for new products will emerge in areas such as carbon trading, mobile banking, environmental liability insurance products and 'green' property developments. However, the development of accurate risk pricing models in the face of increasing complexity (and higher scope for mispricing) is a significant challenge. The sector is affected by the overall economy and the financial wellbeing of its clients; this may be adversely affected by tightening regulations and mitigation policies, and by increasing energy and materials costs. Although current regulatory uncertainty has kept the sector cautious in its investment support, a major expectation will be that it takes up this critical role as regulatory frameworks are established.

Reported risks and opportunities

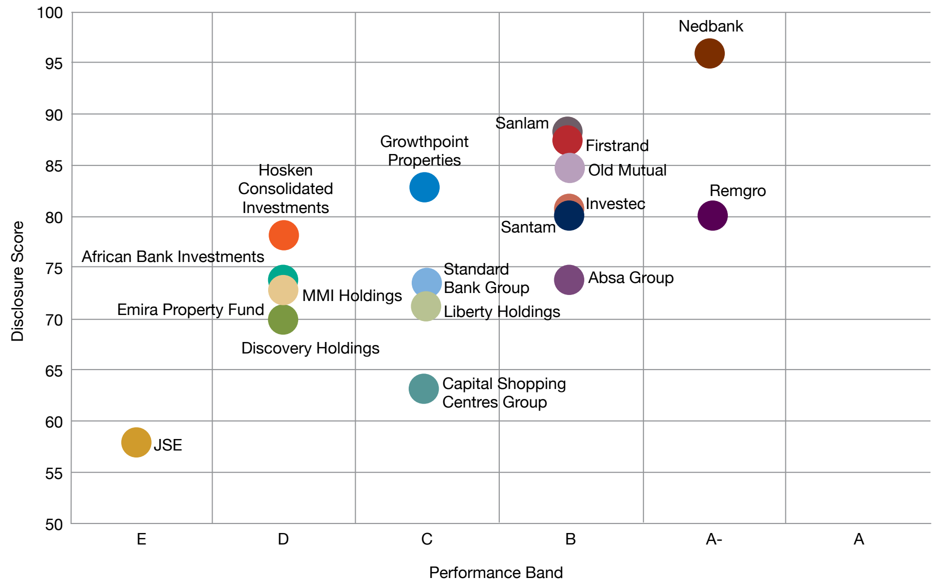
Risks: Banks and other investment companies face risks associated with security or exposure of investments. Investments in agricultural business are identified as being particularly vulnerable. Insurance companies face increasing risks associated with their products. Companies serving lower LSM[30] markets identified decreasing demand for products as increasing energy and food prices reduce disposable income. Several companies identified urban migration as a risk to certain operations in the future. While most companies in the sector take a proactive approach to managing risks, there are some that minimise risk only by diversifying investments.

30 The Living Standards Measure (LSM) is the most widely used marketing research tool in Southern Africa. It divides the population into 10 LSM groups – from 10 (highest) to 1 (lowest) – using criteria such as degree of urbanisation and ownership of cars and major appliances

Fig. 20: Carbon disclosure score breakdown for Financials sector vs. JSE 100 and JSE 100 CDLI



Top disclosure scores and top performance bands



Financials companies that are not represented in the above table for the following reasons:		
Not rated for performance (scored less than 50 on Carbon Disclosure)	Not eligible (response not public)	Did not participate in CDP 2011
None	None	Capitec Bank Holdings Capital Property Fund Fountainhead Property Trust Hyprop Investments Pangbourne Properties PSG Group Redefine Properties Reinet Investments Resilient Property Income Fund

Opportunities: Most highlight cost savings from energy efficiency. Some identify the more significant opportunities in developing the carbon market, financing green projects, and managing socially responsible funds and green product innovation and rollout. Examples include solar heating finance, CDM, REFIT projects. These opportunities were stated to have substantial potential financial gains. Opportunities exist for new insurance product development, but these still require rigorous risk analysis and quantification.

"Growthpoint Properties Management Services seek to provide leading property management services to its clients, the tenants. Energy management, in which we provide consultancy and management services with regard to our tenants energy consumption within the building forms an integral part of this management function."
Growthpoint Properties

"An extensive stakeholder engagement exercise was carried out involving a number of stakeholders in the UK, South Africa and Australia. The aim was to collect the views regarding the business implications of environmental (including climate change), social and governance issues, and to assess perceptions regarding Investec's performance and communication on these issues. While there has been recognition for efforts made in many of these areas, Investec acknowledges that there is vast room for improvement and is reassessing its strategy approach going forward."
Investec

"As a commercial property developer, Liberty Holdings is faced with sometimes contradictory regulation e.g. the requirement to protect ecologically sensitive areas vs. the promotion of development in economically deprived areas."
Liberty Holdings

"Firstrand combines practical considerations of managing our own GHG emissions with broader implications of how climate change affects the competitive marketplace, lending and investment strategies and ultimately our financial bottom line."
Firstrand

"Standard Bank Group as an emerging markets bank is able to respond to the EU cap and trade scheme in terms of opportunity and is ideally placed to assist EU based companies in identifying emerging markets projects and CDM opportunities. Standard Bank participates regularly in policy debates and other initiatives to stay informed and provide expertise into the debate."
Standard Bank Group

"Discovery Holdings hosted an Environmental Day at its Sandton office which was designed to publicise its carbon footprint to employees as well as greater environmental issues by inviting various green companies to showcase their products and services. Employees sent feedback around various ideas and initiatives that Discovery Holdings could get involved in e.g: providing staff with iPads for paper free environment, carbon footprint improvement being linked to Vitality points etc."
Discovery Holdings

Financials sector summary

Sub-sector	Company	CDP 2011	Scope 1 (tCO_2e)	Scope 2 (tCO_2e)	Scope 3	Emissions intensity (CO_2e per FTE)	Emissions intensity (other)
Asset Management & Custody Banks	Reinet Investments	DP					
Diversified Banks	Absa Group	AQ	15,242**	390,635**	Yes	12.07	
	African Bank Investments	AQ	24,328	61,303	Yes	5.66	37.6 t CO_2e per branch
	Capitec Bank Holdings	NR					
	Investec	AQ	1,306*	34,305*	Yes	6.95	0.32 t CO_2e per m^2 of floor space
	Investec plc - see Investec	AQ					
	Nedbank	AQ	1,668*	165,313*	Yes	8.25	0.39 t CO_2e per m^2 of floor space
	RMB Holdings - see Firstrand	AQ					
	Standard Bank Group	AQ	11,195*	149,366*	Yes	5.28	
Diversified Financial Services	Discovery Holdings	AQ	4,172	30,295	Yes	5.88	0.42 t CO_2e per m^2 of floor space
	Firstrand	AQ	12,220*	309,008*	Yes	8.31	0.30 t CO_2e per m^2 of floor space
	Hosken Consolidated Investments	AQ	107,978	251,740	Yes	21.40	
	JSE	AQ	0	12,535	No	27.86	0.75 t CO_2e per m^2 of floor space
	PSG Group	DP					
	Remgro	AQ	324,241	300,613	Yes	65.30	0.40 t CO_2e per m^2 of floor space
Insurance Brokers	Liberty Holdings	AQ	2,218	41,150*	Yes	8.86	0.21 t CO_2e per m^2 of floor space
	MMI Holdings	AQ	1,700*	34,595*	Yes	3.00	0.30 t CO_2e per m^2 of floor space
	Old Mutual	AQ	10,364*	672,612*	Yes	11.57	0.22 t CO_2e per m^2 of floor space
	Sanlam	AQ	41*	44,535*	Yes	9.02	0.37 t CO_2e per m^2 of floor space
	Santam	AQ	28*	6,999*	Yes	2.94	0.18 t CO_2e per m^2 of floor space
Real Estate	Capital Property Fund	NR					
	Capital Shopping Centres Group	AQ	6,047*	38,504*	No	222.00	0.06 t CO_2e per m^2 of floor space
	Emira Property Fund	AQ	9	300,478	Yes		0.22 t CO_2e per m^2 all properties in portfolio
	Fountainhead Property Trust	NR					
	Growthpoint Properties	AQ	26	856	Yes	1.95	0.13 m^2 of occupied property
	Hyprop Investments	NR					
	Pangbourne Properties	NR					
	Redefine Properties	NR					
	Resilient Property Income Fund	NR					
Sector Summary	Companies: 29	AQ: 18	522,782	2,844,842	Yes: 89%		
JSE Summary	Companies: 100	AQ: 70	137,242,088	98,408,917	Yes: 83%		

Note: The emissions data must be read with the explanatory information provided in Appendix II. Summary information includes data for all responding companies (i.e. data not publicly reported is included in the aggregate totals / averages).
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Health Care

