

Carbon Disclosure Project CDP Nordic 260 Report 2011

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



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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

The members and signatories from the Nordic region are marked in blue text.

ABRAPP - Associação
Brasileira das
Entidades Fechadas
de Previdência
Complementar

AEGON N.V.

AKBANK T.A.S.

Allianz Global Investors
Kapitalanlagegesell-
schaft mbH

[ATP Group](#)

Aviva Investors

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

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[KLP](#)

Legg Mason, Inc.

London Pensions Fund
Authority

Mitsubishi UFJ
Financial Group (MUFG)

Morgan Stanley

National Australia Bank

NEI Investments

Neuberger Berman

Newton Investment
Management Limited

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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

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 Alapkezelő Zrt.
AEGON N.V.
AEGON-INDUSTRIAL Fund Management Co., Ltd
AFP Integra
AIG Asset Management
Ak Asset Management
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
AustrianSuper
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
Commlinsure
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
Fédérés 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
Fondation CSN
Fondation de Luxembourg
Fondriaria-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 Economistas Federais
Fundação AMPLA de Seguridade Social - Brasileiros
Fundação Atlântico de Seguridade Social
Fundação Atílio 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 Ferroviária 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

Carbon Disclosure Project 2011 – Global 500 Report

Goldman Sachs Group Inc.	LGT Capital Management Ltd.	Oddo & Cie
GOOD GROWTH INSTITUT für globale Vermögensentwicklung mbH	LIG Insurance Co., Ltd	OEKO Capital Lebensversicherung AG
Governance for Owners	Light Green Advisors, LLC	Old Mutual plc
Government Employees Pension Fund ("GEPP"), Republic of South Africa	Living Planet Fund Management Company S.A.	OMERS Administration Corporation
Green Cay Asset Management	Local Authority Pension Fund Forum	Ontario Teachers' Pension Plan
Green Century Capital Management	Local Government Super	OP Fund Management Company Ltd
Groupe Cr�dit Coop�ratif	Local Super	Oppenheim Fonds Trust GmbH
Groupe Investissement Responsable Inc.	Lombard Odier Darier Hentsch & Cie	Opplysningsvesenets fond (The Norwegian Church Endowment)
GROUPE OFI AM	London Pensions Fund Authority	OPSEU Pension Trust
Grupo Banco Popular	Lothian Pension Fund	Oregon State Treasurer
Grupo Santander Brasil	Lupus alpha Asset Management GmbH	Orion Asset Management LLC
Gruppo Credito Valtellinese	Macif Gestion	Parnassus Investments
Gruppo Montepaschi	Macquarie Group Limited	Pax World Funds
Guardian Ethical Management Inc	MAMA Sustainable Incubation AG	Pensioenfonds Vervoer
Guardians of New Zealand Superannuation	Man	Pension Denmark
Guosen Securities Co., LTD.	Maple-Brown Abbott Limited	Pension Fund for Danish Lawyers and Economists
Hang Seng Bank	Marc J. Lane Investment Management, Inc.	Pension Protection Fund
Harbourmaster Capital	Maryland State Treasurer	Pensionsmyndigheten
Harrington Investments, Inc	Matrix Asset Management	PETROS - The Funda��o Petrobras de Seguridade Social
Hauk & Aufh�user Asset Management GmbH	McLean Budden	PFA Pension
Hazel Capital LLP	MEAG MUNICH ERGO Asset Management GmbH	PGGM
HDFC Bank Ltd	Meeschaert Gestion Priv�e	Phillips, Hager & North Investment Management Ltd.
Health Super Fund	Meiji Yasuda Life Insurance Company	PhiTrust Active Investors
Healthcare of Ontario Pension Plan (HOOPP)	Mendesprev Sociedade Previdenci�ria	Phoenix Asset Management Inc.
Henderson Global Investors	Merck Family Fund	Pictet Asset Management SA
Hermes Fund Managers	Meritas Mutual Funds	PKA
HESTA Super	MetallRente GmbH	Pluris Sustainable Investments SA
HSBC Global Asset Management (Deutschland) GmbH	Metrus – Instituto de Seguridade Social	PNC Financial Services Group, Inc.
HSBC Holdings plc	Metzler Investment GmbH	Pohjola Asset Management Ltd
HSBC INKA Internationale Kapitalanlagegesellschaft mbH	MFS Investment Management	Portfolio 21 Investments
Hyundai Marine & Fire Insurance. Co., Ltd.	Midas International Asset Management	Porto Seguro S.A.
Hyundai Securities Co., Ltd.	Miller/Howard Investments	PREVHAB PREVID�NCIA COMPLEMENTAR
Ibgeana Society of Assistance and Security SIAS / Sociedade Ibgeana de Assist�ncia e Seguridade (SIAS)	Mirae Asset Global Investments Co. Ltd.	PREVI Caixa de Previd�ncia dos Funcion�rios do Banco do Brasil
IDBI Bank Ltd	Mirae Asset Securities Co., Ltd.	PREVIG Sociedade de Previd�ncia Complementar
Ilmarinen Mutual Pension Insurance Company	Missionary Oblates of Mary Immaculate	Provincial Rheinland Holding
Impax Group plc	Mistra, Foundation for Strategic Environmental Research	Prudential Investment Management
IndusInd Bank Limited	Mitsubishi UFJ Financial Group (MUFG)	Psagot Investment House Ltd
Industrial Bank (A)	Mizuho Financial Group, Inc.	PSP Investments
Industrial Bank of Korea	Mn Services	PSS - Seguridade Social
Industry Funds Management	Monega Kapitalanlagegesellschaft mbH	Q Capital Partners Co. Ltd
Infrastructure Development Finance Company	Morgan Stanley	QBE Insurance Group
ING	Motor Trades Association of Australia Superannuation Fund Pty Ltd	Rabobank
Insight Investment Management (Global) Ltd	Mutual Insurance Company Pension-Fennia	Raiffeisen Schweiz
Instituto de Seguridade Social dos Correios e Tel�grafos- Postais	Natcan Investment Management	Railpen Investments
Instituto Infraero de Seguridade Social - INFRAPREV	Nathan Cummings Foundation, The	Rathbones / Rathbone Greenbank Investments
Instituto Sebrae De Seguridade Social - SEBRAEPREV	National Australia Bank	Real Grandeza Funda��o de Previd�ncia e Assist�ncia Social
Insurance Australia Group	National Bank of Canada	Rei Super
Investec Asset Management	National Grid Electricity Group of the Electricity Supply Pension Scheme	Reliance Capital Ltd
Irish Life Investment Managers	National Grid UK Pension Scheme	Resolution
Itau Asset Management	National Pensions Reserve Fund of Ireland	Resona Bank, Limited
Ita� Unibanco Holding S A	National Union of Public and General Employees (NUPGE)	Reynders McVeigh Capital Management
Janus Capital Group Inc.	NATIXIS	RLAM
Jarislowsky Fraser Limited	Nedbank Limited	Robeco
JPMorgan Chase & Co.	Needmor Fund	Rockefeller Financial
Jubitz Family Foundation	NEI Investments	Rose Foundation for Communities and the Environment
Jupiter Asset Management	Nelson Capital Management, LLC	Royal Bank of Canada
Kaiser Ritter Partner (Schweiz) AG	Nest Sammelstiftung	Royal Bank of Scotland Group
KB asset Management	Neuberger Berman	RREEF Investment GmbH
KB Kookmin Bank	New Amsterdam Partners LLC	SAM Group
KBC Asset Management NV	New Mexico State Treasurer	SAMPENSION KP LIVSFORSIKRING A/S
KDB Asset Management Co., Ltd.	New York City Employees Retirement System	SAMSUNG FIRE & MARINE INSURANCE
KEPLER-FONDS Kapitalanlagegesellschaft m. b. H.	New York City Teachers Retirement System	Samsung Securities
KfW Bankengruppe	New York State Common Retirement Fund (NYSCRF)	Sanlam
KlimalNVEST	New Zealand Earthquake Commission	Santa F� Portfolios Ltda
KLP	Newton Investment Management Limited	SAS Trustee Corporation
Korea Investment Management Co., Ltd.	NGS Super	Sauren Finanzdienstleistungen GmbH & Co. KG
The Korea Teachers Pension (KTP)	NH-CA Asset Management	Schroders
Korea Technology Finance Corporation (KOTEC)	Nikko Asset Management Co., Ltd.	Scotiabank
KPA Pension	Nikko Cordial Securities	Scottish Widows Investment Partnership
La Banque Postale Asset Management	Nissay Asset Management Corporation	SEB
La Financiere Responsable	NORD/LB Kapitalanlagegesellschaft AG	SEB Asset Management AG
Lampe Asset Management GmbH	Nordea Investment Management	Second Swedish National Pension Fund (AP2)
Landsorganisationen i Sverige	Norfolk Pension Fund	SEIU Master Trust
LBBW - Landesbank Baden-W�rttemberg	Norges Bank Investment Management (NBIM)	Seligson & Co Fund Management Plc
LBBW Asset Management Investmentgesellschaft mbH	North Carolina Retirement System	Sentinel Investments
LD Lonmodtagernes Dyrtdisfond	Northern Ireland Local Government Officers' Superannuation Committee (NILGOSC)	SERPROS - Fundo Multipatrocinado
Legal & General Investment Management	Northern Trust	Seventh Swedish National Pension Fund (AP7)
Legg Mason, Inc.	Nykredit	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
 Sompoo 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
 Syntus 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

Figure 1: 2011 Signatory Investor Breakdown

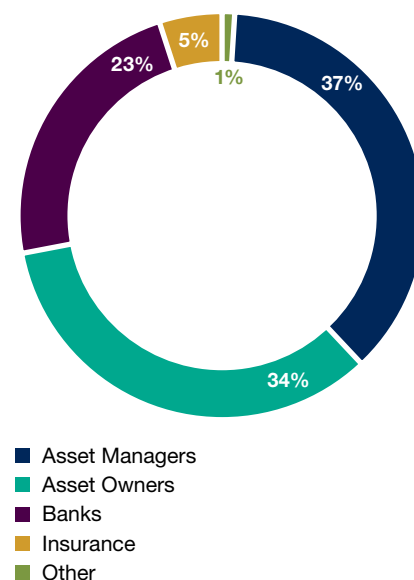
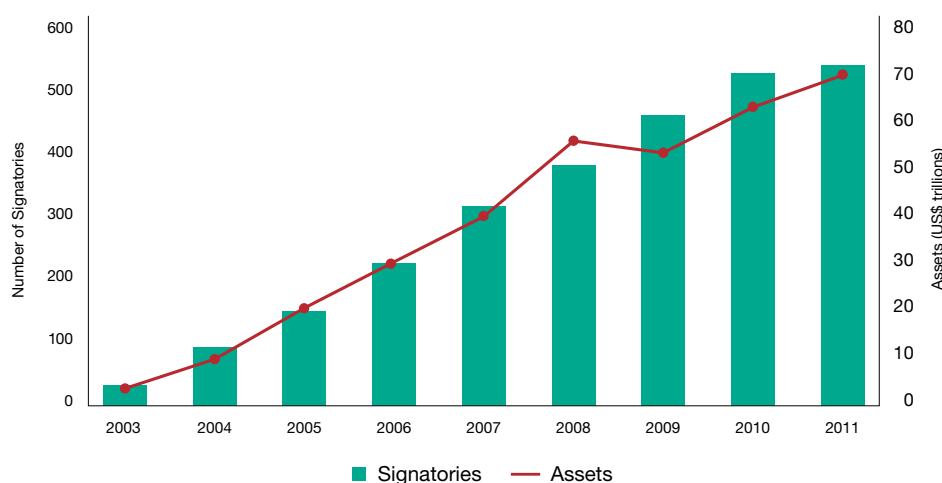


Figure 2: CDP Investor Signatories & Assets over time





Foreword

The climate crisis amplifies many of the known threats to humans. Droughts, floods and extreme weather increasingly come in the way of food production, health, housing and other basic infrastructure. There is an urgent need to stabilise earth's climate to avoid more dangerous climate change.

Sound information must be at the heart of all climate action. The Intergovernmental Panel on Climate Change is unique in that it builds a bridge between the world's leading climate scientists and governments. The Panel is clear that global greenhouse gas emissions must be reduced by 50-85 per cent in 2050 compared to the 2000 level, and that emissions must peak before 2015. Governments are working hard to translate these messages into political goals and practical measures, but governments cannot bring about results on their own.

Just like countries, it is important that companies set emission targets and calculate their own emissions as a basis for decision-making. The Carbon Disclosure Project bears witness to the growing number of corporations across the world that are putting climate at the centre of their operations, whilst sharing this information with the outside world. This is a positive and necessary development. I am glad to see that more companies than ever have responded to this Nordic report, declaring active emission reductions schemes and higher levels of disclosures than in previous years.

An engaged public opinion is possibly the most powerful driver of climate action that there is. To fuel this engagement, climate information needs to be made readily available - by governmental, voluntary and private entities. The Carbon Disclosure Project plays an important role in this respect. We all stand to gain from increased openness about success stories and obstacles in tackling climate change.

I congratulate the Carbon Disclosure Project and all the contributors to this Nordic report on their good work for a low carbon future.

A handwritten signature in black ink that reads "Erik Solheim". The signature is written in a cursive, slightly slanted style.

Erik Solheim

Minister of Environment and International Development
Norway

CEO Foreword

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's 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 business from climate change impacts is fundamental to achieving sustainable and strong shareholder returns. Earlier this year, the 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 reduction activities with a satisfactory payback period. Carbon Action reflects a growing recognition that there is a huge range of carbon reduction 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 institutional 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 launched to help the world's major cities reduce climate change risk and bolster economic growth, whilst 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 the Nordic region we are delighted to be working with our Nordic partner, ATP and our Norway partner KLP. We are grateful for the support of WWF Sweden and PwC Sweden in producing this report. 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.



Paul Simpson

CEO

Carbon Disclosure Project

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Nordic Region Report

Welcome to the fifth annual CDP Nordic report.

This year, with the additional member of staff in the Nordic office, we increased the sample significantly to 260. We will stay with this number next year, while encouraging previously-approached firms that have dropped below the market capitalisation cut-off to continue to provide information.

Intending to provide robust support in the complex journey that is climate reporting, we offered free workshops for the fourth year running. The significance of this training is such that we welcome any firm to attend, since the Supply Chain member companies may approach any size of enterprise.

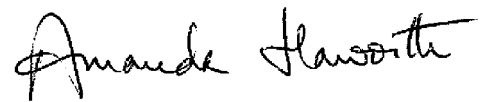
The analysis in this report is based on data submitted from the first year of operations after the COP15 meeting, which brought climate issues to the fore. While governments have ambitious goals, responding companies treat the potential risks of climate change as mainstream knowledge. Leading companies can and do continue to protect share value, pioneering innovative and highly successful ways to do business not at all as usual.

It is clear from the responses that Nordic corporations offer many robust solutions to climate change in their activities and operations: building façades with embedded solar collectors, virtual meeting services, lighter yet stronger steel, bio fuel production and dozens more. Production processes are showing the results of vast sums spent on R & D where dramatically fewer raw materials and energy are required to produce superior quality.

The word 'näringsliv'¹ has roots in the age of barter, and indeed reflects what barter would originally have achieved: to nourish life. Nordic industry is solving 21st century climate challenges with remarkable products and services that do nourish life.

We are deeply grateful for the continued collaboration with our Nordic Partner ATP and Norway Partner KLP who provide invaluable guidance and input. Also to WWF for their support with production of this report and PwC for their ongoing participation.

The number of Nordic companies responding to the Investor request in 2011 increased to 143 (131 in 2010). The share of companies responding publicly has also increased to 83% (79% in 2010).

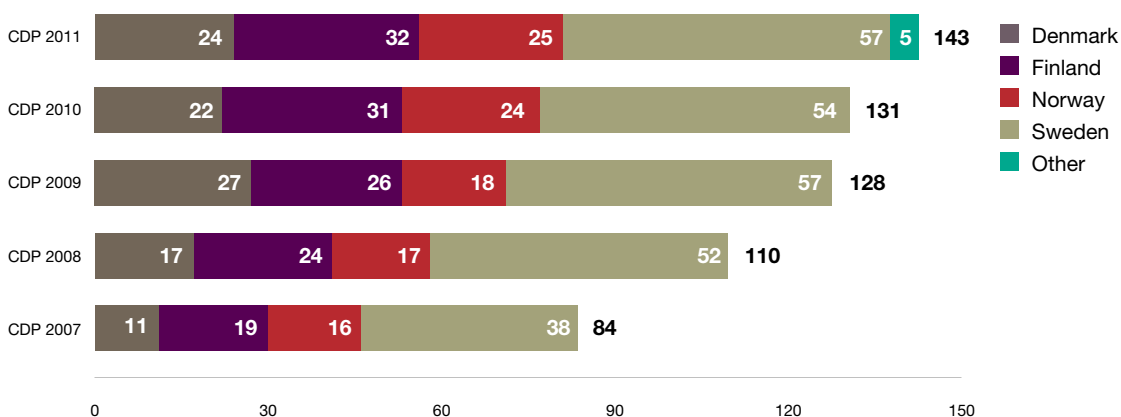


Amanda Haworth Wiklund
Director, CDP Nordic



Emma Henningsson
Project Manager, CDP Nordic

Fig 3: Number of Nordic companies responding to the 2011 investor request



1. 'Näringsliv' is the Swedish word for 'industry', näring = nourishment, liv = life

Executive Summary



Nadine Viel Lamare
Chair of the Ethical Council¹

John Howchin
Secretary General of the Ethical Council

For the fifth year running, the number of Nordic companies responding to the CDP information request has increased, to 143 in 2011 compared with 131 in 2010. The share of companies agreeing to make their responses public has also risen, to 83% from 79% in 2010. This is encouraging not least because many respondents this year will have felt they had fewer success stories to report.

Keeping the lid on greenhouse gas emissions was exceptionally challenging during 2010 (the year covered by most CDP 2011 responses), as the economy rebounded from the severe recession of 2009. Most sectors are not managing to fully decouple emissions from growth.

Yet Nordic companies are still lighting the path towards a low-carbon economy. The report is full of innovative examples – from entire operations run on wind power to commercial flights run on biofuel, from a doubling of the energy efficiency of elevators to a halving of emissions from business travel through the use of virtual meetings.

Even in the finance sector, where own emissions are relatively low, companies are beginning to favour low-carbon alternatives by asserting their influence as investors and lenders. Some banks are offering preferential terms for eco-friendly car loans, while others are screening their managed assets and persuading poor environmental performers to clean up their act.

The business case for reducing emissions

Naturally, while concerns over dangerous climate change underlie the whole CDP process, investors hardly expect companies to reduce their emissions on grounds of altruism alone. One theme in this year's CDP Nordic 260 Report is that there are powerful economic arguments for improving energy efficiency, reducing fuel consumption, switching to renewable sources, and so forth.

For one, companies report that they expect many or most of these emissions-reducing initiatives to pay off within three years, which should certainly give pause for thought to those who consider sustainability to be a luxury they can ill afford.

1. The Ethical Council (Etikrådet) is a collaboration between four of the buffer funds in the national Swedish pension system, AP1, AP2, AP3 and AP4.

On the other hand, investors may worry that this reflects undue focus on the short term. Indeed, some companies indicate that longer-term investments are being delayed by the lack of a stable global regulatory framework. But even here, most Nordic companies regard emissions taxation and regulation as a business opportunity rather than a risk, since they believe they are ahead of the game on low-carbon technology and will benefit as global regulation tightens.

Could these benefits translate into higher returns for shareholders? The report presents data suggesting that the five-year total return on a portfolio comprising the 2011 Carbon Disclosure Leadership Index (CDLI) – the 26 companies with the best and most comprehensive answers to CDP's questionnaire – is more than double that for the Nordic 260 as a whole². Whilst this represents a lasting relationship, the data tell us little about causality; many factors are likely to influence the relationship between financial performance and high carbon disclosure scores.

Progress needed on measurement of carbon footprints

One area where Nordic companies are lagging behind in comparison with global best practice is in disclosing total carbon footprints. While firms do reasonably well at reporting emissions from business travel and the like, only a handful are able to disclose harder-to-measure emissions from their supply chain and from the use and disposal of sold products.

This is important for investors because companies that lack control over upstream and downstream emissions face material risks of being caught out by product regulation or consumer backlashes. Measurement of emissions in the supply chain can also reveal unexpected ways to improve efficiency and cut costs.

