

Carbon Disclosure Project Supply Chain Report 2009

Shared value: Managing climate change in the supply chain



Report written for
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CDP Supply Chain Project 2009

If you are interested in becoming a CDP Supply Chain member company, please go to the CDP website at www.cdproject.net or contact Frances Way on +44 (0) 20 7415 7095 to see the benefits available to your organisation, the CDP Supply Chain questionnaire, and responses to some frequently asked questions.

CDP Supply Chain member companies

| Member companies | Country of incorporation |
|---|--------------------------|
| Acer Inc | Taiwan |
| Banco Bradesco | Brazil |
| Boeing Company (Boeing) | USA |
| BT Group | UK |
| Cadbury | UK |
| Carrefour | France |
| CELESC | Brazil |
| Colgate-Palmolive Company | USA |
| Dell Inc | USA |
| Exelon Corporation (Exelon) | USA |
| FIJI Water | USA |
| H.J. Heinz Company (Heinz) | USA |
| Hewlett-Packard Company (HP) | USA |
| International Business Machines Corporation (IBM) | USA |
| Imperial Tobacco | UK |
| Johnson & Johnson | USA |
| Johnson Controls | USA |
| Juniper Networks | USA |
| Kellogg Company (Kellogg) | USA |
| L'Oréal | France |
| Merrill Lynch & Co Inc | USA |
| National Grid | UK |
| Nestlé | Switzerland |
| Newmont Mining Corporation | USA |
| PepsiCo Inc | USA |
| Procter & Gamble Company | USA |
| Prudential | UK |
| Reckitt Benckiser | UK |
| Royal Mail | UK |
| SSL International | UK |
| Tesco | UK |
| Unilever | UK |
| Vale | Brazil |
| Vodafone | UK |

Executive Summary

This CDP Supply Chain report looks for the first time at how businesses are responding to the call for action and transparency in managing carbon and climate change in their supply chain.

The Carbon Disclosure Project (CDP) has been asking large global corporations to measure and report the impact climate change will have on their business and their carbon emissions since 2002. In 2008 CDP extended this work with the CDP Supply Chain Project. Thirty four member companies nominated a selection of suppliers to receive a questionnaire on climate change looking at issues related to: carbon risks and opportunities, emissions reporting, reduction targets and plans, governance, supplier engagement and product lifecycles.

Looking at the impacts of carbon and climate change on supply chains, it is difficult to understand why some companies are questioning 'if' they should do something. The questions to be asked should instead be 'what' and 'how'. The reason why is simple; carbon and climate change are serious issues, with critical commercial, financial, operational and brand implications. Therefore it is not an option, it is basic business sense.

No matter how well an organisation manages its direct impacts, if its suppliers are not managing the future challenges around regulation, reporting, scarcity of resource, or the effects that changes in the climate could have on their business, their ability to supply and even operate in the marketplace could be dramatically affected.

When managed well, there are many achievable and sustainable benefits to be gained; short and long term cost removal, improved supplier loyalty, long term supply risk management and competitive advantage.



“It is clear to us that there is still a lot of education needed around carbon emission reporting and the understanding that customers like Kellogg will increasingly be expecting this information.”

Kellogg Company

“Our hope is that this report will de-mystify and take away the fear of carbon disclosure in the supply chain.”

National Grid

Managing carbon and climate change in the supply chain may seem like a significant challenge, but it is scalable and manageable by taking a practical approach and building considerations into everyday business processes. The key is collaborating, internally and externally, and taking it step by step.

As part of the CDP Supply Chain Project a total of 2,318 suppliers were invited to complete a questionnaire by 34 participating member companies in 2008. Of those invited, 634 (27%) provided a response, with 453 (71%) of these disclosing information to CDP for the first time. Another 136 (6%) formally declined to participate. The remaining 1,548 (67%) did not log on or formally respond to CDP, although some suppliers indicated a willingness to respond in future years.

When comparing supplier response rates by member company the rate of response ranged from 6% up to 88%, demonstrating how varied the supplier engagement has been, which depended on the members strategies and was influenced by geography and industry.

