



# **International Dimensions of Climate Change**

## **Discussion Paper 2: How Climate Change will affect the world's largest companies**

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## **How climate change will affect the world's largest companies**

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The Carbon Disclosure Project (CDP) has collected climate change information from the world's largest 500 companies on an annual basis since 2003. CDP, a registered charity, asks the companies to set out their emissions and energy use, their risks and opportunities in relation to climate change, their governance on this issue and their performance against emissions reduction targets. The request is made on behalf of institutional investors, in 2010 totalling 534 with \$64 trillion of assets.

Today CDP collects information from thousands of organisations all over the world, and has launched new programs which capture information through global supply chains. Our annual analysis of the 'Global 500' company sample on behalf of investors still continues to be one of our most important and closely followed activities. In the foreword to the 2009 Global 500 report Ban Ki-Moon wrote, "The Carbon Disclosure Project's detailed reporting is helping persuade companies throughout the world to measure, manage, disclose and ultimately reduce their greenhouse gas emissions. No other organization is gathering this type of corporate climate change data and providing it to the marketplace."

In 2009 82% of the Global 500 responded to CDP's information request, up from 77% in 2008. 68% of the responding companies reported direct greenhouse gas emissions equivalent to 11.5% of global emissions, totalling 3.6 billion tonnes of carbon dioxide equivalent. Many companies also reported their indirect emissions and the emissions that they were able to influence e.g. through their use of electricity, and emissions created in their supply chains or resulting from use of their products. Adding all of these together (although, of course, it is important to bear in mind that there will be some double counting between the different reporting categories), 10 billion tonnes of greenhouse gas emissions were reported in total.

The astounding scale of the emissions reported by the Global 500 demonstrates the huge opportunity for emissions reductions that lies in their hands. The high level of reporting shows that these companies, which will typically have complex international operations, have already put in place emissions measurement systems and are working to understand their impacts. Half (49%) of the companies reporting emissions data to CDP have had this information verified by third parties, a very striking figure given the lack of any global regulation requiring companies to verify emissions from their worldwide operations.

Climate change regulation continues to emerge in different jurisdictions and is certainly a factor in the growth of corporate climate reporting. However other drivers are also important, including stakeholder pressure from investors, customers and the wider public. Furthermore, international companies are in the unique position of

having immediate and direct exposure to changing climatic conditions, and resulting changes to market or operating conditions, all over the world.

In 2009 three quarters of companies responding to CDP from the Global 500 reported regulatory risk to their business related to climate change, and the same proportion reported physical risk. Phenomena such as changes to rainfall patterns, increased severity of hurricanes and rising incidence of vector-borne disease can all have effects on business operations around the world. The sectors which considered themselves most exposed to physical risk were Telecommunications, Materials, Utilities and Financials, but other sectors also reported concerns, e.g. Heinz in the Consumer Staples sector said: "In FY2010, our goal is to accelerate and increase water and energy conservation in the years to come through implementation of our Global Utility Optimization Process. When drought reduces the availability of water, Heinz is at risk despite our focus on sustainable agricultural practices. Heinz faces drought and water supply risks in many countries."

As a result of perceived physical risk, some Global 500 companies are already involved in taking measures to understand adaptation needs and to address them cost-effectively. BP reported, "The size of our exposure and the changing risk to both our future operational integrity and our current facilities is not yet well understood. In adapting to a world in which extreme weather might be more common there is also a risk of over-engineering solutions and consequently increasing our construction and abandonment costs. In addressing these issues we are carrying out research, jointly with Imperial College London, to understand better the potential impacts on BP's operations posed by a changing climate."

The likelihood of future regulation is also taken seriously, particularly by energy intensive sectors. Following the introduction of the European Union Emissions Trading Scheme in 2005, countries around the world have introduced new rules which require companies to report, and often to reduce, their emissions. In the United States, where at the time of writing the Obama administration is still struggling to get climate change legislation passed by Congress, new regulations have already been introduced. The US Environmental Protection Agency, now granted powers to regulate greenhouse gas emissions, has introduced a Greenhouse Gas Reporting Rule while earlier this year the US Securities and Exchange Commission published guidance for listed companies in the reporting of climate change risk as part of statutory filings. Meanwhile, companies operating in Australia, Japan and a number of other jurisdictions are subject to further reporting requirements. New reporting regulations, greenhouse gas trading schemes and carbon taxes are under discussion around the world and since many Global 500 companies are international in their operations they are often subject to a number of requirements in different jurisdictions.

In response to likely regulation it has become more common for companies to factor a cost of carbon into investment decisions, for example Newmont Mining reported:

“We have developed a financial risk model that calculates the cost of CO<sub>2</sub> emissions for all of our operations globally and our project pipeline for 20 years into the future.” Risk management in this area is seen as particularly welcome by the large institutional investors who back CDP’s information request, because regulated carbon pricing represents a very sizeable potential financial liability for many companies. This is particularly when the effect of carbon pricing on corporate supply chains is taken into account, because for many companies the emissions produced in their supply chains can be an order of magnitude higher than the emissions that they produce directly.

