

India Inc. readies for #ParisAgreement & beyond

CDP India Climate Change Report 2016

Written on behalf of 827 investors with US\$100 trillion in assets







CDP 2016 climate change scoring partners

CDP works with a number of partners to deliver the scores for all our responding companies. These partners are listed below along with the geographical regions in which they provide the scoring. All scoring partners complete training to ensure the methodology and guidance are applied correctly, and the scoring results go through a comprehensive quality assurance process before being published. In some regions there is more than one scoring partner and the responsibilities are shared between multiple partners.

In 2016, CDP worked with RepRisk, a business intelligence provider specializing in ESG risks(www. reprisk.com), who provided additional risk research and data into the proposed A-List companies to assess whether there were severe reputational issues that could put their leadership status into question.



Australia & New Zealand, Benelux, Canada, DACH, Hong Kong, India, Ireland, Italy, Japan, Nordic, Russia, SE Asia, South Africa, Taiwan, UK, USA.



North America*



Central and Eastern Europe (CEE)



China

DEKRA







Japan, Korea



Brazil



Korea





Japan



Iberia (Spain & Portugal)



All regions

Japan

*Aligned Incentives are retained as an alternative scoring partner in the event of a conflict of interest.

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Investor perspectives



Odd Arild, Storebrand CEO



Philippe Desfosses, ERAFP CEO



Peter Harrison, Schroders CEO

The investment landscape is changing rapidly: the Paris Agreement set out a clear direction of travel on climate change for global policy makers, while developments such as France's Article 173 and the forthcoming Task Force on Climate-related Disclosure are driving greater disclosure and accountability from investors. In the light of this, we ask CEOs from three leading financial institutions how their organisations are responding and where they see the key challenges over the next few years.

1. As an investor what are your top priorities in helping to realise the goals of the Paris agreement? And how do you plan to align with policy-makers' 2 degree targets?

Odd Arild: We have the ambition to be a leading star when it comes to sustainable investments. In Storebrand, sustainability is not a niche, it is included in our main products and services. Which means that we literally have 570 billion NOK in carbon reduction programs. We are presently setting an overall group climate target which will assist us in reaching a 2 degree world, and a 2 degree regulatory ambition.

We have three priorities. The first is about measuring, reporting and lowering our carbon footprint through CDP, Portfolio Decarbonization Coalition (PDC), and Montreal Pledge. The second priority is to work with sustainability and carbon optimization in our main pension portfolios. We're also active in financial innovation – creating one of the world's first fossil free, sustainability optimized index near funds. Our third priority is to be able to report externally in our group communication to the market on our progress towards a 2 degree world.

Philippe Desfosses: Since its inception, as part of fulfilling its fiduciary duty towards the Scheme's contributors and beneficiaries, ERAFP has been working to determine the impact of its investments on the economy, society and the environment. In coming years it will rely not only on the development of appropriate tools to manage climate challenges but also on the experience it has already accumulated, particularly in the area of de-carbonization, such as for the low-carbon equity mandate awarded to Amundi or the virtual platform, built with AM League and Cedrus AM, that managers can use to demonstrate their capacity to reduce the carbon intensity of a portfolio of international equities. In keeping with its socially responsible investment approach, ERAFP will continue to make a major contribution, in collaboration with the various other stakeholders, to speeding up the financing of the energy transition and to exceeding the objectives laid down by the Paris treaty.

Peter Harrison: The physical impacts and social and political responses to climate change will be defining investment themes of the coming years and decades. We are focusing on building our understanding of the implications for economies, industries and companies; developing tools to support better investment decisions, and engaging companies to promote more transparent and forward-thinking responses.

2. As an investor what are your main drivers for incorporating climate change risks and opportunities in investment decision making? And what are the main barriers?

OA: The main drivers are the risks and opportunities facing the companies we invest in. We believe that a tilt in investments from sustainability laggards to leaders will create greater returns in our portfolios. We also have a mission to influence and support our entire sector to professionalize climate risk, through our different products, services and external engagements like the PDC. The main barrier is data access in two areas; lower quality and availability of data and lack of regulations requiring transparency and reporting on climate risk.

PD: In exchange for the contributions that it receives from its beneficiaries, the Scheme undertakes to pay them pension benefits. This is a promise that the youngest among us will benefit from following a very long period of time. It is through nothing other than observance

co storebrand



Schroders

of our fiduciary duty that we have undertaken energy and climate-related initiatives, with a view to aligning our investment portfolios with international global warming containment objectives.

A strong barrier lies in Research which still needs to be encouraged in order to develop robust indicators. It would provide at issuer level, a comprehensive picture of companies' environmental impacts and especially direct and indirect emissions. Most available methodologies only cover part of scope 3 emissions. Thus, in some sectors such as the automotive industry or the financial sector, global emissions tend to be underestimated.

PH: Hitting the commitments our global leaders made in Paris will mean changes on a far bigger scale than financial markets seem to be preparing for, spreading beyond the most obvious sectors or niche asset classes. We need new thinking to understand how large and far reaching the impacts will be. We need to accept that perfect clarity on policies looks unlikely and focus on what we can do: better thinking, better models, better data and a clearer view of how we adapt the portfolios we manage.

3. As an investor how do you balance the needs of the present against the longer term needs of delivering investment/business strategies that avoid dangerous levels of climate change and the associated impacts of these?

OA: As a pension company, we invest for customers who will stay with us for up to 50 years. Our mission is to create the best possible retirement for our customers, both in terms of financial return, but also to support the health of the society where our customers will retire.

PD: As the French public service additional pension scheme manager, ERAFP has a very long-term responsibility towards its contributors and beneficiaries. Driven by its fiduciary duty, ERAFP prioritizes long term investments and seeks to raise the awareness about the importance of changing economic structures with a view to de-carbonization.

PH: At Schroders we have a long tradition of long term, fundamental analysis. That experience convinces us that taking account of structural trends such as climate change does not have to mean compromising shorter term performance. In fact, we are not going to be able to help our

clients meet their goals, which are typically far longer than investment cycles, unless we establish long term views of critical structural trends such as climate change.

4. Environmental disclosure is a fast evolving field, how is better data, disclosure and research affecting investor decision-making?

OA: Better data is definitely improving our possibilities to make informed investments optimising return and climate risk. We supported a government bid in Sweden to standardise disclosure of carbon foot printing of mutual funds. We also support data development and availability in other areas, such as water or political instability where we in fact have developed our own system to predict a coup d'état in different countries.

PD: In 2015, with the help of a specialized organization' services, ERAFP have extended its perimeter and reported on the carbon footprint of 87% of its total assets. Beyond its carbon footprint, ERAFP made also a comparison of the energy mix attributable to ERAFP's equity portfolio with an energy generation breakdown for the International Energy Agency's '2°C' scenarios between 2030 and 2050. The fast evolving environmental disclosure tools allow ERAFP to expand and deepen its analyses in order to develop the most efficient decarbonization strategies.

PH: Good investment decisions rely on analysis and analysis needs data. While climate science is awash with data, most of it of little use in helping us choose one investment over another. Rigorous, relevant and consistent data at company and asset levels – like that CDP promotes and collates – is critical to our ability to get past quantifying the scale of the problem and into deciding how to navigate it.

5. What would you like to see from companies with regards to improved transparency on climate change relevant issues?

OA: We would like to see an increase in regulation when it comes to climate reporting, and higher taxes based on polluters pays principle. The real costs of operation have to be brought to the surface, so that we as investors better can adapt our investments to this.

PD: As a member of the Institutional Investors Group on Climate Change (IIGCC), ERAFP takes part in engagement initiatives towards regulatory authorities but also companies in the most exposed sectors in order to improve their climate reporting. ERAFP is also involved into the extractive industries transparency initiative (EITI). ERAFP would like companies, especially the most exposed to climate change risks, communicate on strategic resilience and their efforts to manage environmental impacts.

PH: Ours is a forward looking industry and information that provides more insight into companies' future planning will be vital; how companies assess changes in their industries, the assumptions they make, the strategies they form and the products they develop. No one has all the answers and more frank discussion on how companies approach the challenge is more important than holding on for definitive answers.

6. What role can engagement play in driving corporate behavioural change in the climate change context and how do you measure its success?

OA: Engagement plays an important role as a complement to divestment and portfolio tilting. We focus engagement within the climate areas to group activities within PRI, often initiated by CDP. In this way we want to increase availability of data, which is our target of engagement. We can then use it to make decision on tilting and divestment.

PD: ERAFP is an extremely engaged asset owner, maintaining dialogue with many of the companies the Scheme invested in. Through its asset managers, in 2016, ERAFP supported more than 10 shareholder resolutions on climate change. ERAFP is also involved in engagement initiatives through Institutional Investors Group on Climate Change (IIGCC), ShareAction/RE100, Carbon Disclosure Project or alongside Mirova on oil exploration's themes. Forcing companies to discuss and think with a long term approach, ERAFP is convinced that asset owners' union, followed by their asset managers, will allow the acceleration of companies' change, among which the most advanced already oriented their development towards the energy transition.

PH: Engagement is a key part of our responsibilities as responsible, active investors. We regularly talk to management teams about why we think climate change is an important issue, as well as our expectations for disclosure

and transparency. That work is intrinsically tied up with how we approach investing and the benefits are evident in the decisions we make and the changes we see in companies.

7. If we were to have a similar conversation in three years time, what do you think would be some of the key successes for an investor in managing climate change risks and opportunities?

OA: Integration. Integration of competence, and tools. Managing climate risk must be at the core of the investment strategy covering all assets in all assets classes and not seen as a side activity for certain SRI funds. The global pension capital consists of the 40 000 billion USD – that is the money we need to get to work if we want to create a better, more sustainable future.

PD: Because you can't manage what you don't measure, ERAFP thinks that a crucial key of success consists in good measures of its investment climate related risks. ERAFP is working on it using and questioning current carbon foot-printing methodologies. Working with its asset managers on portfolio de-carbonization approaches, disclosing the results of its work on these areas and engaging with companies on carbon disclosure are other keys that ERAFP use to manage climate risks and opportunities.

PH: We have to build better tools to measure, quantify and analyse the risks and opportunities climate changes represents to companies and portfolios. Unless we can do that, we are going to struggle to know if we are on the right track. Progress has been made with things like carbon footprinting, but we are in the foothills of what needs to be done.