Climate change and the Health Care sector

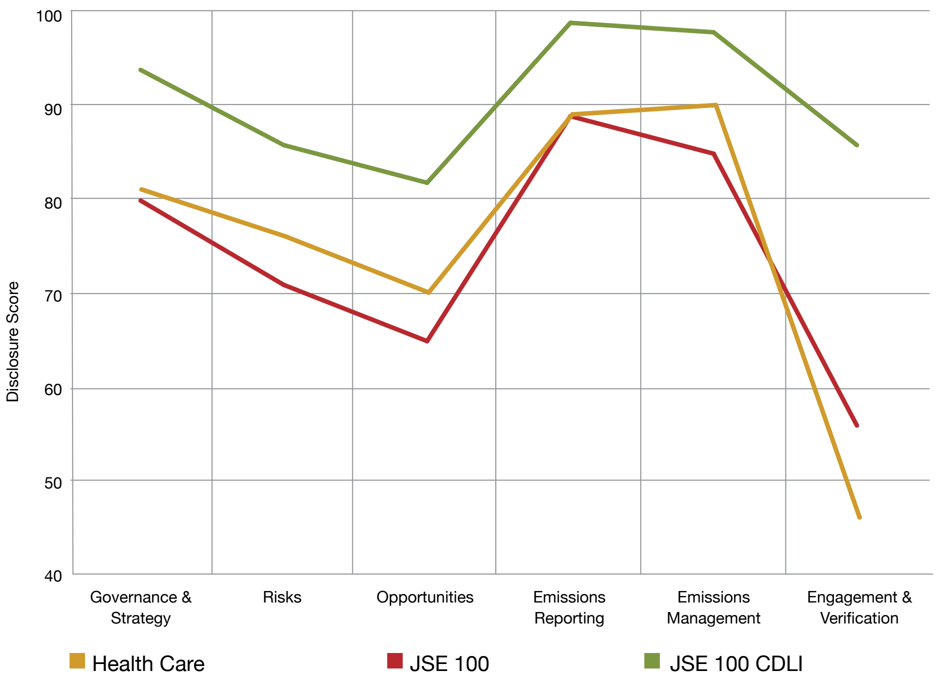
The sector does not produce extensive direct emissions, and has comparatively limited exposure to increasing operating and energy costs. Reduced access to raw materials due to climate impacts on agriculture pose a potential risk to pharmaceutical drug production, potentially leading to increased costs 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 rates and the resultant demand for medical care and treatment drugs. As suppliers of generic drugs, ensuring continued access and affordability to the more vulnerable population groups is a key expectation for this sector.

Reported risks and opportunities

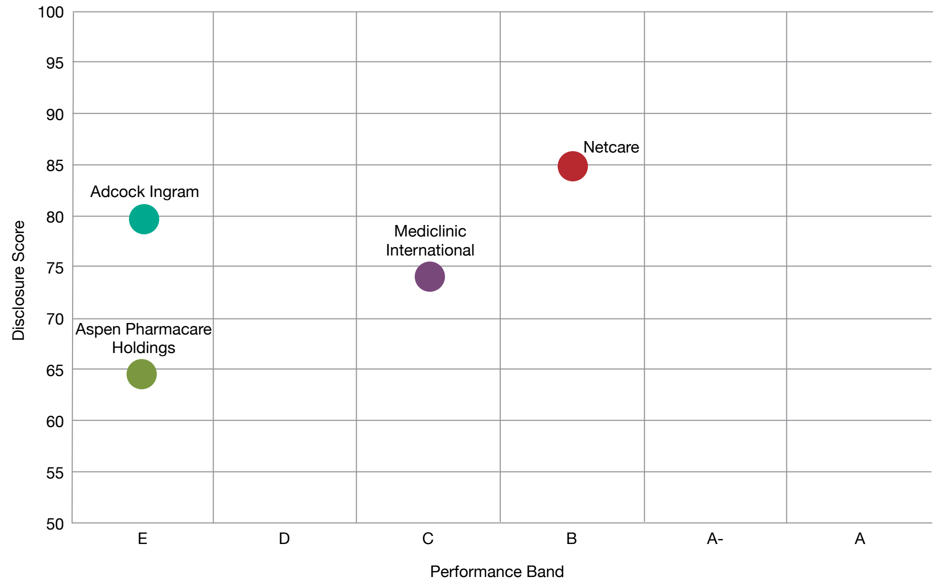
Risks: Some cite concerns with increased operational costs associated with rising energy and compliance costs. Energy security presents risks for health care providers, requiring investment in back-up generators. Hospitals and particularly pharmaceutical companies have strict regulated temperature requirements that may require increased energy consumption. Pharmaceutical companies face risks associated with access to and increasing costs of raw materials in the supply chain over the longer term.

Opportunities: Principal opportunities relate to cost savings from efficiency initiatives, and product efficiency for pharmaceutical companies. Increasing demand for health care services associated with changing disease vectors and increased extreme weather events has been identified.

Fig. 21: Carbon disclosure score breakdown for Health Care sector vs. JSE 100 and JSE 100 CDLI



Top disclosure scores and top performance bands



Health Care companies that are not represented in the above table for the following reasons:		
Not rated for performance (scored less than 50 on Carbon Disclosure)	Not eligible (response not public)	Did not participate in CDP 2011
None	None	Life Healthcare Group Holdings

"A further reduction target of 3.09% was set for the electricity consumption of only the 52 hospitals in Southern Africa for the financial year 2011/2012. This reduction target is in line with the carbon emission reduction target agreed on by South African Government after COP15 at Copenhagen of 34% by 2020."

Mediclinic International

"It is envisaged that the effect of climate change on viral and bacterial distribution will impact on population health. This could result in increased need for treatment for diseases and ailments caused by these distribution shifts."

Netcare

Health Care sector summary

Sub-sector	Company	CDP 2011	Scope 1 (tCO_2e)	Scope 2 (tCO_2e)	Scope 3	Emissions intensity (CO_2e per FTE)	Emissions intensity (other)
Health Care	Life Healthcare Group Holdings	NR					
	Mediclinic International	AQ	15,652*	154,298*	Yes	13.891	0.113 t CO_2e per bed days sold
	Netcare	AQ	29,436*	242,089*	Yes	13.205	0.136 t CO_2e per patient days
Pharmaceuticals	Adcock Ingram	AQ	29,931	27,744	Yes	28.37	0.62 per m^2
	Aspen Pharmacare Holdings	AQ	13,110	34,934	No	23	
Sector Summary	Companies: 5	AQ: 4	88,130	459,065	Yes: 75%		
JSE Summary	Companies: 100	AQ: 70	137,242,088	98,408,917	Yes: 83%		

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Industrials

Climate change and the Industrials sector

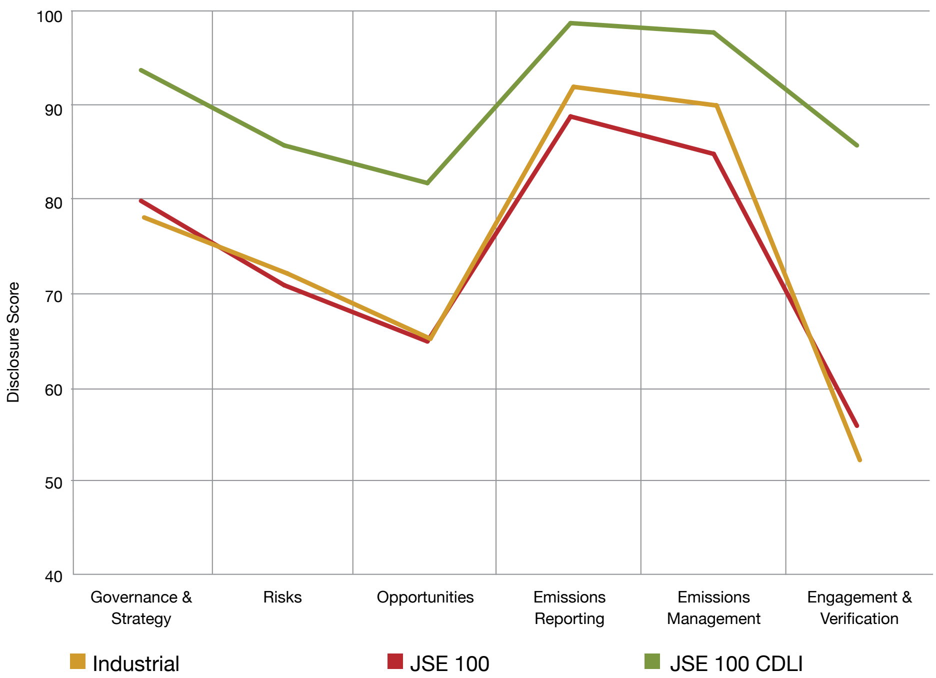
The Industrials sector – comprising construction, engineering, manufacturing and logistics service providers – will be exposed to significant new costs in its value chain. These include: increased input costs particularly for carbon intensive materials (e.g. cement and steel), water, fuels and electricity; increased taxes on direct emissions from its manufacturing processes; and increased transport and logistics costs due to climate-related policy measures. The sector is also vulnerable to extreme weather events leading to business disruptions and damage to infrastructure and assets. The major expectation for this sector is to see investments in new technologies, skills development and product diversification in order to meet the growing customer demand for low-carbon and climate change mitigation/adaptation products and infrastructure.