This report is structured in four sections:

1. The need to manage carbon and climate change in the supply chain;
2. Geographical trends in responses;
3. Industry trends in responses; and
4. Global response summary report.

Interspersed within the report are also three commentaries from PricewaterhouseCoopers LLP, Pankaj Bhatia, Director GHG Protocol Initiative, World Resources Institute and John Hirst, Chief Executive, UK Met Office.

The need to manage carbon and climate change in the supply chain

Research with the CDP Supply Chain member companies and their suppliers who took part in the process found that there are four key elements to effectively managing carbon and climate change in the supply chain including:

- Improving suppliers’ emissions management, reporting and accuracy of data;
- Influencing and supporting decreases in suppliers’ actual emissions and impacts;
- Reducing own emissions by considering ‘carbon costs’ in procurement decisions; and
- Managing supply risks related to future climate change impacts.

The research with member companies also identified a number of key actions for companies wishing to engage and manage their supply chain on carbon and climate change.

Understand the market

- **Maturity of the supply chain market** – Although some examples of leading practice do exist, few businesses are very far along the path of fully managing carbon and climate change in their organisation. Many are just starting out and some are still trying to work out where to start.
- **Understand the regulatory environment** – Businesses need to identify which regulatory frameworks apply to relevant procurement categories and markets and then share this knowledge with suppliers. As the cost of carbon becomes internalised through regulation companies will have to work closely with their suppliers to minimise potential cost increases. Where impacts are greatest companies should get actively involved in regulatory developments to help shape new legislation.

- **Long term supply risks –** Businesses need to understand the risks posed to their sources of supply from the impacts of climate change such as; sea level rises, extreme weather events, water scarcity and associated cost volatility. Procurement teams need to understand which procurement categories may be exposed, and then develop sourcing strategies which mitigate these risks at a category level. Done well, businesses can help secure future supplies and ultimately their long term viability.

Prioritise categories of spend

- **Identify the highest impact areas in the supply chain first –** Some companies spend too much time carrying out in depth analysis across their entire supply chain. It is better to first prioritise those areas where the greatest difference can be made, so that resources are deployed in an effective way to maximise their impacts.
- **Understand suppliers positioning to identify areas for collaboration –** Many of the CDP Supply Chain member companies are hoping to use their suppliers' responses to the 2008 questionnaire to identify the strengths, weaknesses and climate change adaptation strategies in their supply base. This will help them further prioritise their activities and identify suppliers to approach for possible collaboration on joint emissions reduction projects in the high impact procurement categories selected.
- **Knowing when to use Lifecycle Assessment (LCA) –** LCA is a very valuable tool for establishing carbon intensive areas for a particular product, process or service, but given the complexity and resource involved with completing a detailed LCA, it is not a tool that is easy to apply across an entire product portfolio or supply chain. LCA is best used after having prioritised; where to focus, which suppliers to work with, and validating the time and resources it will demand.

Prepare internally

- **Management buy-in –** Having internal Board level ownership and understanding of climate change risks and opportunities is vital to make real progress. It is also important to feed back the findings and results of activities to maintain momentum.
- **Align procurement and sustainability teams –** Sustainability teams hold expertise in understanding carbon and climate change and procurement teams know what will work in practice when it comes to managing their suppliers. Aligning objectives along the supply chain and clearly communicating the challenges and opinions of each team means workable and practical processes can be designed.
- **Provide training and tailored tools –** Procurement teams do not need to become sustainability professionals, but they do need to understand some key carbon impacts in their supply chain and the strategic implications of climate change on their sourcing strategies. Toolkits can be simple templates or knowledge sources.

Engage suppliers

- **Clearly communicate what, why and how –** Suppliers need to know why customers want them to provide data and how they plan to use it both now and in the long term. Communicating to suppliers that the data provided will not be used against them – to terminate contracts or demand cost reductions or shared savings – greatly increases supplier support and opens the door to suppliers bringing savings opportunities to member companies.
- **Select the right supplier management strategy –** Benefits have been realised from developing a relationship management strategy that learns from the leaders and encourages and informs the rest.

“Our intent in joining the CDP process is to help determine the logical next steps for us to encourage actions by our suppliers that, hopefully, will lead to improved energy and process efficiency and reductions of GHG emissions in their operations.”