8. How are you engaging with the Sustainable Development Goals 2030 agenda?

OA: SDG sets a clear direction on what the focus should be to reach a more sustainable future. We now work to integrate the SDGs in our strategy and targets, so that we ensure that the company's strategy is in line with the goals of the world. Already in 2016 we will as a group start to report on our contribution to the SDGs.

PD: In line with its socially responsible investor's status since its beginning, ERAFP has developed a best in class strategy. This approach has had positive results since ERAFP's portfolio is globally more carbon efficient than its benchmark. By

selecting the most sustainable players but also being a strongly engaged investor on ESG issues, ERAFP aims to contribute to the Sustainable Development Goals agenda 2030. Its recent signing of the Energy Efficiency Investor Statement at COP 21 and of the 2016 global investor letter to the G20 are examples of its ongoing efforts to limit climate change and promote a Sustainable Development.

PH: The Sustainable Development Goals highlight the changes we are seeing in social and political awareness of the challenges facing many of the world's poorest countries and people. This backdrop of growing awareness and commitment will have direct implications for how we manage money. We are working hard to build an understanding of the potential changes into our decision making.

Custom questions

Storebrand is in the unique position of facing the risk of increased claims from climate change as well as the risks of decreased portfolio returns from it. How do your investment activities reduce the risk of increased claims from climate change?

OA: Companies with significant greenhouse gas emissions often make for poor financial investments. In order to make it easier to identify the companies we wish to invest in, we rate potential companies according to how sustainable they are. The environmental impact is a decisive factor when we make our assessment, which makes it easier to pinpoint which companies we do not wish to invest in. We also have an exclusion policy on negative environmental impact, with exclusion of for example more than 60 companies based on their poor climate record.

We also work in the area of financial innovation, and have launched a number of products recently. They are important not only to our customers, but also as examples to inspire and show our sector what is really possible. SPP/ Storebrand presently have the world's largest green bond fund. We have also launched a unique series of products: a near index equity mutual fund that is fossil free, and optimised for a high sustainability level of the remaining companies. We are able to deliver a low tracking error in comparison to 'standard' indices, a low fee, and a substantially lower climate related risk. In ERAFP's "Combating Climate Change" approach it says that in order to meet the ambitions of the SRI charter in limiting greenhouse gas emissions investors should "provide tangible evidence of their approaches impact". What is your view on the current state of Asset Manager's ability to provide this?

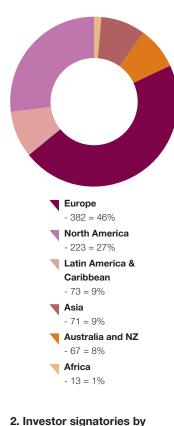
PD: ERAFP discusses with its asset managers to understand their portfolio companies' management and improves it. This year, ERAFP has entered into an agreement with Cedrus AM and AM League to establish a framework that asset managers can use to demonstrate their know-how in the reduction of carbon intensity by applying their expertise in the management of a notional portfolio of international equities. In the coming months, with the benefit of the Cedrus AM return of experience, ERAFP will be working on ways to extend its "low carbon" management approach, either through investment in open funds or through a call for tenders to select an asset manager to create a dedicated fund.

Schroder's Chief Economist recently published the findings of a survey of 18 Chief Economists. Its finding was pretty bleak in terms of the level of integration of climate change risk into their forecasting process. What impacts, in your opinion, do you think that this lack of macrolevel analysis will have on the effective integration of climate change risks into the investment process?

PH: Although it was disappointing that more of the City's economists don't build climate trends into their forecasts, it was not altogether surprising. The problem lies with tools and models as much as awareness; most in our industry know the scale of the challenge and the impacts it will have, but the potential dislocation does not fit easily with models that are designed around linear trends. Unless we can come up with better ways of analysing the financial implications of climate change, we are going to find it hard to avoid being surprised down the line.

Investor signatories and members

1. Investor signatories by location



type

CDP's investor program – backed in 2016 by 827 institutional investor signatories representing in excess of US\$100 trillion in assets - works with investors to understand their data and analysis requirements and offers tools and solutions to help them.

Our global data from companies and cities in response to climate change, water insecurity and deforestation and our award-winning investor research series is driving investor decision-making. Our analysis helps investors understand the risks they run in their portfolios. Our insights shape engagement and add value not only in financial returns but by building a more sustainable future.

For more information about the CDP investor program, including the benefits of becoming a signatory or member please visit: https:// www.cdp.net/Documents/Brochures/investorinitiatives-brochure-2016.pdf

To view the full list of investor signatories please visit: https://www.cdp.net/en-US/ Programmes/Pages/Sig-Investor-List.aspx

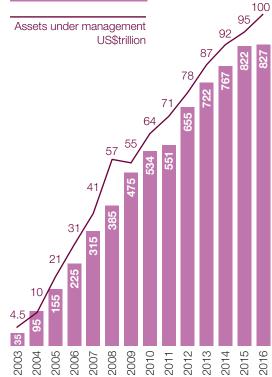
3. Investor signatories over time



-256 = 30%Banks -158 = 19%Insurance -39 = 5%



Number of signatories



Investor members

ACTIAM	
AG NAM AFGON N.V.	
AEGON N.V. Allianz Global Investors	
ATTP Group	
Aviva Investors	
AXA Group	
Bank of America Merrill Lynch	
Bendigo and Adelaide Bank	
BlackRock	
Boston Common Asset Management, LLC	
BP Investment Management Limited	
British Columbia Investment Management Corporation	
California Public Employees' Retirement System	
California State Teachers' Retirement System	
Calvert Investment Management, Inc	
Capricorn Investment Group	
Catholic Super	
CCLA Investment Management Ltd	
DEXUS Property Group	
Etica SGR	
Fachesf	
FAPES	
Fundação Itaú Unibanco	
Generation Investment Management	
Goldman Sachs Asset Management	
Henderson Global Investors	
Hermes Fund Managers	
HSBC Holdings plc	
Infraprev	
KeyCorp	
KLP	
Legg Mason, Inc.	
London Pensions Fund Authority	
Maine Public Employees Retirement System	
Morgan Stanley	
National Australia Bank	
NEI Investments	
Neuberger Berman	
New York State Common Retirement Fund	
Nordea Investment Management	
Norges Bank Investment Management	
Overlook Investments Limited	
PFA Pension	
POSTALIS - Instituto de Seguridade Social dos Correios e Telégrafos	
PREVI	
Rathbone Greenbank Investments	
Real Grandeza	
Robeco	
RobecoSAM AG	
Rockefeller & Co.	
Royal Bank of Canada	
Sampension KP Livsforsikring A/S	
Schroders	
SEB AB	
Sompo Japan Nipponkoa Holdings, Inc	
Sustainable Insight Capital Management	
TIAA	
Terra Alpha Investments LLC	
The Sustainability Group	
The Sustainability Group The Wellcome Trust	
THE WEIGOTHE HUSL	
LIPS	
UBS	
University of California	

Paul Simpson Chief Executive Officer. CDP



Measurement and transparency are where meaningful climate action starts, and as governments work to implement the Paris Agreement, CDP will be shining a spotlight on progress and driving a race to net-zero emissions. The Paris Agreement – unprecedented in speed of ratification – and the adoption of the Sustainable Development Goals (SDGs) marked the start of a new strategy for the world, with a clear message for businesses: the low-carbon revolution is upon us. By agreeing to limit global temperature rises to well below 2°C, governments have signaled an end to the fossil fuel era and committed to transforming the global economy.

The choice facing companies and investors has never been clearer: seize the opportunities of a carbon-constrained world and lead the way in shaping our transition to a sustainable economy; or continue business as usual and face serious risks – from regulation, shifts in technology, changing consumer expectations and climate change itself. CDP's data shows that hundreds of companies are already preparing for the momentous changes ahead, but many are yet to grapple with this new reality.

Investors are poised to capitalize on the opportunities that await. Some of the biggest index providers in the world, including S&P and STOXX, have created lowcarbon indices to help investors direct their money towards the sustainable companies of the future. Meanwhile, New York State's pension fund – the third largest in the United States – has built a US\$2 billion low-carbon index in partnership with Goldman Sachs, using CDP data.

With trillions of dollars' worth of assets set to be at risk from climate change, investors are more focused than ever on winners and losers in the low-carbon transition. Information is fundamental to their decisions. Through CDP, more than 800 institutional investors with assets of over US\$100 trillion are asking companies to disclose how they are managing the risks posed by climate change. Their demands don't stop there: international coalitions of investors with billions of dollars under management are requesting greater transparency on climate risk at the AGMs of the world's biggest polluters.

The glass is already more than half full on environmental disclosure. Over fifteen years ago, when we started CDP, climate disclosure was nonexistent in capital markets. Since then our annual request has helped bring disclosure into the mainstream. Today some 5,800 companies, representing close to 60% of global market capitalization, disclose through CDP. Now, we are poised to fill the glass. We welcome the FSB's new Task Force on Climate-related Financial Disclosures, building on CDP's work and preparing the way for mandatory climate-related disclosure across all G20 nations. We look forward to integrating the Task Force recommendations into our tried and tested disclosure system and working together to take disclosure to the next level.

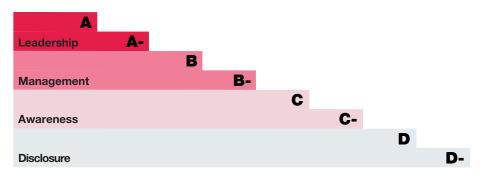
We know that business is key to enabling the global economy to achieve – and exceed – its climate goals. This report sets the baseline for corporate climate action post-Paris. In future reports, we'll be tracking progress against this baseline to see how business is delivering on the low-carbon transition and enabling investors to keep score. Already, some leading companies in our sample – including some of the highest emitters – are showing it's possible to reduce emissions while growing revenue, and we expect to see this number multiply in future years.

Measurement and transparency are where meaningful climate action starts, and as governments work to implement the Paris Agreement, CDP will be shining a spotlight on progress and driving a race to net-zero emissions.

The Paris Agreement and the SDGs are the new compass for business. Companies across all sectors now have the chance to create this new economy and secure their future in doing so. High-quality information will signpost the way to this future for companies, investors and governments – never has there been a greater need for it.