Extending carbon disclosure to cover the more challenging areas of Scope 3 (indirect) emissions is therefore a key area for progress over the coming year.

Climate change in the Nordic region

Melting of the Arctic ice cap, increased frequency of heavy rainfall, and extreme low temperatures in northern regions are just a few of the current phenomena that Nordic companies associate with climate change, and that are occurring in the region itself.

Most of these developments entail both risks and opportunities. But while companies consider the immediate risks to be manageable on the whole, some point out that the knock-on effects may be far-reaching and unpredictable.

Uncertainty of this nature is always difficult to manage, but what can be said is that those who are engaged in tackling climate change will be best placed to deal with concrete risks when they do emerge, and to help prevent them emerging in the first place.

That, ultimately, is the reason why the information presented in this report and in the public company responses available from CDP's website should be of the greatest interest to investors, to companies themselves and indeed to anyone with a stake in a future that is both sustainable and competitive.

2. Total Return includes interest, capital gains, dividends and distributions realised over a given period of time. The composition of the CDLI should not be construed as investment advice. Read more on page 35.

Key Issues

This chapter provides an overview of some of the key issues that emerge from Nordic company responses to CDP's 2011 questionnaire.

Before looking at the data on emissions it is useful to recall the turbulent macroeconomic conditions that companies have faced over the past two years, especially in Denmark, Finland and Sweden.

The CDP 2011 responses generally relate to the calendar year 2010,¹ during which the economy bounced back dramatically from a severe recession (as shown in Figure 4). Since greenhouse gas (GHG) emissions depend partly on output, cutting emissions was a much taller order for most companies in 2010 than it was in 2009.

Emissions rise during 2010 ...

CDP's 2011 questionnaire asks all companies to indicate the change in their total Scope 1 and 2 emissions since the previous reporting year (see Appendix 2 for an explanation of the different Scopes).¹ A majority of respondents (75 out of 142²) reports that their emissions increased (see Figure 5).

Figure 4: GDP growth, 2009–2011. Source: OECD.

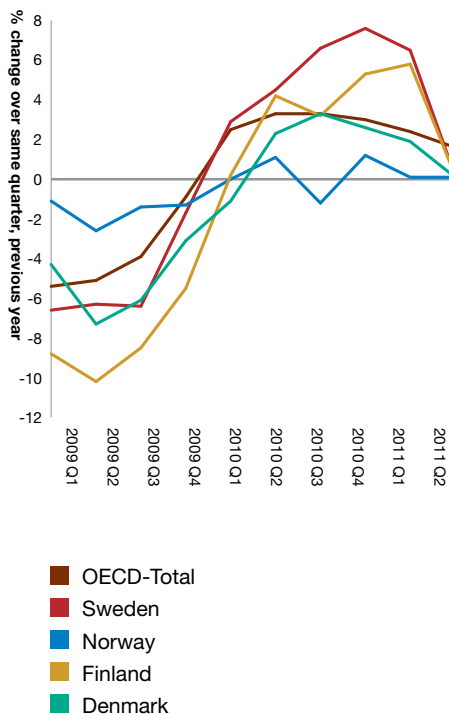
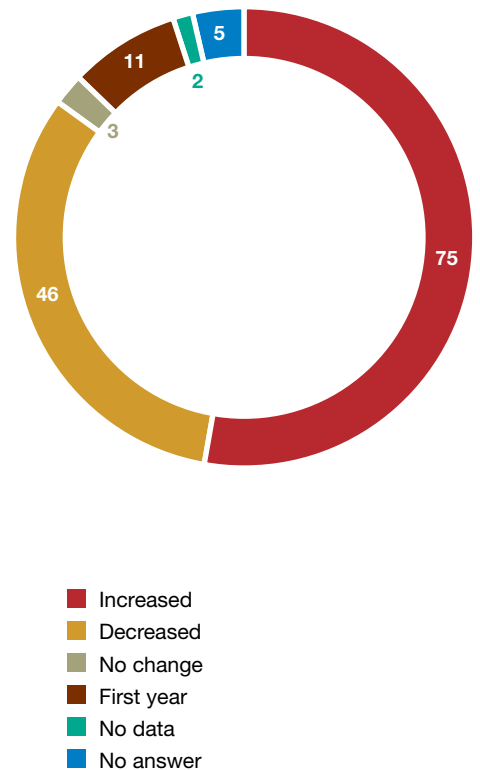
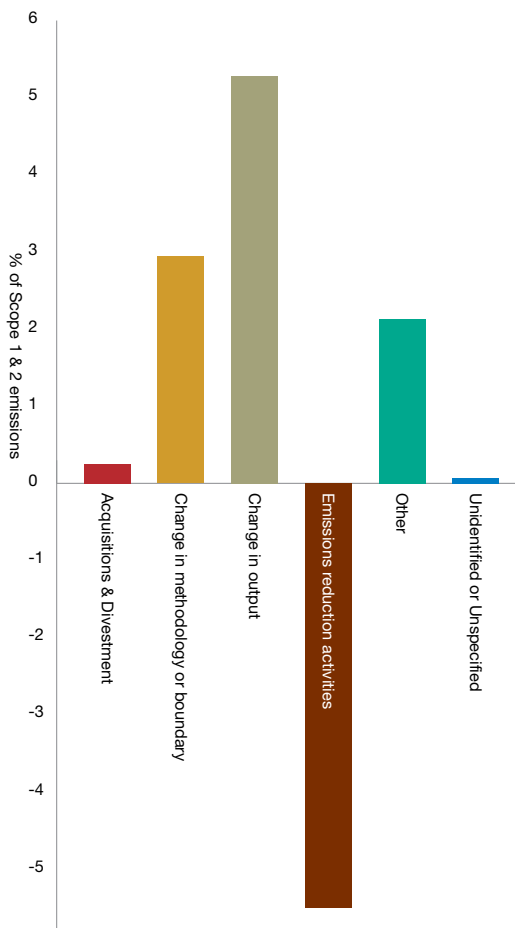


Figure 5: How do your absolute emissions (Scope 1 and 2 combined) for the reporting year compare to the previous year?



1. Six companies have different reporting years, for example 1 October to 30 September and for one company the latest figures are for the calendar year 2009.
 2. Last year, companies were only asked to give reasons if absolute emissions varied significantly compared with the previous year, and they were not asked to provide figures.
 3. While 143 company responses were received, only 142 are included in the analysis. Cardo responded indirectly through the parent company, Assa Abløy.

Figure 6: Reasons for changes in emissions.



- Acquisitions & Divestment
- Change in methodology or boundary
- Change in output
- Emissions reduction activities
- Other
- Unidentified or Unspecified

Companies were also asked to quantify the reasons for any change. Figure 6 summarises these answers, given as a percentage of total Scope 1 and 2 emissions. Limited importance should be attached to the precise amounts here, since many of the percentages reported are likely to be approximate. Even so, it is interesting to compare the different reasons given.

While acquisitions and divestments may have a significant impact on reported emissions in individual cases, their net impact is minor according to Figure 6. Changes in methodology or the reporting boundary (for example, when a firm includes activities over which it has financial, not just operational, control in its CDP reporting) appear more significant, and the increase here may be welcomed in so far as it reflects better reporting rather than higher actual emissions.

Perhaps the most striking aspect of Figure 6 is that emissions reduction activities appear to be almost entirely cancelled out by increased emissions due to changes in output. Indeed, the impact of output growth may be even larger in reality, since several firms report factors such as increased sales under 'Other'. Many firms also cite the exceptionally cold winter in 2010/11 and the resulting increase in energy costs under the 'Other' category.

One way to compare emissions year-on-year is to focus directly on disclosed emissions and to restrict attention to the 119 companies that provided data in both 2010 and 2011. This suggests an increase of 0.9% in Scope 1 and 2 emissions, part of which is also likely to be due to improved methodology. Figure 7 breaks this change down by sector.⁴

The rise in emissions in the energy-intensive Materials and Industrials sectors confirms what some firms in these sectors report: that it is difficult to decouple emissions from growth in the short run. Yet equally remarkable is the continued fall in emissions in Transportation and Energy & Utilities, despite the spike in GDP growth. As Figures 8 and 9 show, overall efforts to reduce industrial emissions depend largely on these sectors, which along with Materials account for the bulk of total Scope 1 and 2 emissions.

Figure 7: Change in reported emissions for companies reporting in both 2010 and 2011.

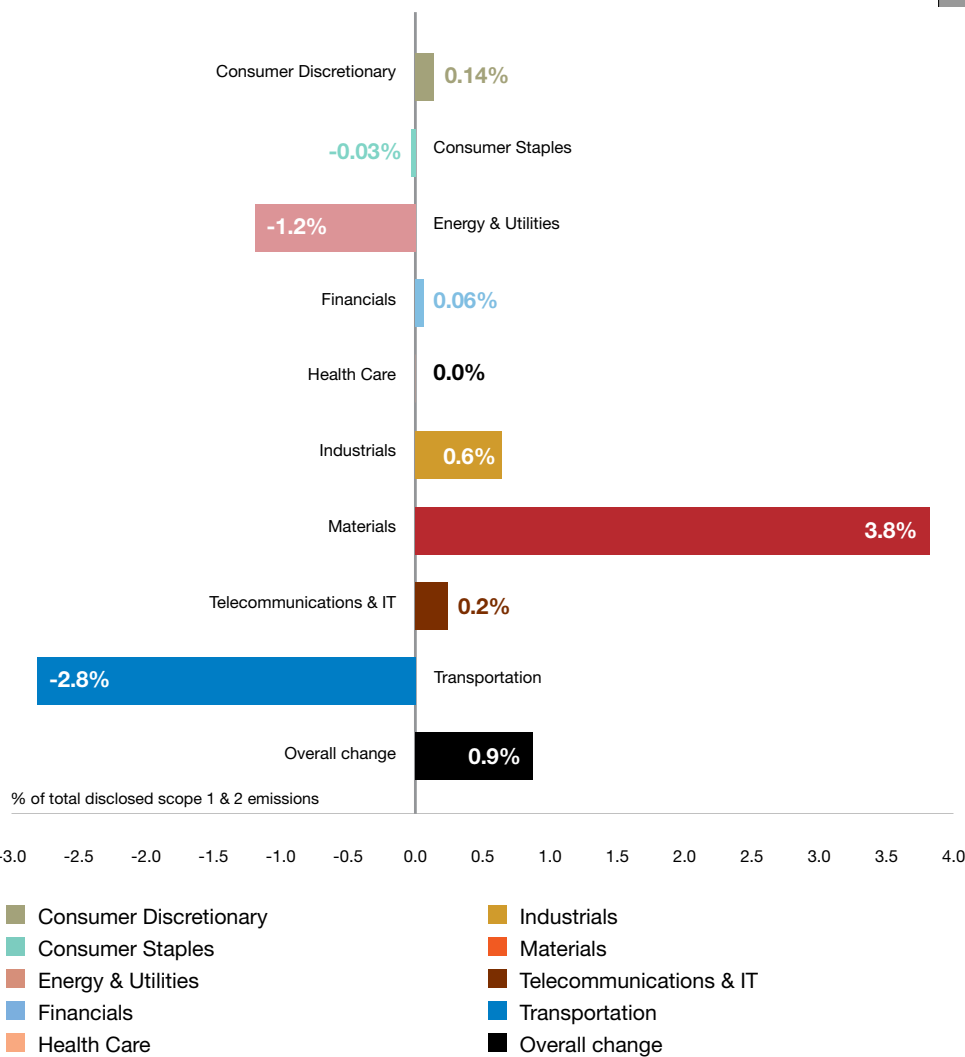
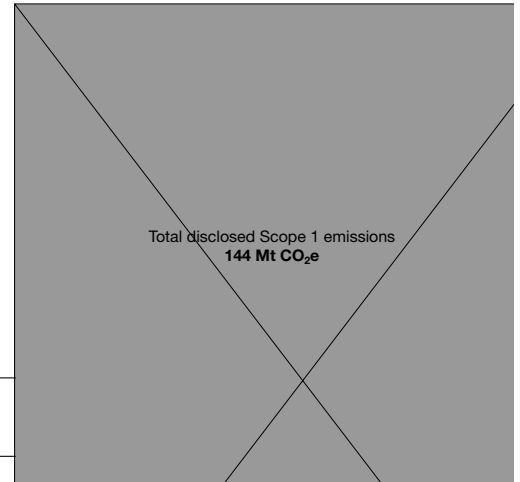
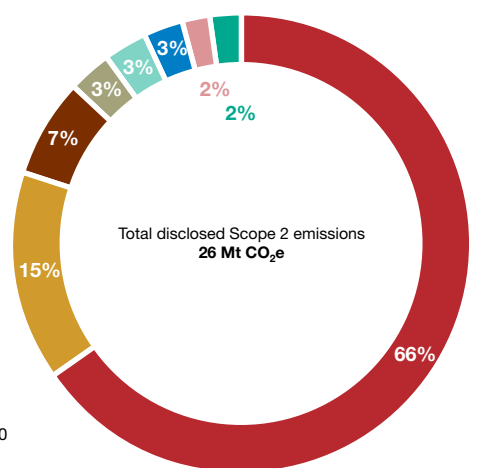


Figure 8: Disclosed Scope 1 emissions by sector (% of total).



- 38% Transportation
- 33% Energy & Utilities
- 21% Materials
- 4% Industrials
- 3% Consumer Discretionary
- 1% Other sectors (Consumer Staples, Financials, Health Care, IT & Telecommunications)

Figure 9: Disclosed Scope 2 emissions by sector (% of total).



- 66% Materials
- 15% Industrials
- 7% IT & Telecommunications
- 3% Consumer Discretionary
- 3% Consumer Staples
- 3% Transportation
- 2% Energy & Utilities
- 2% Other sectors (Financials and Health Care)

4. As last year, the sectoral split is based on the Global Industry Classification Standard (GICS), but with four sectors merged into pairs (Energy with Utilities, Telecommunications Services with Information Technology). In addition, Transportation is treated separately from the other GICS Industry Groups in the Industrials sector on account of its relatively high carbon intensity. Thus, in this report, the Industrials sector comprises only Capital Goods and Commercial & Professional Services, and Transportation is referred to as a sector.

The increase in emissions in the Nordic 260 as a whole is perhaps not surprising in view of the rapid economic turnaround in 2010. By contrast, a comparison of the emissions of the 103 companies who disclosed data in both 2009 and 2010 suggests that total Scope 1 and 2 emissions fell by 5.5% in the recession year of 2009.

Similarly, total emissions from companies participating in the EU Emissions Trading System rose by 3.2% in 2010 after falling by more than 11% in 2009. Nonetheless, with Nordic governments pushing for the EU to make more ambitious unilateral commitments to reduce GHG emissions, the absolute increase in the Nordic region may still be seen as a disappointment.

... but some Nordic companies remain pioneers in tackling climate change

Despite the rise in emissions during 2010, it is clear from CDP 2011 responses that many Nordic companies continue to pursue an ambitious approach to tackling climate change. Active initiatives to reduce emissions are reported by 89% of respondents.

Over two-thirds of respondents have at least one active emissions reduction target (see Figure 10). Given the previous discussion it is worth noting that more than half of these firms target emissions intensity only – that is, emissions relative to revenue or some

other measure of activity. Intensity targets may spur firms into taking action even when growth falters, as seems to be happening again in 2011. However, in periods of faster growth, emissions may rise while still remaining on target, and there is therefore a danger that over-reliance on intensity targets may limit the scope for reducing emissions in absolute terms.

Figure 11 provides an overview of the types of initiative specified, from energy efficiency to product design. Many or most of these initiatives are expected to pay off within three years, which suggests a strong business case for cutting emissions even in the relatively short term.

Figure 10: Active emissions reduction targets.

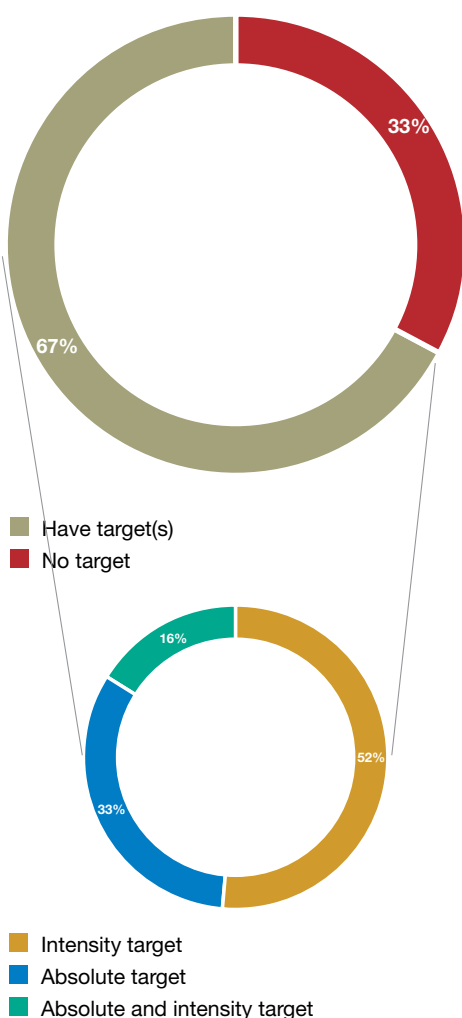
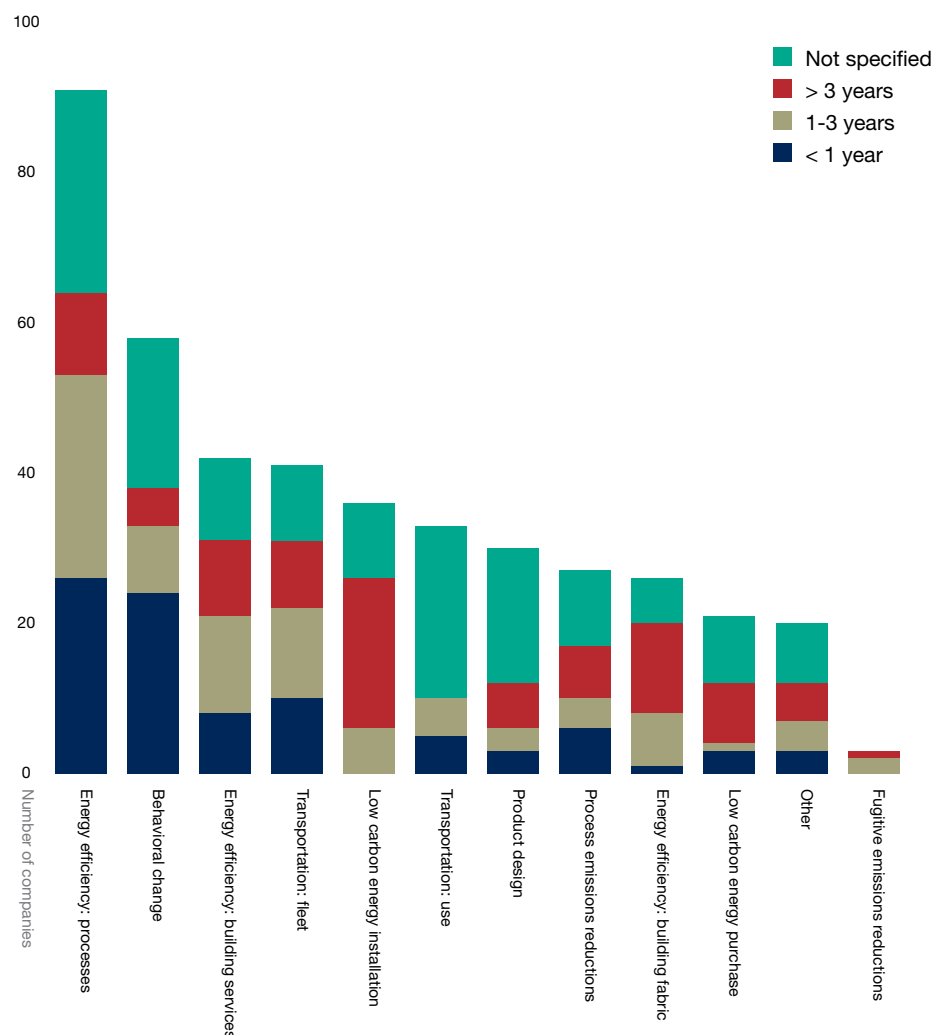


Figure 11: Types of emission reduction initiatives and payback time.