Media coverage of climate change regulation often focuses on the economic challenge that carbon pricing can present to business, and for some energy-intensive business sectors this does present a real challenge. Less often publicised are the views of the many multinational businesses that see opportunity and competitive advantage arising from the effects of such regulation. 84% of the Global 500 companies reporting to CDP in 2009 perceived opportunity for their business in relation to regulation; a higher proportion than the 78% which reported risk in this area.

As might be expected, perceived regulatory opportunities tend to involve providing new products and services to customers. However it is important to note that this is not only the case for service sector companies, which often have relatively low direct emissions, but that it also applies to companies in more energy-intensive sectors. For example, Alstom said in their report to CDP: “Regulatory requirements present major commercial opportunities for Alstom. Alstom today is uniquely positioned versus its competitors to provide clean power and transportation with a variety of solutions to help its customers meet new regulatory requirements related to climate change.”

Regulation provides particular business opportunities for the financial sector. This sector has low direct emissions but exerts a powerful influence both on future prospects for energy-intensive sectors and on the growth of new low-carbon business areas. Westpac reported: “Westpac has identified a number of emerging regulatory and policy response to climate change which will have a significant impact on our business. In balance with emerging regulatory risks, these same policy frameworks are also creating significant new commercial opportunities across financial markets, institutional banking and corporate finance, retail banking and wealth management and investment.” 63% of Global 500 companies reporting to CDP said that physical changes related to climate change presented opportunities to their company. As for regulation, these opportunities generally relate to the emergence of new business areas. Google reported: “Google sees an opportunity to help raise awareness about the physical changes to the Earth’s climate through Google Earth and other products. For example, Google worked with UNEP to create a layer within Google Earth highlighting specific locations on the planet where the effects of climate change are already being felt. Google also partnered with the

Natural Resources Defence Council (NRDC) to produce interactive maps that show promising sites for developing renewable energy in the United States. Other users have used Google Maps and Google Earth to create layers highlighting vanishing ice sheets in the Arctic and Antarctic, changing weather patterns, or the extent of future sea level rise.”

Competitive advantage through risk management can also bring opportunities. Hess Corporation reported: “When hurricanes or other events disrupt energy supplies, Hess has a competitive advantage because of our strong presence in the densely populated Northeast, Mid Atlantic and Southeast regions of the U.S. and our ability to quickly deliver product to the market place. For example, Hess retail stations have a competitive advantage because they have backup generators and are typically the first gasoline stations able to provide fuel to police departments and emergency responders, as well as the general public.”

Secondary impacts from climate change, such as biodiversity loss and changes to disease patterns are typically seen as a business risk. However for companies which specialise in these areas they can also be an opportunity. For example, GlaxoSmithKline reported: “GSK’s existing product portfolio of asthma and other respiratory disease products, antibacterial, anti-depressants, anti-malarials and vaccines, including one that targets rotavirus, (the leading cause of infectious diarrhoea in the world), will help governments to address some of the projected impact of climate change on disease burden. New medicines are needed for the treatment and, ultimately, prevention of diseases most susceptible to climate change.”

The Global 500 company sample is predominantly made up of companies which are listed on stock exchanges in France, Germany, Japan, the United Kingdom and the United States. 70% of responding companies had their primary listing in these countries and these companies were responsible for 70% of the emissions reported to CDP. However, beneath these headline numbers CDP has seen a remarkable shift in the geographical distribution of the world’s leading companies. The number of Asian companies in the Global 500 which reported to CDP increased by 39% between 2008 and 2009 (from 51 to 71) and the response rate from companies listed in Brazil, Russia, India and China doubled in the same year, with a 100% response rate from companies listed in Brazil.

These changes, attributable to fundamental shifts in the global economy, are helping to make clear that climate change action is not confined to companies which are headquartered in the industrialised countries which took on emissions reduction targets under the Kyoto Protocol. Climate change is being taken seriously by companies all over the world, and in a post-Copenhagen world we can see that some of the most progressive action and investment being reported to CDP in this area come from companies in emerging markets.

This conclusion becomes particularly clear when we move outside the Global 500 sample to consider CDP's national company samples, for example looking at responses from the largest 100 listed companies in China, the largest 200 listed companies in India, and many others. For example China Shenhua Energy, a world-leading coal-based integrated Energy Company, reported, "The Company has established departments and positions responsible for environmental protection and energy conservation and emission reduction... Each major subsidiary or branch of the Company has its own environmental protection department. In terms of energy conservation and emission reduction, the Company has formed a leading group led by the president of the Company comprising relative departments such as the Science & Development Department and heads of subsidiaries and branches, to facilitate the implementation of energy conservation and emission reduction of the Company."