Reported risks and opportunities

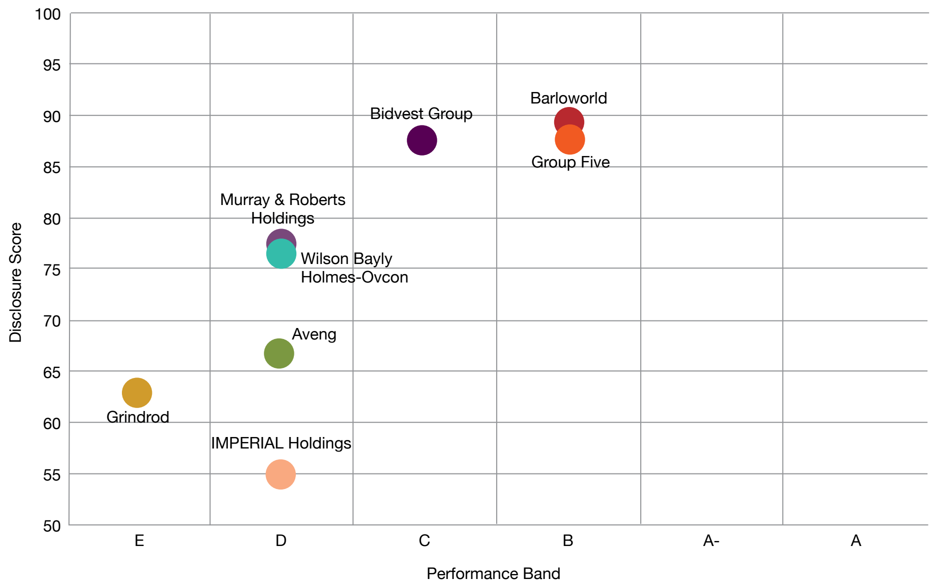
Risks: This sector faces high direct impacts associated with its energy and resource consumption, and its greater exposure to carbon taxes. Increasing energy costs, energy security and the physical impacts of climate change (such as increased extreme weather events and changing precipitation patterns) are reported as contributing to unavoidable project delays, particularly for construction companies.

Opportunities: There are significant opportunities for gains from energy efficiency. Companies are exploring opportunities for developing CDM projects, investing in renewables, and developing 'carbon-neutral' products and services. Several companies report having significant research and development (R&D) budgets, some of which are now including a focus on exploring 'green business' opportunities. Companies see opportunities to contribute to 'green economy' infrastructure in the future.

Fig. 22: Carbon disclosure score breakdown for Industrial Sector vs. JSE 100 and JSE 100 CDLI



Top disclosure scores and top performance bands



Industrials companies that are not represented in the above table for the following reasons:		
Not rated for performance (scored less than 50 on Carbon Disclosure)	Not eligible (response not public)	Did not participate in CDP 2011
Reunert	None	None

"Shipping is the most GHG-efficient mode of transporting goods on the planet – Grindrod's shipping division offers third party customers the opportunity to reduce (avoid a portion of) their transport emissions by choosing maritime freight over land freight (coastal sea freight compared to road freight over the same distance) and/or air freight (for inter-continental freight) where they have the choice."
Grindrod

"Damage of infrastructure through catastrophic/ extreme events can present opportunities to Clough, the Group's oil & gas engineering & construction company in the future. This opportunity holds true for other Murray & Roberts Holdings companies involved in the construction sector, for refurbishment and new developments of damaged and destroyed infrastructure."
Murray & Roberts Holdings

"Bidvest Group divisions are aware that carbon-intensive operations are a growing business liability and, conversely, that carbon and energy-efficient operations are becoming a value-driver providing competitive advantage."
Bidvest Group

Industrials sector summary

Sub-sector	Company	CDP 2011	Scope 1 (tCO_2e)	Scope 2 (tCO_2e)	Scope 3	Emissions intensity (CO_2e per FTE)	Emissions intensity (other)
Construction & Engineering	Aveng	AQ	146,412	49,306	No	5.67	
	Group Five	AQ	69,464	84,484	Yes	21.21	
	Murray & Roberts Holdings	AQ	301,839**	325,114**	Yes	17.4	54.4 t CO_2e per Rand of value created
	Wilson Bayly Holmes-Ovcon	AQ	43,275	7,843	Yes	7.66	
Electrical Components & Equipment	Reunert	AQ	9,772	63,700	No	12.51	
Industrial Conglomerates	Bidvest Group	AQ	367,092*	316,079*	Yes	6.46	
Industrial Machinery	Barloworld	AQ	108,864*	92,869*	Yes	11.1	
Trading Companies & Distributors	Grindrod	AQ	261,561*	19,170*	Yes	44.66	10.44 g CO_2e average per ship per tonne.NM (transport work per ship)
	IMPERIAL Holdings	AQ	811,934	158,626	No	28.79	
Sector Summary	Companies: 9	AQ: 9	2,120,213	1,554,237	Yes: 67%		
JSE Summary	Companies: 100	AQ: 70	137,242,088	98,408,917	Yes: 83%		

Note: The emissions data must be read with the explanatory information provided in Appendix II. Summary information includes data for all responding companies (i.e. data not publicly reported is included in the aggregate totals / averages).

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IT & Telecoms

Climate change and the IT & Telecoms sector

This sector is widely acknowledged as potentially enabling significant carbon savings across many sectors. It has been estimated, for example, that in Europe the sector could contribute to a 15% reduction in GHG emissions against business-as-usual by 2020.[31] 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 security. A significant challenge is the required change in consumer behaviour. There are opportunities for partnership with government and for leadership in terms of climate change response.

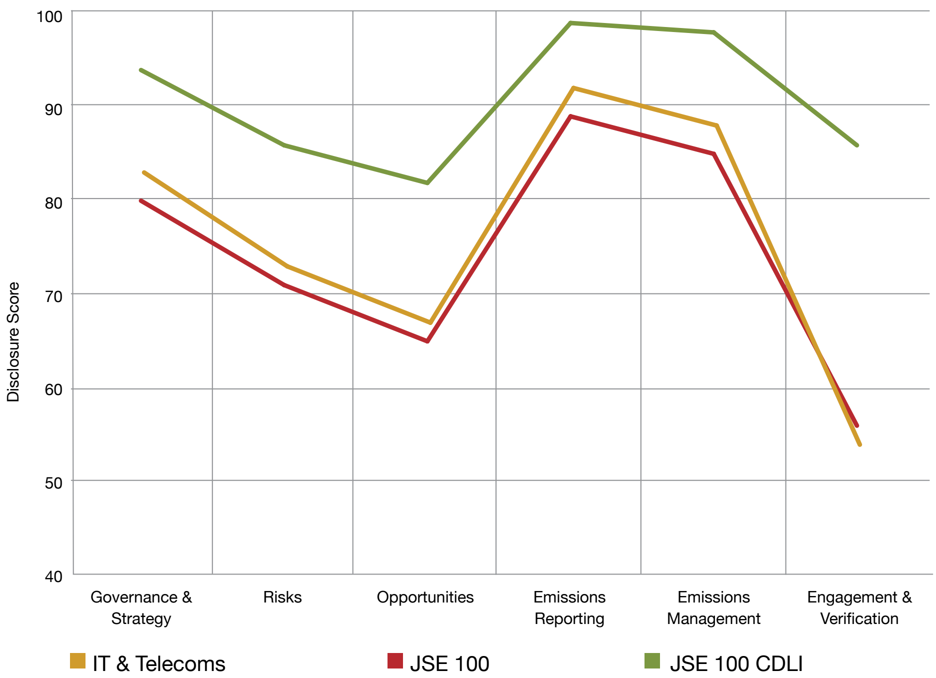
Reported risks and opportunities

Risks: Principal reported risks include increasing compliance and reporting costs, and greater energy costs, particularly in terms of network infrastructure. Physical climate change impacts can damage infrastructure and increase demand for cooling at base station sites and data centres.

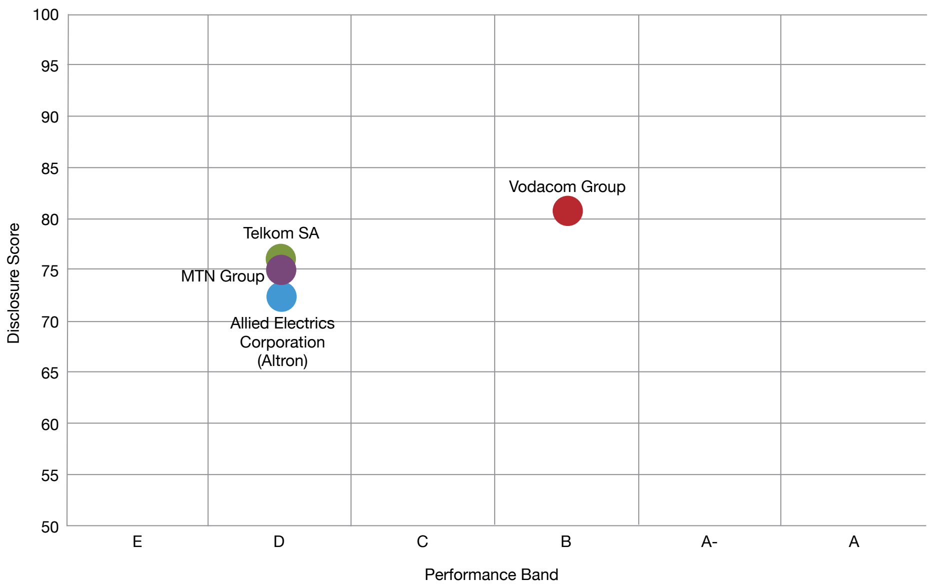
Opportunities: Companies in this sector identify significant opportunities for existing and new products, including logistics, communications, machine-to-machine products and smart grid management. There are also opportunities for costs savings from conventional energy efficiency as well as for alternative and renewable energy generation, with surplus power to be sold on to communities.

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

Fig. 23: Carbon disclosure score breakdown for IT & Telecoms Sector vs. JSE 100 and JSE 100 CDLI



Top disclosure scores and top performance bands



Information Technology and Communications companies that are not represented in the above table for the following reasons:		
Not rated for performance (scored less than 50 on Carbon Disclosure)	Not eligible (response not public)	Did not participate in CDP 2011
None	None	None

"As an ICT-sector company, Altron is assisting in reducing the impact of other sectors through de-materialisation, where high carbon or physical products are replaced with electronic solutions (for example, teleconferencing and cellular technology)."