Communicating progress

Central to CDP's mission is communicating the progress companies have made in addressing environmental issues, and highlighting where risks may be unmanaged. In order to do so in a more intuitive way, CDP has adopted a streamlined approach to presenting scores in 2016. This new way to present scores measures a company's progress towards leadership using a 4 step approach: **Disclosure** which measures the completeness of the company's response; **Awareness** considers the extent to which the company has assessed environmental issues, risks and impacts in relation to its business; **Management** which is a measure of the extent to which the company has implemented actions, policies and strategies to address environmental issues; and **Leadership** which looks for particular steps a company has taken which represent best practice in the field of environmental management.

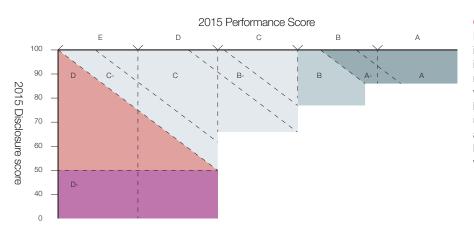


Leadership	75-100%	А
	0-74%	A-
Management	40-74%	В
	0-39%	B-
Awareness	40-74%	С
	0-39%	C-
Disclosure	40-74%	D
	0-39%	D-

F: Failure to provide sufficient information to CDP to be evaluated for this purpose¹

1 Not all companies requested to respond to CDP do so. Companies who are requested to disclose their data and fail to do so, or fail to provide sufficient information to CDP to be evaluated will receive an F. An F does not indicate a failure in environmental stewardship. The scoring methodology clearly outlines how many points are allocated for each question and at the end of scoring, the number of points a company has been awarded per level is divided by the maximum number that could have been awarded. The fraction is then converted to a percentage by multiplying by 100 and rounded to the nearest whole number. A minimum score of 75%, and/or the presence of a minimum number of indicators on one level will be required in order to be assessed on the next level. If the minimum score threshold is not achieved, the company will not be scored on the next level.

The final letter grade is awarded based on the score obtained in the highest achieved level. For example, Company XYZ achieved 88% in Disclosure level, 76% in Awareness and 65% in Management will receive a B. If a company obtains less than 40% in its highest achieved level, its letter score will have a minus. For



example, Company 123 achieved 76% in Disclosure level and 38% in Awareness level resulting in a C-. However, a company must achieve over 75% in Leadership to be eligible for an A and thus be part of the A List, which represents the highest scoring companies. In order to be part of the A-list a company must score 75% in Leadership, not report any significant exclusions in emissions and have at least 70% of its scope 1 and scope 2 emissions verified by a third party verifier using one of the accepted verification standards as outlined in the scoring methodology.

Public scores are available in CDP reports, through Bloomberg terminals, Google Finance and Deutsche Boerse's website. CDP operates a strict conflict of interest policy with regards to scoring and this can be viewed at https://www.cdp.net/Documents/ Guidance/2016/CDP-2016-Conflict-of-Interest-Policy.pdf

Comparing scores from previous years.

It is important to note that the 2016 scoring approach is fundamentally different from 2015, and different information is requested, so 2015 and 2016 scores are not directly comparable. However we have developed a visual representation which provides some indication on how 2015 scores might translate into 2016 scores. To use this table a company can place its score in the table and see in which range it falls into in the current scoring levels. For more detailed instructions please refer to our webinar: https://vimeo.com/162087170.

ERM commentary

Environmental Resources Management (ERM) is a leading global provider of environmental, health, safety, risk, social consulting services and sustainability related services. ERM has 160 offices in over 40 countries and territories employing more than 5,000 best-in-class personnel. ERM has worked with over 50% of the Global Fortune 500 companies delivering innovative solutions for business and selected government clients helping them understand and manage sustainability challenges. The key sectors served by ERM include Oil & Gas, Mining, Power, and Manufacturing, Chemical and Pharmaceutical.

With EU ratification on 5th October 2016, the Paris Agreement has crossed the final hurdle to its enforcement. In the future, both rich and poor countries will be parties to combating climate change, with common but differentiated responsibilities. In India, the Agreement got support across the political spectrum despite India's position that rich nations pay to address it since climate change is the historical responsibility of rich nations. In the run up to Paris, India's conciliatory and forward looking position was key to reaching a global agreement. India's goals of reducing GHG intensity in a rapidly growing economy is a bold commitment, especially given that 300 million people in India still live in obscure energy poverty with no access to electricity.

In 2016, governmental action in India was focused on the effective implementation of existing policy instruments such as a carbon cess, ramp up of renewable energy capacity and integration of renewable power into the grid. More work needs to be done to ensure that policy tools such as Renewable Purchase Obligations (RPO) and Perform Achieve Trade (PAT) are working to their desired intent. In 2016 private sector actions appeared to be aligned with the government in meeting national commitment. GHG emissions and its effect on climate change is well understood by private companies in India. Over the last 15 years, India has developed a large number of GHG mitigation projects funded by both foreign and Indian entities. These projects have paved the path to a clean energy future in India and opened up new business opportunities for the private sector. In 2016, there was all-round progress in the private sector towards setting emission reduction and clean energy consumption goals, setting a carbon price, alignment with upcoming regulations and better disclosure of emissions data.

ERM in India is pleased to develop CDP India Climate Change Report for 2016. ERM has provided sustainability services to private and public sector companies in India for the last 21 years. Climate change is one of the biggest sustainability issues of our time and ERM in India stands committed to support global transition towards a low carbon future at both national and international levels. Over the coming year, ERM and CDP will work together to promote wider and better disclosure of carbon emissions in India.

> Masood Mallick, Managing Partner Rupam Raja, Partner, ERM in India



India Inc. readies for **#ParisAgreement** & beyond

Introduction

Gandhi Jayanti on two consecutive years in 2015 and 2016 marked India's historic affirmation to be a central player in the global fight against climate change. India submitted its Intended Nationally Determined Contribution (INDC) on October 2nd 2015 and a year later, President Pranab Mukherjee put his signature to the ratification document of the Paris Agreement to avow India's fight for climate justice and action. By doing so, India ensured it's rightful place at the high table for crucial rounds of hardnosed negotiations that will determine vital rules in operationalizing the important task of keeping global warming well below the 2° C threshold.

As a nation highly vulnerable to extreme weather events, India has much at stake in the success of any global agreement to combat climate change. According to Intergovernmental Panel on Climate Change (IPCC) and other projections, climate change will slow India's economic growth, impact health and development and make poverty reduction more difficult, all the while threatening food security.

India also needs to be at the forefront of framing the climate action agenda in order to maintain it's GDP growth rate which is currently amongst the highest in the world. A rapidly changing environment will put at risk, India's large agricultural base and associated population and will also imperil industrial assets.

The Indian Government has already embarked on the steps required to fulfil its pledges under the Paris Agreement which includes reduction in emissions intensity of its GDP by 33 to 35 % by 2030 from 2005 levels; ensure 40% of energy comes from nonfossil fuel sources, a mammoth 175 GW renewable energy target and afforestation goals. Inter-ministerial committees have been set up to look at different policy related commitments and obligations that will arise from implementing the Agreement.

Several initiatives are under way in India to prepare industry and consumers. No sooner had the Indian delegation returned from Paris, that the-then Secretary, Ministry of Environment, Forest and Climate Change (MoEFCC) Mr. Ashok Lavasa, publicly stated that Indian Industry, which will play an important role in meeting the goals set by India's INDC, will need to meet obligations even as they capitalise on new business opportunities. Mr. Lavasa has since been promoted as the chief administrator in India's Finance Ministry, one of the country's most important bureaucratic posts.

The Government has already moved to tighten emission standards for power plants and automobiles, and other efforts are underway. It has also announced the establishment of National Inventory Management System¹ for greenhouse gases (GHG) and is actively engaging in the World Bank's Partnership for Market Readiness which supports action on climate change mitigation. As these targets begin to be further allocated down the economy, some forward-looking businesses have already started taking steps to develop a roadmap towards climate action. There was initial hesitancy in some quarters about the level of ambition and pace of change but with the ratification of the Paris Agreement, clear signals have been sent. Driven by increasing electricity prices and internal commitments to reduce carbon emissions, many large Indian corporations are integrating renewable power into their operations. Some companies are adopting science-based targets and also setting an internal price on carbon to align their business towards future carbon related regulations. By aligning deep de-carbonization techniques with their sustainability goals, these companies are adopting eminent strategies to address issues such as external costs of energy, energy security and air and water pollution.

The CDP India 2016 Report highlights the activities of companies taking actions to combat climate change and support India's INDC.

Highlights of 2016 CDP Responses

In 2016, **58** Indian companies responded to the CDP Questionnaire, of which **47** were among BSE Top 200 companies to whom CDP had sent information requests. In addition, another 11 companies came forward on their own volition to disclose their climate impact to CDP; these are referred to as Self-Selected Companies (SSC) in the report. The total reported emissions from unique reporting companies is 272 million tCO_2e . Combining the emissions from SSCs give an aggregate reported figure of 293 million tCO_2e . Multinational companies, 12 of those that have operations in India chose to club their India emissions as part of their global submissions.

Large companies have taken the lead in engaging with CDP in India including some big Governmentowned companies. Ideally, the number of reporting companies should increase year on year but it is likely that companies had chosen to wait and observe climate change disclosure trends until there was certainty around the Paris Agreement- as is now the case. Over the past year, the country witnessed greater public engagement on issues of air quality and health impact in Indian cities. As the modalities of implementation of the Paris Agreement become imminent, along with linkages of air quality and water availability to climate change becoming more apparent, we expect more companies to disclose via CDP.

It is encouraging to note that over the years, low carbon growth patterns are beginning to settle in to the business cycle. Our analysis indicates that there is clear evidence of increasing focus on voluntary emission reduction targets and growing interest for renewable energy sourcing demonstrating long term vision amongst companies.

1 http://unfccc.int/resource/docs/natc/indbur1.pdf

CDP India A List 2016

Company Name	Sector	2016 SCORE
Tech Mahindra	Information Technology	А
Wipro	Information Technology	А
Godrej Consumer Products	Consumer Staples	A-
Godrej Industries	Materials	A-
IndusInd Bank	Financials	A-
Infosys Limited	Information Technology	A-
ITC Limited	Consumer Staples	A-
Larsen & Toubro	Industrials	A-
Tata Consultancy Services	Information Technology	A-
Tata Global Beverages	Consumer Staples	A-
Tata Motors	Consumer Discretionary	A-
Tata Steel	Materials	A-

India Emission Snapshot

The number of Indian companies managing climate change through CDP has increased to 47 since 2010.