CDP has scored the quality of corporate disclosures on climate change for several years, producing a much-watched league table known as the Carbon Disclosure Leadership Index (CDLI). Global 500 companies competed fiercely with their peers for places in the ranking, and this was very effective in driving up the overall quality of climate change reporting. With reporting now a mainstream activity CDP wanted to do more to focus corporate attention on action, so in 2009 we trialled a new scoring methodology which rewarded good performance in managing climate change impacts, as well as high-quality disclosure. This trial was successful, and performance scoring has been fully integrated into the CDP corporate rating methodology for 2010. The new Carbon Performance Leadership Index will not replace but complement the existing CDLI.

Good performance in relation to climate change must of course include measurement and management of greenhouse gas emissions as a first step. But as I have already explained in the discussion of risks and opportunities, the leading companies are also redesigning their business strategies in order to become winners in a changing world. This includes investment in new technology and products which will change our way of life as we move towards a low-carbon economy. Transport is one area where many changes are occurring, both in the development of new alternatives to the hydrocarbon-fuelled internal combustion engine and in the steady rise of videoconferencing technology as a substitute for travel. Global 500 companies are consistently reporting to CDP that they are investing in new, cleaner, technology in order to meet their business goals in relation to climate change, and investors are coming to expect this of leading companies.

We are seeing this change of expectations in all spheres, including at the level of the consumer. Although public opinion on climate change science and politics has taken a few knocks in late 2009 and early 2010, we are still seeing major brands advertising their low carbon credentials on posters and packaging in a way that would have seemed incredible only a few years ago. This reflects a fundamental shift in awareness and a belief that greenhouse gas emissions associated with

manufacturing or product use are something that should be understood and managed by companies.

Public demand for information about the climate change impact of products has led to a strong demand for measurement and accounting methodologies that address the corporate supply chain. CDP has been actively involved in the development of the Greenhouse Gas Protocol's new Scope 3 standard addressing this area. We also run a growing program, CDP Supply Chain, which helps over 50 multinational companies such as Boeing, Dell and Unilever to understand the climate change risks and impacts in their corporate supply chains. We have successfully extended the model to the public sector, where 17 UK central government bodies including BIS, DECC and Defra request climate change information from their suppliers through the CDP Public Procurement program.

Climate change accounting for the supply chain is a relatively new and emerging area. Reporting rules for direct emissions have a longer history, however because this activity was conducted on a voluntary basis for so many years the market suffers from a great deal of fragmentation and proliferation of methodologies and standards. The Greenhouse Gas Protocol, developed by the World Resources Institute and the World Business Council for Sustainable Development, is the best known and most widely used voluntary standard, but its use is by no means universal and a 'long tail' of alternatives means that it can be difficult to compare one company's reported data with another. While government regulation might in theory be expected to solve this problem, so far the rapid proliferation of mandatory reporting requirements in different jurisdictions has simply added to the list of different reporting rules that are in everyday use around the world.

This situation can be frustrating for international companies, including many of the Global 500, and makes it difficult for institutional investors to compare corporate performance in the area of climate change. The lack of a single global standard for carbon accounting hinders effective business and investment decision-making. In the longer term governments will need to co-ordinate their activities in this area and to harmonise their individual reporting requirements. Eventually we may even see sufficient co-ordination that global data on corporate emissions from key sectors can be collected and aggregated in the same way that country-level data is already reported under the UN Framework Convention on Climate Change. However we are a long way from that situation today and corporate climate reporting continues to happen in parallel to the international institutional framework on climate change.

The example of financial accounting provides a good analogy to this problem; it has taken approximately a century for the world to move from national, and incompatible, financial accounting rules to the near universal adoption of an International Financial Reporting Standard (IFRS) under the International Accounting Standards Board (IASB). If we are to combat climate change it is essential that the world moves faster than this when it comes to climate change accounting. This is why CDP supports

and provides the secretariat for the work of the Climate Disclosure Standards Board (CDSB) which was founded at the World Economic Forum in 2007 and brings together leading climate change reporting NGOs with the 'Big 4' accounting firms and a number of national and international accountancy associations. CDSB is working to develop a globally accepted framework, based on existing standards, for corporate reporting on climate change, and will publish an updated version of its draft reporting framework in mid 2010.

Climate change reporting standards, an expectation of reporting created through both stakeholder demand and regulation, and a price for carbon are three important aspects of the new world that the largest global companies are finding themselves in. A new corporate operating environment is being created that internalises the carbon externality and makes climate change management a normal part of doing business. Today we are only part of the way there, but the rate of change is dizzying and we know from the information reported to CDP that the world's largest corporations are at the forefront of this change.