Altron

"While mobile communications clearly improves the energy efficiency of the economy (e.g. mobile communications facilitates quick and easy access to information, improving planning and saving on logistics costs), Vodacom Group is nevertheless mindful of its direct environmental impact through energy and materials usage, e-waste and the placement of base stations."

Vodacom Group

IT & Telecoms sector summary

Sub-sector	Company	CDP 2011	Scope 1 (tCO_2e)	Scope 2 (tCO_2e)	Scope 3	Emissions intensity (CO_2e per FTE)	Emissions intensity (other)
Electronic Equipment & Instruments	Allied Electronics Corporation (Altron)	AQ	8,400	222,917	Yes	18.05	
Integrated Telecommunication Services	Telkom SA	AQ	50,517*	721,969*	Yes	37.2	
Telecommunication Services	Allied Technologies - see Allied Electronics Corporation (Altron)	AQ					
Wireless Telecommunication Services	MTN Group	AQ	744,074	378,888	Yes	32	0.008 t CO_2e per subscriber
	Vodacom Group	AQ	39,510	306,401	Yes	57.39	1.33 t CO_2e per m^2
Sector Summary	**Companies: 5**	**AQ: 4**	**1,630,175**	**73,959**	**Yes: 100%**		
JSE Summary	**Companies: 100**	**AQ: 70**	**137,242,088**	**98,408,917**	**Yes: 83%**		

Note: The emissions data must be read with the explanatory information provided in Appendix II. Summary information includes data for all responding companies (i.e. data not publicly reported is included in the aggregate totals / averages).

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5 Conclusion: partnering for a low carbon future

Conclusion: partnering for a low carbon future[32]

In analysing the South African CDP responses since 2007, we have found ourselves facing two potentially competing objectives: on the one hand, seeking to encourage further corporate participation in the CDP process, while on the other, striving to raise the bar in terms of our expectations for improved corporate accountability and more ambitious climate change performance. Our approach to dealing with this dilemma has been to focus primarily on presenting an objective and largely quantitative account of the corporate responses in a manner that will assist investors, policy-makers, climate change practitioners and other interested parties to undertake their own analysis, draw their own conclusions and adopt their own approach in seeking to foster further corporate leadership on climate change. To support the raising of the bar – and taking the lead from the Global CDP teams – we have increased the demands and assessment rigour of the Carbon Disclosure and Performance Leadership Indices, which is reflected in this year's results.

In this closing commentary, we provide some high-level reflections and observations on the CDP 2011 responses, and some opinion on where further improvement is needed. We hope these observations will assist others in their analysis of the information submitted as part of this year's CDP process.

Increasing evidence of positive corporate engagement on climate change

The responses to *CDP South Africa 2011* demonstrate a positive and continuing improvement on the previous years' submissions, both in terms of the disclosure and the performance of the country's top 100 listed companies.

On disclosure, not only is the response rate particularly commendable – at 83% it places the JSE100 as the second highest internationally – but there has also been an evident improvement in the quality of the responses across all reported issues and business sectors. The nature and level of the voluntary disclosure on greenhouse gas emissions is particularly noteworthy, and represents a profound change since the introduction of the CDP in 2007. This year, 82 companies reported their emissions, as compared with 17 in 2007 (JSE 40), 45 in 2008 (JSE 100) and, more recently, 67 last year. There has similarly been an encouraging increase in the number of companies that have voluntarily committed to emissions reduction targets, with 40 companies now reporting targets, up from 31 companies last year and eight companies in 2007 (JSE 40).

Aligned with this increase in reported targets is the evidence across most sectors of the implementation of more ambitious mitigation initiatives, both in the reporting companies' direct operations as well as increasingly (albeit still limited) within their broader sphere of influence. Another encouraging development is the indication that climate change considerations are being integrated into internal governance systems. This year, 68 companies report having a board committee or executive body that has responsibility for climate change issues, while forty companies report having introduced monetary performance incentives relating to the achievement of climate change goals and objectives. Coupled with the significant improvement in the quality of the disclosure on climate change risks and opportunities, this seems to suggest an increasing appreciation by the South African corporate sector of the strategic importance of climate change.

Importantly, more and more companies appear to be recognising the value in adopting a collaborative approach to climate change. This is reflected by the increase in the number of reported partnerships and engagement activities with research bodies, NGOs, business peers and government agencies across most of the participating sectors. While there remains substantial additional opportunity for improved collaboration, it is encouraging to see the evidence of public and private sector bodies working together to address the economic, social, technological and environmental challenges that climate change presents.

For the strategic implications of climate change to be more broadly appreciated and acted upon by the business sector as a whole, we will arguably need to see a significant shift in the level of engagement and understanding of both the institutional investment community and the financial media, two important levers for change that have been a target of the CDP process.

32 This closing chapter represents the joint views of the National Business Initiative (the South African partner to the CDP) and Incite Sustainability (who have analysed the CDP South Africa responses for the past five years).

Given the current absence of any legislative requirement in South Africa to disclose or reduce greenhouse emissions, these continuing positive improvements in disclosure, target-setting, mitigation action and climate change governance practice, are indicative of an increasingly proactive engagement by the South African corporate sector on climate change issues.

This proactive response by the corporate sector has been acknowledged by the government in its recently released *National Climate Change Response Paper.* These various activities reflected in the CDP responses will provide a valuable basis for informing the government's proposed national GHG emissions trajectory, determining the sectoral emission reduction outcomes, clarifying the possible carbon budget allocations, and assisting in the establishment of sectoral and company mitigation plans.

Addressing continuing areas of concern

Notwithstanding these positive developments, there remains significant scope for further action if business is to play the leadership role that will be increasingly expected of it should governments fail to reach agreement in Durban (or beyond) on an international policy framework. The valuable improvements in disclosure and performance evidenced over the last few years through the CDP analysis process, are not sufficiently widespread within and between sectors, or appropriately ambitious, to constitute the level of leadership and action that many observers deem necessary to mitigate, and adapt to, climate change.

While this year's CDP process has shown improved performance and disclosure across all sectors, there are still certain high-profile companies and sectors (such as real estate) that do not appear to have sufficiently considered the potential risks and opportunities that climate change presents. The improvement across most sectors also masks the varying nature of the responses within sectors. This difference is characterised, for example, by the contrasting understanding between competitor companies in several sectors regarding the strategic significance of climate-related risks and opportunities, as well as by the occasionally very varying levels of investment in managing these risks and opportunities.

It is also disappointing that several key sectors and companies are failing to focus sufficiently on their capacity to exert leverage throughout their spheres of influence. Most of the reported mitigation initiatives are still largely being undertaken at the company level, despite the fact that in some sectors (such as finance and retail) there is far greater opportunity to effect change upstream or downstream in their value chains. Although there has been an encouraging increase in Scope 3 emission accounting, as well as some evidence of companies including adaptation aspects in their community engagement initiatives, there is substantial further potential for mitigation and adaptation activities throughout organisations' spheres of influence.

Similarly, while there has been a positive increase in the number of companies with publicly-stated emissions reduction targets, including almost all the largest emitters, some concerns remain regarding the scope of the coverage of the targets, the rate of progress against some of these commitments, the robustness of some of the baseline assessments, and the level of ambition of these targets. Taken collectively, the current commitments would fall short of what most scientists believe is required if we are to avoid a 2°C rise in temperature on pre-industrial levels (a goal that some informed observers increasingly suggest is no longer realistic).

Related to these concerns on targets is the low number of companies that are currently verifying their emissions data. This year, only 29 companies have verified or are in the process of verifying elements of their Scope 1 or 2 emissions. This is unchanged from last year, when fewer companies responded, and is low in comparison with international peers. In the context of the anticipated introduction of GHG emissions regulations, and the proposed focus on sector-based carbon budgets, the need for accurate measurement and verification of baselines and emissions reductions will become increasingly important.

Given the belief by several well-informed observers that the 2°C target will probably not be met, this further highlights the importance of implementing effective adaptation initiatives, particularly as Africa is seen to be one of the regions hardest hit by a changing climate. Although the CDP questionnaire does not include a specific question on adaptation, companies are asked to report on their policies and practices to manage risks driven by changes in physical climate parameters. While there is evidence of some exciting initiatives on adaptation – with some companies, for example, exploring opportunities to develop hardier drought-resistant crops, changing product ingredients or redesigning production processes – the current level of response on adaptation is not commensurate with the anticipated likely impacts that will need to be managed.

For business to play a meaningful role in climate change mitigation and adaptation, individual companies will need to fully internalise the scale of the challenge and ensure that any strategically significant climate change elements have been sufficiently integrated into their core business strategies. Unfortunately it is difficult to assess, from the CDP responses alone, the extent to which the many climate-related risks and opportunities that companies identify have in fact had a genuine impact on their business strategy. While many companies report that climate change is integrated into their risk management procedures, the specific detail on the assessment and management of climate change risks is often lacking. Interestingly, 77% of responding companies report that climate change risks and opportunities are integrated into their overall business strategy, yet only 14% clearly indicate that climate change has influenced their short-term and long-term strategy. In many instances the activities cited as being driven by climate change considerations appear to be normal business activities, relating for example to optimisation and cost reduction, that would have been taken irrespective of any desire to reduce carbon emissions.