Examples from company responses



The Nordic company responses abound with examples of concrete measures to reduce GHG emissions. While it is scarcely possible to do full justice to these in the present report, we try here to provide a flavour of company strategies by outlining a range of innovative, topical or otherwise significant examples.

Metals company **Boliden** reports that several of its mines and smelters are taking part in government energy efficiency programmes in Sweden, Finland, Norway and Ireland. Reported annual savings of 12.5 gigawatt-hours at a single plant in Norway are notable in view of the sensitivity of Scope 2 emissions to output growth in this sector. Cash savings of SEK15.5 million at one Finnish smelter illustrate the business case for improving efficiency.

Elsewhere in the energy-intensive Materials sector, enzymes producer **Novozymes** reports some success in decoupling emissions from growth through continuous process optimisation and investment in energy-efficient equipment. A recent milestone was the company's announcement in May 2011 that its entire operation in Denmark is now powered by electricity from wind turbines.

Wind power is also a theme in paper and pulp manufacturing, with several companies reporting the construction of turbines on their forest land. **SCA**, for instance, has formed a jointly owned company with Fred. Olsen renewables to build wind farms with a potential annual capacity of 2 terawatt-hours.

Global shipping company **A. P. Moller – Maersk** – which accounts for most of the reported emissions in the Transportation sector – cites new hull designs and hybrid-fuelled cranes in container terminals among other measures that led to a further large fall in emissions in 2010. Yet most significant in monetary terms is a straightforward behavioural change: the company saves approximately US\$320 million worth of fuel and over 2 million metric tons in CO₂ emissions each year by simply sailing a little slower.

Solstad Offshore has introduced the concept of climate-neutral operations in its shipping services for the energy sector. The company gives clients an overview of the ship's CO₂ accounts, takes a range of steps to reduce fuel consumption and then compensates for remaining emissions by supporting projects that qualify for

UN Certified Emission Reductions. This together with other efficiency measures contributed to a saving of some 18,000 cubic metres of fuel, or 11% of the company's total fuel consumption, in 2010.

Alternative fuels are an increasingly common theme in Transportation, and developments in airlines have been rapid over the past year or so. In July 2011, **Finnair** began limited commercial flights using a 50:50 blend of kerosene and biofuel derived from cooking oil previously used in restaurants.

Refurbishments and upgrades of its hydropower and nuclear plants are key to **Fortum's** recent efforts to increase CO₂-free electricity production. The company also has interests in wind power and has commissioned combined heat and power plants that will run partly on biomass. Yet longer-term, Fortum sees a gradual shift towards reliance on solar energy as 'the only way to get the world's natural resources to last for future generations'.⁵

In Industrials, many companies emphasise innovations that help their customers to reduce emissions. Elevator manufacturer **Kone** reports that by the end of 2010 it had reduced the energy consumption of its standard range of lifts by 50% compared with equivalent models from early 2008.

Truck manufacturer **Scania's** 'Ecolution' concept aims to support customers' efforts to reduce the environmental impact of their transport services. The concept involves first optimising the specification of vehicles and then providing ongoing driver training to maintain optimal performance. Each element can reduce fuel consumption by up to 10%, with further reductions



in emissions if customers choose renewable fuels.

Construction company **NCC** says it is the first company in Sweden to offer 'green tenders' as a matter of course when bidding for major contracts (above SEK50 million). This means submitting an alternative tender that provides options for reducing and compensating for any negative impact on climate change, thus enabling clients to make an informed decision.

In Health Care, **Novo Nordisk** gives a good example of a comprehensive energy-saving programme, involving some 500 measures throughout the company's global operations. Improvements to heating and ventilation, compressed air systems and so forth rarely hit the headlines, but still play their part in helping to cut both GHG emissions and costs. The company reports total savings of DKK290 million (DKK58 million annually) for a total investment of DKK92 million over the period 2005–2010.

Cermaq has developed an ecological footprint model for its fish feed production business. This shows that only around 5% of emissions stem from the company's own operations; the rest occur in the supply chain. As a result, Cermaq has been able to reduce its carbon footprint by replacing certain marine ingredients with terrestrial alternatives.

In the Consumer Discretionary sector, companies are under pressure from both consumers and regulators to make their products energy-efficient. But household appliance maker **Electrolux** has also focused on its own operations, reporting that it is on course to hit an ambitious 2012 target to reduce energy consumption by 28% compared with 2005. The estimated annual savings are SEK200 million.

Alma Media helps business-to-business customers to reduce travel and transport emissions by means of its Mascus digital marketplace for heavy machinery. Before, machines were often transported several hundred kilometres to physical marketplaces, and customers travelled similar distances to purchase a machine before bringing

it back to its new home. Now the machine only needs to be moved once, which is estimated to reduce emissions by at least 1,000 metric tons of CO₂e per year.

Companies in Finance, as elsewhere, report a raft of measures to improve energy efficiency and to reduce the use of paper and transport. But unique to this sector is the influence firms may exercise as investors and lenders. Around one-third of the assets managed by **Swedbank**, for example, are in socially responsible investment (SRI) funds, which favour low-carbon alternatives. In addition, the bank offers beneficial terms in some of its markets on loans for eco-friendly cars and climate-smart homes.

Further examples can be found in the sectoral snapshots in the next chapter and in the company quotes elsewhere in the text, as well as in the public company responses available on the CDP website.

5. See also guest commentary on page 38 on the implications of the phasing out of nuclear energy in Germany, including the potential boom for renewable energy.

‘Our e-invoice service alone saved customers more than 75 000 tons CO₂.’

Tieto

‘All our funds are screened semi-annually for companies that violate international norms regarding environmental protection, human rights, labour standards and ethics. Exclusion of companies is used as a last resort when violations are severe and when companies are unwilling to change or improve their behaviour.’

Nordea Bank

Virtual meetings replace business travel

Similar measures to tackle climate change are often found in several different sectors, but one type of action that stands out this year is the avoidance of business travel through virtual meetings. Well over one-third of Nordic 260 respondents – including companies in all sectors – mention this as a significant source of emissions reductions.

In Industrials, for example, **SAAB** says that video or teleconferencing must be considered as an alternative before any business trip. In 2010 the company held nearly 10,000 virtual meetings – almost double the amount in 2009 – on over 100 videoconference systems, saving an estimated 3,900 metric tons of CO₂e emissions.

Even in the Transportation sector itself, companies are aware that climate concerns are increasing the demand for virtual meetings as a substitute for physical travel. **Finnair** reports that its travel agencies already have such services in their product range, and that Finland Travel Bureau succeeded in reducing its own travel and expenses by 15% last year by this means.

Firms in Telecommunications and IT naturally focus on the business opportunities in this area. **Telenor**, for example, reports that it has begun to market a portfolio of sustainable services, including ‘unified communications’ (email, phone, chat, videoconferencing, etc. on the same platform), that enable its customers to save energy and reduce emissions.

Nokia has reduced its CO₂ emissions from air travel by 40% since 2008 thanks to a travel awareness campaign and improved videoconferencing facilities. Moreover, the firm estimates that 88 million tons of CO₂ emissions would be avoided if 10% of its customers used their mobile device once a year to attend a meeting instead of travelling by plane.

100% renewable energy by 2050?

Switching to renewable energy or fuel is one of the most effective ways to reduce CO₂ emissions, and companies throughout the Nordic region report progress in this area. Even in aviation, where the use of renewables seemed hard to imagine only a few years ago, biofuel is now helping to power commercial flights. There are many examples in other sectors where companies have converted offices, factories and even entire operations to run on solar, water and wind energy.

But can these success stories be translated to the region as a whole? The Nordic countries are relatively well placed, with plentiful sources of wind, water and biomass. Denmark, Finland and Sweden are already subject to EU targets of 30%, 38% and 49% respectively, compared to 20% for the EU as a whole, for the share of total energy to come from renewable sources by 2020.

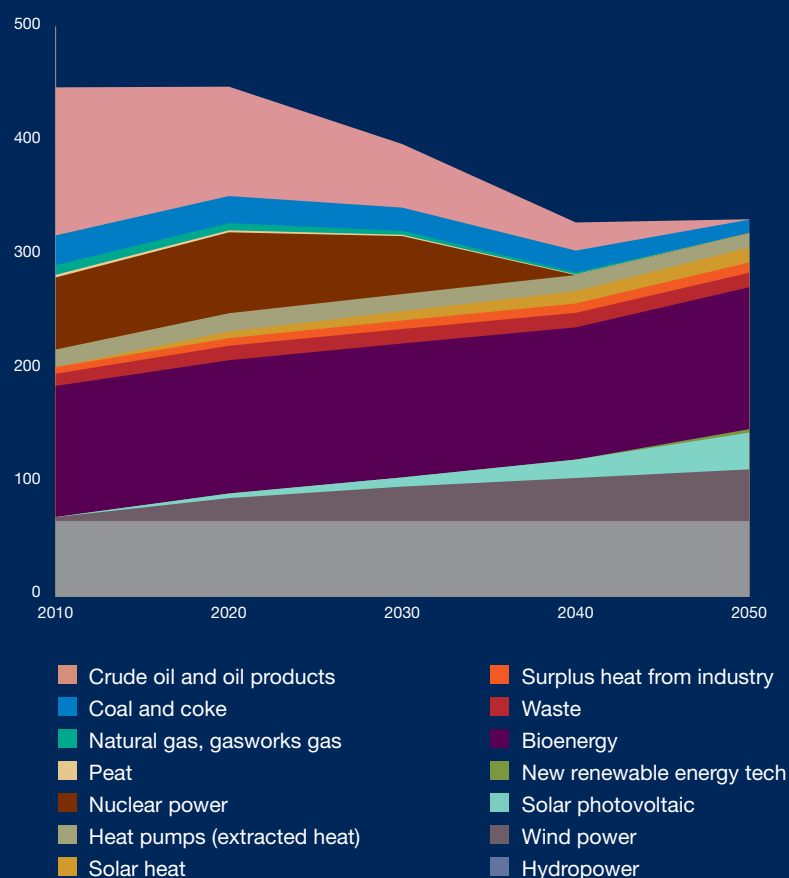
Yet there are also obstacles:

- Finland and Sweden rely heavily on nuclear energy, which also helps to keep CO₂ emissions down even though it presents its own set of environmental dangers.
- The supply of forest biomass is not unlimited, even in the sparsely populated Nordic region. Paper manufacturers point out that the growth in demand for wood to be used as biofuel is pushing up prices.
- Fossil fuels are still needed at times of peak demand, and while utilities report some progress with smart grids that would balance supply and demand and enable the storage of solar and wind power, developments are still at an early stage.

Nevertheless, a recent World Wildlife Fund report has concluded that 100% renewable energy by 2050 is entirely possible not only for the Nordic region but for the whole world.* An additional study develops a concrete scenario for how fossil fuels and nuclear power might be phased out in Sweden in a sustainable manner and based on known technology.†

As the figure below shows, the scenario depends on reducing total energy usage by around one-third, and on increasing the supply of wind and solar power in particular. The criterion of sustainability places a limit on any increase in bioenergy, since taking much more wood from Nordic forests would endanger both biodiversity and the role of the forest as a carbon sink, while imports of liquid biofuel might result in higher emissions abroad.

Figure 12: Energy sources in Sweden in a scenario for 100% renewable energy by 2050 (TWh) excluding energy losses in nuclear



Source: Gustavsson, M., E. Särholm, P. Stigsson and L. Zetterberg (2011). "Energy Scenario for Sweden 2050 Based on Renewable Energy Technologies and Sources", IVL Swedish Environment Institute and WWF Sweden, Göteborg and Stockholm. September.

* WWF, The Energy Report: 100% Renewable Energy By 2050 (2011)

† WWF, Hållbar energi: 100% förnybart på naturens villkor (2011)

‘Competition for wood fibre is driven by a regulatory demand for non-fossil fuel created from the biofuel sector which is driving up prices for wood raw material.’

SCA

Regulatory uncertainty is holding back emissions-reducing investments

Judging by the Nordic 260 responses, regulation accounts for some of the most clearly identifiable material risks that companies face in relation to climate change. In Transportation, Energy & Utilities, Materials and Industrials, almost all respondents say that costs and/or sales are sensitive to a range of international, regional and national regulations and taxes relating to fuel, energy and emissions. Moreover, developments in the regulatory framework are not always easy to predict.

In most cases, the issue is not climate change regulation in itself. On the contrary, most large firms in the Nordic region consider themselves to be ahead of the game when it comes to low-carbon technology, and many say explicitly that they expect to benefit from tougher standards – provided that such standards are consistently applied.

However, the lack of international agreement on tackling climate change – both within the UN Framework Convention on Climate Change and in international organisations governing sectors such as shipping and aviation – creates uncertainty over future regulation. Companies are also concerned that the vacuum may be filled by inconsistent national and regional regulations that will prove distortionary or difficult to enforce.

Among the concerns highlighted in company responses:

- The EU and Norway have offered further reductions in GHG emissions by 2020 if other large emitters make similar commitments as part of a global deal. Emissions may have to fall by 30% instead of 20% in the EU, and 40% instead of 30% in Norway (compared with 1990 levels). But companies are unsure whether to take the necessary action now or, like some of their competitors (at home and abroad), to wait and see.
- The lack of progress towards a global carbon market in aviation has led the EU to step into the breach by bringing the sector under the aegis of its Emissions Trading System (ETS) from 2012. But the application of the ETS to non-EU carriers' flights to and from the EU faces stiff legal and political challenges. Airlines in the Nordic region fear that their non-EU competitors will, one way or another, gain an unfair advantage.
- Progress towards a market-based mechanism in shipping has also been slow. Some see regulation as a more likely alternative, in the form of mandatory requirements under the IMO's Energy Efficiency Design Index and Ship Energy Efficiency Management Plan schemes. But this too could take time, and some Nordic respondents say they will need to see the details before spending substantial amounts on upgrading their fleets.

- In the absence of effective global and regional measures, several firms see a significant risk of higher national carbon taxes. But while the prospect of higher taxes may broadly encourage energy and fuel efficiency, some firms say that uncertainty in this area – due in part to the unpredictability of national policy-making – is holding back some of the investments needed to enable a low-carbon economy.

Figure 13 illustrates the coverage of emissions trading schemes in the Nordic 260. The EU ETS accounts for the vast majority of this, and as Table 1 shows, in most cases it has not yet had a material impact on the bottom line, at least not directly. Most firms continued to receive more than enough free allowances in 2010, and at an average of €13.99 per metric tonne,⁶ the price of CO₂e was affordable for those that did need to purchase additional allowances.

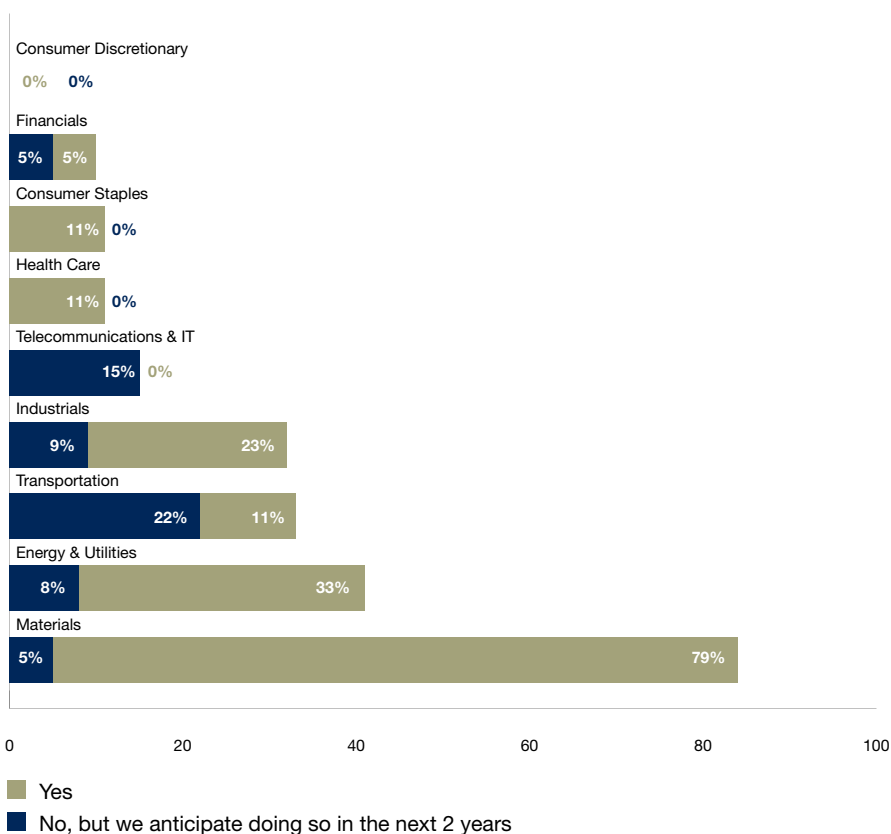
‘Slow progress by the International Maritime Organization (IMO) could encourage unilateral and non-harmonised responses from some or several jurisdictions.’

Teekay Petrojarl

‘The Viasat set-top boxes (STBs) now have two standby functions, “normal” and “deep” standby, and an automatic standby function was introduced on all boxes last year. All this is done to decrease our and the customers’ environmental impact and to ensure we are well positioned ahead of any future regulations on STB energy efficiency.’

Modern Times Group

Figure 13: Do you participate in any emission trading schemes?



6. Source: Point Carbon

Table 1: EU ETS allowances and verified emissions, 2010 (metric tons CO₂e), as disclosed

	Sector	Allowances allocated	Allowances purchased	Verified emissions
A.P. Moller – Maersk	Transportation	2,452,971	44,970	1,909,094
Ahlstrom	Materials	982,255	0	548,512
Auriga Industries	Materials	78,507	–	56,721
Boliden Group*	Materials	78,909	0	78,909
Carlsberg Breweries	Consumer Staples	201,208	0	132,440
Fortum	Energy & Utilities	5,600,000	4,100,000	9,700,000
Hafslund	Energy & Utilities	57,655	63,624	–
Huhtamäki	Materials	73,642	–	67,970
Kinnevik	Financials	214,079	0	205,993
Kemira	Materials	6,343	0	3,978
M-Real	Materials	–	0	–
Metso	Industrials	14,194	0	6,020
Neste Oil*	Energy & Utilities	16,131,564	899,000	10,224,108
Norske Skog	Materials	518,085	0	438,721
Novo Nordisk†	Health Care	131,778	0	99,188
Novozymes	Materials	15,193	0	12,570
Orkla	Industrials	200,250	0	158,519
Outokumpu	Materials	13,000,000	0	795,000
Rockwool International	Industrials	987,300	0	715,000
Scania	Industrials	24	0	0
SKF	Industrials	9,885	0	3,543
SSAB	Materials	7,371,579	0	5,921,510
Statoil	Energy & Utilities	12,695,792	12,695,792	12,695,792
Stora Enso	Materials	3,995,841	441,871	2,744,214
SCA	Materials	1,797,870	0	1,429,645
UPM-Kymmene	Materials	2,450,886	0	1,777,868
Wärtsilä	Industrials	11,092	–	12,153

Notes:

Dash indicates no data reported

* figures for the whole period 2008–2012

† figures for the whole period 2005–2010

In Phase 3 (2013–2020), more industries will be covered, including aluminium and other non-ferrous metals as well as airlines (from 2012), and free allowances are to be progressively replaced by auctions. Last year’s CDP Nordic report noted concerns over the precise arrangements for Phase 3. These appear to have subsided somewhat over the past year, although uncertainty remains over the likely price of carbon, which will depend partly on whether the EU commits to further reductions in emissions.

All in all, the Nordic 260 responses suggest that companies would be willing to pay a higher price for CO₂e in exchange for greater regulatory stability and international consistency. Moreover, compared with a patchwork of national regulations and taxes, global agreements would reduce material risks and improve the conditions for investments in low-carbon technology.