	2010	2016
Scope 1 emissions (million metric tonnes CO ₂ e)	87.9	261.4
Scope 2 emissions (million metric tonnes CO2e) **	35.6	10.6
Total footprint (Scope 1 + Scope 2)	123.5	272.0
Number of responding companies*	34	47

*Companies which responded after submission deadline or which provided their data as a part of their parent company's CDP response are not counted here. **Scope 2 emissions in 2016 is comparatively low; one possible reason is increased captive power generation which shifted emissions from Scope 2 to Scope 1.

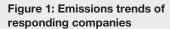
Key Trends seen in 2016

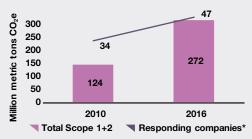
The key trends observed from the responses of the 47 unique companies are:

- Increasing focus on setting emission reduction and renewable energy targets
- Regulations continue to be perceived as a risk and an opportunity
- Companies are increasingly looking to set an internal price on carbon as part of risk mitigation
- Increasing awareness on data quality and assurance

Trend 1 - Increasing focus on emission reduction and renewable energy targets

38 responding companies reported having current targets for reduction in emission intensity or absolute emissions and 15 of these have short term targets (till the year 2020).

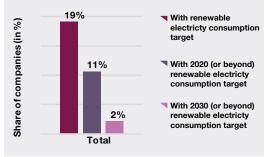




Along with emission reduction targets, companies have also reported on setting renewable energy targets. On the supply side, there is ramping up of renewable power with the prices of solar power continuing to drop and new capacity being added. Purchasing or generating renewable energy for consumers is easier now than it has been historically.

This is in line with data available for the national grid as of March 2015² which shows a 22.5% increase in installed renewable power capacity within a oneyear period. Government of India is very proactive in supporting renewable energy sector in India. This instils confidence among companies to integrate renewable electricity into their energy strategy. 34% of respondents reported having renewable energy targets.19% of respondents have reported a renewable electricity consumption target. This year also saw significant interest in captive renewable electricity consumption reported by companies. The Information Technology sector has risen to the call and has the highest share in consuming all of it's produced renewable electricity (Fig. 3).

Figure 2: Share of companies with renewable electricity consumption targets



Two companies from India viz. Infosys Limited and Tata Motors Limited have joined RE100³ – a global renewable energy campaign led by The Climate Group and CDP. Both companies have committed to a 100% renewable energy consumption target by 2018 and 2030 respectively.

 Energy Statistics 2016, Ministry of Statistics and Programme Implementation, Government of India
 http://there100.org/companies



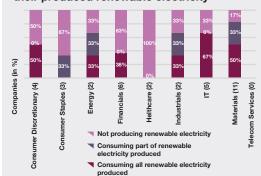
IndusInd Bank

IndusInd has pledged INR 10,000 crore to renewable energy projects within five years through long-term financing and has already achieved close to 50% of this investment. These investments have led to a cumulative capacity of 1,497 MW in renewable energy across 7 southern and western states of India helping IndusInd reach 75% of targeted capacity within the first year of its green energy commitment.

ітс

ITC's Paperboards and Specialty Papers Business (which contributes to 89% of ITC's total energy consumption, 2015-16) has been rated as the most energy efficient business in the Indian paper & paperboard sector, by other agencies. At the same time their business model allows for sequestration of carbon emissions which have been computed in accordance with ISO 14064:2006 and also has been third-party verified. The Social and Farm Forestry Initiatives of ITC have helped sequester 5,122 kilotonnes of CO₂ in 2015-16 which is more than twice the company's total GHG emissions (Scope 1, 2 & 3 including biogenic emissions) facilitating ITC's claim to be 'Carbon Positive Company' for the 11th year in a row.

Figure 3: Share of companies consuming all their produced renewable electricity



Emissions Reduction Initiatives

The majority of companies have reported at least one emissions reduction initiative at implementation stage. The highest average number of initiatives was reported by Energy, Materials and Information Technology sector companies. The most widely used measures for emission reduction included energy efficiency in processes, energy efficiency in building services and low carbon energy installation. Respondents reported a 57% jump in estimated monetary savings year-on-year from emission reduction initiatives.

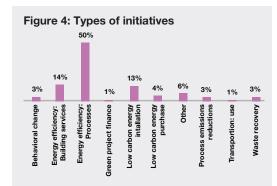
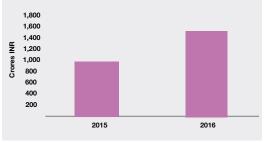


Figure 5: Estimated annual monetary savings from initiatives



Trend 2- Regulations continue to be perceived as a risk and an opportunity

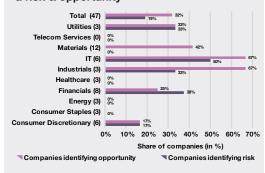
The Government announced new emissions control measures for thermal power plants as well as advanced the tightening of vehicular emission standards by stating that it will skip Bharat Stage V and move to Bharat Stage VI by 2020. This will affect auto manufacturers as well as the oil & gas sector. The Bureau of Energy Efficiency and Ministry of Power also announced widening of the Perform Achieve and Trade (PAT) scheme to include more sectors and units with stringent standards.

Coal cess has steadily increased and now stands at Rs. 400 per tonne with the proceeds being used for funding research and initiatives for clean energy through the National Clean Energy Fund (NCEF) which has since been renamed as Clean Environment Fund. The Government has announced steps to position distribution companies for better execution of RPO and PAT schemes.

With these gradual changes in regulatory measures, nearly 94% of responding companies see risks due to regulations related to climate change. Taxes and regulations, renewable energy requirements, and cap and trade schemes are perceived as the top three regulatory risks. The Financial sector saw the highest number of risks on an average per respondent followed by Consumer Discretionary and Industrials.

Perhaps surprisingly, 89% of responding companies see opportunities in climate change. Emissions reporting obligations, taxes and regulations, and cap and trade schemes are perceived as the top three opportunities. The Industrial sector saw the highest number of opportunities on an average followed by Utilities, Financials and Information Technology. Fuel/energy taxes and regulations, cap and trade schemes and emission reporting obligations are listed in the top three for both risks and opportunities from climate change.

Figure 6: Companies identifying "emission reporting obligations" as a risk & opportunity





Godrej Industries

Godrej Group of Companies has made a public commitment to be carbon neutral by 2020. Godrej Industries, a part of the Godrej Group, have set themselves a target to reduce their Scope 1 and Scope 2 emissions from their operations by 100% against base year of 2010. Godrej Industries is shifting from fossil fuel based energy, wherever feasible and is considering offset mechanisms for emissions that it cannot reduce. Godrej Industries has achieved a 20% reduction in gross global emissions (Scope 1 and Scope 2 combined) compared to the previous year.

Emission reporting requirement obligations emerged as an important indicator in both risks and opportunities as reported by companies. 32% of companies have identified emission reporting requirement obligations as an opportunity whereas 19% have reported it as a risk. This shows a growing attention to GHG quantification and reporting, an area in which CDP excels worldwide.

Trend 3- Companies are setting an internal price on carbon

One of the key risk mitigation strategies that companies deploy in a carbon constrained world is putting an internal price on carbon even though current market signals on carbon pricing are mixed. These companies have seen the value of how an internal price on carbon helps in making the business case for low-carbon investments, and are now shifting their use of the tool towards delivering company-wide strategic advantage and meeting their climate targets. The CDP India 2016 Report includes a series of new case studies which show how internal carbon pricing is being embedded into corporate strategy.

Data suggests internal carbon pricing is moving from theory to practice with take up at more than 1,200 companies globally, a 23% increase from 2015, with close to 150 embedding a carbon price deep into their corporate strategy, according to the latest research⁴ by CDP.

In India, 15% of the responding companies currently put a price on their carbon emissions and 43% are planning to set a price on carbon within the next two years. The Materials, Energy, Information Technology and Consumer Discretionary sectors are already putting a price on carbon emissions in their internal calculations. All the Utility companies and a majority of the Healthcare and Consumer Staples sector plan to put a price on carbon in the next two years. The number of companies that do not plan to put a price on carbon over the next two years has decreased from 28 in 2015 to 19 in 2016. Interestingly, majority of the Energy, Industrial and Financial companies have no intention of putting a price on carbon for the next two years. Given the amount of infrastructure that still needs to be built in India and the related financing needs, these sectors certainly have the short term motivation to keep carbon costs off the balance sheet.

Indian Companies Pricing Carbon from 2015-2016

Six Indian companies have joined The World Bank's Carbon Pricing Leadership Coalition to which CDP is a global corporate engagement partner: Infosys, Yes Bank, Mahindra & Mahindra, Dalmia Cement, Arvind and Hindustan Construction Company.

Figure 7: Share of companies setting an internal price of carbon

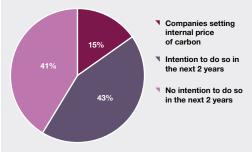
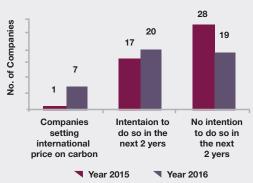


Figure 8: Companies with internal price on carbon



Trend 4- Increasing awareness on data quality and assurance

An increasing number of Indian companies are now reporting on their sustainability initiatives. Listed companies in India are required to submit corporate social spend information to the regulator and put this information in the public domain. There is also push for sustainability reporting from global stakeholders. Indian companies are clearly paying more attention to the quality of data that they put out in the public domain, as demonstrated in Fig. 9.

4 CDP's Report titled 'Embedding a carbon price into business strategy', https://b8f65cb373b1b7b15febc70d/8ead6ced550b4d987d7c03fcdd1d. ssl.cf3.rackcdn.com/cms/reports/ documents/000/001/132/original/CDP_Carbon_ Price_report_2016.pdf?1474899276

Mahindra & Mahindra

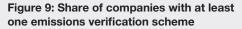
The company announced its internal carbon price of US \$10 per ton of carbon emitted. Mahindra's carbon price is aligned with its business commitment to reduce its GHG emissions by 25% over the next three years. Carbon pricing is being deployed to create resources which will enable investments in low carbon technologies to reduce future emissions and lower operating costs.