IBM

“Suppliers are nervous about the consequences of disclosing this information, and the upfront message of why this information is requested needs to be very carefully managed.”

Royal Mail

“All other things being equal, a greener supplier would be given preference.”

Exelon

Key facts: Geographical trends

Europe = 1,327 suppliers invited making up 57% of total invitees. **274** responded (21%), representing 43% of total respondents.

North America = 540 invited making up 23% of total invitees. **221** responded (41%), representing 35% of total respondents.

Asia = 247 invited making up 11% of total invitees. **77** responded (31%), representing 12% of total respondents.

Rest of the World = 204 invited making up 9% of total invitees. **62** responded (30%), representing 10% of total respondents.

- **Using carbon as procurement decision criteria** – Member companies agreed that the most important priority is to create criteria that can also take into account the actions suppliers are taking to improve their climate change performance, and not just their emissions record alone. The impact of carbon and climate change on business in the future may be an important screening factor as to who the company does business with. Those companies that embed this into their procurement functions are ultimately more likely to gain the greatest benefit.

Plan practically for projects

- **Create an action plan of projects** – Projects for each of the four elements (suppliers' emissions reporting, emissions reductions, procurement consideration, and risk management) will need to be covered. To maintain support and results, projects need to be followed up appropriately. Taking on a small number of focused initial activities, means results are often delivered faster, giving credence to investments made and demonstrating value early on.
- **Collaborate** – One approach being used by member companies is to work collaboratively with one supplier on a pilot project in a focus area, then using the findings to develop self informing 'roll out packs' for all other suppliers in that industry to implement themselves.
- **Factor in savings measurement to project design** – Consider how the results of projects and achievements will be reported and where. The true value of managing carbon and climate change in the supply chain can then be clear and visible to all stakeholders concerned.

Geographical trends

This section looks at the geographical trends identified from the 634 global responses in the 2008 GDP Supply Chain Project:

- **Response rates** – On a country level, the highest response rates (from countries with an invitee group larger than 2) were in Sweden (88%), South Korea (67%), Taiwan (65%), Japan (63%) and Denmark (63%). The lowest response rates (from countries with an invitee group larger than 2) were in Thailand (4%), France (8%), Italy (10%), Belgium (11%), Czech Republic (11%), Spain (13%), and India (14%).

The response rates are likely to reflect a mix of engagement on climate change and the power of purchasers to influence their supply chain.

- **Governance and ownership** – Suppliers in Asia were found most likely to have governance and remuneration incentives to drive positive activity in carbon and climate change activity. 66% of respondents in this region cite Board level responsibility for climate change issues, and 39% for incentive mechanisms. European suppliers were still relatively well represented with 60% for governance and 27% for incentive mechanisms, North American suppliers had 47% and 23% and Rest of the World suppliers had 34%, and 16% respectively for their governance and incentive responses.
- **Awareness of risks and opportunities** – The principal risks identified by most respondents overall were; regulatory – cap-and-trade, physical – extreme weather events and general – consumer demand. There are a large number of suppliers that do not perceive any regulatory risk (34% overall), physical risk (34%) or general risk (29%) from carbon and climate change. However, many respondents identified real business opportunities in some form (regulatory opportunities 71%, physical opportunities 53% and general opportunities 71%).

- **Emissions reporting** – North America had the highest number of suppliers disclosing their Scope 1 and 2 emissions at 38% for each. Europe had the highest coverage of some Scope 3 reporting at 28%.

Industry trends

This section looks at the awareness of carbon and climate change issues by industry.

- **Response rates** – The Industrial, 193 (31%) and Consumer Staples, 146 (23%), sectors provided the largest group of respondents. The Industrials sector was dominated by respondents from North America (74), Europe (68), and Rest of the World (35). The Consumer Staples sector had 89 (61%) of the respondent population coming from Europe.
- **Governance and ownership** – Respondents by industry sector showed that overall 54% of responding suppliers have Board representation on climate change related issues. This ranges from 48% (Industrials) to 78% (Financials) with Utilities and Telecommunications scoring highly as well with 75% and 67% respectively.
- **Awareness of risks and opportunities** – The Utilities sector had the highest response around risk management of carbon and climate change with 81% of those who responded. The Energy sector had the lowest number of respondents in this area with 63%.
- **Emissions reporting** – The total proportion of CDP Supply Chain respondents providing Scope 1, 2 and some Scope 3 emissions data were 30%, 31% and 24% respectively. The notable sector with the highest proportion was in the Financials sector with disclosure rates of 56%, 56% and 89% respectively.