Of further concern is that there is some uncertainty regarding the extent to which the CDP responses provide a sufficiently accurate portrayal of the level of understanding and commitment amongst the organisation's leadership, or whether they reflect the views of the corporate affairs department (or an external consultant), driven primarily by the desire to score well on the Carbon Disclosure Leadership Index. A well-answered CDP questionnaire is not of itself sufficient to provide an accurate indication of the extent the organisation's governing structure has integrated the concepts into its business.

Institutional investors and the media: engaging potential levers for change

For the strategic implications of climate change to be more broadly appreciated and acted upon by the business sector as a whole, we will arguably need to see a significant shift in the level of engagement and understanding of both the institutional investment community and the financial media, two important levers for change that have been a target of the CDP process.

While there are some encouraging signs that South African institutional investors are beginning to appreciate the significance of environmental, social and governance (ESG) issues – as demonstrated by the *Code for Responsible Investing by Institutional Investors in South Africa* and the increasing uptake locally of the *UN Principles for Responsible Investment* – many mainstream investors do not sufficiently acknowledge the potential impact of ESG issues on shareholder return. A global study undertaken by the World Economic Forum[33] suggests that this failure arises largely "because of today's blend of available information, participant competencies and, most of all, institutionalised incentives that drive behaviour" within the sector. The fact that investment analysts are often reluctant to move their research time horizon beyond the immediately foreseeable and quantifiable, and that many of them have limited training in the use of non-financial criteria in financial evaluation, understandably impedes the extent to which climate considerations are being sufficiently provided for in current investment decisions.

33 World Economic Forum Mainstreaming Responsible Investment https://members.weforum.org/pdf/mri.pdf

Unfortunately, this approach seems to be reflected by many in the business media. Several prominent business journalists in the country still appear to entertain the notion, for example, that climate change is driven primarily by a "gang of alarmist climate-change scientists". Dismissing the "hype" and "hysteria" of "this story about global warming", some have expressed concern that efforts to address climate change will undermine the more important and immediate goal of promoting economic growth. In failing to appreciate the strategic commercial significance of societal issues such as climate change, the investors and media arguably reflect what respected business strategy guru, Michael Porter, has called the "big problem" of many companies who "remain trapped in an out-dated approach to value creation that has emerged over the past few decades".[34] As Porter puts is, "they continue to view value creation narrowly, optimizing short-term financial performance in a bubble, while… ignoring the broader influences that determine their longer-term success."

As long as any such "out-dated approach to value creation" persists in informing investment decisions, it will be difficult to see the private sector responding with the scale and urgency that is required. But changing the current understanding and approach to value creation will not be easy: we have become accustomed to price signals that suggest abundant availability of resources, despite the fact that some of the most fundamental inputs to the economy may soon be facing significant supply constraints, particularly given the rapid increase in demand from the emerging economies of India and China. Addressing this flawed understanding of value, and facing up to the inconvenient truth of market failure, will prove to be a tough test requiring uncommonly bold and visionary business leadership.

Business leadership

Those companies that are more responsive to societal issues such as climate change, and that integrate these issues into their leadership philosophy and business strategies, tend to be more effectively managed and, ultimately, better competitors. This is supported by the CDP data, which shows that those companies that approach climate change issues as part of their core business are more rigorous in identifying opportunities and risks, implement more strenuous targets and show greater improvement in performance towards these targets. Even amongst these leading companies, however, there are some that are not fully considering the implications of climate change for their business – particularly in terms of adaptation – and who are not moving beyond identifying very generic risks.

For South African business to demonstrate the required leadership, all companies will need to consider how they more effectively execute strategy that provides appropriately for climate change issues. While there are some encouraging disclosure improvements in defining strategy and identifying risk, it is clear that most companies are only starting to grapple with implementation. This is most clearly in evidence when looking at how few companies who claim to have effective strategy also have ambitious targets in place.

South African business needs to work collaboratively and share their learning to drive more appropriate valuation models. Through a considered approach to understanding the long-term value of their businesses and by communicating these drivers more clearly to stakeholders – including in particular to investors and the media – we can drive the necessary societal shift to new valuation models. Those companies that act early will be more competitive, more resilient in times of volatility, and ultimately more sustainable.

34 Porter M and Kramer M "Creating Shared Value: How to reinvent capitalism and unleash a wave of innovation and growth" in *Harvard Business Review (Jan-Feb 2011)*

Appendix I: Global key trends summary[1]

This table outlines some of the key findings from CDP 2011 by geography or industry data-set.[2]

	Key Trends Indicators	Sample: geography/number of companies															
		Asia ex-JICK 170*[4]	Australia 200	Benelux 150**	Brazil 80	Canada 200	Central & Eastern Europe 100	China 100	Emerging Markets 800	Europe 300	FTSE All-World 800	France 250	Germany and Austria 250 *	Global 500	Global Electric Utilities 250	Global Transport 100	Iberia 125
	% of sample answering CDP 2011[3]	26	50	35	67	54	22	11	36	91	80	35	51	81	39	49	40
	Number of companies answering CDP 2011[3]	45	101	52	53	108	22	11	287	272	625	87	128	405	98	49	50
Governance	% of responders with **Board or other executive level** responsibility for climate change	65	76	79	78	57	33	64	71	85	72	77	63	73	78	69	79
Governance	% of responders with **incentives** for the management of climate change issues	49	53	60	46	44	25	82	55	70	71	63	38	72	62	69	56
Strategy	% of responders with climate change **integrated into their business strategy**	84	84	89	80	73	50	73	79	92	89	88	69	90	93	88	96
Strategy	% of responders **engaging policymakers** on climate issues to encourage mitigation or adaptation	67	75	79	70	63	17	36	67	84	81	76	54	84	91	84	71
Targets & Initiatives	% of responders with **emissions reduction targets**	67	46	68	30	34	50	27	55	81	77	69	48	76	62	73	65
Targets & Initiatives	% of responders with **absolute** emissions reduction targets	42	26	40	26	16	25	9	32	42	45	33	28	44	41	33	31
Targets & Initiatives	% of responders with **active emissions reduction initiatives** in the reporting year	91	89	91	83	88	50	82	83	97	95	95	73	97	87	94	94
Targets & Initiatives	% of responders indicating that their products and services directly **help third parties to avoid GHG emissions**	63	60	66	59	54	25	45	54	69	70	65	62	70	80	59	79
Risks & Opportunities	% of responders seeing **regulatory risks**	77	82	77	76	67	50	55	77	80	76	81	55	79	94	86	85
Risks & Opportunities	% of responders seeing **regulatory opportunities**	77	76	83	83	69	50	55	76	88	79	88	67	81	91	80	88
Emissions Data	% of responders whose absolute emissions (Scope 1 & 2) have **decreased** compared to last year due to emissions reduction activities	30	28	47	11	29	33	9	31	48	46	35	19	48	23	33	52
Emissions Data	% of responders **independently verifying** any portion of **Scope 1** emissions data[6]	47	45	70	43	34	33	9	48	74	62	64	40	67	68	61	77
Emissions Data	% of responders **independently verifying** any portion of **Scope 2** emissions data[6]	51	45	66	41	21	25	0	47	69	58	53	34	61	34	53	73

Sample: geography/number of companies

India 200	Ireland 40	Italy 100*	Japan 500	Korea 200	Latin America 50	New Zealand 50	Nordic 260*	Russia 50	South Africa 100	Switzerland 100	Turkey 100	UK FTSE 350	US S&P 500	Overall[5]	Key Trends Indicators	
28	49	34	41	47	58	42	55	8	83	59	17	69	68	N/A	**% of sample answering CDP 2011[3]**	
56	19	34	205	94	29	21	143	4	83	59	17	240	340	2057	Number of companies answering CDP 2011[3]	
78	68	59	91	62	73	60	65	67	90	69	60	93	49	68	% of responders with **Board or other executive level** responsibility for climate change	Governance
49	47	47	71	55	32	45	46	33	55	37	67	65	63	55	% of responders with **incentives** for the management of climate change issues	Governance
87	68	81	88	74	73	70	87	33	77	75	73	80	78	79	% of responders with climate change **integrated into their business strategy**	Strategy
73	53	66	77	65	68	45	73	33	77	61	47	73	70	68	% of responders **engaging policymakers** on climate issues to encourage mitigation or adaptation	Strategy
49	47	66	94	57	32	50	67	33	51	58	33	66	65	60	% of responders with **emissions reduction targets**	Targets & Initiatives
7	26	47	69	33	23	35	32	33	26	24	33	32	40	36	% of responders with **absolute** emissions reduction targets	Targets & Initiatives
91	89	91	94	59	86	70	89	67	94	88	73	93	90	87	% of responders with **active emissions reduction initiatives** in the reporting year	Targets & Initiatives
56	32	59	72	53	59	40	73	67	54	61	53	56	60	59	% of responders indicating that their products and services directly **help third parties to avoid GHG emissions**	Targets & Initiatives
76	68	75	90	70	73	70	77	33	96	58	73	80	63	73	% of responders seeing **regulatory risks**	Risks & Opportunities
87	58	78	82	63	73	50	80	67	91	68	80	77	63	73	% of responders seeing **regulatory opportunities**	Risks & Opportunities
18	32	41	40	40	9	25	39	33	40	31	33	40	38	33	% of responders whose absolute emissions (Scope 1 & 2) have **decreased** compared to last year due to emissions reduction activities	Emissions Data
40	63	72	35	53	59	40	51	33	49	39	33	49	42	45	% of responders **independently verifying** any portion of **Scope 1** emissions data[6]	Emissions Data
42	53	59	37	54	50	40	43	0	50	37	27	46	37	40	% of responders **independently verifying** any portion of **Scope 2** emissions data[6]	Emissions Data

1. The key trends table provides a snapshot of response trends based on headline data. That is, responses given to main questions without assessment of detailed explanations in follow up questions. The numbers in this table are based on the online responses submitted to CDP as of 7 September 2011. They may therefore differ from numbers in the rest of the report which are based on the number of companies which responded by the applicable local deadline (e.g. 30 June 2011). Please refer to the CDP website and the local reports for an updated version of this table.
2. In some cases, the number of companies in a sample may differ slightly from the named sample size due to takeovers, mergers, acquisitions and duplicate share listings.
3. Includes offline responses to the CDP 2011 questionnaire and indirect answers submitted by parent companies. All other key trend indicators are based on direct and online company responses only.
4. Asia excluding Japan, India, China and Korea (ex-JICK).
5. Includes responses across all samples as well as responses submitted by companies not included in specific geographic or industry samples in 2011.
6. This takes into account companies reporting that data verification is either complete or underway.