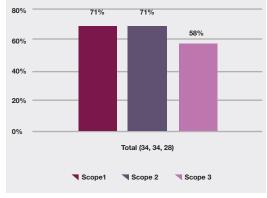


Essar Oil

Essar Oil sees carbon pricing as an opportunity to drive investments for low carbon options including renewables, natural gas and Coal Bed Methane (CBM) into business operations. Essar Oil is increasing its usage of CBM for power generation for its Exploration and Production (E&P) operations as against electrical grid power or using diesel generator (DG) sets at a relatively cheaper cost. In addition, Essar Oil is deploying advanced emission reduction technologies at all stages of CBM production thereby reducing its CBM emission intensity by 33% since 2014. Essar Oil has embarked on a nationwide program to solarise its fuel retail outlets.

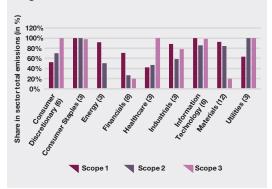
71% of responding companies have 3rd party verification of their Scope 1 and Scope 2 GHG emissions. Companies are also extending 3rd party verification to Scope 3 GHG emissions. 100% of the companies in Information Technology, Utilities, Healthcare and Financials sectors conducted 3rd party verification on their Scope 1, Scope 2 and Scope 3 emissions. Interestingly, across all sectors, the Energy sector seems to be the least proactive in verifying its data.





Self-Selected Companies

Every year, a number of companies which are not a part of the BSE Top 200 by market capitalization, choose to voluntarily participate in the CDP Climate Change program and disclose their climate change data. These companies are known as Self-Selected Companies (SSC). CDP commends these companies for their disclosure and commitment to climate change disclosure. Figure 10: Share of emissions verified



11 Indian SSCs have reported on their GHG emissions. The total gross Scope 1 and Scope 2 emissions reported by these companies was 21 million metric tonnes CO₂e.

Self-Selected Companies

- 1. ARVIND Ltd
- 2. Dalmia Cement (Bharat) Limited
- 3. Essar Steel Limited
- 4. Godrej Interio Division-Godrej & Boyce Mfg. Co.Ltd.
- 5. IDFC Ltd
- 6. Jubilant Life Sciences Limited
- 7. Kansai Nerolac Paints Limited
- 8. Mahindra Lifespace Developers Limited
- 9. Mahindra Sanyo Special Steel Pvt. Ltd
- 10. Orient Cement Limited
- 11. Welspun India Ltd

Dalmia Cement (Bharat) Limited: Dalmia Cement (Bharat) Limited is among the top five cement producers in India with total installed capacity of 25 million tonnes. The company has incorporated climate change into its core business strategy and has set both energy and emission reduction targets. The targets and ambitions are compliant with India Low Carbon Technology Roadmap. It plans to reduce Scope 1 emission intensity by 45% in the year 2050 with a base year of 2010. Dalmia has implemented two emission reduction projects in the reporting year amounting to annual CO₂e savings of 10370 metric tonnes and also completed and achieved energy efficiency targets of the first PAT cycle. As for renewable energy, they have also commissioned 5.5 MW Solar PV project in the current reporting year.

Dalmia has also set a shadow internal carbon pricing mechanism for development of a virtual credit line that helps in decision making of capital intensive low carbon technology projects. In FY 2015-16, their net CO_2 footprint reduced through persistent efforts on clinker factor improvement and alternative fuel utilization. The accrued CO_2 avoidance was about 0.46 million tonnes in FY 2014-15. Putting a price on avoided CO_2 emissions at group level helped in creation of virtual credit line which increased the feasibility of a waste heat recovery project for their subsidiary, OCL India Limited. This project was capital intensive and with a very long payback period, but with an estimated emissions reductions potential of 78,459 metric tonnes CO_2 emissions, the project became financial viable. Dalmia group is further planning to formalize this mechanism so that it percolates down the line and maximum decisions are taken based on this concept in order to prepare the company for future carbon taxation.

"World is rapidly changing due to climate change and implementation of the Paris Agreement, which seemed distant, will soon be upon the world. As a responsible corporate citizen, we are driven by our vision "to be a leader in building materials that evokes pride in all stakeholders through customer focus, innovation, sustainability and our values". We firmly believe in a circular economy and over 30% of our raw material is nothing but waste from other industries. As a testimony to our sustainability practices, the group is globally acknowledged as having one of the lowest carbon footprints in its sector. We pledge to maintain our position". - Mahendra Singhi, Group CEO, Dalmia Cement (Bharat) Limited

Executive summary from CDP Global Climate Change Report

The challenge of climate change and how to address it is now firmly on the global agenda. The Paris Agreement has been ratified at unprecedented speed by the international community, including some of the world's biggest carbon emitters, such as the US, China, India, the EU and Brazil, and will enter into force in November.

This historic agreement, with defined goals to limit climate change and clear pathways for achieving its goals, marks a step-change in the transition to a lowcarbon world.

In the Paris Agreement, emissions reductions are talked about at the country level, and national governments will lead with policy changes and regulation. But companies can move much faster than governments, and they have an opportunity to demonstrate their leadership, agility and creativity in curbing their own substantial emissions. Many companies had already realised the need for action before Paris, and they played an important role in making that summit a success. Others, however, are yet to come on board.

The first in an annual series, the report establishes the baseline for corporate action on climate change. In future reports, CDP will track companies' progress on reducing greenhouse gas emissions in line with the goals of the Paris Agreement against this benchmark. The report presents analysis on corporate climate action including emissions reductions, the adoption of targets based on the most up-to-date climate science ("science based targets"), use of internal carbon prices, and the uptake of renewable energy.

The benchmark established in this first report includes a number of companies failing to engage even with the critical first step of disclosure. Of close to 2,000 companies in this global tracking sample, only just over a thousand responded with data within the deadline. We hope the remaining 700 odd companies will start to engage during the course of the next five years.

The 1,089 companies that provided the data for the global report will be tracked over the next five years to see how they are performing. Between them these companies account for 12 per cent of global greenhouse gas emissions, and 85 per cent of them have already set targets to reduce their emissions.

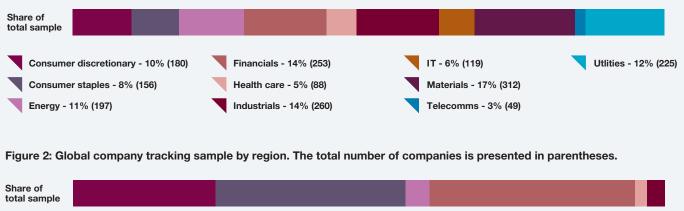


Figure 1: Global company tracking sample by sector. The total number of companies in each sector is presented in parentheses.

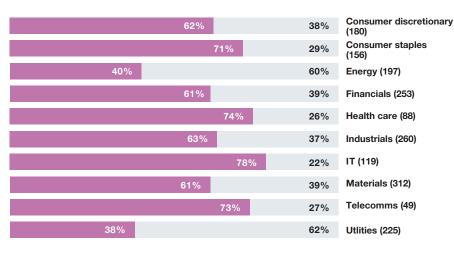
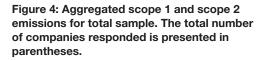
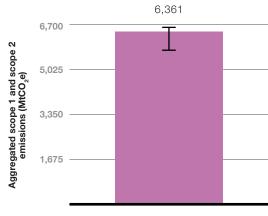


Figure 3: Companies responded and not-responded by sector. The total number of companies in each sector is presented in parentheses.





Share of companies responded

Share of companies not-responded

Total (1089)

Visibility on the road

Although companies and governments are starting to realise the benefits of the low-carbon transition, the need for a complete economic shift can make it hard for individual companies to start the process of change. A shift in thinking is also needed, to see the transition as an opportunity, rather than a restriction.

In order to achieve this success, however, companies need to measure their emissions, then work out how to reduce them.

Given that only 62 per cent of companies contacted by CDP for the report were able to provide data on their own emissions, many businesses have yet to grasp the importance of this challenge. However, the number disclosing is increasing, and the Paris Agreement should provide a greater incentive to engage.

Business gearing up to go low-carbon, but targets lack long-term vision

Eighty-five per cent of companies that provided data have already set targets (comprising absolute and/ or intensity targets) to reduce their greenhouse gas emissions. Setting targets is not enough, however, without realistic plans for meeting them. Even meeting those targets might not be enough if the targets themselves are inadequate.

There has been significant improvement in recent years in the numbers of companies setting targets for

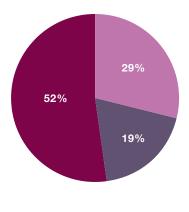
emissions reductions, but these targets are in many cases unambitious in their time horizon. While 55 per cent of companies have targets for 2020 and beyond, just 14 per cent set goals for 2030 or beyond, a situation that must change to achieve a transition to well-below 2°C.

The headline figures from this report mask wide variance in performance both at company level and at sector level. Perhaps inevitably, the energy sector has a lower share of companies with emissions reduction targets, in particular for 2020 and beyond. This should not surprise us, because fossil fuel companies must undergo a major transition to mitigate climate change and are in general not ready to face up to this.

Given that this data is mostly based on calendar year 2015, and so predates the Paris Agreement, we may reasonably hope to see a jump in longer term targets in the next report, which will be based on data generated after the Paris Agreement.

Companies wishing to ensure they are taking meaningful action should set science-based targets; this report and its successors will monitor how many companies are setting targets in line with the latest climate science.

From the sample, 94 have publicly committed to science-based greenhouse gas reduction targets via the Science Based Targets Initiative. Eighty-five of those companies submitted a target to the initiative for official check, and 15 companies have passed the initiative's official check. Figure 5: Share of companies setting an internal price of carbon



Companies setting internal price of carbon

Intention to do so in the next 2 years

No intention to do so in the next 2 years

Company targets achieving just one quarter of the emissions reductions required by science; Paris Agreement expected to help close that gap

As well as recording them, we analyse the potential impact of the existing targets to see if they are compatible with the objective of limiting global warming to well-below 2°C.