Conclusions

It is still early days for the management of carbon and climate change in the supply chain, but a few companies are clearly seeking to position themselves as innovators in

this field. This year, the CDP Supply Chain member companies cited that the main reason for participating was to raise awareness with their suppliers of carbon and climate change issues and to flag that this is an important subject. They were not expecting detailed and accurate emissions data from all suppliers. Next year however, progress is expected to be seen.

Having explored the findings of the member companies and the areas that carbon and climate change management in the supply chain may cover, there is no doubt that this is a large and sometimes complex area, but nevertheless one that is clearly manageable. Businesses need to be practical, engaged and tailor their activities to their own organisation and the position of their procurement categories and suppliers.

Procurement teams will need to be open and flexible. There are simple solutions and common learnings, but the approach used by businesses will need to be able to adapt to the changing issues and landscapes of regulation, risks and opportunities and support the different abilities of suppliers.

Collaboration is a core message – with suppliers, industry, NGO's and government bodies and with customers. Effective and sustainable progress can be made as long as trust is not abused, especially by businesses evaluating suppliers. The key here is to work together and be mutually supportive so far as commercial constraints permit especially in the current climate.

There are financial and business implications in not managing carbon and climate change in the supply chain. Regulation is ever increasing and there are no more supplier margins left to squeeze for cost. But managing this well can bring achievable and sustainable benefits – in relationships, in internal capabilities, in carbon reductions, in the management of critical supply risks and in achieving cost reductions.

Key facts: Industry trends

Industrials = 193 responded representing 31% of total respondents

Consumer Staples = 146 responded representing 23% of total respondents

Information Technology = 96 responded representing 15% of total respondents

Consumer Discretionary = 70 responded representing 11% of total respondents

Materials = 50 responded representing 8% of total respondents

Telecommunications = 30 responded representing 5% of total respondents

Utilities = 16 responded representing 3% of total respondents

Health Care = 14 responded representing 2% of total respondents

Financials = 9 responded representing 1% of total respondents

Energy = 6 responded representing 1% of total respondents

The PricewaterhouseCoopers Perspective: A new landscape for supply chains

For many businesses the global recession has led to a vigorous refocusing of efforts to secure short term survival. Procurement and supply chain teams frequently find themselves at the sharp end of cost-cutting initiatives, which often result in corresponding cost reduction targets being passed on to suppliers.

These same teams and the suppliers that they manage also have a key part to play in developing more sustainable business practices and delivering long term savings opportunities, especially where carbon is concerned.

In some industries, for example in Retail and Consumer businesses, the majority of a company's 'carbon footprint' is regularly found upstream in the supply chain. In others, the supply chain footprint is smaller, but no sector will be entirely immune. As carbon-based regulation increases, energy prices remain volatile, and the physical impacts of climate change increasingly become a reality, all supply chains will be impacted.

In the current economic climate though, one thing is clear: if companies are to make significant progress with developing low carbon supply chains, they will need to present a strong business case. This clear commercial focus will help to engage the parties that need to be involved and will highlight the financial benefits around future cost savings, in both the short and longer term.

This is a huge positive change to the way that many sustainability initiatives have been managed over the last ten years. There has been some great activity but much of it has been seen as 'nice to have' or managed without the rigour of effective business analysis, assessment and reporting. As a result, carbon and climate change has not been recognised as a valuable strategic tool for business improvement, cost reduction and long term business risk management.

Our experience suggests that the change needed manifests itself in the following ways:

- A clear business case for actions to manage carbon and climate change in the supply chain is essential to ensure efforts are focused, strategic and value added;
- Integration of these actions into mainstream business processes is vital if they are to deliver the potential benefits; and
- Transparent reporting of targets and progress is needed to link activity to performance and demonstrate value to business owners and stakeholders.