Nordic companies lag behind in disclosing their total carbon footprint

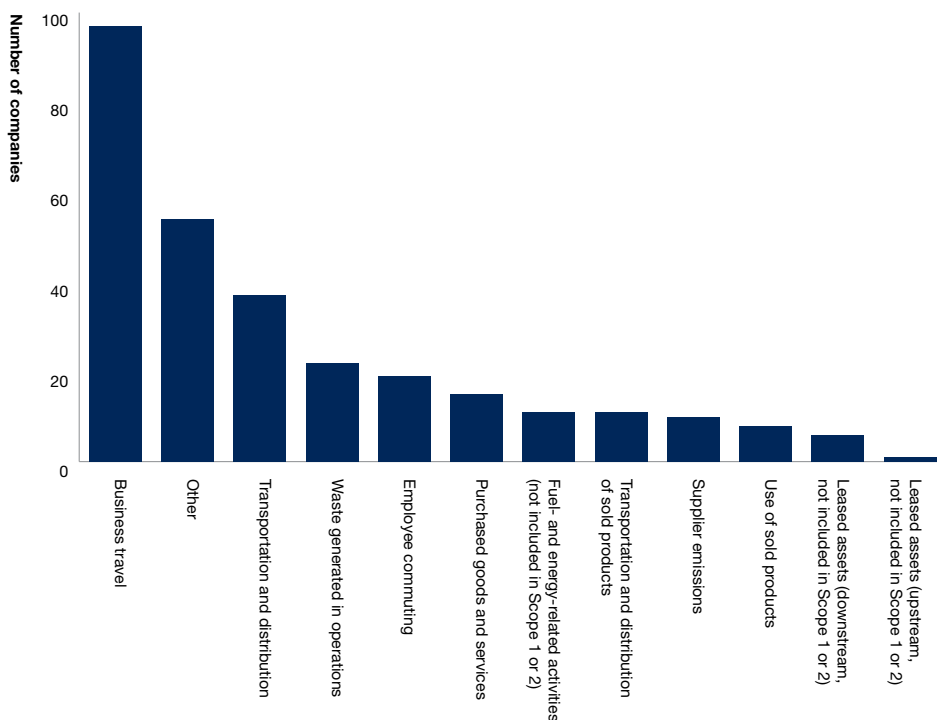
This chapter has focused mainly on Scope 1 and 2 emissions so far, and with good cause. Reporting of Scope 3 emissions is optional under the GHG Protocol, and disclosure is much less comprehensive than for Scopes 1 and 2.

Figure 14 shows the number of Nordic 260 companies disclosing each type of Scope 3 emission in CDP 2011. In many of these areas, the measurement of emissions is methodologically more complex than for Scopes 1 and 2, and relies partly on information from suppliers and customers, or on estimates and modelling.

‘Although the EU has committed itself to emission reduction beyond 2012 and to the continuation of the emissions trading system (ETS), the uncertainty related to post-2012 global policy is the main regulatory risk for the future investments of the energy industry. This might result in wrong investment decisions (technology, fuels, location).’

Fortum

Figure 14: Types of Scope 3 emissions disclosed



Emissions due to travel and transport are relatively straightforward to estimate, since many companies already have information from contractors on modes of transport and distances travelled. But these categories account for only a small fraction of total Scope 3 emissions. Towards the other end of the scale, only a handful of companies disclose emissions from their supply chain and from the use and disposal of their products.

As a result, reported Scope 3 emissions are dwarfed by Scope 1 and 2 emissions in the so-called carbon intensive sectors – Transportation, Energy & Utilities and Materials. Only in IT & Telecommunications and Industrials – two sectors with especially strong incentives to focus on what they can do to reduce their customers’ emissions – does Scope 3 appear substantial in both absolute and relative terms (Figure 15).⁷

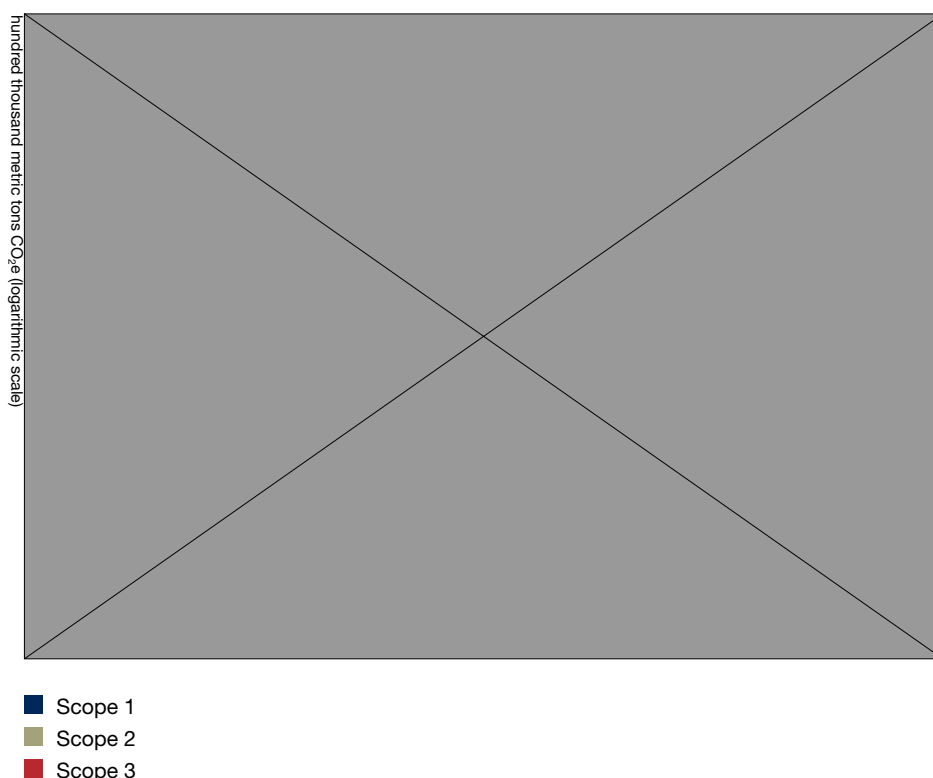
But this picture is misleading. A similar figure for the CDP Global 500 – where Scope 3 reporting is a little less patchy, though still far from comprehensive – shows that Scope 3 emissions are larger than Scope 1 and Scope 2 in almost every sector, including Energy and Materials (Figure 16).⁸

Indeed, if Scope 3 emissions were fully reported, they would be larger still. This is partly because of double counting (for example, one firm’s Scope 1 emissions may also be counted as Scope 3 by its customers and/or suppliers). But Scope 3 also covers emissions from the use and disposal of products by final consumers, as well as in business-to-business trade. Aside from size, however, there are two compelling reasons for companies to improve their monitoring of Scope 3 emissions.

One is that Scope 3 reflects real material risks. Companies that do not have a clear picture of the emissions caused by the use and disposal of their products are more likely to fall foul of product regulations and tightening energy efficiency standards, not to mention consumer backlashes. Similarly, failure to check the carbon credentials of suppliers may risk reputational damage that undermines a company’s own efforts to cut emissions.

In addition, many Nordic 260 companies report that they are under pressure from customers, investors and other stakeholders to map their total carbon footprint. In some cases, firms are being asked to account for their supply chain as well as their own operations in order to win both public and private sector contracts.

Figure 15: Total reported emissions by sector, Nordic 260.



7. Note that the scales in Figures 15 and 16 are logarithmic so as to make the charts readable for the lower-emitting sectors. In Figure 15, for instance, Scope 1 emissions in Energy & Utilities (blue) are eight times the size of Scope 3 emissions (red). The sectoral breakdown is slightly different in Figure 16 since the Global 500 report uses the unmodified GICS classification (see footnote 4 above).

8. The particularly large difference in Energy is mostly due to Scope 3 emissions from the use of sold products. No firms in the Nordic 260 report emissions in this category even though several sell large quantities of petrol, diesel and gas.

A second and related reason is that Scope 3 represents the main channel of influence over climate change for many firms, especially in sectors where direct emissions and energy intensity are low. By meeting consumers' expectations for reduced emissions during use and disposal, and by demanding effective carbon management from their own suppliers, firms are helping to stimulate demand for and supply of low-carbon goods and services throughout the economy.

The issue is not that companies in the Nordic region are unaware of their influence over emissions outside their own operations. On the contrary, 73% of Nordic 260 respondents indicate that their products and services directly help third parties to avoid GHG emissions, compared with 70% for the Global 500. The question, therefore, is how to proceed practically with tracking and quantifying Scope 3 emissions.

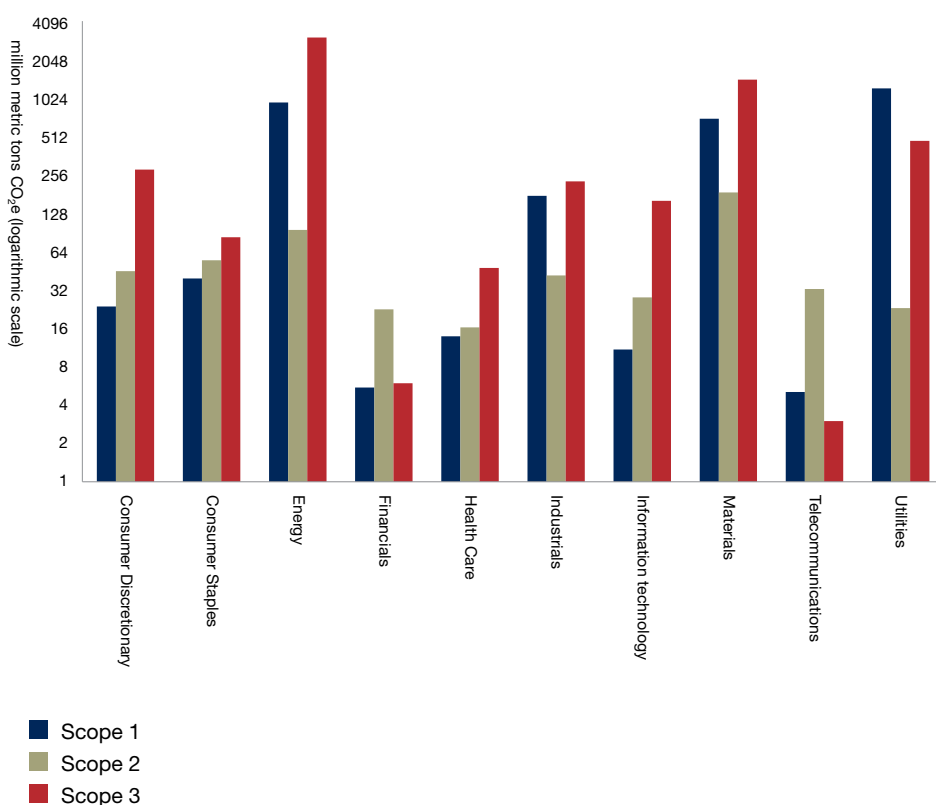
The good news here is that improved protocols for Scope 3 reporting are now available. A new Corporate Value Chain (Scope 3) accounting and reporting standard was published under the GHG Protocol in October 2011. The International Organisation for Standardisation (ISO) is also drafting a new standard that will help companies to measure their carbon footprint on a comparable basis.

One practical option for respondents is to work with an external partner who can also help to verify Scope 3 emissions. Verification in general has received more emphasis in CDP this year (see Box), but it is likely to be particularly important in future for Scope 3 given the greater complexity involved.

Another option for companies wishing to improve Scope 3 monitoring would be to join CDP's Supply Chain programme, through which suppliers respond to the CDP questionnaire and an additional supplier module. This already applies the new GHG Protocol standard and provides a solid basis for measuring upstream Scope 3 emissions. Participating companies have reported response rates as high as 100%, which is testimony to the influence wielded by major customers. They have also found that the process helps to identify 'carbon hotspots' in the supply chain, and to find new ways of cooperating with suppliers to reduce waste and emissions.

It seems unlikely that companies will be formally required to report Scope 3 emissions in the near future. Carbon taxation and emissions trading generally apply to Scopes 1 and 2 only, and it might be legally problematic to hold companies to account for emissions that are not strictly under their control. Nevertheless, Scope 3 is of the greatest relevance for investors, consumers and anyone else with an interest in transparent reporting of GHG emissions. It is precisely in this area that voluntary reporting initiatives may add the most value.

Figure 16: Total reported emissions by sector, Global 500.



Verification

CDP is committed to increasing the level of verification of emissions disclosures in order to improve the quality of the information submitted by companies globally. In turn, 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 organizations and other stakeholders for assured and reliable climate data.

Improved internal management processes that can be harnessed for competitive advantage is a key benefit of verification. In order 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, a number of criteria were introduced to determine what is accepted as verification within CDP's scoring methodology. It requires that a verification statement:

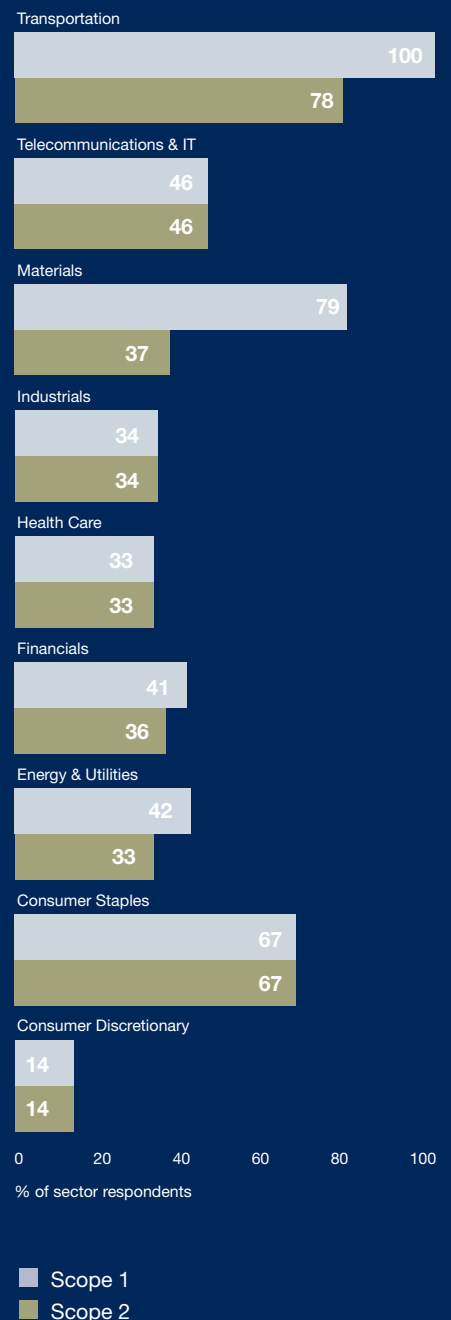
1. Is related to the relevant emission scope
2. Clearly states the type of verification that has been given and the standard used
3. Covers the current reporting year
4. Is undertaken by an independent third party

Whilst 52% (74) of respondents stated that they had gained or were in the process of gaining verification of Scope 1 or 2 emissions, only 23% (33) met all verification criteria for Scope 1 or 2 emissions. This is a result of strengthened criteria from CDP to reflect the importance of verification. 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 17.

What is CDP doing to support reporting companies?

For 2012, CDP is providing further clarity on what constitutes an acceptable verification process, which will be 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.

Figure 17: Percentage of companies in each sector with verification complete for at least a proportion of their emissions



The physical impact of climate change hits home in the Nordic region

When it comes to the physical consequences of climate change, it is probably fair to say that most companies in the Nordic 260 are more concerned about their foreign operations. In CDP 2011, physical risks and opportunities are reported as far afield as Alabama (USA) and Zhuhai (China). Coastal regions in Asia are often cited as being particularly vulnerable to rising sea levels and extreme weather events.

The potential consequences to which firms must adapt include disruption of production and distribution, shortages of water and raw materials, and associated security risks. 'Cyclone-safe' building specifications, reduced reliance on local freshwater supplies, and the diversification of risks across many different locations are among the measures cited.

The home market by contrast tends to be seen as a relatively safe haven. Several firms cite the findings of the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (2007): that climate change in Northern Europe is initially projected to have mixed effects, including some benefits.

Nevertheless, a look at the combined responses of Nordic companies suggests that climate change is already having a significant physical impact on the Nordic region itself. Moreover, the responses of some firms suggest that there may be knock-on effects, with associated material risks and opportunities that other firms have perhaps yet to take into account.

Figure 18 shows a selection of observed and expected environmental changes identified by Nordic 260 respondents and linked to business risks and opportunities. The timescale varies. Effects due to a rise in mean temperature, for example, are generally longer-term, while others, such as the increased frequency of heavy rain in Denmark and southern Sweden over the past decade, are already making themselves felt.

Of course, uncertainty remains over the permanence of some of these effects or the extent to which they are due to climate change. For instance, many firms report problems due to the exceptionally cold and snowy winters of the past two years, but views differ on whether this represents a trend or an aberration. Some firms expect a gradual increase in year-round temperatures, though perhaps with wider extremes; others expect warmer summers and colder winters.

'Heavy rains in the Nordic region, especially in the South of Sweden and Denmark ... could directly harm the quality of Peab's buildings or other construction made by Peab.'

Peab

Figure 18: The physical impact of climate change in the Nordic region.

Note: selected observed and expected physical effects identified by Nordic companies.



Most of the changes illustrated present both risks and opportunities. In forestry, for instance, increased temperatures and rainfall will mean faster tree growth, but since transport from within the forest is easier when the ground is frozen solid, the harvesting period may shorten. Increased precipitation might be good for hydropower, but not if it is unevenly distributed throughout the year, since energy from wet seasons cannot be stored to make up the shortfall in a drought.

The melting of the polar ice cap is another current phenomenon. At the time of writing (September 2011), the Northern Sea Route – a shortcut to South East Asia through the Barents Sea and along the coast of Siberia – is open. The extent of ice in the Arctic Sea has declined towards record lows in 2011, and the decline over recent decades appears to be confirmed.⁹

Shipping firms, particularly Nordic ones with long experience of sailing icy waters, see this as an emerging opportunity over the next decade or so. Others, such as security and defence contractor SAAB, see opportunities of a different kind: providing protection against the inevitable security concerns that will arise if the route does become a major one for global trade.

Similarly, oil and gas deposits beneath the receding ice shelf present opportunities for some companies, but the Nordic countries may risk being drawn into conflicts over these resources. Thus, changes in the physical environment may have far-reaching and unpredictable economic and political consequences, which in turn may entail risks and opportunities for businesses in all sectors.

Perhaps ‘uncertainty’ is a more accurate term than ‘risk’ in this context, since natural phenomena rarely come with known probabilities and possible outcomes attached. This may be of little practical help to risk managers, except perhaps to suggest the risk of complacency in assuming that climate change will have a minimal impact in the North. In any event, companies that are engaged in these issues are likely to be better prepared to deal with concrete risks when they do emerge, as well as to help prevent them emerging in the first place.

‘Due to the vulnerability of the Arctic environment it is likely that only companies that can demonstrate a good environmental management and safety performance will be allowed to operate on these trade routes.’

A.P. Moller – Maersk

9. According to data compiled by the University of Bremen's Institute for Environmental Physics, the extent of Arctic sea ice reached a record minimum on 8 September 2011, and researchers say the decline can no longer be attributed to natural yearly variations, for example in weather conditions (<http://www.iup.uni-bremen.de/seaice/amslr/minimum2011-en.pdf>). Different satellite observations reported by the National Snow and Ice Data Center at the University of Colorado, Boulder, suggest that the minimum extent of ice in 2011 is the second lowest on record, and data for the past several years lie well below two standard deviations under the 1979–2000 average (<http://nsidc.org/arcticseaicenews/>).

Seizing the opportunities, stepping up the challenge

Commentary by Håkan Wirtén, Secretary General, WWF Sweden



Whether you have your heart in climate science and protecting natural resources, or in economics and global development, breaking our dependence on fossil fuels is paramount. This calls for a transformation of our economies and the energy systems that fuel them. This is the challenge of our time. But there is good news to go with the endeavour: an energy system based on 100% renewables is possible, and therefore necessary.

The impact of climate change is material already today in all parts of the world. Ever since the IPCC released its Fourth Assessment Report (AR4) in 2007 it's been clear that developed countries need to reduce their GHG emissions by 80-95% to give us a 50/50 chance (!) of keeping global warming below 2°C. Beyond this level scientists predict catastrophic effects of climate change for ecosystems and economies. Later publications indicate that the situation for our climate is even worse than described in the AR4 report.

As if this wasn't enough, the concentration of greenhouse gases in the atmosphere is steadily increasing and the International Energy Agency (IEA) recently reported all-time high carbon emissions in 2010.

Technology isn't the issue. Leadership wanted.

In the transition to a truly low-carbon economy we will face many global challenges, but also global opportunities. A crucial step towards a sustainable energy system based on 100% renewables is to come to grips with our inefficient use of energy and resources. Technology isn't the issue, there's a multitude of innovative solutions and technologies waiting to serve the low-carbon market. What we need is ambitious governments who implement measures for faster large-scale deployment of climate innovations, e.g. by increasing support for demonstration and introducing feed-in tariffs.