We found that if the companies in the sample were to achieve their current targets, they could realise 1Gt CO₂e (1,000 MtCO₂e) of reductions by 2030. This is about one quarter of the 4GtCO₂e (4,145 MtCO₂e) of reductions that this group of companies would need to achieve in order to be in line with a 2°C-compatible pathway, leaving a gap of at least 3GtCO₂e (3,145 MtCO₂e) between where companies' current targets take them, and where they should be. This gap is equal to nearly 50 per cent of these companies' current total emissions.

The amount of emissions reductions pledged by companies has been increasing steadily from 2011 to 2015 and we hope to see it close at a faster rate in future years, as company targets become more ambitious in response to the regulatory certainty offered by the Paris Agreement.

Transition planning: carbon pricing on the rise, yet companies lag in renewable energy production and consumption

Even those companies that have not set themselves targets have almost all established emissions reduction initiatives (97 per cent of all companies), although the success and scope of these initiatives has been varied.

Increasingly, companies are utilising internal carbon pricing as an approach to help them manage climate risks and opportunities. Companies are using this tool in a range of different ways including risk assessment in their scenario planning, as a real hurdle rate for capital investment decisions and to reveal hidden risks and opportunities in their operations. Some companies embed a carbon price deep into their corporate strategy, using it to help to deliver on climate targets, whether it be an emissions or energy related target or to help foster a new line of lowcarbon products and services.

Currently 29 per cent of responding companies use internal carbon pricing, while a further 19 per cent plan to do so in the near future. By 2017, about half of this sample should have introduced carbon pricing.

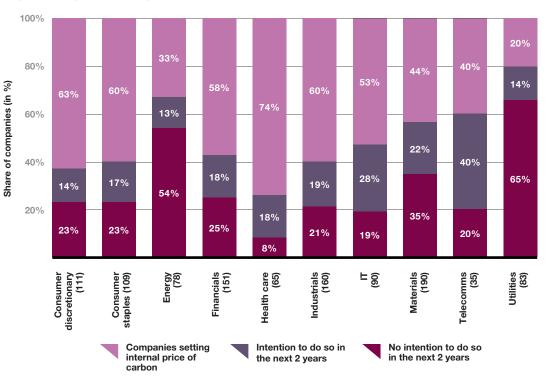


Figure 6: Companies setting an internal price of carbon by sector. The total number of companies responded is presented in parentheses for each sector.

Renewable energy will need to play a major role in any global shift to a low carbon economy. So far, relatively few companies (just 5%) have targets for increasing their renewable energy generation, while 11% have targets for renewable energy consumption.

Of the companies in the utilities sector, 90% of which are electric power companies, fewer than a third have renewable energy generation targets.

Companies decoupling emissions from revenue, showing the low carbon transition does not mean low profit

A small group of companies are showing that reducing environmental impact is compatible with economic growth.

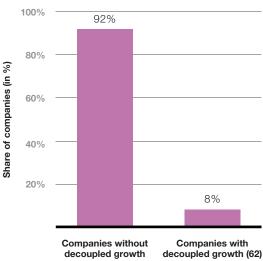
We report on the 62 companies in the sample that can be shown to have made impressive and consistent year on year achievements both in reducing emissions and decoupling growth of revenue from growth of emissions.

They include consumer staples companies such as J. Sainsbury and Walmart de Mexico, as well as utilities companies like Eversource Energy and Idacorp. The materials sector, also a heavy emissions source, is represented by the likes of Givaudan in Switzerland and Lixil in Japan.

'Decoupling' is defined for this purpose as having reduced emissions by 10 per cent or more over five years, while simultaneously growing revenue by 10 per cent.

The success of these leaders points the way for others to realise the opportunity for innovative companies to turn the challenge of emissions reduction from risk management to business success.

Figure 7: Share of companies with decoupled growth over period of five years (time-series sample)



(729) Although correlation must not be taken to be causation, it is worth noting that the group of companies that met the "decoupled growth"

criteria increased revenue by 29 per cent over the five-year period of measurement, while reducing GHG emissions by 26 per cent. For the rest of the companies in the tracking sample, revenue decreased by 6 per cent while GHG emissions increased by 6 per cent.

Switching to renewable energy or producing its own renewable energy, using internal carbon pricing to make production more efficient, using innovation to create less energy intensive systems or even selling products to help customers reduce emissions are all strategies that add to the bottom line, rather than to costs.

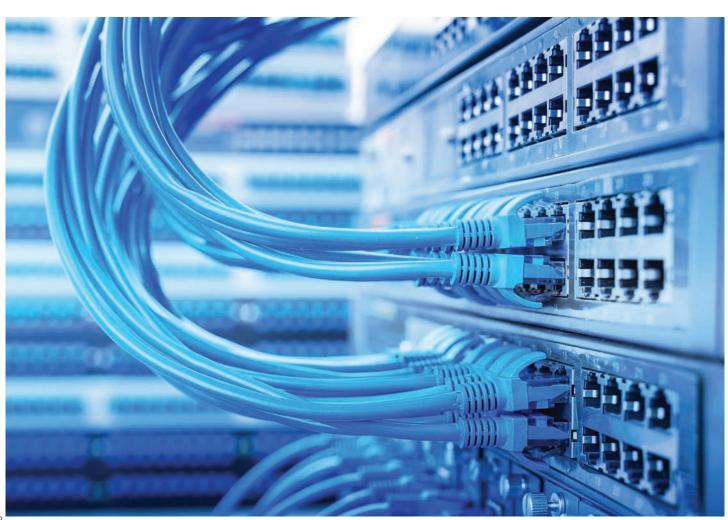
Figure 8: Comparison of the changes in revenues (left) and GHG emissions (right) over the 5-year period between companies that achieved deocupied growth and other companies.

Company group (no. companies)	Total revenue: (trillio	Total revenue: (trillion current USD)		ered for evaluation
	Year 1 of the 5-year period	Final year of the 5-year period	Year 1 of the 5-year period	Final year of the 5-year period
No decoupled growth (730)	17.7	16.6 (-6%)	4.82	5.08 (+6%)
Achieved decoupied growth (62)	1.31	1.70 (+29%)	0.468	0.345 (-26%)

Appendix 1 Table of emissions, scores and sector information by company

Sector	Company name	2016 Score band	2016 permission status	Scope 1 Scope 1 (tons CO ₂ e)	Scope 2 (tons CO ₂ e)- Location based	Scope 2 (tons CO ₂ e)- Market based	Number of Scope 3 categories reported
	Bharat Forge	D	Public	65,000	150,000	-	1
	Indian Hotels Co.	С	Public	82,239	-	246,716	
Consumer	Mahindra & Mahindra	В	Public	32,622	157,542	-	5
Discretionary	Tata Motors	A-	Public	64,400	318,198	-	1
	Motherson Sumi Systems	D-	Public	142	740	-	0
	MRF LTD	-	Non Public	-	-	-	-
	Godrej Consumer Products	A-	Public	42,773	35,883	-	2
Consumer Staples	ITC Limited	A-	Public	1,059,277	187,187	-	6
	Tata Global Beverages	A-	Public	21,240	40,933	-	6
	Cairn India	С	Public	1,530,121	117,689	-	
Eporav	Essar Oil	В	Public	5,836,531	12,536	-	3
Energy	Indian Oil Corporation	С	Public	12,801,293	105,178	-	6
	Axis Bank	С	Public	8,778	134,747	-	3
	HDFC Bank Ltd	С	Public	6,830	471,113	-	3
	IDBI Bank Ltd	D	Public		105,545	-	
	Kotak Mahindra Bank	С	Public	90	16,976	-	1
Financials	YES BANK Limited	В	Public	1,651	30,946	-	1
	IndusInd Bank	A-	Public	5,983	48,950	-	3
	State Bank of India	D	Public		-	-	
	Mahindra & Mahindra Financial Services	В	Public	127	1,874	-	2
	Dr. Reddy's Laboratories	С	Public	135,140	335,254	-	6
Health Care	Piramal Enterprises	D	Public	30,268	47,681	-	
	Sun Pharmaceutical Industries	-	Non Public	-	-	-	-
	Crompton Greaves	D	Public	68,824	39,873	-	3
Industrials	Jain Irrigation Systems	-	Non Public	-	-	-	-
	Larsen & Toubro	A-	Public	381,690	295,345	-	4
	HCL Technologies	B-	Public	31,862	127,178	-	2
	Infosys Limited	A-	Public	17,950	160,184	-	6
Information	Tata Consultancy Services	A-	Public	31,924	454,598	439,400	7
Technology	Tech Mahindra	А	Public	6,257	108,052	-	4
	Wipro	А	Public	44,355	219,378	-	5
	Mindtree Ltd		Non Public				

Sector	Company name	2016 Score band	2016 permission status	Scope 1 Scope 1 (tons CO ₂ e)	Scope 2 (tons CO ₂ e)- Location based	Scope 2 (tons CO ₂ e)- Market based	Number of Scope 3 categories reported
	ACC	В	Public	15,100,275	466,195	393,802	4
	Ambuja Cements	В	Public	13,585,987	888,778	-	7
	Asian Paints	D	Public	15,365	60,304	-	
	Godrej Industries	A-	Public	42,337	40,607	-	2
	Hindustan Zinc	С	Public	4,470,196	218,265	-	2
Materials	JSW Steel	-	Non Public	-	-	-	-
Materials	NMDC	-	Non Public	-	-	-	-
	Vedanta Ltd	С	Public	39,391,412	1,562,376	-	4
	Shree Cement	В	Public	11,651,464	151,345	-	5
	Tata Chemicals	В	Public	5,131,276	63,723	223,361	6
	Tata Steel	A-	Public	23,298,343	1,409,816	-	10
	Ultratech Cement	В	Public	32,892,171	746,636	-	4
	GAIL	В	Public	2,549,022	420,835	-	2
Utilities	Tata Power Co	С	Public	36,334,745	3,357	-	1
	JSW Energy	-	Non Public	-	-	-	_