There is nothing new in this – in any other area of business these factors would be self evident. The perfect storm of climate change and economic crisis may be exactly what is needed to force the change in thinking and business behaviours needed in this area.

Recent PwC research with over 1,000 CEO's from some of the world's leading companies showed that 48% of CEO's were already making changes in their supply chain in response to climate change or would start within the next 12 months. 66% of these CEO's were already making a return on this investment or expected to do so within the next 12 months.

Leading businesses are already proving that it is possible and extremely beneficial to integrate sustainable business practices into their supply chain strategy. We have seen a number of examples delivering real cost reductions as a result of using carbon as the value driver within the supply chain. For example, one major clothing retailer recently reduced their supply chain operating costs by 17% and saved over 4,500 tonnes of carbon by redesigning their distribution and logistics chain.

Beyond cost and risk reduction, organisations are also increasingly looking to understand the wider implications of carbon and climate change, as well as other sustainability issues such as resource and water scarcity, through scenario planning 10 to 15 years into the future. From a procurement perspective, this has shown that a fundamental shift in mindset is needed; the last decade has seen globalisation and cost deflation provide great benefit to many organisations in the form of low cost raw materials. With suppliers, like all businesses, now under increasing pressure for their own survival, low cost supply markets are not a sustainable way to manage cost cutting efforts. Developing new strategies to deal with these new risks, like scarce resources and shifting patterns of supply all now need to be considered and managed.

The scale and complexity of managing this issue has meant that organisations are increasingly concluding that supply chain management of carbon and climate change cannot be tackled by businesses working alone. The importance of collaborating with suppliers, to get a fuller perspective of the issues, maximise short term cost savings and generate long term innovation and growth is becoming ever more apparent.

We believe that those businesses who address these issues strategically will be best-placed to survive both the immediate economic crisis and the impending climate crisis. Far from being an excuse to cut back on sustainability activity, the business case for managing carbon and climate change in the supply chain is even stronger. Those businesses that strategically identify the need for immediate action on carbon and climate change management in the supply chain, may well exit the current downturn in the stronger position required to face what many believe will be far greater challenges ahead.

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About CDP Supply Chain

The CDP Supply Chain Project, initiated in 2007, represents an integral aspect of the Carbon Disclosure Project's drive to promote management of greenhouse gases within industry. Building on the annual CDP Investor Information Request, it effectively leverages CDP's unique position as the world's largest resource of corporate greenhouse gas emissions data.



The Carbon Disclosure Project (CDP) works with key stakeholders to encourage companies all over the world to measure, manage, disclose and ultimately reduce their energy use and greenhouse gas emissions.

The CDP Supply Chain Project is a collaboration of global corporations (as listed on the inside front cover) who have extended their climate change strategies beyond their direct corporate boundaries and are engaging with their suppliers via CDP's annual information request.

CDP Supply Chain aims to provide a global, standardised framework for supply chain disclosure to avoid suppliers receiving multiple individual requests. The objectives of the project are:

- To collect information that leads to action by both purchasing and supplier companies in respect of climate change;
- To leverage the expertise of CDP Supply Chain members to influence international standards and establish a global process for supply chain disclosure; and
- To maximise engagement and dialogue between purchasing organisations and suppliers on climate change issues.

By inviting suppliers to participate in the CDP Supply Chain Project, the members demonstrate the importance of climate change within their own corporate strategy, and raise awareness among their suppliers of the issues associated with climate change and the need to build capability to move into a low carbon economy. This business to business approach can strengthen relationships and lead to an increase in customer-supplier collaboration for innovative solutions to climate change.

The CDP Supply Chain Project 2008

In 2008 CDP sent the Supply Chain information request to more than 2,300 companies. These were all suppliers chosen by the CDP Supply Chain member companies. For the first time, CDP also requested information from private and smaller companies.