*Denotes change in number of companies in sample compared to previous year.

**Denotes new sample for 2011.

Appendix II – Exclusions and qualifying remarks

Company	Sub-sector	Exclusions and qualifying remarks
		This table identifies what was not included within the Scope 1 and/ or Scope 2 emissions provided in Table 2.
Consumer Discretionary		
Massmart Holdings	Department Stores	Scope 2: Excludes emissions from non-South African facilities. Usage figures were excluded due to data inaccuracies and the provision of electricity sourced from hydroelectric facilities. Scope 1: Excludes emissions from Mass discounters in non-South African facilities.
Mr Price Group	Apparel Retail	Scope 1 and 2: Excludes emissions from owned stores in Botswana, Lesotho, Namibia and Swaziland.
Consumer Staples		
British American Tobacco	Tobacco	Scope 1 and 2: Excludes emissions from Bentoel in Indonesia (a new business)
Distell Group	Beverages	Scope 1: Excludes nitrous oxide from fertilizer. Scope 1 and 2: Excludes non-South African facilities. Scope 1 and 2: all data is excluded over the period January 2011 to June 2011.
Pick ‘n Pay Holdings	Food Retail	Scope 1 and 2: Excludes stores in other Southern African countries
SABMiller	Brewers	Scope 1 and 2: Excludes non beer and non-beer producing facilities.
The Spar Group	Food Retail	Scope 1: Excludes refrigerant leakage
Tiger Brands	Food Distributors	Scope 1 and 2: Excludes warehouse and distribution (run by third party vendors).
Woolworths Holdings	Food Retail	Scope 1 and 2: Excludes Country Road Australian operations
Energy & Materials		
Anglo American	Metals & Mining	Scope 1: Excludes F-gasses (considered negligible). Scope 1: Excludes N2O (not material)
Anglo American Platinum	Precious Metals & Minerals	Scope 1 and 2: Excludes Head Office (covered in Anglo American’s footprint). Scope 1 and 2: Excludes exploration activities outside South Africa and some Greenfields exploration within South Africa (not material)
AngloGold Ashanti	Gold	Scope 1: Excludes emissions associated with land clearance (impact uncertain but not seen as material). Scope 1: Excludes explosives (not material). Scope 1: Excludes process emissions (not material).
Aquarius Platinum	Precious Metals & Minerals	Scope 1 and 2: Excludes operations at Mimosa, Platinum Mile Resources, and Chromite Tailings Retreatment Plant
Evraz Highveld Steel and Vanadium	Steel	Scope 1 and 2: Excludes methane and nitrous oxide emissions. Scope 1: Excludes steelworks sewerage plant. Scope 1: Excludes embedded emissions in raw materials other than dolomite. Scope 1: Excludes emissions contained in the products, by-products or slag
Exxaro Resources	Metals & Mining	Scope 1: Excludes emissions from the seven coal discard dumps have been excluded, however Exxaro Resources is in the process of quantifying these emissions through the Grootegeluk Dump- CDM Project. Phase 1 was completed in 2010.
Gold Fields	Gold	Scope 1: Excludes mine methane at all operations except Beatrix
Harmony Gold Mining Co	Gold	Scope 1: Excludes methane (the right to the methane in the Free State Goldfields and Evander have been awarded to a third party and therefore the baseline has been restated to remove methane emissions from the previous years). Scope 2: Excludes Australian head offices (not material)
Impala Platinum Holdings	Precious Metals & Minerals	Scope 1 and 2: Excludes emissions from Two Rivers Platinum (non-managed mine-to-market operations where the group has an interest in the full value chain)
Kumba Iron Ore	Metals & Mining	Scope 1 and 2: Excludes emissions from head office (not material)
Lonmin	Metals & Mining	Scope 1 and 2: Excludes emissions from Johannesburg and London Head Office (not material). Scope 1 and 2: Excludes emissions from Akanani and Limpopo acquisitions (not material). Scope 1 and 2: Excludes emissions from Lonmin’s exploration portfolio (not material).
Nampak	Paper Packaging	Scope 1 and 2: Excludes European operations and operations in the rest of Africa.
Northam Platinum	Precious Metals & Minerals	Scope 1 and 2: Excludes head office (not material)
Pretoria Portland Cement Co	Construction Materials	Scope 1 and 2: Excludes Zimbabwe and Botswana operations (incomplete and unreliable information due to challenges with the economy and information transfer). Scope 1 and 2: Excludes PPC Aggregates (not material).
Sappi	Paper Products	Scope 1: Excludes producer gas production
Financials		
Absa Group	Diversified Banks	Scope 1 and 2: Excludes Absa Africa (not material)
African Bank Investments	Diversified Banks	Scope 1 and 2: Excludes non-South African operations
Discovery Holdings	Diversified Financial Services	Scope 1 and 2: Excludes emissions from Discovery Holdings Consulting Service (not material)
Emira Property Fund	Real Estate	Scope 1: Excludes fugitive emissions from air conditioning gas (Emira Property Fund intends to include this source of emissions in future assessments)

Company	Sub-sector	Exclusions and qualifying remarks
		This table identifies what was not included within the Scope 1 and/ or Scope 2 emissions provided in Table 2.
Growthpoint Properties	Real Estate	Scope 1 and 2: Excludes Australian emissions. Scope 1 and 2: Excludes emissions from the V&A Waterfront
Hosken Consolidated Investments	Diversified Financial Services	Scope 1: Excludes petrol/motor gasoline usage from vehicles/equipment owned or controlled by subsidiaries Montauk, Formex, Galaxy Bingo, Syntell and Tsogo. Scope 1: Excludes Tsogo. Scope 1: Excludes emissions from air-conditioning/refrigeration equipment. Scope 2: Excludes Tsogo and facilities other than South African Hotel Operations.
JSE	Diversified Financial Services	Scope 1 and 2: Excludes emissions from the disaster recovery site
Liberty Holdings	Insurance Brokers	Scope 1: Excludes air-conditioning and refrigerant gas refills for buildings owned and occupied by Liberty Liberty in South Africa. Scope 1 and 2: excludes leased branches. Scope 1 and 2: Excludes emissions from operations in other African countries outside South Africa.
MMI Holdings	Insurance Brokers	Scope 1: Excludes diesel used in generators. Scope 1: Excludes air conditioning refrigerants. Scope 2: Excludes African subsidiaries (not material). Scope 1: Excludes owned cars.
Nedbank	Diversified Banks	Scope 2: Excludes certain electronic banking service devices like: ATM, SST and POS. Scope 1: Excludes offshore operations. Scope 2: Excludes Bancassurance and Wealth Financial Advisors (not material). Scope 2: Excludes Pick 'n Pay in store Nedbank outlets.
Old Mutual	Insurance Brokers	Scope 1 and 2: Excludes Triangle Fund India (working towards including this data in 2011). Scope 1: Excludes heat, steam and cooling. Scope 1 and 2: Excludes Skandia International services offices. Scope 1 and 2: additional exclusions as described by Nedbank.
Remgro	Diversified Financial Services	Scope 1: Excludes refrigerants and/or air conditioning gases. Scope 1 and 2: Excludes Remgro International (Jersey) (not material).
Sanlam	Insurance Brokers	Scope 1 and 2: Excludes the rest of Africa, India, Australia, United States of America (USA), and the United Kingdom (UK)(not material). Scope 1 and 2: Excludes some facilities (currently facilities accounting for 68% of South African staff are included in carbon footprint). Scope 1 and 2: Excludes Santam. Scope 1: Excludes company fleet.
Santam	Insurance Brokers	Scope 1 and 2: Excludes Namibian operations. Scope 1 and 2: Excludes emissions from facilities other than head office; Bedfordview; Auckland Park; Illovo; Bruma & Menlynn Piazza.
Standard Bank Group	Diversified Banks	Scope 1 and 2: Excludes Angola, Botswana, Democratic Republic of Congo, Ghana, Kenya, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Nigeria, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe, Brazil, China (including Hong Kong), Isle of Man, Japan, Jersey, Russian Federation, Singapore, Taiwan, Turkey, United Arab Emirates, United Kingdom and United States of America. Scope 1 and 2: Excludes branches
Health Care		
Adcock Ingram	Pharmaceuticals	Scope 1 and 2: Excludes the manufacturing facility in Ghana. Scope 1 and 2: Excludes the branch office in Kenya. Scope 1 and 2: Excludes the facility in Zimbabwe.
Aspen Pharmacare Holdings	Pharmaceuticals	Scope 1 and 2: Excludes Woodmead Healthcare Office Park. Scope 1 and 2: Excludes Fine Chemicals Cooperation.
Industrials		
Aveng	Construction & Engineering	Scope 1: Excludes fuels other than diesel. Scope 1 and 2: Excludes Dynamic Fluid Control (facility).
Bidvest Group	Industrial Conglomerates	Scope 1: Excludes greenhouse gas refills of air conditioning and refrigeration equipment owned or operated by the Bidvest Group. Scope 1: Excludes emissions from Bidvest Group Car Rental operations generated by customer usage of vehicles.
Group Five	Construction & Engineering	Scope 1 and 2: Excludes Afrimix and Quarry Cats Office and sites. Scope 1 and 2: Excludes Group Five Pipe - Office and Factory Cape Town.
Reunert	Electrical Components & Equipment	Scope 1 and 2: Excludes the Australian operation (not material). Scope 1: Excludes fugitive emissions.
Wilson Bayly Holmes-Ovcon	Construction & Engineering	Scope 1 and 2: Excludes African (other than South Africa) and Australian operations
IT & Telecoms		
Allied Electronics Corporation (Altron)	Electronic Equipment & Instruments	Scope 1 and 2: Excludes facilities under control of the parent. Scope 1: Excludes air-conditioning and refrigeration gases from South African and Lesotho operations.
MTN Group	Wireless Telecommunication Services	Scope 1 and 2: Excludes certain OPCOs (not material)
Telkom SA	Integrated Telecommunication Services	Scope 1 and 2: Excludes subsidiaries Swiftnet ta Fastnet, Trudaon, Africa Online, Multilinks and Mweb Africa.
Vodacom Group	Wireless Telecommunication Services	Scope 1 and 2: Excludes Mauritius