Appendix 2 CDP India 200 sample response status

GICS Sector	Company name	Response Status	GICS Sector	Company name	Response Status
	Bharat Forge	AQ*		Coal India	NR
	Indian Hotels Co.	AQ*		Hindustan Petroleum	NR
	Mahindra & Mahindra	AQ*		Corporation	
	Motherson Sumi Systems	AQ*		Oil & Natural Gas	NR
	MRF LTD	AQ*		Oil India Ltd.	NR
	Tata Motors	AQ*		Petronet LNG	NR
	APOLLO TYRES LTD	NR		Reliance Industries	NR
	Bajaj Auto	NR		Axis Bank	AQ*
	Bata India Ltd	NR		HDFC Bank Ltd	AQ*
	Bosch Ltd	NR		IDBI Bank Ltd	AQ*
Consumer	Dish TV India	NR		Indusind Bank	AQ*
Discretionary	Exide Industries	NR		Kotak Mahindra Bank	AQ*
	Hero Motocorp Ltd	NR		Mahindra & Mahindra Financial	AQ*
	Jubilant Foodworks Ltd	NR		Services State Bank of India	10*
	Maruti Suzuki India	SA			AQ*
	Page Industries Ltd	NR		YES BANK Limited	AQ*
	Rajesh Exports Ltd	NR		Allahabad Bank Andhra Bank	NR
	Sun TV Network	NR			NR
	Titan Industries	NR		Bajaj Finance Limited	NR
	TV18 Broadcast Ltd	NR		Bajaj Finserv	NR
	TVS Motor Company Ltd	NR		Bajaj Holdings & Invst. (BHIL)	NR
	Zee Entertainment Enterprises	NR		Bank of Baroda	NR
	Godrej Consumer Products	AQ*		Bank of India Canara Bank	NR
	ITC Limited	AQ*			NR
	Tata Global Beverages	AQ*		Central Bank of India	
	Britannia Industries	NR	Financials	CRISIL LTD	NR
	Colgate Palmolive India	SA		Dewan Housing Finance Corporation Limited	NR
	Dabur India	NR		DLF	NR
	Emami Ltd.	NR		Federal Bank	NR
	Gillette India	SA		Gruh Finance Ltd	NR
Consumer Staples	GlaxoSmithKline Consumer Health	SA		Housing Development & Infrastructure	NR
	Kaveri Seed Company Limited	NR		Housing Development Finance	NR
	Marico	NR		Corporation	
	Nestle India	SA		ICICI Bank Limited	NR
	Procter & Gamble Hygiene & Health Care Ltd	SA		IFCI Indiabulls Housing Finance Ltd	NR NR
	United Breweries	NR		Indiabulls Real Estate Ltd	NR
	United Spirits	NR		Indian Overseas Bank	NR
	Hindustan Unilever	SA		J&K Bank	NR
	Cairn India	AQ*		Karnataka Bank Limited	NR
_	Essar Oil	AQ*		L&T Finance Holdings Limited	NR
Energy	Indian Oil Corporation	AQ*		LIC Housing Finance	NR
	Bharat Petroleum Corporation	NR		Max India	NR
				IVIAA II IUIA	רואו

GICS Sector	Company name	Response Status	GICS Sector	Company name	Response Status
	Multi Commodity Exchange of	NR		Alstom T&D India Ltd	NR
	India Ltd			Amara Raja Batteries Ltd	NR
	Muthoot Finance Limited	NR		Ashok Leyland	NR
	Oriental Bank of Commerce	NR		Bharat Electronics	NR
	Power Finance Corporation	NR		Bharat Heavy Electricals	NR
	Punjab National Bank	NR		Container Corporation of India	NR
	Reliance Capital Ltd	NR		Cummins India	SA
	Rural Electrification Corpn.	NR		Eicher Motors Ltd	NR
	Shriram City Union Finance Ltd	NR		Engineers India Ltd	NR
	Shriram Transport Finance Co.	NR		GMR Infrastructure Limited	NR
	SKS Microfinance Ltd.	NR		Great Eastern Shipping Co.	NR
	South Indian Bank Ltd.	NR		Gujarat Pipavav Port Limited	NR
	Syndicate Bank	NR		Havells India	NR
	UCO Bank	NR		IRB Infrastructure Developers	NR
	Union Bank of India	NR		Jaiprakash Associates	NR
	Unitech	NR		NCC Ltd (Nagarjuna	NR
	Dr. Reddy's Laboratories	AQ*		Construction Co.)	<u></u>
	Piramal Enterprises	AQ*		Siemens India	SA
	Sun Pharmaceutical Industries	AQ*		SKF INDIA	NR
	Ajanta Pharma Ltd.	NR		Thermax	NR
	Apollo Hospitals Enterprises	NR		Voltas	NR
	Aurobindo Pharma	NR		HCL Technologies	AQ*
	Biocon	NR		Infosys Limited	AQ*
	Cadila Healthcare	NR		Mindtree Ltd	AQ*
	Cipla	NR		Tata Consultancy Services	AQ*
Health Care	Divi's Laboratories	NR		Tech Mahindra	AQ*
	GlaxoSmithKline Pharmaceuticals	NR	Information Technology	Wipro Hexaware Technologies Ltd	AQ*
	Glenmark Pharmaceuticals	NR	leenneleyy	-	
	lpca Laboratories Ltd	NR		Info Edge (India) Ltd.	NR
	Lupin	NR		Just Dial Ltd	NR
	Strides Arco	NR		MphasiS	NR
	Sun Pharma Advanced	NR		Vakrangee Softwares Ltd.	NR
	Research Company Ltd			Oracle Financial Services ACC	SA AQ*
	Torrent Pharmaceuticals	NR		Ambuja Cements	AQ*
	Wockhardt	NR		Asian Paints	AQ*
	Crompton Greaves	AQ*			AQ*
	Jain Irrigation Systems	AQ*		Godrej Industries Hindustan Zinc	AQ*
	Larsen & Toubro	AQ*			
	Suzlon Energy Ltd.	DP	Materials	JSW Steel	AQ*
Industrials	ABB India Ltd	SA		NMDC	AQ*
	Adani Ports & Special	NR		Shree Cement	AQ*
	Economic Zone			Tata Chemicals	AQ*
	Aditya Birla Nuvo	NR		Tata Steel	AQ*
				Ultratech Cement	AQ*

GICS Sector	Company name	Response Status
	Bayer CropScience Ltd	SA
	Berger Paints India Ltd	NR
	Castrol India	NR
	Century Textiles & Industries	NR
	Coromandel International	NR
	Grasim Industries	NR
	Hindalco Industries	NR
	Jindal Steel & Power	NR
	National Aluminium Co.	NR
	PI Industries Ltd	NR
	Pidilite Industries Ltd	NR
	Steel Authority of India	NR
	Supreme Industries Ltd	NR
	The Ramco Cements Ltd	NR
	UPL Limited	NR
	Idea Cellular	DP
	Tata Communications	DP
Telecommuni- cation Services	Bharti Airtel	NR
	Bharti Infratel Limited	NR
	Reliance Communications	NR

GICS Sector	Company name	Response Status
	GAIL	AQ*
	JSW Energy	AQ*
	Tata Power Co	AQ*
	Adani Power Ltd	NR
	CESC Ltd	NR
	Gujarat State Petronet	NR
Utilities	Indraprastha Gas Ltd	NR
Ountes	National Hydroelectric Power Corporation Ltd (NHPC)	NR
	NTPC Ltd	NR
	Power Grid Corpn. of India	NR
	Reliance Infrastructure	NR
	Reliance Power	NR
	Torrent Power	NR

AQ* - Answered Questionnaire SA - See Another, Parent Company Responded

DP - Declined to Participate NR - No Response



The Climate A List 2016

Company	Country
Consumer Discretionary	
ARÇELİK A.Ş.	Turkey
BMW AG	Germany
Caesars Entertainment	USA
Daimler AG	Germany
Electrolux	Sweden
Fiat Chrysler Automobiles NV	Italy
Gap Inc.	USA
General Motors Company	USA
Groupe PSA	France
Hyundai Motor Co	South Korea
Inditex	Spain
Johnson Controls	USA
Las Vegas Sands Corporation	USA
LG Electronics	South Korea
Michelin	France
Nissan Motor Co., Ltd.	Japan
RELX Group	United Kingdom
Renault	France
Sky plc	United Kingdom
Sony Corporation	Japan
Sumitomo Forestry Co., Ltd.	Japan
Toyota Motor Corporation	Japan
TUI Group	United Kingdom
Yokohama Rubber Company, Limited	Japan

Consumer Staples	
Asahi Group Holdings, Ltd.	Japan
Coca-Cola European Partners*	USA
Coca-Cola HBC AG	Switzerland
Colgate Palmolive Company	USA
Diageo Plc	United Kingdom
Japan Tobacco Inc.	Japan
Kirin Holdings Co Ltd	Japan
L'Oréal	France
Nestlé	Switzerland
Philip Morris International	USA
Pick 'n Pay Stores Ltd	South Africa
RCL Foods Ltd	South Africa

Company	Country
Reynolds American Inc.	USA
SCA	Sweden
Tesco	United Kingdom
Unilever plc	United Kingdom

Energy	
Compañía Española de Petróleos, S.A.U. CEPSA	Spain
Eni SpALimited	Italy
Galp Energia SGPS SA	Portugal
Neste Corporation	Finland
Vermilion Energy Inc.	Canada

Financials	
Bank Coop AG	Switzerland
Basler Kantonalbank	Switzerland
BNY Mellon	USA
British Land Company	United Kingdom
Caixa Geral de Depósitos	Portugal
CaixaBank	Spain
Daito Trust Construction Co., Ltd.	Japan
Dexus Property Group	Australia
Goldman Sachs Group Inc.	USA
Great-West Lifeco Inc.	Canada
Host Hotels & Resorts, Inc.	USA
HSBC Holdings plc	United Kingdom
ICADE	France
ING Group	Netherlands
Intesa Sanpaolo S.p.A	Italy
Klepierre	France
Lloyds Banking Group	United Kingdom
Macerich Co.	USA
MAPFRE	Spain
National Australia Bank	Australia
Nedbank Limited	South Africa
Raiffeisen Bank International AG	Austria
Remgro	South Africa
Shinhan Financial Group	South Korea
Sompo Japan Nipponkoa Holdings, Inc	Japan

*Data provided in response relates to Coca-Cola Enterprises, prior to merger with Coca-Cola European Partners.