The 2008 CDP Supply Chain information request sent to suppliers was made up of seven sections:

1. Management's views on the risks and opportunities that climate change presents to the business;
2. Greenhouse gas emissions accounting, energy and fuel requirements and costs, emissions trading;
3. Emissions/energy reduction activities, plans, targets, and forecasting;
4. Corporate governance with regard to climate change;
5. Greenhouse gas emissions split by business category;
6. Management's engagement with its suppliers; and
7. Greenhouse gas emissions over the lifecycle of goods or services.

The process for completing the information request is consistent across CDP projects. Those companies willing to respond log on to a secure website to read and complete the questionnaire. Once the deadline for completion passes, responses are made available to requesting members and sent to PricewaterhouseCoopers (CDP's advisors and report writers) for analysis and reporting.

“Juniper became involved with CDP in response to investor requests for this organization to be an environmental leader in the industry.”

Juniper Networks

“We knew we were seeing progress when we asked a supplier to participate and they, in turn, engaged with CDP directly to start a dialogue and build their own awareness. We understand that it was a very fruitful conversation on both sides.”

Kellogg Company

“We view the CDP process as a means of raising awareness while also engaging suppliers to minimize the environmental impact of their operations.”

Exelon

“The participation in the CDP Supply Chain Project opens up another dialogue channel between Vale and its suppliers. A few suppliers pro-actively contacted Vale’s environmental department in search of win-win opportunities.”

Vale

Background to CDP

CDP Supply Chain has its roots and infrastructure in the Carbon Disclosure Project, the largest institutional investor coalition in the world. On 1st February 2009 CDP’s seventh annual investor information request was signed by 475 signatory investors, with a combined asset base of \$55 Trillion, and sent to over 3,700 publicly listed companies worldwide. CDP is an independent not-for-profit organisation with charitable status in the UK and U.S.

The companies’ responses provide investors with vital information regarding the current and prospective impact of climate change on their portfolios, and therefore represent an important resource for investment decisions and shareholder engagement. More than 1,550 companies responded in 2008, including 77% of the Global 500. This demonstrates an increasing understanding by the world’s largest corporations of the importance of climate change and its relation to business strategy and shareholder value.

Government and public sector organisations also understand the importance of measuring their own carbon emissions and climate change risks. More than 30 cities in the U.S. are currently working together to report through the CDP system, a development that will yield a much better understanding as to how cities are preparing for the low carbon economy. CDP is also working with central and local government departments in the UK including the Foreign and Commonwealth Office and the Office of Government Commerce in Her Majesty’s Treasury to understand supply chain emissions, risks and opportunities from public procurement.

CDP also acts as secretariat for the Climate Disclosure Standards Board (CDSB), which aims to promote and advance climate-change-related disclosure in mainstream reports through the development of a global

framework for corporate reporting on climate change. This framework will elicit comprehensive, consistent and comparable information for investors, as well as offering greater certainty on disclosure requirements for corporations, and thereby provide an influential model for use by national regulators.

CDP Supply Chain in the future

CDP is continuously working to encourage suppliers to disclose climate change information for the first time, so is developing a supporting webinar series for respondents. In 2009 CDP is offering a Small and Medium Sized Enterprise (SME) version of the Supply Chain questionnaire.

CDP plans to expand its membership globally and is offering a tiered membership structure to enable maximum entry-level opportunities to corporations wishing to engage with their suppliers on climate change issues.

CDP will continue to work closely with the Supply Chain member companies to develop best practice in terms of supplier engagement, motivation and use of data. CDP is supporting the World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD) led GHG Protocol team’s work to develop and improve the international standards for Scope 3 emissions reporting.

As global regulation increasingly focuses on greenhouse gas emissions and consumers demand low-carbon and energy-efficient products, it is likely that climate change will increasingly be incorporated into procurement criteria and the tendering process. Supplier data provided via the CDP process may be used in supplier rating and ranking in the future.

There’s more information on CDP, and the Supply Chain Project at www.cdproject.net

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The need to manage carbon and climate change in the supply chain

For the first time the views and recommendations of the CDP Supply Chain member companies are brought together to provide some practical learnings and advice to suppliers and customers alike.

Looking at the impacts of carbon and climate change on supply chains, it is difficult to understand why some companies are questioning 'if' they should do something. The questions to be asked should instead be 'what' and 'how'. The reason why is simple.....carbon and climate change is a serious issue, with critical commercial, financial, operational and brand implications. Therefore it is not an option, it is basic business sense.