Appendix III – Sector emission reduction targets

Consumer Discretionary emission reduction targets

Sub-sector	Company	Type	Target Year	Baseline	Scope	Target
Department Stores	Massmart Holdings	Absolute	2011	2008	Scope 2	12% reduction from base year. (249,716 t CO_2e reported in base year). 0% of target emissions reductions achieved.
	Massmart Holdings	Intensity	2012	2008	Scope 2	12% reduction per square meter from base year. (0.163 t CO_2e reported in base year). Target relates specifically to Builders Warehouse stores division. 71% of target emissions reductions achieved.
	Massmart Holdings	Intensity	2011	2008	Scope 2	3% reduction per square meter from base year. (0.125 t CO_2e reported in base year). Target relates specifically to Builders Express stores division. 98% of target emissions reductions achieved.
	Massmart Holdings	Intensity	2012	2008	Scope 2	7% reduction per square meter from base year. (0.255 t CO_2e reported in base year). Target relates specifically to Game stores division. 57% of target emissions reductions achieved.
Publishing	Caxton CTP Publishers & Printers	Absolute	2011	2010	Scope 1 & 2	2% reduction from base year. (128,962 t CO_2e reported in base year). Target not achieved.

Consumer Staples emission reduction targets

Sub-sector	Company	Type	Target Year	Baseline	Scope	Target
Brewers	SABMiller	Intensity	2020	2008	Scope 1 & 2	50% reduction per hectolitre of beer from base year. (15 t CO_2e reported in base year). 17% of target emissions reductions achieved.
Food Retail	Pick n Pay Holdings	Absolute	2015	2010	Scope 1, 2 & 3	15% reduction from base year. (672,554 t CO_2e reported in base year). 60% of target emissions reductions achieved.
	The Spar Group	Intensity	2011	2009	Scope 1 (diesel)	3% reduction in grams CO_2e per case distributed from base year. (176 t CO_2e reported in base year). Target applies to diesel usage of The Spar Group distribution fleet only. 0% of target emissions reductions achieved.
	The Spar Group	Intensity	2011	2009	Scope 2 (electricity)	2% reduction in grams CO_2e per case distributed from base year. (234 t CO_2e reported in base year). Target applies to electricity consumption of all Spar facilities. 0% of target emissions reductions achieved.
	The Spar Group	Intensity	2010	2009	Scope 3 (air travel)	33% reduction in grams CO_2e per case distributed from base year. (6.4 t CO_2e reported in base year). Target applies to air travel for Spar business purposes only. Target reduction achieved.
	Woolworths Holdings	Intensity	2012	2007	Scope 1, 2 & 3	30% reduction per square meter from base year. (323,171 t CO_2e reported in base year). 67% of target emissions reductions achieved.
Tobacco	British American Tobacco	Intensity	2030	2000	Scope 1, 2 & 3	50% reduction per million cigarettes equivalent from base year. (1.38 t CO_2e reported in base year). 38% of target emissions reductions achieved.
	British American Tobacco	Intensity	2050	2000	Scope 1, 2 & 3	80% reduction per million cigarettes equivalent from base year. (1.38 t CO_2e reported in base year). 38% of target emissions reductions achieved.

Energy & Minerals emission reduction targets

Sub-sector	Company	Type	Target Year	Baseline	Scope	Target
Construction Materials	Pretoria Portland Cement Co	Intensity	2020	2008	Scope 1 & 2	15% reduction per unit of production from base year. (6,362,086 t CO_2e reported in base year). Target includes lime and dolomite plants. 20% of target emissions reductions achieved
	Pretoria Portland Cement Co	Intensity	2015	2000	Scope 2	15% reduction in kWh from base year. (425,737 t CO_2e reported in base year).
Energy	Sasol	Absolute	2020	2005	Scope 1 & 2	20% reduction on the base year coal-to-liquids design. (30,000,000 t CO_2e reported in base year).
	Sasol	Absolute	2030	2005	Scope 1 & 2	30% reduction on the base year coal-to-liquids design. (30,000,000 t CO_2e reported in base year).
	Sasol	Intensity	2020	2005	Scope 1 & 2	15% reduction per unit of production from base year. (81,600,000 t CO_2e reported in base year). This is an on-going target. 23% of target emissions reductions achieved.
	Sasol	Intensity	2015	2000	Scope 1	15% reduction GJ per ton of production from base year. (75,805,000 t CO_2e reported in base year).
Gold	AngloGold Ashanti	Intensity	Medium to long-term	2007	Scope 1 & 2	30% reduction per ounce of gold from base year. (0.77 t CO_2e reported in base year).
	Gold Fields	Absolute	2015	2009	Scope 1 (diesel)	10% reduction from base year. (108,797 t CO_2e reported in base year). 10% of target emissions reductions achieved.
	Gold Fields	Absolute	2015	2009	Scope 2 (electricity)	5% reduction from base year. (132,998 t CO_2e reported in base year). 0% of target emissions reductions achieved.
	Gold Fields	Intensity	2015	2009	Scope 1 & 2 (electricity and diesel)	Beatrix Mine: 12% reduction per ounce of gold from base year. (2.22 t CO_2e reported in base year). Scope 1 & 2 excludes mine methane. Target reduction achieved ahead of time.
	Gold Fields	Intensity	2015	2009	Scope 1 & 2 (electricity and diesel)	KDC West Mine: 13% reduction per ounce of gold from base year. (2.03 t CO_2e reported in base year). 0% of target emissions reductions achieved.
	Gold Fields	Intensity	2015	2009	Scope 1 & 2 (electricity and diesel)	KDC East Mine: 13% reduction per ounce of gold from base year. (2.8 t CO_2e reported in base year). Target reduction achieved ahead of time.
	Gold Fields	Intensity	2015	2009	Scope 1 & 2 (electricity and diesel)	South Deep Mine: 14% reduction per ounce of gold from base year. (2.08 t CO_2e reported in base year). Target reduction achieved ahead of time.
	Gold Fields	Intensity	2012	2009	Scope 1 & 2 (electricity and diesel)	Tarkwa Mine: 8 % reduction per ounce of gold from base year. (0.41 t CO_2e reported in base year). 51% of target emissions reductions achieved.
	Gold Fields	Intensity	2012	2009	Scope 1 & 2 (electricity and diesel)	Damang Mine: 7% reduction per ounce of gold from base year. (0.32 t CO_2e reported in base year). 0% of target emissions reductions achieved.
	Harmony Gold Mining Co	Intensity	2013	2008	Scope 1	15% reduction from base year. (0.084 t CO_2e reported in base year).Target applies to SA operations only - Papua New Guinea emissions are excluded. 0% of target emissions reductions achieved.
	Harmony Gold Mining Co	Intensity	2013	2005	Scope 2	15% reduction per tonne of ore processed from base year. (0.379 t CO_2e reported in base year). Target applies to SA operations only - Papua New Guinea emissions are excluded. Target reduction achieved ahead of time.