Company	Country
Stockland	Australia
T.GARANTİ BANKASI A.Ş.	Turkey
The Dai-ichi Life Insurance Company, Limited	Japan
UBS	Switzerland
Westpac Banking Corporation	Australia

Health Care	
AstraZeneca	United Kingdom
Bayer AG	Germany
GlaxoSmithKline	United Kingdom
Lundbeck A/S	Denmark
Mediclinic International	South Africa
Novo Nordisk A/S	Denmark
Roche Holding AG	Switzerland

Industrials	
Abengoa	Spain
Abertis Infraestructuras	Spain
Bic	France
Bouygues	France
Canadian National Railway Company	Canada
CNH Industrial NV	United Kingdom
Ecorodovias Infraestrutura e Logística S.A	Brazil
FERROVIAL	Spain
Grupo Logista	Spain
Huber + Suhner AG	Switzerland
Hyundai E&C	South Korea
INDUS Holding AG	Germany
Kajima Corporation	Japan
Kawasaki Kisen Kaisha, Ltd.	Japan
Kingspan Group PLC	Ireland
Komatsu Ltd.	Japan
Kone Oyj	Finland
Lockheed Martin Corporation	USA
Mitsubishi Electric Corporation	Japan
Nabtesco Corporation	Japan
Obrascon Huarte Lain (OHL)	Spain
Owens Corning	USA
Qantas Airways	Australia

Company	Country
Republic Services, Inc.	USA
Royal BAM Group nv	Netherlands
Royal Philips	Netherlands
Salini Impregilo S.p.A.	Italy
Samsung C&T	South Korea
Samsung Engineering	South Korea
Schneider Electric	France
Secom Co., Ltd.	Japan
SGS SA	Switzerland
Skanska AB	Sweden
Stanley Black & Decker, Inc.	USA
Taisei Corporation	Japan
Toda Corporation	Japan
Toshiba Corporation	Japan
Union Pacific Corporation	USA
Valmet	Finland
Waste Management, Inc.	USA

Information Technology Accenture Ireland Advanced Semiconductor Engineering Taiwan Alphabet, Inc. USA Amadeus IT Holding Spain USA Apple Inc. Atos SE France Autodesk, Inc. USA Canon Inc. Japan USA Cisco Systems, Inc. EMC Corporation USA EVRY ASA Norway USA Hewlett-Packard Konica Minolta, Inc. Japan LG Display South Korea LG Innotek South Korea USA Microsoft Corporation Oracle Corporation USA Samsung Electronics South Korea Tech Mahindra India Wipro India

Materials	
AkzoNobel	Netherlands
Anglo American Platinum	South Africa
BillerudKorsnäs	Sweden
Braskem S/A	Brazil
Gold Fields Limited	South Africa
Harmony Gold Mining Co Ltd	South Africa
HeidelbergCement AG	Germany
International Flavors & Fragrances Inc.	USA
Koninklijke DSM	Netherlands
Kumba Iron Ore	South Africa
LANXESS AG	Germany
LG Chem Ltd	South Korea
Metsä Board	Finland
Mondi PLC	United Kingdom
Novozymes A/S	Denmark
Praxair, Inc.	USA
Sealed Air Corp.	USA
Sibanye Gold Ltd	South Africa
Stora Enso Oyj	Finland
Symrise AG	Germany
The Mosaic Company	USA
ThyssenKrupp AG	Germany
UPM-Kymmene Corporation	Finland

Company

Country

Company	Country
EDF	France
EDP - Energias de Portugal S.A.	Portugal
ENAGAS	Spain
ENEL SpA	Italy
ENGIE	France
Gas Natural SDG SA	Spain
Iberdrola SA	Spain
Iren SpA	Italy
Korea District Heating Corp.	South Korea
Korea Electric Power Corp	South Korea
National Grid PLC	United Kingdom
PG&E Corporation	USA
R.E.E.	Spain
Snam S.P.A	Italy
Suez Environnement	France
VEOLIA	France
VERBUND AG	Austria

Telecommunication Services	
China Mobile	China
Deutsche Telekom AG	Germany
Koninklijke KPN NV (Royal KPN)	Netherlands
KT Corporation	South Korea
LG Uplus	South Korea
Proximus	Belgium
Swisscom	Switzerland
Telefonica	Spain
Telstra Corporation	Australia

Utilities	
ACCIONA S.A.	Spain
Centrica	United Kingdom

Investing in CDP's Global Climate A List:

strong performance by climate change leaders



STOXX® Low Carbon Indices provide easy new way to climate-friendly and attractive returns

Performance STOXX Global Climate Change Leaders vs. STOXX Global 1800

- STOXX Global Climate Change Leaders EUR (Gross) STOXX Global 1800 EUR (Gross) 240,00 220,00 200,00



Data from Dec. 19, 2011 to Aug. 31, 2016

This year CDP collaborated with STOXX® and South Pole Group on the development of a new series of low-carbon indices, one of which now makes investing in CDP's A List companies very easy: The STOXX® Global Climate Change Leaders Index.

STOXX® Climate Change Leaders Index is the first ever that tracks the CDP "A List" available to market participants offering a fully transparent and tailored solution to address long-term climate risks, while participating in the sustainable growth of a lowcarbon economy.

The index has performed strongly against a global benchmark, outperforming by 6% over 4 years.

Being based on the CDP "A List" database, this unique index concept includes carbon leaders who are publicly committed to reducing their carbon footprint.¹

Key benefits for investors:

- Constituents are forward-looking leaders with superior climate change mitigation strategies and commitments to reducing carbon emissions
- In addition to Scope 1 & Scope 2, also incorporates Scope 3 data
- Significantly lower carbon footprint ¹⁾ (>80%) while still containing high emitters
- Similar risk-return profiles compared to the benchmark
- Use reported carbon intensity data only
- Could be used for engagement supporting the < Aiming for A Coalition >

CDP is looking forward to contributing to innovative solutions that can add real value for investors in the future.

Our Climate A List comprises a strong set of companies who lead on climate change mitigation today and in the future. It is exciting to see the rising investor interest in the STOXX® Global **Climate Change Leaders**

Index.



 The index is price weighted with a weight factor based on the free-float market cap multiplied by the corresponding Z-score carbon intensity factor of each constituent. Components with lower carbon intensities are overweighted, while those with higher carbon emission are underweighted.

We Mean Business: Commit to Action

Companies are taking direct and ambitious action on climate change. More than 465 companies have made commitments to climate action via the We Mean Business commitments platform "Commit to Action," representing a **tenfold increase** in two years.

Progress in 2016 has remained strong, suggesting a positive response to the Paris Agreement and its universal commitment to a low-carbon economy.

Companies have **been adopting more aggressive targets** — around emissions reductions, renewable energy, deforestation, water, and energy productivity **and improving operational or governance measures for climate risk** through use a price on carbon, more responsible policy engagement mechanisms, and greater transparency on climate governance in mainstream reports. Corporate action has grown across all of these issues. The strongest growth has been in companies committing to **science-based emissions reduction targets**, from 50 companies in late 2015 to nearly 190 today.

Companies in 42 countries have taken action.

At the beginning of 2015 just 3 **US companies** had made commitments via this platform. By Paris, this number had grown to more than 50 companies. The fastest growing issue with US companies has been science-based targets, with 33 companies making that commitment. Climate action remains popular with **European companies**, with 237 taking action, predominantly in mainstream reporting on climate and science-based target setting.

Setting science based targets is the right thing to do, but also makes perfect business sense. Setting a science-based target directly answered the needs of our customers, all of whom are thinking about their own carbon footprints. It is also critical for investors who need to know that we are thinking of potential risks, in the short-, medium- and long-term.

Laurel Peacock Senior Sustainability Manager NRG Energy 90+ Companies North America



WE MEAN BUSINESS

economic opportunity through bold climate action

Translating Paris into business strategy

Thirteen companies headquartered in **Brazil** have taken action, including materials company Braskem (price on carbon) and the consumer brand Natura (science-based targets, deforestation, policy engagement, and mainstream reporting on climate). In **India**, 17 companies, including Tata & Sons and Mahindra, have made bold commitments to renewable energy and energy productivity. Important first movers in **China**, like industrials company Broad Group, have made a range of commitments, importantly including setting science-based targets.

Sector trends show that companies in every industry are acting. Strongest growth in 2016 has been in the **industrials sector**. Together, this sector accounts for over 20% of corporate action via the We Mean Business platform, as well as more than 100 million metric tonnes CO₂e. **Consumer**

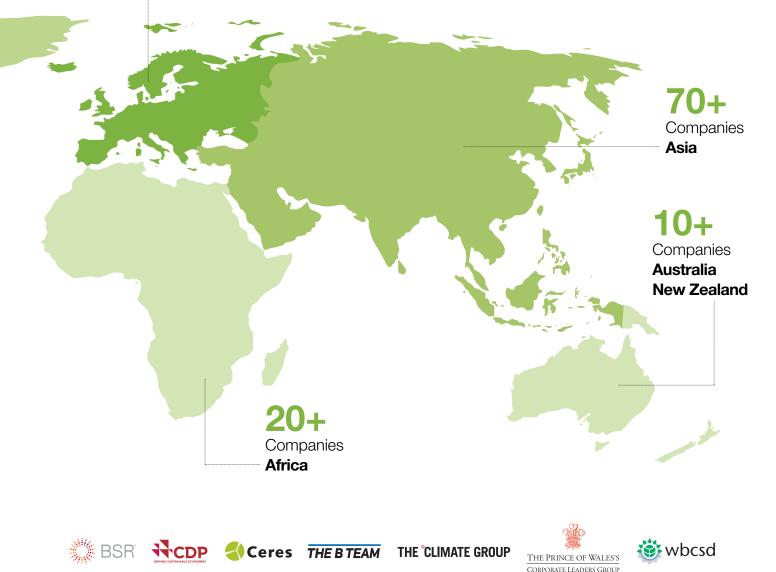
235 +

Companies **Europe**

discretionary and consumer staples companies also represent 20% of committed companies, led by major brands like Walmart, The Coca-Cola Company and Honda Motor Company. **IT sector** participation has accelerated post-Paris, with companies including Apple and Facebook making 100% renewable power commitments.

By acting early and decisively, these companies are better able to manage their climate risk, gain competitive edge over their peers, and reap the reputational benefits that early leadership provides.

To find out more please visit www.cdp.net/commit.





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