But what is the role and contribution of Nordic companies in the global transition?

Awareness is high but emissions keep rising

The 2011 Nordic CDP respondents seem to recognize the climate challenge, and they display a wide range of strategies to meet it. The many specific examples of profitable energy efficiency measures are instrumental. The communication of such business cases plays an important role in inspiring more companies to follow.

At the same time, a high level of activity may conceal that the sum of our efforts is insufficient or inadequate. This is reflected in the absolute increase in emissions reported by responding companies in 2010¹ – confirming the IEA all-time high report – and that emissions reduction activities appeared to be almost entirely cancelled out by increased emissions due to changes in output. Given that a third of the companies only use a carbon intensity target this should come as no surprise. However, it triggers a further discussion about the alleged decoupling of growth and emissions, often put forward by government and industry representatives. A quick look at our carbon footprint in the Nordic countries tells us that we need more transformative measures and to become serious about targets for absolute emission reductions.

Opportunity for business development and strengthened competitiveness

Some respondents indicate that additional measures could be taken, but refer to "uncertainty over future regulation" and claim that "unpredictability of national policy-making is holding back investments". This is confirmed by many studies but only partly true; investments in renewable energy are indeed severely hampered by fragmented policies, but the evidence – also presented in this report – confirms a substantial potential for profitable energy efficiency investments that are ready to roll out. Nonetheless, to realise

1. Data is based on emissions disclosed by the 119 companies that provided data in both 2010 and 2011 (see page 14). This suggests an increase of 0.9% in Scope 1 and 2 emissions, part of which is also likely to be due to improved methodology.

the full potential of energy efficiency more ambitious standards and energy saving targets are needed. Over-consumption of energy means that money is wasted and competitiveness is reduced. It should be addressed accordingly.

It's encouraging to see the examples of Scope 3 measures reported by the respondents. Strategies for reduced emissions in the usage phase of the corporate value chain (Scope 3) as well as strategies for avoided emissions in society (also referred to as Scope 4) are essential for the transition to a low carbon future because, as the report points out, they have a multiplying effect by "helping to stimulate demand for and supply of low-carbon goods and services throughout the economy". Some of the examples presented in this report may be limited in scale and embraced by only a few of the companies. However, given the magnitude of challenges ahead, enhanced climate strategies open the door to opportunities for new markets and revenues which are waiting to be exploited. This is particularly valid for sensitive products where indirect, life-cycle impact dominates the carbon footprint, e.g. automobiles, home appliances, buildings, etc.

Given the anticipated growing importance of Scope 3 and avoided emissions it should worry managers and owners that "Nordic companies lag behind in disclosing their total carbon footprint". Scope 3 must be placed at the core of business

strategies and rewarded in carbon reporting to enable the transition and fully capitalise on the opportunities in the low carbon economy. This would also contribute to a much needed capital injection from Nordic corporates and financial actors towards the cleantech sector, a €180 billion business area that is currently growing at 31% per year.

Decision-making for a low carbon future

The establishment of CDP Nordic is a great achievement and the increasing number of respondents is indeed a promising sign. WWF Sweden fully supports all efforts to put climate change impact at the core of every business manager's and investor's decision-making. We hope for a continued fruitful partnership to fulfill CDP's ambition to "ensure the effective use of data collected", by the reporting companies as well as by the CDP signatory investors.

'Enhanced climate strategies open the door to opportunities for new markets and revenues which are waiting to be exploited.'

2011 Leaders

Introduction to the Carbon Disclosure Leadership Index (CDLI) and the Carbon Performance Leadership Index (CPLI)

Each year, company responses are reviewed, analysed and scored for the quality of disclosure and performance on actions taken to mitigate climate change. This results in a disclosure score and, where sufficient disclosure exists, a performance score.

Disclosure scores

- 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 normalized scale
- Companies are assessed based on their level of disclosure of carbon emissions measurement techniques and subsequent public disclosure
- Companies with the highest disclosure scores are listed in the CDLI

Performance bands

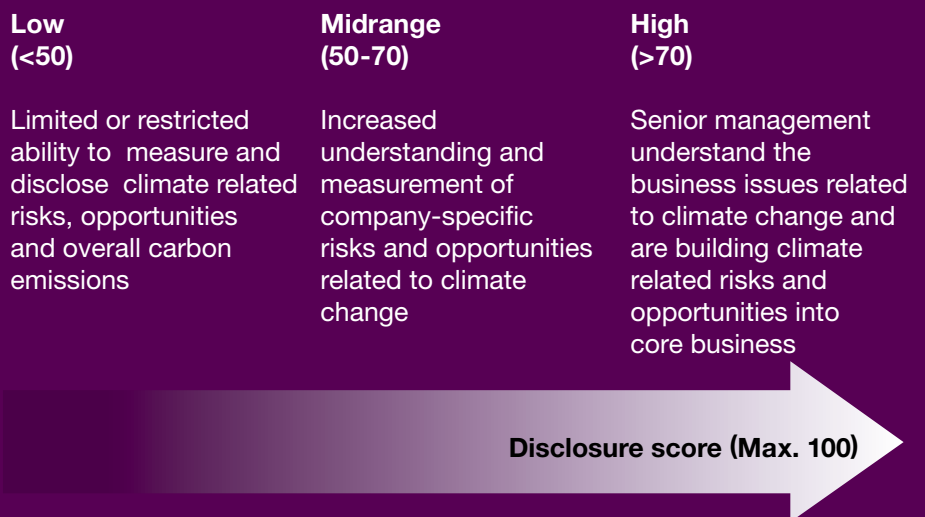
- Where a company's disclosure score is 50 or more, its performance in contributing to climate change mitigation, adaptation and transparency is assessed and ranked in a performance band
- In 2011 there are six performance bands (there were four bands in 2010)
- Score within the top 10% of the reporting population: a total of 26 companies are included in the 2011 Nordic 260 CDLI

Analysis of the CDLI and CPLI provides insights into the characteristics and common trends among the leading companies on carbon disclosure, and highlights good practices in reporting, governance, risk management, emissions reductions and other areas. The financial performance of CDLI companies is examined and compared against the benchmark index of the Nordic 260.

What does a CDP carbon disclosure score represent?

Generally, companies scoring within a particular range suggest levels of commitment to, and experience of, carbon 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.

Figure 19: Carbon disclosure score



The journey to leadership



How is the disclosure score determined?

In determining the disclosure score for each company, we assess the following:

- 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 organization

- 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 for 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 52¹³ companies are included in the 2011 Global 500 CDLI

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

1. In 2011, seven companies scored 90 (the 46th highest score) which took the total number of companies in the CDLI to 52.

The 2011 Carbon Disclosure Leadership Index (CDLI)

Table 2: The Nordic 260 CDLI 2011

Company	Sector	Disclosure Score
Fortum	Energy & Utilities	97
Tieto	Telecommunications & IT	96
Novo Nordisk	Health Care	89
Nordea Bank	Financials	87
Norske Skog	Materials	87
Stora Enso	Materials	87
Electrolux	Consumer Discretionary	86
Rockwool International	Industrials	86
SCA	Materials	86
Novozymes	Materials	85
Atea	Telecommunications & IT	84
Nokia Group	Telecommunications & IT	84
Outokumpu	Materials	84
Storebrand	Financials	84
Kone	Industrials	83
Skanska	Industrials	83
UPM-Kymmene	Materials	83
D/S Norden	Transportation	82
Ericsson	Telecommunications & IT	82
Outotec	Industrials	81
SAAB	Industrials	81
SEB	Financials	81
Ekonnes	Consumer Discretionary	80
Kesko	Consumer Staples	80
SKF	Industrials	80
Tryg	Financials	80

‘Disclosure scores are an assessment of the quality and completeness of company responses to the CDP information request’

■ Companies highlighted in cream are those that have been in the Nordic CDLI for three consecutive years (2009-2011)

■ Companies highlighted in blue are those that have moved into the Nordic 260 CDLI this year

In 2011, CDP has raised the bar by enhancing the scoring methodology for both disclosure and performance questions to make the scoring results more relevant to investors and other stakeholders.

The number of companies in the CDLI has increased to 26 in 2011 (20 in 2010) due to the increase in the Nordic sample to 260 companies (200 in 2010).

The highest disclosure score in 2011 is 97, achieved by Fortum, closely followed by Tieto with a score of 96. These scores are higher than the highest disclosure score in the 2010 Nordic 200, which was 93 (achieved by Stora Enso).

Nine companies enter or re-enter the Nordic 260 CDLI in 2011. The entry of Ekornes into the disclosure leadership index is particularly noteworthy since the company responded for the first time this year.

The average disclosure score of the CDLI companies is 84 in 2011 (84 in 2010, 76 in 2009). The lowest CDLI score is 80 in 2011 (78 in 2010, 72 in 2009). Thus the quality of disclosure within the CDLI remains similar, although the growth in the index from 20 to 26 means that the number of companies achieving high disclosure scores this year is greater in absolute terms.

The overall Nordic 260 average disclosure score is 64 in 2011 (60 in 2010, 55 in 2009), indicating a general improvement in the quality and depth of responses by Nordic companies, despite the increasing stringency of the scoring mechanism from year to year.

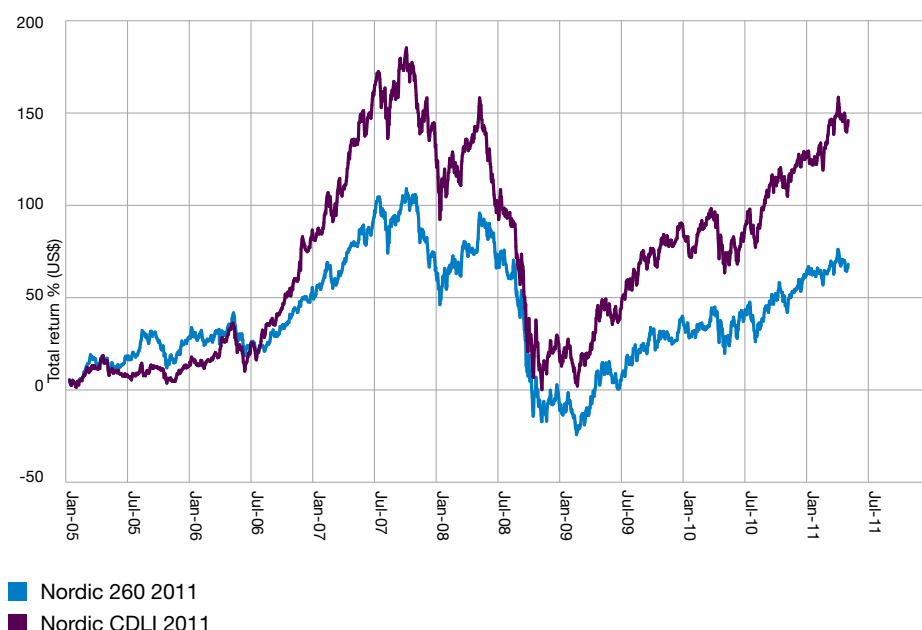
All sectors² are represented in the CDLI, confirming the view that high quality disclosure is possible in all areas of industry. The Materials sector has high representation compared with the Nordic 260 as a whole, while Industrials, Energy & Utilities and Transportation have low representation. Many companies have reached the CDLI on more than one occasion. However, eight companies have featured in the leadership index for the third consecutive year, thereby demonstrating a strong long term commitment to measuring and reporting on climate change.

CDLI and Shareholder Value

Companies included in the Nordic CDLI in 2011 have a higher total return³ from January 2005 to May 2011 than Nordic 260 companies, outperforming them by a total of 84 percentage points over the five year period. This indicates that companies which are successful at measuring and reporting on climate change demonstrate higher financial performance.

It is noted that the relationship between strong carbon disclosure scores and total return has not been fully explored and the data tell us little about causality. The relationship does not necessarily indicate that one causes the other; both will be influenced by a range of factors. These may include the quality of the companies' management, the resources available to measure and manage emissions or the companies' broader approach to identifying and capitalising on opportunities or managing risks. These findings would benefit from further analysis by the investment community.

Figure 20: Total return % (US\$)



2. See explanation of the sector classification used in this report on page 40.
 3. Total Return includes interest, capital gains, dividends and distributions realised over a given period of time. The composition of the CDLI should not be construed as investment advice.

Source: Bloomberg

About the CDP carbon performance scores

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 evaluate performance.

Performance is grouped into six bands: A, A-, B, C, D and E (see Figure 21).

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 Nordic 260 in response to climate change.

Eligibility for the CPLI (Band A)

- 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); at least a 2.65%⁴ reduction in carbon emissions must have been achieved as a result of emissions reduction activities over the last year
- Disclose gross global Scope 1 and Scope 2 figures
- Score maximum performance points for verification of Scope 1 and Scope 2

Notes:

- Band A- (A minus) companies are not in the CPLI. They are strong performers, with a performance score high enough to warrant inclusion in the CPLI but they do 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

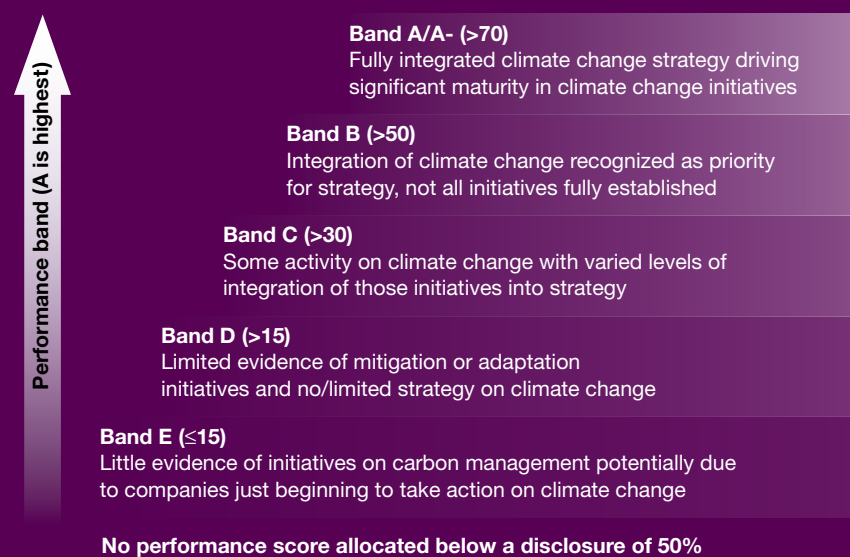
Performance scoring is an instructive exercise for all stakeholders. The score provides an indication of the extent to which companies are addressing the potential opportunities and risks presented by climate change. CDP recognizes that this is a process that will evolve over time. It is important for investors to keep in mind that the carbon performance band 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
- An assessment of how material a company's actions are relative to the business; the score simply recognizes evidence of action

It is possible to review individual company disclosures in addition to performance rankings in order to gain the most comprehensive understanding of company performance. A listing of companies and their bands is included in Appendix I. Companies that did not qualify for a performance band appear in Appendix I with a dash (-) in the performance band column.

More information can be found in the information request, supporting methodology and guidance documents, as well as within individual company responses at www.cdproject.net.

Figure 21: Carbon performance elements



4. 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.

The 2011 Carbon Performance Leadership Index (CDLI)

Table 3: The Nordic 260 CPLI 2011

Company	Sector	Disclosure score
Tieto	Telecommunications & IT	96

‘Performance scores provide an indication of the extent to which companies are addressing the potential opportunities and risks presented by climate change.’

Performance

Overall, 83% (118) of responding Nordic 260 companies are included in a performance band compared to 78% in 2010. However, as a consequence of more stringent CPLI entrance criteria on emissions reductions and verification, the number of companies included in the CPLI dropped from five to one.

A lower percentage (18%) of companies achieved high performance (bands A, A- or B) in 2011 than 2010 (31%). This is primarily the result of a change in focus of the performance scoring rather than a change in corporate performance. In 2010, the focus was to measure the extent to which a company had a framework in place to address carbon management. This year, performance focuses more on measuring the quality and status of a company’s short and long term actions to mitigate climate change.

Three other companies, Rockwool International, SEB and Nokia achieved scores high enough to warrant inclusion in the CPLI but did not meet all other CPLI requirements (see opposite page) and therefore have the performance band ‘A-’.

It is important to note that performance improvements take longer to implement and often lag behind improvements in disclosure. As companies measure, they can manage and then begin to improve performance and optimise results. True performance enhancements take longer to achieve and the expectation is that companies’ performance will continue to improve over the coming years.

Impacts on Nordic industry of the German nuclear phase-out

Commentary by Martin Gavelius, Head of Energy, Utilities and Mining, PwC Sweden



The decision to close all German nuclear power plants by 2022 will have significant cross-border effects in Europe. The integrated Nordic electricity market is already influenced by Germany, both by coal prices and by import and export of electricity through the linked national grids. An increase in the use of fossil fuels for power production would lead to an increase in the price of emission allowances with increased costs for Nordic industry as a result. More positively, commercialisation and investment in renewable energy are likely to gain momentum.

The decision to phase out the entire nuclear power programme over a relatively short time period has consequences for the Nordic region and many other countries. Close to 130 TWh will be required to replace German nuclear power by 2020. Germany and also Denmark, which already has a large share of wind power in its energy mix, will play central roles in the pricing of electricity on the Nordic market.

Several factors affect Nordic industry

The Nordic region is heavily dependent on electricity. A significant portion of finished goods' costs are energy-related and residential housing is, to a great extent, directly or indirectly heated by electricity. In Germany, the opposite applies: energy costs represent a relatively small portion of finished goods' costs and electricity is rarely used for the heating of residential housing. The Nordic electricity price is driven by the operating status of nuclear power stations, the water level in the Nordic reservoirs and the price of coal. Marginal pricing of electricity is determined by Nordpool and prices are likely to increase in response to the German decision to stop nuclear power production. Electricity supply is not a national issue and there is concern amongst Nordic industry as to whether Germany can manage the transition from nuclear power to renewable energy without the price of electricity soaring, not least considering the very tight time schedule.

Increased demand for regulatory capacity

As the use of renewable energy increases there will be growth in demand for regulatory capacity, i.e. power that is flexible and can quickly be put into production, for example hydro and gas power stations. The more flexible a country's energy system, the higher the proportion of intermittent energy, like sun and wind, that can be included in the overall energy mix. Wind energy varies significantly over time and it is urgent to speed up technological progress in the development of energy storage. Investments and new technology in infrastructure, such as smart grids, also have an important role to play.

The Nordic region may need to use fossil-based regulatory capacity, for instance via imported electricity, with a resultant increase in carbon dioxide emissions. In turn, the demand, and price, for emission allowances may increase with resulting impact on electricity prices. From 2013, the total number of emission allowances will decrease and an auction procedure will be introduced which could push up the price of emission allowances. This would affect Nordic energy-intensive industries and power production.

Boom for renewable energy

A positive effect of the German nuclear decision is an increase in commercialisation and investment in renewable energy. Good progress has been made in the transition from fossil-based energy in the Nordic region. The challenge is to continue this transition without harming heavy industry and to manage the risks of bringing forward investments in new technology. But the short time perspective will have an impact, for example on financing and on costs.

A recently published PwC study on sea-based wind power, *Offshore Proof*¹, described problems in obtaining components and material for the construction of wind turbines. Solutions are needed to these bottlenecks in the supply chain to facilitate growth in renewable energy. There is also a need for massive investment in infrastructure. Whilst financing of such investments is as yet unclear, major new employment opportunities will be created.

The European Commission aims to be at the cutting edge of development of clean energy technology. Success with this goal and in meeting the forecasted need for the expansion of renewable energy sources depends on rapid political decisions regarding investment, subsidies, land use, taxes, etc., all of which must be neutral with regards to competition.

Energy efficiency within the heavy and power industries and also in real estate has not progressed as quickly as was hoped. There is major potential for technological development and commercialisation in the energy efficiency business. Statistics from the European Commission show that only 10% of the overall goal of 20% by year 2020 has been achieved to date.

Three megatrends will affect future development

Three megatrends will impact progress in the energy market within the EU and in the Nordic region: political forces; alternative costs; and developments in technology and infrastructure. All of these areas are characterised by major uncertainty. Will other countries follow Germany? How will the nuclear power debate be affected? High on the EU's agenda is a common energy market; the questions are what form it will take and on what timescale.