Sub-sector	Company	Type	Target Year	Baseline	Scope	Target
	Harmony Gold Mining Co	Intensity	2013	2008	Scope 1 & 2	15% reduction per tonne of ore processed from base year. (0.341 t CO_2e reported in base year). Target applies to SA operations only - Papua New Guinea emissions are excluded. 92% of target emissions reductions achieved.
Metals & Mining	Anglo American	Absolute	2014	2004	Scope 1 & 2	10% reduction from base year. (32,692,000 CO_2e reported in base year). Target reduction achieved ahead of time.
	BHP Billiton	Intensity	2012	2006	Scope 1 & 2	6% reduction per unit of production from base year. (0.21 t CO_2e reported in base year). Target reduction achieved ahead of time.
	Exxaro Resources	Absolute	2012	2009	Scope 1 & 2	10% reduction from base year. (2,768,104 t CO_2e reported in base year). 57% of target emissions reductions achieved.
	Kumba Iron Ore	Intensity	2014	2004	Scope 1 (diesel only) & 2	10% reduction per metric ton of product from base year. (477,454 t CO_2e reported in base year). 1% of target emissions reductions achieved.
	Lonmin	Intensity	2012	2007	Scope 1 & 2	7% reduction in GJ Energy per ounce of Platinum group metals from base year.
Paper Packaging	Nampak	Absolute	2013	2008	Scope 2	10% reduction from base year. (714,815 t CO_2e reported in base year). Target reduction achieved ahead of time.
Paper Products	Mondi Group	Intensity	2014	2004	Scope 1 & 2	15% reduction per metric ton of product from base year. (6,966,024 t CO_2e reported in base year). Target reduction achieved ahead of time.
	Sappi	Intensity target	2015	2000	Scope 1 & 2	15% reduction per metric ton of product from base year. (4,566,239 t CO_2e reported in base year). The target applies to the South African region. 18% of target emissions reductions achieved.
	Sappi	Intensity	2010	2007	Scope 1	10% reduction per metric ton of product from base year. (1,051,577 t CO_2e reported in base year). Target applies to North American operations only. Target reduction achieved.
	Sappi	Intensity	2013	2008	Scope 1	5% reduction per metric ton of product from base year. (1,219,106 t CO_2e reported in base year). Target applies to European operations only. 40% of target emissions reductions achieved.
Precious Metals & Minerals	Anglo American Platinum	Intensity	2014	2004	Scope 1 & 2	10% reduction per refined ounce of Platinum group metals from base year. (4,869,000 t CO_2e reported in base year). 8% of target emissions reductions achieved.
	Impala Platinum Holdings	Absolute	2020	2000	Scope 2	5% reduction from base year. (2,256,000 t CO_2e reported in base year). 3% of target emissions reductions achieved.
Steel	Arcelor Mittal SA	Intensity	2020	2007	Scope 1 & 2	8% reduction per metric ton of product from base year. (18,475,607 t CO_2e reported in base year). 1% of target emissions reductions achieved.
	Evraz Highveld Steel and Vanadium	Absolute	2011	2010	Scope 1 & 2	1% reduction from base year. (4,611,082 t CO_2e reported in base year). 50% of target emissions reductions achieved.
	Evraz Highveld Steel and Vanadium	Intensity	2011	2010	Scope 1 & 2 (energy consumption only)	0.87% reduction per tonne of steel from base year. (7,962 t CO_2e reported in base year). Dolomite emissions are not included in the scope. 50% of target emissions reductions achieved.

Financials emission reduction targets

Sub-sector	Company	Type	Target Year	Baseline	Scope	Target
Diversified Banks	Investec	Absolute	2012	2010	Scope 2	10% reduction from base year. (5,082 t CO_2e reported in base year). This target applies to the Investec London office. Target reduction achieved ahead of time
	Nedbank	Intensity	2015	2007	Scope 1, 2 & 3	12% reduction per FTE employee from base year. (9.15 t CO_2e reported in base year). 82% of target emissions reductions achieved.
Diversified Financial Services	Firstrand	Absolute	2012	2006	Scope 2	11% reduction from base year. (334,031 t CO_2e reported in base year). 64% of target emissions reductions achieved.
	Firstrand	Intensity	2012	2007	Scope 1, 2 & 3	16 % reduction per FTE employee from base year. (10.2 t CO_2e reported in base year). 75% of target emissions reductions achieved.
	Remgro	Absolute	2010	2009	Scope 1 (coal)	10% reduction from base year. (64,619 t CO_2e reported in base year). Target applies to Remgro's Rainbow business only. Target achieved.
	Remgro	Absolute	2010	2009	Scope 2 (electricity)	5% reduction from base year. (300,975 t CO_2e reported in base year). Target applies to Remgro's Rainbow business only. Target not achieved.
Insurance Brokers	Old Mutual	Intensity	2015	2007	Scope 1, 2 & 3	12% reduction per FTE employee from base year. (9.15 t CO_2e reported in base year).
	Old Mutual	Intensity	2015	2005	Scope 2	12% reduction per kWh per FTE from base year. (6,063 t CO_2e reported in base year).
	Sanlam	Intensity	2010	2007	Scope 2	14% reduction per FTE employee from base year. (8.65 t CO_2e reported in base year). Target not achieved.
	Sanlam	Intensity	2010	2007	Scope 1, 2 & 3	15% reduction per FTE employee from base year. (11.1 t CO_2e reported in base year). Target not achieved.
	Sanlam	Intensity	2010	2007	Scope 3 (paper)	10% reduction per FTE employee from base year. (0.11 t CO_2e reported in base year). Target reduction achieved.
	Santam	Intensity	2010	2007	Scope 1, 2 & 3	15% reduction per FTE employee from base year. (6,289 t CO_2e reported in base year). Target applies to head office only. Target reduction achieved.
Real Estate	Capital Shopping Centres Group	Absolute	2010	2009	Scope 1 & 2	5% reduction per year (45,156 t CO_2e reported in base year). This is a rolling target for all company owned shopping centres. Target reduction achieved.
	Growthpoint Properties	Absolute	2015	2010	Scope 1	10% reduction from base year. (268 t CO_2e reported in base year). 0% of target emissions reductions achieved
	Growthpoint Properties	Absolute	2015	2010	Scope 2	10% reduction from base year. (956 t CO_2e reported in base year). Target achieved ahead of time.

Health Care emission reduction targets

Sub-sector	Company	Type	Target Year	Baseline	Scope	Target
Health Care	Mediclinic International	Absolute	2010	2009	Scope 2	3% reduction from base year. (152,412 t CO_2e reported in base year). Target reduction achieved.
	Netcare	Intensity	2011	2008	Scope 1, 2 & 3	7% reduction per unit revenue from base year. (0.000027 t CO_2e reported in base year). Target reduction achieved ahead of time.
	Netcare	Intensity	2011	2008	Scope 1, 2 & 3	0.150% reduction per number of patient days from base year. (0.147 t CO_2e reported in base year). Target reduction achieved ahead of time.

Industrials emission reduction targets

Sub-sector	Company	Type	Target Year	Baseline	Scope	Target
Industrial Conglomerates	Bidvest Group	Absolute	2050	2006	Scope 1, 2 & 3	67% reduction from base year. (107,360 t CO_2e reported in base year). Target applies to Bidvest Group's 3,663 business only. 20% of target emissions reductions achieved.
	Bidvest Group	Intensity	2015	2008	Scope 1 & 2	20% reduction per metric ton of product relative to base year. Target relates to Bidvest Groups's Deli XL Projects. 41% of target emissions reductions achieved.
Industrial Machinery	Barloworld	Intensity	2014	2009	Scope 1 & 2	12% reduction per unit revenue from base year. (199,053 t CO_2e reported in base year). 0% of target emissions reductions achieved.
Trading Companies & Distributors	Grindrod	Absolute	2012	2009	Scope 3 (waste)	10% reduction from base year. (7,060 t CO_2e reported in base year). 0% of target emissions reductions achieved.
	Grindrod	Intensity	2015	2010	Scope 1	Ships: 5% reduction per tonne/nautical mile from base year. (145,879 t CO_2e reported in base year). Target applies to ships in which the company has operation control only.
	Grindrod	Intensity	2015	2010	Scope 1	Fleet: 5% reduction per kilometre from base year. (105,307 t CO_2e reported in base year). Target applies to land-based fleet where company has operational control only.
	Grindrod	Intensity	2015	2010	Scope 2	Machinery & Buildings: 5% reduction per unit revenue from base year. (19,170 t CO_2e reported in base year). Target applies to machinery and buildings on property owned and operated by Grindrod only.

IT & Telecoms emission reduction targets

Sub-sector	Company	Type	Target Year	Baseline	Scope	Target
Wireless Telecommunication Services	Vodacom Group	Absolute	2011	2009	Scope 2	40% reduction from base year. (188,590 t CO_2e reported in base year). This target relates to energy savings in MWhs and CO_2e at base stations and network sites. 50% of target emissions reductions achieved.

ACRONYMS

BUSA	Business Unity South Africa
CDLI	Carbon Disclosure Leadership Index
CDM	Clean Development Mechanism
CDP	Carbon Disclosure Project
CEO	Chief Executive Officer
CER	Certified Emission Reductions
CO_2e	Carbon dioxide (CO_2) equivalent
COP	Conference of the Parties
CPLI	Carbon Performance Leadership Index
DSM	Demand-side management
FTE	Full time employee
GHG	Greenhouse gas
ICT	Information and communications technology
IPCC	Intergovernmental Panel on Climate Change
LSM	Living Standards Measure
LTMS	Long Term Mitigation Scenarios
NBI	National Business Initiative
NGO	Non-governmental organisation
PGM	Platinum Group Metal
REFIT	Renewable Energy Feed-in Tariff
SA	South Africa(n)
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
WBCSD	World Business Council for Sustainable Development
WWF	World Wide Fund for Nature

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Finally, a special note of thanks goes to those JSE Top 100 companies that responded to the 2011 questionnaire. We are confident that it will fulfil its main purpose of supporting investors in their decision-making processes, but also that it will provide valuable information for a variety of initiatives in the fields of energy and climate change.

For further information on how you may become involved in the NBI's key initiatives, please visit our website (www.nbi.org.za) or contact Valerie Geen on geen.valerie@nbi.org.za.

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