This CDP report highlights the creative and innovative approaches taken by Nordic companies to solve the challenges ahead. There are great opportunities for companies that are proactive in finding solutions to the technology and infrastructure issues associated with a European energy system in transition.

‘There is major potential for technological development and commercialisation in the energy efficiency business.’

1. A copy of the study *Offshore Proof* can be ordered from www.pwc.com/se/energi

Sectoral Snapshots

This chapter presents snapshots of emissions data, climate-related risks and opportunities, key actions taken to reduce emissions and selected performance indicators for each of nine industrial sectors.

The sectoral split is based on the Global Industry Classification Standard (GICS), but with four sectors merged into pairs (Energy with Utilities, Telecommunications Services with Information Technology). In addition, Transportation is treated separately from the other GICS Industry Groups in the Industrials sector on account of its relatively high carbon intensity. Thus, in this report, the Industrials sector comprises only Capital Goods and Commercial & Professional Services, and Transportation is referred to as a sector.

‘In 2010 numerous initiatives were implemented to reduce our overall energy intensity, ranging from introduction of new, more efficient vessels, optimising deployment of existing vessels, and installing new systems to help minimise hull resistance. The result of these initiatives was a [saving of] approximately 60,000 metric tons of fuel.’

Royal Caribbean Cruises

Notes on the snapshots

Largest non-respondents

Identified on the basis of market capitalisation at the end of 2010.

Emissions disclosed

Total reported emissions and the percentage of respondents disclosing.

Opportunities and risks reported

Intended as a concise, neutral summary of company responses. The absence of a particular item does not necessarily mean that no firm in the sector mentioned it, only that the other points were more frequently mentioned.

Key actions

Intended as a summary of frequently cited measures that are characteristic of the sector. Avoidance of business travel through virtual meetings, which is mentioned by firms in all sectors, is covered in the box on page 18.

Verification rate

The percentage of companies that reported verification complete for at least part of their emissions.

Share with emissions reduction targets

The percentage of companies responding that they had an emissions reduction target that was active in the reporting year.

Change in emissions during 2010

Calculated on the same basis as in Figure 7 above, i.e. the change in reported emissions of companies disclosing emissions in both 2010 and 2011.

Consumer Discretionary

Nordic 260 response rate:

Consumer Discretionary Overall:
47% (14 of 30)

Key Industries within the sector:

Hotels, Restaurants & Leisure (1 of 7);
Household Durables (4 of 6);
Media (4 of 5)

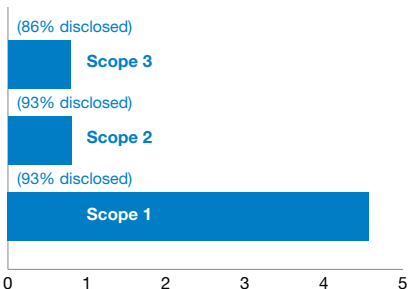
Responders:

Amer Sports
Clas Ohlson
Ekornes
Electrolux
H&M Hennes & Mauritz
Hexpol
Husqvarna
Modern Times Group MTG
Nobia
Royal Caribbean Cruises
Sanoma
Schibsted
Stockmann

Largest non-respondents include:

Pandora, Autoliv, Fiskars

Fig 22: Emissions disclosure (million metric tons CO₂e)



Opportunities reported

- First-mover advantages for firms with climate-friendly and energy-saving products.
- Increased demand for brands with a strong reputation for sustainability.
- Increased demand for products such as water-efficient household appliances; reduced costs for raw materials such as newsprint in the event of higher temperatures and water shortages.

Risks reported

- Reputational risks including damage to brands that consumers do not regard as environmentally sustainable.
- Compliance costs due to product regulations and/or some risk of lost sales in the event of failure to comply.
- Higher costs for energy, fuel and raw materials due to emissions taxes and regulation.

Key actions

- Measures to improve the efficiency of heating, cooling, lighting and operations in offices, shops, data centres, printing presses, etc.
- Emissions limits for company cars and delivery vehicles; eco-driving training for drivers; smart transport logistics to minimise distances travelled.
- Improved product design and manufacture by means of lifecycle analyses.

‘Compared to conventional skis, the Nomad Renu uses 30% less fiberglass and epoxy resins. The top sheet is produced with rapeseed oil, while recycled materials are used for the production of the base and steel edges. The special combination of a laminated ash core and a nut veneered top reinforcement makes energy-intensive aluminium components unnecessary and as a result, the carbon footprint has been reduced by 50%.’

Amer Sports

Performance indicators	Nordic 260	Consumer Discretionary
Average disclosure score	64	62
Verification rate Scope 1	47%	14%
Verification rate Scope 2	38%	14%
Share with emissions reduction targets	67%	46%
Change in emissions during 2010	+0.9%	+4.5%

Consumer Staples

Nordic 260 response rate:

Consumer Staples Overall:
45% (9 of 20)

Key Industries within the sector:

Food Products (3 of 13); Food & Staples Retailing (3 of 3); Beverages (1 of 2)

Responders:

Axfood
Carlsberg Breweries
Cermaq
Hakon Invest
Kesko
Marine Harvest Group
Oriflame
Salmar
Swedish Match

Largest non-respondents include:

Danisco,¹⁶ Lerøy Seafood Group, Austevoll Seafood

Opportunities reported

- Competitive advantage for firms ready to comply with tougher product regulations and energy efficiency standards.
- Increased demand for products meeting consumer demands for sustainability, including fish (low emissions compared with agricultural protein).
- Improved conditions for fish farming and new plant varieties owing to higher temperatures.

Risks reported

- Compliance costs from product, packaging and labelling regulations, including carbon footprinting.
- Reputational risks for firms that fail to adapt to consumer awareness of climate change. Vulnerability to criticism by journalists and NGOs.
- Indirect risk of higher transport and distribution costs due to emissions taxes and regulation. Supermarkets may face taxes on HFC gases for refrigeration.

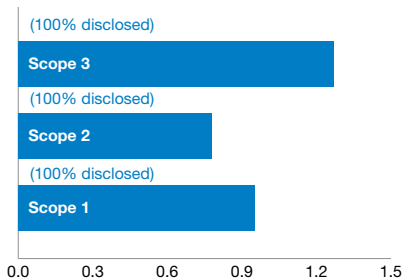
Key actions

- Increased use of renewable energy; measures to improve the efficiency of refrigeration, lighting, ventilation, etc. in stores, warehouses and factories.
- Reduced emissions from transport through maximised loads, lower speed limits, driver training and preference for rail.
- Measures to reduce waste in processing plants and stores, including donations of soon-to-expire products to charity.

‘The carbon footprint of fish (2.9 kg CO₂/kg) is half that of pork (5.9 kg CO₂/kg), and one tenth of that of beef (30 kg CO₂/kg), measured as kg CO₂e per kg edible part at slaughter. Substituting other meats with fish will therefore contribute to a lower carbon footprint per person.’

Marine Harvest Group

Fig 23: Emissions disclosure (million metric tons CO₂e)



Performance indicators	Nordic 260	Consumer Staples
Average disclosure score	64	69
Verification rate Scope 1	47%	67%
Verification rate Scope 2	38%	67%
Share with emissions reduction targets	67%	78%
Change in emissions during 2010	+0.9%	+3.2%

16. Danisco cited the ongoing acquisition (by DuPont) during the responding period 2011 as the reason for not responding.

Energy & Utilities

Nordic 260 response rate:

Energy & Utilities Overall:
43%(12 of 28)

Key Industries within the sector:

Energy Equipment & Services (5 of 13);
Oil, Gas & Consumable Fuels (5 of 12);
Electric Utilities (2 of 2)

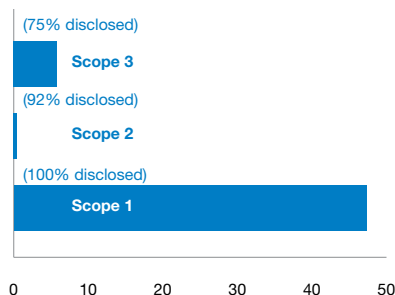
Responders

DNO International
DOF
Fortum
Hafslund
Lundin Petroleum
Neste Oil
Petroleum Geo-Services
Prosafe
Seadrill Management
Solstad Offshore
Statoil
Teekay Petrojarl

Largest non-respondents include:

Aker Solutions, Fred Olsen Energy,
Alliance Oil Company

**Fig 24: Emissions disclosure
(million metric tons CO₂e)**



Opportunities reported

- Competitive edge in the event of tougher carbon taxation and regulation thanks to low dependence on fossil fuels.
- Increased demand for renewable energy and infrastructure such as smart grids. Reputational benefits for firms with low-carbon offerings.
- Increased capacity in renewables owing to higher temperatures, precipitation and wind.
- New fields for oil and gas exploration in the Arctic Sea.

Risks reported

- Uncertainty surrounding future climate change regulation.
- Higher costs and reduced demand due to emissions taxation or cap-and-trade schemes.
- Vulnerability of distribution networks to damage from extreme weather events.
- Shifts in political or consumer sentiment away from particular energy sources, such as fossil fuels or nuclear.

Key actions

- Refurbishment of existing plants and measures to optimise efficiency in furnaces and refineries.
- Investment in renewable energy production.
- Reduced gas flaring.
- Improved design and fuel efficiency of vessels.

‘Looking into the future, we believe that CO₂ will gradually become costly elsewhere in the world as well. That is why we calculate in a CO₂ price when we decide to go forward with new investments regardless of the current carbon regime at the location of the project. We believe this makes our portfolio more robust when climate policies tighten further down the road.’

Statoil

Performance indicators	Nordic 260	Energy & Utilities
Average disclosure score	64	61
Verification rate Scope 1	47%	42%
Verification rate Scope 2	38%	33%
Share with emissions reduction targets	67%	42%
Change in emissions during 2010	+0.9%	-4.1%

Financials

Nordic 260 response rate:

Financials Overall:
50% (22 of 44)

Key Industries within the sector:

Real Estate Management & Development (7 of 15);
Commercial Banks (5 of 10);
Capital Markets (4 of 9)

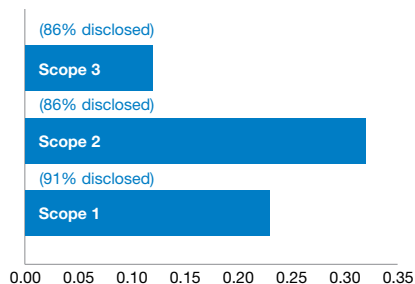
Responders

Atrium Ljungberg, Castellum, Citycon, Danske Bank, DnB NOR, Hufvudstaden, Industrivärden, Investment AB Kinnevik, Investor, Kungsleden, Melker Schörling, Nordea Bank, Nordnet, Ratos, SEB, Storebrand, Svenska Handelsbanken, Swedbank, Topdanmark, Tryg, Wallenstam, Wihlborgs Fastigheter, Alma Media

Largest non-respondents include:

Sampo, Lundbergs

Fig 25: Emissions disclosure (million metric tons CO₂e)



Opportunities reported

- Investment opportunities in companies that adapt well to climate change and developing low-carbon technologies.
- Competitive edge in real estate for firms ahead of current regulatory standards on energy efficiency and emissions.
- Increased demand for insurance and other risk management services owing to more frequent extreme weather. New financial markets, including emissions trading.
- Reduced heating costs in real estate owing to warmer climate.

Risks reported

- Cost increases in real estate due to tightening energy efficiency requirements in building regulations.
- Reputational risks if firms not seen by consumers and stakeholders to be enabling the transition to a low-carbon economy.
- Indirect exposure for banks and insurers to a wide range of risks through their clients.

Key actions

- Renovation of offices and real estate properties to improve the efficiency of heating, ventilation, lighting, etc.
- Increased use of renewable energy, district heating and deep-water cooling.
- Improved efficiency in data centres, including consolidation of servers through virtual server technology.
- Replacement of office machines with more energy-efficient models; reduced use of paper, e.g. through digital statements.

‘A new headquarters is under construction in Oslo, which will gather 4,000 employees in one place. By using new building techniques and facilitating new ways of organising work the new headquarters is estimated to reduce energy consumption by 70% and CO₂ emissions by 50% per employee in the Oslo area.’

DnB NOR

‘Volvo Penta’s engine plant in Vara, Sweden is powered without using any fossil fuel whatsoever. ... A large raft of measures has helped to make the production process increasingly energy efficient. [The boiler room] now uses biofuel in the form of pellets instead of the approximately 400 cubic metres of oil it previously used every year. ... The total consumption of energy ... has been reduced by around 40% since 2003.’

Industrivärden

Performance indicators	Nordic 260	Financials
Average disclosure score	64	63
Verification rate Scope 1	47%	41%
Verification rate Scope 2	38%	36%
Share with emissions reduction targets	67%	73%
Change in emissions during 2010	+0.9%	+24.3%

Health Care

Nordic 260 response rate:

Health Care Overall:
36% (9 of 25)

Key Industries within the sector:

Pharmaceuticals (4 of 8);
Health Care Equipment & Supplies
(4 of 8); Biotechnology (1 of 7)

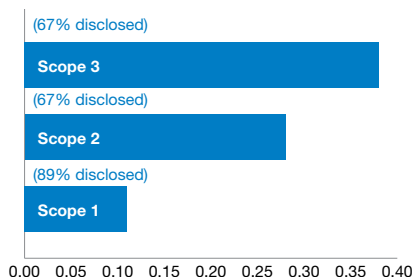
Responders

Coloplast
Elekta
Genmab
Getinge
Lundbeck
Meda
Novo Nordisk
Orion
William Demant Holding

Largest non-respondents include:

GN Store Nord, Active Biotech,
Swedish Orphan Biovitrum

**Fig 26: Emissions disclosure
(million metric tons CO₂e)**



Opportunities reported

- Preference in public procurement for companies with strong performance on carbon management.
- Increased need for certain treatments (e.g. respiratory diseases, skin cancers) owing to the physical effects of climate change.
- Attraction of employees, investors and customers through establishing a reputation for leadership on climate change.

Risks reported

- Increased operational costs if chemical production plants are subject to carbon taxation and/or emissions trading.
- Increased costs of transport and certain raw materials owing to carbon taxes and regulation.
- Vulnerability of distribution networks to extreme weather events

Key actions

- Measures to improve energy efficiency in laboratories and production plants, e.g. waste heat recovery, automatic shutdown of pumps, etc.
- Campaigns and incentives for employees to commute using carpools and public transport, and to turn off computers, lights, etc.
- Greater use of renewable energy, including geothermal heating, groundwater cooling and wood-fired boilers.

‘We are seeing more and more public and private tenders having environmental and climate requirements, and we have won quite a few tenders based on our ‘green’ performance.’

Coloplast

Performance indicators	Nordic 260	Health Care
Average disclosure score	64	64
Verification rate Scope 1	47%	33%
Verification rate Scope 2	38%	33%
Share with emissions reduction targets	67%	44%
Change in emissions during 2010	+0.9%	-0.4%

Industrials

Nordic 260 response rate:

Industrials Overall:
65% (35 of 54)

Key Industries within the sector:

Machinery (12 of 18); Construction & Engineering (8 of 11); Commercial Services & Supplies (5 of 8)

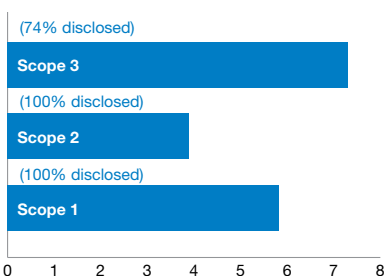
Responders

ÅF Group, Assa Abloy, Atlas Copco, Cardo (SA), Cargotec, FLSmidth & Co., G4S, Gunnebo, JM, Kone, Konecranes, Kongsberg Gruppen, Lassila & Tikanoja, Lemminkainen Group, Lindab, Metso, NCC, NKT Holding, Orkla, Outotec, Peab, Rockwool International, SAAB, Sandvik, Scania, Securitas, Skanska, SKF, Solar, Tomra Systems, Trelleborg, Uponor, Veidekke, Vestas Wind Systems, Volvo, Wärtsilä Corporation

Largest non-respondents include:

Alfa Laval Corporate, Hexagon, Subsea 7¹⁷

Fig 27: Emissions disclosure (million metric tons CO₂e)



Opportunities reported

- Increased demand for energy-, fuel- and water-efficient products.
- Competitive edge through tightening of emissions standards abroad.
- Increased demand for resilient products in the face of extreme weather, high and low temperatures, condensation, etc.
- Reputational benefits for firms offering energy-efficient products.
- Development of new services including carbon-footprinting.

Risks reported

- Indirect exposure to carbon taxes and regulations through suppliers and clients; some direct exposure within own operations.
- Costs of adapting production and distribution to cope with extreme weather events and longer-term climate change.
- Reputational and business risks if firms fail to meet customers' expectations on environmental performance.

Key actions

- Efficiency improvements, e.g. in insulation, heat recovery, and use of sustainable materials.
- Efficiency gains in production processes, e.g. through load balancing, use of timers and sensors, and reduced waste.
- Increased use of renewable energy and fuels, inc. in company vehicles.
- More efficient transport and distribution through route optimisation, maximised loads, optimised packaging and favouring of rail.

'In 2007, total calculated CO₂e emissions from new housing projects during their first two years of use was 4,047 tons. In 2010 the corresponding figure was 1,833 tons, indicating a 55% reduction of CO₂e emissions from our products in use.'

JM

'Maximizing the "fill rate" of trucks that deliver SKF's goods is critical from an economic and environmental perspective. In 2010, these efforts resulted in a fill rate of 77% compared to 72% in 2009 and this reduced the carbon emissions per tonne-kilometre by 12%.'

SKF

Performance indicators	Nordic 260	Industrials
Average disclosure score	64	64
Verification rate Scope 1	47%	34%
Verification rate Scope 2	38%	34%
Share with emissions reduction targets	67%	71%
Change in emissions during 2010	+0.9%	+12.6%

17. Subsea 7 cited the ongoing merger (with Acergy) during the responding period 2011 as the reason for not responding.

Materials

Nordic 260 response rate:

Materials Overall:
86% (19 of 22)

Key Industries within the sector:

Paper & Forest Products (7 of 8);
Metals & Mining (7 of 8);
Chemicals (4 of 5)

Responders

Ahlstrom, Auriga Industries, Boliden Group, Chr. Hansen Holding, Holmen, Huhtamäki, Kemira, Lundin Mining, M-Real, Norsk Hydro, Norske Skog, Novozymes, Outokumpu, Rautaruukki, SCA, SSAB, Stora Enso, Talvivaara Mining Company, UPM-Kymmene

Largest non-respondents include:

Yara International, Billerud

Opportunities reported

- Increased demand for energy-efficient, light and/or resilient materials, such as high-strength metals and fibre-based packaging.
- Growth in recycling and recovery of paper and metals.
- Potential credits for CO₂ absorption in forestry in some countries or in the future. Reputational benefits from responsible forest management.
- Increased yields in forestry owing to higher temperatures and precipitation.

Risks reported

- Increased costs, both direct and indirect (energy, raw materials, transport), owing to regulation, carbon pricing and taxation.
- Uncertainty over emissions trading and EU commitments post-2012 and post-2020.
- Reputational risks depending on public perceptions of the climate-friendliness of materials produced.
- Disruption of production and transport in forestry and mining by extreme weather.

Key actions

- Innovation and energy-saving measures at mills, mines and smelters, e.g. variable-speed fans, pumps, etc. with smarter controls.
- Greater use of renewable energy, including wind power on own land; recycling of surplus heat for use in district heating.
- Greater use of recycled raw materials.
- Lighter and stronger products, reducing transport costs as well as emissions in use.

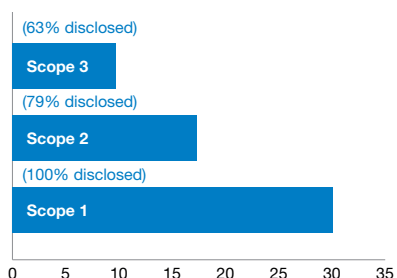
‘By using high strength abrasion-resistant steel ... the body for dump trucks within the mining industry acquired greater resistance to the strenuous wear and tear exacted by mining operations. At the same time, the vehicle weight was reduced by 8 tons, or 19%. As a result, operating and maintenance costs were reduced, as well as the impact on the environment due to lower emissions. The fuel saving was 10%.’

SSAB

‘Between 2000 and 2006, six roll-on roll-off vessels were purpose built for Stora Enso, equipped with state of the art techniques and operated in order to achieve superior environmental performance. This is still a unique initiative in the forest industry.’

Stora Enso

Fig 28: Emissions disclosure (million metric tons CO₂e)



Performance indicators	Nordic 260	Materials
Average disclosure score	64	62
Verification rate Scope 1	47%	79%
Verification rate Scope 2	38%	37%
Share with emissions reduction targets	67%	79%
Change in emissions during 2010	+0.9%	+15.4%

Telecommunications & IT

Nordic 260 response rate:

Telecommunications & IT Overall:
62% (13 of 21)

Key Industries within the sector:

Diversified Telecommunication Services (5 of 5);
Communications Equipment (3 of 4);
IT Services (2 of 3)

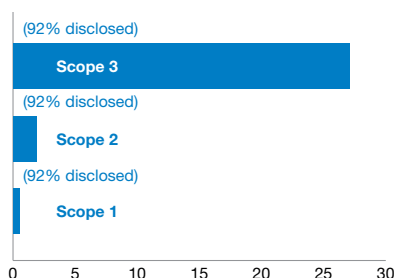
Responders

Atea
Bang & Olufsen
Elisa
Eltek
Ericsson
Millicom International Cellular
Nokia Group
TDC
Tele2
Telenor Group
TeliaSonera
Tieto
Vaisala

Largest non-respondents include:

Axis Communications, SimCorp, EDB
ErgoGroup

Fig 29: Emissions disclosure (million metric tons CO₂e)



Opportunities reported

- Increased demand for products that help others to save energy and reduce emissions, including smart metering and monitoring.
- Increased demand for telepresence technology in the event of disruptions due to extreme weather.
- Reputational benefits through reduction of own emissions and the sector's role in enabling a low-carbon economy.

Risks reported

- Vulnerability of network infrastructure and energy security to extreme weather.
- Some operational cost increases due to carbon taxes and regulation.
- Compliance costs due to product regulation, including energy efficiency and waste disposal standards.

Key actions

- Shift to low-carbon energy through district heating, water- and air-cooling, use of solar and wind power, recycling of heat from server rooms and purchase of certified renewable electricity.
- Modernisation of software and equipment to reduce energy consumption – from virtual server technology to mobile phone chargers.
- Refurbishment of offices, factories, etc. – from LED lighting to compressed air systems – to reduce energy consumption.

‘The study ‘Smart 2020: Enabling the low carbon economy in the information age’ ... states that even though the ICT sector’s own emissions are expected to increase, the ICT sector is projected to reduce global emissions by up to 15 % by 2020 by enabling reductions in other sectors.’

Tele2

‘At our Head Office in Finland, we have installed 700 square metres of solar panels, making the site one of the largest solar power producers in Finland. We have also installed 4 kilometres worth of geothermal pipes into the bedrock, a system that heats the main building during winter and cools it in summer without the need for any bought in electricity or heat for this purpose.’

Vaisala

Performance indicators	Nordic 260	Telecoms & IT
Average disclosure score	64	67
Verification rate Scope 1	47%	46%
Verification rate Scope 2	38%	46%
Share with emissions reduction targets	67%	85%
Change in emissions during 2010	+0.9%	+21.1%

Transportation

Nordic 260 response rate:

Transportation Overall:
56% (9 of 16)

Key Industries within the sector:

Marine (5 of 11); Airlines (2 of 3);
Transportation Infrastructure (1 of 1)

Responders

A.P. Moller - Maersk
Copenhagen Airports
D/S Norden
DSV
Finnair
Frontline
Odfjell SE
SAS
TORM

Largest non-respondents include:

Stolt-Nielsen, DFDS, Norwegian Air Shuttle

Opportunities reported

- Competitive edge in the event of global agreement on emissions regulation, given above-average fuel efficiency.
- New, shorter trade routes through the Arctic instead of via the Suez or Panama canals.
- Experience in coping with extreme weather.
- Reputational benefits for firms seen as responsible on climate change.

Risks reported

- Threat of inconsistent national regulations due to uncertainty over global/regional agreements.
- Higher operational costs due to taxes on fossil fuels or emissions.
- Disruption due to more frequent and severe adverse weather, including flight cancellations in extreme cases.
- Reputational risks if not seen to be responding to the challenges posed by climate change.

Key actions

- Improved design and maintenance of the fleet to increase fuel efficiency, e.g. waste heat recovery, improved aero/hydro dynamics, monitoring and calibration.
- Increased fuel efficiency in use, e.g. through slow steaming, continuous descent approach to airports, and improved voyage planning based on real-time weather data.
- Some use of renewable energy in operations as well as carbon offsets and carbon-free electricity in properties.

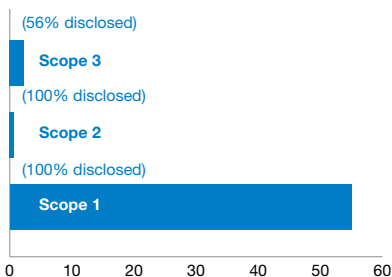
‘Our focus on improving the climate and the environment has proven a competitive advantage when negotiating contracts.’

D/S Norden

‘SAS is offering its passengers carbon offsets for air travel and supporting the development and dissemination of green technologies.’

SAS

Fig 30: Emissions disclosure (million metric tons CO₂e)



Performance indicators	Nordic 260	Transportation
Average disclosure score	64	67
Verification rate Scope 1	47%	100%
Verification rate Scope 2	38%	78%
Share with emissions reduction targets	67%	67%
Change in emissions during 2010	+0.9%	-8.0%

Appendix I: Company information and scores

The key to the table is found on page 56

Company Name	Sector	Country	2011 Response Status	2010 Response Status	2009 Response Status	2008 Response Status	2007 Response Status	Carbon Disclosure Score	Carbon Performance Band	Non-Public	Scope 1 Emissions	Scope 2 Emissions	Scope 3 Emissions	Scope 3 Emissions breakdown
A.P. Moller - Maersk	Industrials ¹	Dk	AQ	AQ	AQ	DP	NR	73	C		38,516,000	560,000	-	
Aarhus-karlshamn	Consumer Staples	Se	NR	DP	X	X	X							
ABG Sundal Collier Holding	Financials	No	DP	X	X	X	X			NP				
Acta Holding	Financials	No	NR	X	X	X	X							
Active Biotech	Health Care	Se	DP	X	X	X	X			NP				
ÅF Group	Industrials	Se	AQ	X	X	X	X	73	D		-	1,258	5,135	PGS, Tr
Ahlstrom	Materials	Fi	AQ	AQ	AQ	AQ	DP	57	D		668,145	301,330	942	Tr
Aker	Energy	No	IN	NR	NR	AQ	AQ							
Aker Solutions	Energy	No	DP	NR	X	X	X			NP				
Aktia	Financials	Fi	NR	NR	X	X	X							
Aktiv Kapital	Financials	No	NR	X	X	X	X							
Alfa Laval Group	Industrials	Se	DP	AQ	AQ	AQ	AQ			NP				
Algeta	Health Care	No	DP	X	X	X	X							
Alk-Abelló	Health Care	Dk	NR	NR	X	X	X							
Alliance Oil Company	Energy	Bm	NR	X	X	X	X							
Alma Media	Consumer Discretionary	Fi	AQ	AQ	AQ	AQ	X	78	B		670	2,470	280	PGS, TI, Tr, Wa
Ambu	Health Care	Dk	NR	X	X	X	X							
Amer Sports	Consumer Discretionary	Fi	AQ	DP	DP	DP	DP	51	E		10,475	16,243	13,376	Fu, Oth, Tr, Wa
Arendals Fossekompagni	Utilities	No	NR	AQ	X	X	X							
Assa Abloy	Industrials	Se	AQ	AQ	AQ	AQ	AQ	41	-		42,500	169,200	-	
Atea	Information Technology	No	AQ	AQ	AQ	X	X	84	C		4,435	4,766	1,113	Tr, Wa
Atlas Copco	Industrials	Se	AQ	AQ	AQ	AQ	AQ	72	C		25,000	91,000	202,000	TI
Atrium Ljungberg	Banks	Se	AQ	AQ	AQ	NR	X	68	D		141	6,224	27,661	Oth, Tr
Auriga Industries	Materials	Dk	AQ	X	AQ	X	X	22	-		66,600	-	-	
Austevoll Seafood	Consumer Staples	No	NR	NR	NR	NR	X							
Autoliv	Consumer Discretionary	Se	DP	X	X	X	X			NP				
Avanza Bank Holding	Financials	Se	NR	X	X	X	X							
Axfood	Consumer Staples	Se	AQ	AQ	AQ	AQ	AQ	51	C		10,742	13,726	7,053	Fu, TI, Tr
Axis Comms	Information Technology	Se	DP	DP	DP	NR	X			NP				
Bakkafrost	Consumer Staples	Dk	DP	X	X	X	X			NP				
Bang & Olufsen	Information Technology	Dk	AQ	AQ	AQ	AQ	IN	49	-		2,085	7,300	7,229	USP
Bavarian Nordic	Health Care	Dk	NR	X	X	X	X							
Beijer Alma	Industrials	Se	NR	X	X	X	X							
Betsson	Consumer Discretionary	Se	NR	X	X	X	X							
Billerud	Materials	Se	NR	NR	X	X	X							
Bionor Pharma	Health Care	No	DP	X	X	X	X							
Boliden Group	Materials	Se	AQ	AQ	AQ	AQ	AQ	78	B		510,000	403,415	-	EC, TI, Tr, TSP, Wa
Bonheur	Energy	No	NR	NR	NR	NR	X							
BW Offshore	Energy	No	DP	NR	NR	DP	X			NP				
BWG Homes	Consumer Discretionary	No	NR	X	X	X	X							
Cardo	Industrials	Se	SA	NR	X	X	X							
Cargotec	Industrials	Fi	AQ	AQ	AQ	AQ	DP	52	E	NP				
Carlsberg Breweries	Consumer Staples	Dk	AQ	AQ	AQ	AQ	AQ	59	C		743,206	314,880	4,305	Tr
Castellum	Banks	Se	AQ	AQ	AQ	AQ	AQ	49	-		2,902	17,430	-	

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Cermaq	Consumer Staples	No	AQ	AQ	DP	NR	X	75	C		54,067	14,645	1,026,119	SE
Chr. Hansen Holding	Materials	Dk	AQ	X	X	X	X	60	D	NP				
Citycon	Banks	Fi	AQ	AQ	DP	NR	X	68	C		-	63,255	873	EC, Oth, Tr, Wa
Clas Ohlson	Consumer Discretionary	Se	AQ	AQ	AQ	AQ	X	67	D		224	2,802	16,803	TI, Tr
Clavis Pharma	Health Care	No	DP	X	X	X	X			NP				
Coloplast	Health Care	Dk	AQ	AQ	AQ	AQ	AQ	65	D		10,221	51,660	63,267	EC, Oth, SE, TI, Tr, Wa
Copenhagen Airports	Industrials ¹	Dk	AQ	AQ	AQ	AQ	AQ	29	-		5,636	24,006	-	
D/S NORDEN	Industrials ¹	Dk	AQ	AQ	AQ	AQ	DP	82	B		528,285	534	2,278,950	Fu, Oth, Tr
Danisco	Consumer Staples	Dk	DP	AQ	AQ	AQ	AQ			NP				
Danske Bank	Banks	Dk	AQ	AQ	AQ	AQ	AQ	66	E		4,402	37,254	10,520	PGS, Tr
DFDS	Industrials ¹	Dk	NR	X	X	X	X							
Diamyd Medical	Health Care	Se	NR	X	X	X	X							
DnB NOR	Banks	No	AQ	AQ	AQ	AQ	AQ	63	D		1,176	10,716	8,488	Tr, Wa
DNO International	Energy	No	AQ	AQ	AQ	AQ	NR	69	D		240,125	30	280	Tr, Wa
DOF	Energy	No	AQ	NR	X	X	X	60	C		1,290,000	5,400	9,000	PGS, TI, Wa
DSV	Industrials ¹	Dk	AQ	AQ	AQ	DP	IN	56	E		3,143,707	77,146	-	
EDB ErgoGroup	Information Technology	No	NR	X	X	X	X							
Eitzen Chemical	Industrials ¹	No	NR	X	X	X	X							
Ekornes	Consumer Discretionary	No	AQ	NR	NR	NR	X	80	C		1,793	2,638	664	SE, Tr, TSP, Wa
Electrolux	Consumer Discretionary	Se	AQ	AQ	AQ	AQ	AQ	86	C		116,779	285,374	422,000	SE, USP, TI, Tr
Elekta	Health Care	Se	AQ	AQ	AQ	DP	IN	76	D		5,363	5,393	14,056	Tr, TSP
Elisa	Telecommunication Services	Fi	AQ	NR	DP	NR	NR	70	C	NP				
Eltek	Information Technology	No	AQ	X	X	X	X	27	-	NP	-	-	-	
Eniro	Consumer Discretionary	Se	DP	AQ	AQ	AQ	AQ			NP				
EnQuest	Energy	UK	DP	X	X	X	X			NP				
Ericsson	Information Technology	Se	AQ	AQ	AQ	AQ	AQ	82	B		30,000	174,000	18,443,000	EC, TI, Tr, USP
Fabege	Financials	Se	DP	AQ	AQ	AQ	AQ			NP				
Farstad Shipping	Energy	No	NR	NR	X	X	X							
Finnair	Industrials ¹	Fi	AQ	AQ	AQ	AQ	AQ	78	B		2,225,569	22,568	-	Tr
Fiskars	Consumer Discretionary	Fi	NR	NR	DP	DP	X							
FLSmidth & Co.	Industrials	Dk	AQ	AQ	DP	DP	DP	54	E		23,812	53,722	-	
Fornebu Utvikling	Financials	No	NR	X	X	X	X							
Fortum	Utilities	Fi	AQ	AQ	AQ	AQ	AQ	97	B		25,600,000	104,279	5,654,740	Fu, USP, Tr
Fred. Olsen Energy	Energy	No	NR	NR	NR	NR	X							
Frontline	Industrials ¹	No	AQ	AQ	NR	NR	IN	75	C	NP				
F-Secure	Information Technology	Fi	NR	NR	X	X	X							
G4S	Industrials	UK	AQ	AQ ²	AQ ²	AQ ²	AQ ²	42	-		415,031	123,914	34,817	Oth
Ganger Rolf	Energy	No	NR	NR	NR	NR	X							
Genmab	Health Care	Dk	AQ	AQ	AQ	AQ	X	12	-	NP				
Getinge	Health Care	Se	AQ	AQ	AQ	AQ	AQ	63	C		17,985	23,099	5,500	TI, Tr
GN Store Nord	Health Care	Dk	NR	NR	AQ	IN	IN							
Golden Ocean	Industrials ¹	No	NR	NR	NR	NR	X							
Gunnebo	Industrials	Se	AQ	AQ	AQ	AQ	AQ	67	C		21,433	7,012	19,800	TI, Tr
H&M Hennes & Mauritz	Consumer Discretionary	Se	AQ	AQ	AQ	AQ	AQ	57	D		11,466	270,422	215,377	TI, Tr
Hafslund	Utilities	No	AQ	AQ	AQ	NR	DP	47	-		151,727	56,067	160	Tr
Hakon Invest	Consumer Staples	Se	AQ	AQ	AQ	AQ	X	79	B		66,913	214,331	5,841	Oth, Tr
Hexagon	Industrials	Se	DP	NR	DP	DP	AQ			NP				
Hexpol	Consumer Discretionary	Se	AQ	X	X	X	X	46	-		10,866	36,861	-	

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HKScan	Consumer Staples	Fi	NR	NR	X	X	X							
Höganäs	Materials	Se	IN	IN	X	X	X							
Holmen	Materials	Se	AQ	AQ	AQ	AQ	AQ	64	C		303,000	245,000	381,100	Oth, PGS, SE, Tr, TSP
Hufvudstaden	Banks	Se	AQ	AQ	AQ	AQ	AQ	88	C	NP				r
Huhtamäki	Materials	Fi	AQ	AQ	AQ	AQ	AQ	31	-		165,600	-	-	
Husqvarna	Consumer Discretionary	Se	AQ	AQ	AQ	AQ	NR	40	-	NP				
IC Companys	Consumer Discretionary	Dk	NR	X	X	X	X							
Industrivärden	Banks	Se	AQ	IN	AQ	AQ	AQ	41	-		-	22	75	Oth, Tr
Indutrade	Industrials	Se	DP	DP	X	X	X			NP				
Intrum Justitia	Industrials	Se	NR	DP	AQ	AQ	X							
Investment AB Kinnevik	Banks	Se	AQ	AQ	AQ	AQ	AQ	56	D		208,122	5,367	486	Tr
Investment AB Latour	Financials	Se	NR	X	X	X	X							
Investment AB Öresund	Financials	Se	NR	NR	NR	NR	X							
Investor	Banks	Se	AQ	AQ	AQ	AQ	IN	73	D	NP				
Jeudan	Financials	Dk	NR	NR	X	X	X							
Jinhui Shipping and Transportation	Industrials'	Bm	NR	X	X	X	X							
JM	Industrials	Se	AQ	AQ	AQ	AQ	X	66	D		1,396	2,353	7,631	EC, TI, Tr, USP
Jyske Bank	Financials	Dk	NR	NR	DP	DP	DP							
Kappahl Holding	Consumer Discretionary	Se	DP	DP	X	X	X			NP				
Kemira	Materials	Fi	AQ	AQ	AQ	AQ	AQ	30	-		182,000	-	-	
Kesko	Consumer Staples	Fi	AQ	AQ	AQ	AQ	AQ	80	B		6,332	144,504	51,983	Eq, TI
Klöver	Financials	Se	NR	X	X	X	X							
Kone	Industrials	Fi	AQ	AQ	AQ	DP	X	83	B		105,530	27,132	2,893,533	EC, Oth, TI, Tr
Konecranes	Industrials	Fi	AQ	AQ	AQ	NR	AQ	52	D	NP				
Kongsberg Automotives	Consumer Discretionary	No	NR	X	X	X	X							
Kongsberg Gruppen	Industrials	No	AQ	NR	NR	DP	X	50	D		2,832	8,589	-	EC, TI, Tr, USP
Kungsleden	Banks	Se	AQ	AQ	AQ	AQ	NR	68	C		-	18,875	64	Tr
Lassila & Tikanoja	Industrials	Fi	AQ	AQ	AQ	AQ	X	57	D	NP				
Lemminkäinen	Industrials	Fi	AQ	NR	DP	DP	X	69	C		82,300	5,550	-	PGS, Tr, Wa
Lerøy Seafood Group	Consumer Staples	No	NR	NR	NR	X	X							
Lindab	Industrials	Se	AQ	AQ	AQ	AQ	X	70	C		10,392	19,798	28,115	Oth, Tr, Wa
Loomis	Industrials	Se	NR	NR	X	X	X							
Lundbeck	Health Care	Dk	AQ	AQ	AQ	AQ	AQ	79	B		11,728	26,276	16,880	Ld, SE, TI, Tr, Wa
Lundbergs	Financials	Se	NR	NR	X	X	X							
Lundin Mining	Materials	Ca	AQ	AQ ³	NR	AQ ³	X	35	-		64,228	74,928	-	
Lundin Petroleum	Energy	Se	AQ	AQ	AQ	AQ	DP	74	D		144,862	2,857	21,459	EC, Tr, Oth
Marine Harvest	Consumer Staples	No	AQ	NR	DP	NR	AQ	74	C		38,752	25,043	454	Oth, Tr
Meda	Health Care	Se	AQ	AQ	AQ	AQ	X	61	D		15,272	8,366	7,871	EC, TI, Tr
Mekonomen	Consumer Discretionary	Se	DP	X	X	X	X			NP				
Melker Schörling	Banks	Se	AQ	NR	DP	AQ	X	6	-	NP				
Metso	Industrials	Fi	AQ	AQ	AQ	AQ	AQ	41	-		79,095	204,253	-	
Millicom International Cellular	Telecommunication Services	Se	AQ	AQ	AQ	AQ	DP	42	-		86,564	104,628	5,640	Tr
Modern Times Group MTG	Consumer Discretionary	Se	AQ	AQ	AQ	DP	X	70	D		291	5,496	9,245	PGS, TI, Tr

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Morpol	Consumer Staples	No	NR	X	X	X	X							
M-Real	Materials	Fi	AQ	AQ	AQ	AQ	AQ	69	C		789,347	533,439	560,000	Oth, TSP
NCC	Industrials	Se	AQ	AQ	AQ	AQ	AQ	55	E		177,836	33,925	-	PGS, TI, Tr, USP
Neste Oil	Energy	Fi	AQ	AQ	AQ	AQ	AQ	58	C		3,747,847	25,700	27,952	TI, Tr
NeuroSearch	Health Care	Dk	NR	X	X	X	X							
NIBE Industrier	Industrials	Se	DP	DP	X	X	X			NP				
Niscayah Group	Industrials	Se	DP	DP	X	X	X			NP				
NKT Holding	Industrials	Dk	AQ	AQ	AQ	AQ	DP	63	E		27,612	100,253	59,614	TI, Tr, USP
Nobia	Consumer Discretionary	Se	AQ	AQ	AQ	AQ	AQ	51	E		36,649	24,233	14,631	SE, TI, Tr
Nokia Group	Information Technology	Fi	AQ	AQ	AQ	AQ	AQ	84	A-		20,100	286,400	8,501,500	EC, SE, Tr, USP
Nokian Tyres	Consumer Discretionary	Fi	IN	AQ	AQ	NR	X							
Nordea Bank	Banks	Se	AQ	AQ	AQ	AQ	NR	87	B		236	55,970	20,675	Tr
Nordic Semiconductor	Information Technology	No	NR	X	X	X	X							
Nordnet	Banks	Se	AQ	X	X	X	X	49	-		0	234	158	EC, Tr
Norsk Hydro	Materials	No	AQ	AQ	AQ	AQ	AQ	56	D		5,763,633	5,386,652	-	USP
Norske Skog	Materials	No	AQ	AQ	AQ	AQ	DP	87	B		774,000	1,747,000	645,034	PGS, TI, Tr
Norwegian Air Shuttle	Industrials ¹	No	NR	NR	X	X	X							
Norwegian Energy	Energy	No	NR	NR	X	X	X							
Norwegian Property	Financials	No	NR	NR	NR	DP	X							
Novo Nordisk	Health Care	Dk	AQ	AQ	AQ	AQ	AQ	89	B		47,562	131,900	273,300	EC, Ld, Oth, Se, TI, Tr, TSP, USP, Wa
Novozymes	Materials	Dk	AQ	AQ	AQ	AQ	AQ	85	B		53,443	360,098	469,954	PGS, TI, Tr
Odfjell SE	Industrials ¹	No	AQ	IN	IN	X	X	65	D	NP				
Olav Thon Eiendoms-selskap	Financials	No	NR	NR	NR	DP	X							
OP Pohjola Group	Financials	Fi	NR	AQ	AQ	AQ	AQ							
Opera Software	Information Technology	No	NR	X	X	X	X							
Oriflame	Consumer Staples	Se	AQ	AQ	AQ	AQ	AQ	62	D		9,177	21,783	40,242	Fu, Oth, TI, Tr, Wa
Oriola-KD	Health Care	Fi	NR	NR	X	X	X							
Orion	Health Care	Fi	AQ	AQ	AQ	AQ	AQ	65	D		3,818	27,582	-	
Orkla	Industrials	No	AQ	AQ	AQ	AQ	IN	75	C		2,152,026	925,860	-	EC, PGS, Se, TI, Tr, USP, Wa
Össur	Health Care	Is	NR	X	X	X	X							
Outokumpu	Materials	Fi	AQ	AQ	AQ	AQ	AQ	84	B		827,256	571,419	162,916	TI, Tr
Outotec	Industrials	Fi	AQ	AQ	AQ	NR	X	81	C		2,587	10,617	11,049	DSP, EC, PGS, SE, TI, Tr, TSP, USP, Wa
PA Resources	Energy	Se	IN	AQ	DP	X	X							
Pandora	Consumer Discretionary	Dk	DP	X	X	X	X			NP				
Peab	Industrials	Se	AQ	AQ	AQ	NR	X	71	C		9,275	2,104	-	Tr
Petroleum Geo-Services	Energy	No	AQ	AQ	AQ	AQ	AQ	68	D	NP				
Photocure	Health Care	No	DP	X	X	X	X			NP				
Pöyry	Industrials	Fi	DP	AQ	NR	NR	X							
Pronova BioPharma	Health Care	No	DP	AQ	AQ	DP	X			NP				
Prosafe	Energy	Cy	AQ	X	AQ	AQ	AQ	39	-		43,867	-	-	
Q-Free	Information Technology	No	DP	X	X	X	X							
Q-Med	Health Care	Se	NR	AQ	AQ	AQ	X							

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Questerre Energy	Energy	Ca	DP	X	X	X	X			NP				
Raisio	Consumer Staples	Fi	NR	NR	X	X	X							
Ramirent	Industrials	Fi	NR	NR	NR	NR	DP							
Ratos	Banks	No	AQ	AQ	AQ	AQ	AQ	12	-	NP				
Rautaruukki	Materials	Fi	AQ	AQ	AQ	AQ	X	63	D	NP				
REC Group	Industrials	No	DP	NR	NR	AQ	AQ			NP				
Rezidor Hotel Group	Consumer Discretionary	Be	NR	X	X	X	X							
Rockwool International	Industrials	Dk	AQ	AQ	AQ	NR	X	86	A-		1,062,000	242,000	4,016,004,284	Tr, USP
Royal Caribbean Cruises	Consumer Discretionary	No	AQ	AQ	NR	NR	NR	70	C		4,327,349	-	19,827	EC, Ld, PGS, TI
Royal Unibrew	Consumer Staples	Dk	DP	X	X	X	X			NP				
Ruukki Group	Industrials	Fi	NR	NR	NR	NR	X							
SAAB	Industrials	Se	AQ	AQ	AQ	AQ	AQ	81	B		18,012	22,073	19,750	Ld, PGS, Tr
Salmar	Consumer Staples	No	AQ	AQ	AQ	X	X	85	B	NP				
Sampo	Financials	Fi	NR	NR	DP	DP	X							
Sandvik	Industrials	Se	AQ	AQ	AQ	AQ	AQ	54	E	NP				
Sanoma	Consumer Discretionary	Fi	AQ	AQ	AQ	AQ	AQ	43	-	NP				
SAS	Industrials ¹	Se	AQ	AQ	AQ	AQ	AQ	74	B		3,664,701	21,238	2,118	TI
SCA	Materials	Se	AQ	AQ	AQ	AQ	AQ	86	B		2,588,000	1,789,000	916,215	Oth
Scania	Industrials	Se	AQ	AQ	AQ	AQ	AQ	59	D		34,612	46,831	164	Oth
Schibsted	Consumer Discretionary	No	AQ	AQ	NR	NR	AQ	73	D		2,268	5,977	90,505	PGS
Schouw & Co	Financials	Dk	NR	X	X	X	X							
Seadrill Management	Energy	No	AQ	AQ	NR	DP	DP	15	-	NP				
SEB	Banks	Se	AQ	AQ	AQ	AQ	AQ	81	A-		-	17,545	21,333	EC, SE, Tr
Seco Tools	Industrials	Se	DP	NR	DP	X	X			NP				
Securitas	Industrials	Se	AQ	DP	DP	DP	DP	71	C	NP				
Sevan Marine	Energy	No	DP	NR	NR	NR	X			NP				
SimCorp	Information Technology	Dk	NR	NR	X	DP	X							
Sjælsø Gruppen	Financials	Dk	NR	NR	NR	X	X							
Skanska	Industrials	Se	AQ	AQ	AQ	AQ	AQ	83	C		336,082	106,189	1,115,229	Ld, PGS, TI, Tr
SKF	Industrials	Se	AQ	AQ	AQ	AQ	AQ	80	B		75,700	581,154	66,880	Tr, TSP
Skistar	Consumer Discretionary	Se	DP	X	X	X	X			NP				
Solar	Industrials	Dk	AQ	X	X	X	X	54	D		3,529	6,112	12,414	TI
Solstad Offshore	Energy	No	AQ	NR	X	X	X	75	C		419,006	86	3,539	EC, Wa
Songa Offshore	Energy	No	DP	NR	X	X	X			NP				
Spar Nord Bank	Financials	Dk	NR	NR	NR	DP	X							
Sponda	Financials	Fi	NR	NR	NR	AQ	X							
SSAB	Materials	Se	AQ	AQ	AQ	AQ	DP	77	C		6,497,451	885,299	627,300	EC, Oth, Tr, TSP
Statoil	Energy	No	AQ	AQ	AQ	AQ	AQ	60	E		14,179,708	227,613	37,000	Tr
Stockmann	Consumer Discretionary	Fi	AQ	DP	AQ	AQ	AQ	61	E		889	29,771	3,654	TI, Tr
Stolt-Nielsen	Industrials ¹	UK	DP	X	X	X	X			NP				
Stora Enso	Materials	Fi	AQ	AQ	AQ	AQ	AQ	87	B		3,250,000	2,275,000	4,057,000	Fu, PGS, SE, TSP
Storebrand	Banks	No	AQ	AQ	AQ	AQ	AQ	84	B		598	820	957	Tr, Wa
Subsea 7	Industrials	No	DP	AQ	AQ	AQ	X							
Svenska Handelsbanken	Banks	Se	AQ	AQ	AQ	AQ	AQ	76	C		17	8,152	2,666	TI, Tr
Sweco	Industrials	Se	DP	NR	X	X	X			NP				
Swedbank	Banks	Se	AQ	AQ	AQ	AQ	AQ	72	C		10,592	39,642	26,228	Fu, Lu, PGS, Tr, TSP
Swedish Match	Consumer Staples	Se	AQ	AQ	AQ	AQ	AQ	60	E		11,627	26,607	15,186	TI, Tr

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Swedish Orphan Biovitrum	Health Care	Se	NR	X	X	X	X							
Sydbank	Financials	Dk	NR	NR	DP	DP	NR							
Systemair	Industrials	Se	NR	X	X	X	X							
Talvivaara Mining Company	Materials	Fi	AQ	AQ	X	X	X	56	E		160,160	61,353	24,377	#N/A
TDC	Telecommunication Services	Dk	AQ	AQ	AQ	AQ	AQ	59	C		16,510	113,090	4,631	Tr
Teekay Petrojarl	Energy	No	AQ	AQ	AQ	AQ	AQ	67	C		680,862	40	-	TI
Tele2	Telecommunication Services	Se	AQ	AQ	AQ	AQ	AQ	73	C		750	86,993	1,458	DSP, PGS, SE, TI, Tr
Telenor Group	Telecommunication Services	No	AQ	AQ	AQ	AQ	AQ	72	C		344,881	714,463	25,120	Fu, TI, Tr
TeliaSonera	Telecommunication Services	Se	AQ	AQ	AQ	AQ	AQ	72	C		18,154	245,669	35,877	PGS, Tr, TSP
TGS-NOPEC Geophysical	Energy	No	NR	NR	NR	DP	NR							
The East Asiatic Company	Consumer Staples	Dk	DP	X	X	X	X			NP				
Tieto	Information Technology	Fi	AQ	AQ	AQ	NR	AQ	96	A		93	37,402	15,151	Tr
Tivoli AS	Consumer Discretionary	Dk	NR	X	X	X	X							
Tomra Systems	Industrials	No	AQ	AQ	AQ	AQ	AQ	74	C		19,300	3,400	98,125	TI, Tr, USP
Topdanmark	Banks	Dk	AQ	AQ	AQ	DP	NR	69	D		1,969	4,029	2,204	Tr
TORM	Industrials ¹	Dk	AQ	AQ	AQ	AQ	NR	73	C		1,681,258	660	6,452	Tr
Trelleborg	Industrials	Se	AQ	AQ	AQ	AQ	AQ	65	C		109,782	237,095	1,050	Tr
Tryg	Banks	Dk	AQ	AQ	AQ	AQ	AQ	80	B		1,627	2,166	3,344	Tr
Unibet Group	Consumer Discretionary	Mt	DP	X	X	X	X			NP				
United International Enterprises	Consumer Staples	Dk	DP	X	X	X	X			NP				
UPM-Kymmene	Materials	Fi	AQ	AQ	AQ	AQ	AQ	83	C		3,300,000	2,680,000	1,344,000	TI, Tr, TSP, Wa
Uponor	Industrials	Fi	AQ	AQ	NR	NR	DP	65	C	NP				
Vacon	Industrials	Fi	IN	DP	X	X	X							
Vaisala	Information Technology	Fi	AQ	AQ	X	X	X	65	C		1,377	4,815	2,293	Tr
Veidekke	Industrials	No	AQ	AQ	AQ	AQ	X	60	E		93,000	10,500	718,950	EC, PGS, Tr, Wa
Vestas Wind Systems	Industrials	Dk	AQ	AQ	AQ	AQ	AQ	72	C		56,547	66,457	1,562,341	PGS, SE, Tr, TSP
Viking Line	Consumer Discretionary	Fi	NR	NR	X	X	X							
Vizrt	Information Technology	No	NR	NR	NR	X	X							
Volvo	Industrials	Se	AQ	AQ	AQ	AQ	AQ	56	D	NP				
Wallenstam	Banks	Se	AQ	AQ	NR	IN	X	66	C		365	13,691	85	Fu, Tr
Wärtsilä	Industrials	Fi	AQ	AQ	AQ	AQ	AQ	67	D		80,234	58,002	35,060	Tr
Wihlborgs Fastigheter	Banks	Se	AQ	AQ	X	X	X	61	D		458	9,483	83	EC, Oth, TI
Wilh. Wilhelmsen	Industrials ¹	No	IN	NR	IN	NR	X							
William Demant Holding	Health Care	Dk	AQ	AQ	AQ	NR	DP	61	E		599	9,199	-	
Yara International	Materials	No	DP	AQ	NR	IN	AQ			NP				
YIT	Industrials	Fi	NR	NR	DP	DP	DP							

Other responding companies **Key to Appendix I**

The following Nordic companies responded to the CDP Investor Request as voluntary responders (without receiving a request from investors):

KMD (Denmark)
Nykredit (Denmark)
SOL Pesulapalvelut Oy (Finland)

Response Status:

AQ	Answered questionnaire
AQ(SA)	Company is either a subsidiary or has merged during the reporting process. See company in brackets for further information on company's status
DP	Declined to participate
IN	Provided information
NP	Answered questionnaire but response not made publicly available
NR	No response
–	Company has not provided information or the information has not been made publicly available

Disclosed emissions are in units of metric tonnes CO₂e

Scope 3 Source Key:

DSP	End of life treatment of sold products
EC	Employee commuting
Eq	Capital goods
Fr	Franchises
Fu	Fuel energy – related activities not included in Scope 2
In	Investment
Ld	Leased assets (downstream)
Lu	Leased assets (upstream)
Oth	Other
PGS	Purchased goods and services
PSP	Processing sold products
SE	Supplier emissions
TI	Transportation and distribution (goods and services)
Tr	Business travel
TSP	Transportation and distribution of sold products inc. warehousing and retail
USP	Use of sold products
Wa	Waste generated in operations

Country Abbreviations:

Be - Belgium
Bm – Bermuda
Ca – Canada
Cy – Cyprus
Dk – Denmark
Fi – Finland
Is – Iceland
Mt – Malta
Se – Sweden
UK – United Kingdom

Endnotes to Appendix I

1. Company belongs to the 'Transportation' industry group within the 'Industrials' sector. The report analysis addresses this Industry Group separately from the other Industry Groups in the Industrials sector.
2. G4S has responded as part of the FTSE 250 and FTSE 100
3. Lundin Mining has responded as part of the Canadian sample in previous years

Appendix II: GHG Protocol emissions and scopes

In this report, the term GHG refers to the six greenhouse gases covered by the Kyoto Protocol – carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF₆).

Emissions are weighted by the global warming potential of each of these gases, and expressed in terms of CO₂-equivalent (CO₂e).

The GHG Protocol defines three emissions ‘scopes’ for accounting and reporting purposes. In essence (see <http://www.ghgprotocol.org> for further details), these are:

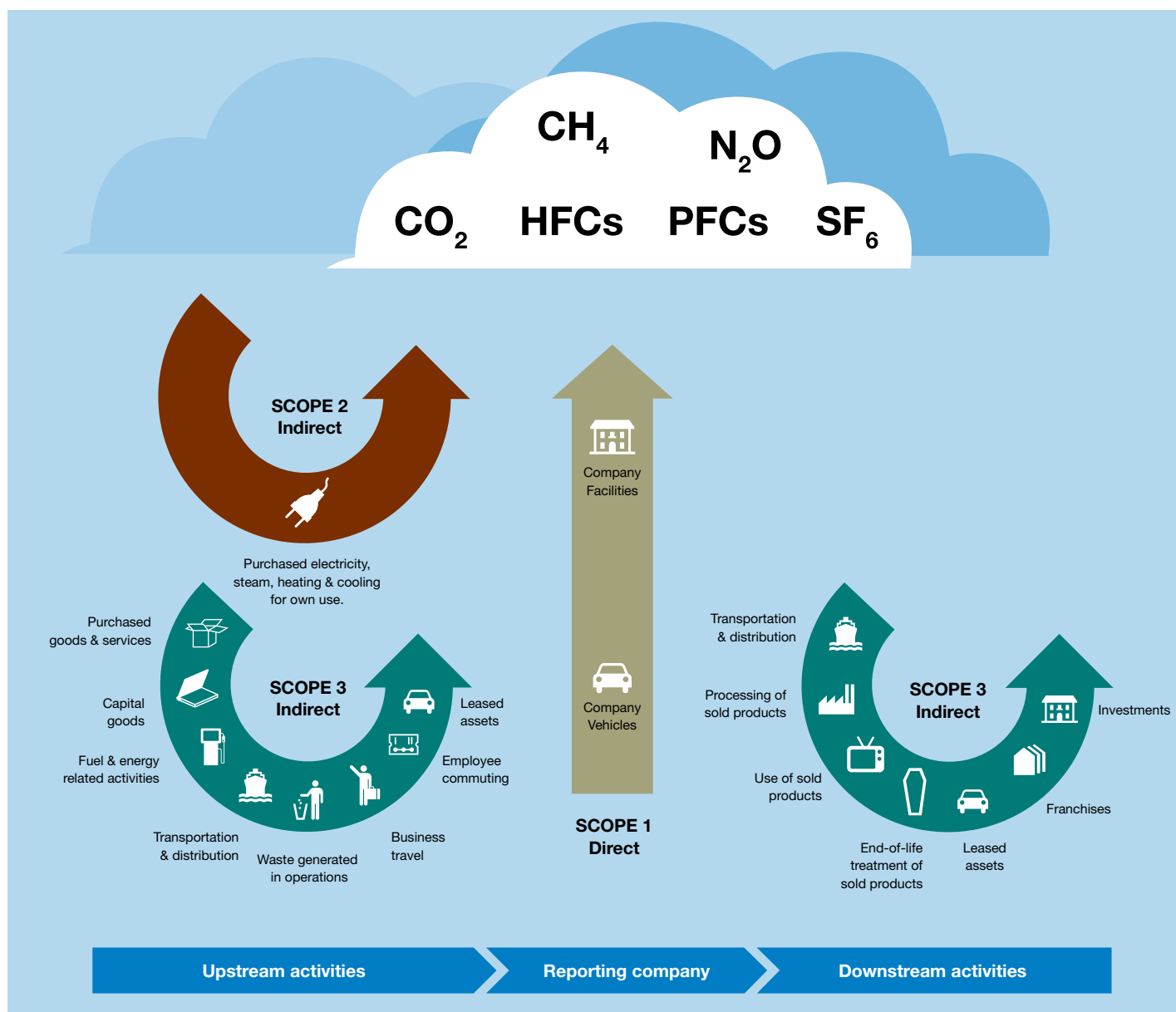
- Scope 1: direct GHG emissions from sources that are owned or controlled by the company (e.g. combustion in the company's boilers, furnaces or vehicles)
- Scope 2: indirect GHG emissions

from the generation of purchased electricity, heat or steam consumed by the company

- Scope 3: other indirect emissions due to the activities of the company, but from sources that it does not own or control (e.g. extraction of purchased raw materials, or use of the company's products and services).

Figure 31 provides an overview.

Figure 31 – graphic from ghgprotocol.org



Appendix III: Global Key Trends Summary¹

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

		Sample: geography/number of companies															
Key Trends Indicators		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
	% 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
	% 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
	% of responders with absolute emissions reduction targets	42	26	40	26	16	25	9	32	42	45	33	28	44	41	33	31
	% 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
	% 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
	% 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
	% 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
	% 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.

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