Just a few years ago many people had not even heard of the phrase 'carbon footprint'; now it has become part of the language – not just in the Oxford English Dictionary, but in every day use from national energy policy to car advertising. Climate change has moved from the margins to the mainstream, and as the science has gained ground, pressure has grown for concerted action by governments, individuals and companies alike.

With the future impacts of climate change becoming better understood, governments are increasingly responding with new regulations such as cap-and-trade schemes and carbon taxes. There are now genuine and mounting long term financial implications of failing to manage and reduce carbon emissions and the future impacts of climate change on a company's supply base.

Businesses and suppliers may not remain financially sustainable if they are not prepared for the evolving climate change regulatory landscape. Similarly, if suppliers are not managing the future challenges around raw material and utility scarcity, or the effects that changes in the climate or extreme weather events could have, their ability to supply and even operate in the marketplace could be dramatically affected.



“For many companies, the supply chain generates the majority of total life-cycle emissions, making the issue a vital part of carbon management.”

Paul Dickinson,
CEO, CDP

“It’s too early to tell quantitatively what our success has been, but qualitatively we can say that for at least one supplier filling out the [CDP Supply Chain] SC survey provided an a-ha moment. The supplier performed an energy audit afterward and is now putting reduction plans in place.”

Exelon

On the plus side, there are achievable and sustainable short and long term cost removal opportunities throughout the supply chain; along with improved supplier loyalty and competitive advantage to be gained in effectively managing carbon and climate change. This is not as difficult as some think. It may be a large area, but it is scalable and manageable by taking a practical approach and building a few considerations into everyday business processes. The key is collaborating, internally and externally, and taking it step by step.

Most large businesses are now becoming increasingly aware of their direct environmental impacts, and are reducing their own energy use. However few have yet developed an effective way of truly addressing these issues within their supply chains.

Critically, the sustainability greenwash historically deployed by some procurement functions will not work with carbon. Simply writing a policy (without implementing it) or setting basic tick box criteria for suppliers or products will not reduce cost or risk to the business. Procurement departments will have to demonstrate to suppliers the importance of carbon and climate change, including articulating the business case and actively monitoring and rewarding performance. This will need to include:

- Improving suppliers’ emissions management, reporting and accuracy of data;
- Influencing and supporting decreases in suppliers’ actual emissions and impacts;
- Reducing the company’s own emissions by considering ‘carbon costs’ in procurement decisions; and
- Managing supply risks related to future climate change impacts.

CDP is helping organisations around the world address these challenges. This report shares the findings from supplier responses to the CDP Supply Chain 2008 questionnaire,

and makes practical recommendations based on the CDP member company views on practices already in use across regions and industries.

There is some excellent work going on, as several of this year’s CDP Supply Chain member companies and suppliers demonstrate. Most of the companies asked have managed to find an approach that is effective, flexible, and does not impose a disproportionate burden on either their own procurement teams, or their suppliers.

By providing one standardised global disclosure framework for supply chain emissions and climate change data, the CDP Supply Chain Project is providing companies with the guidance and tools needed to manage and measure carbon and climate change performance in their supply base.

2008 CDP Supply Chain Questionnaire Respondent Statistics

In total 2,318 suppliers were invited to take part in the CDP Supply Chain 2008 questionnaire by 34 participating member companies. Of those invited, 634 (27%) provided a response, with 453 (71%) of these disclosing to CDP for the first time. Another 136 (6%) formally declined to participate and 494 (21%) logged on to the CDP Supply Chain questionnaire but did not respond either at all or in time. The remaining 1,054 (46%) did not log on to the website or formally respond to CDP.

Of the 634 responses, 165 (26%) of suppliers elected to make their responses public and a further 52 (8%) chose to make their responses available to all requesting member companies (rather than just those formally inviting them).

Although the overall response rate of 634 (27%) against an invitee group of 2,318 seems low, when looking on an ‘inviting customer’ (by member company) basis, this ranged from 6% up to 88%.

These statistics demonstrate some positive behaviour, but also highlight a significant proportion of suppliers that are not yet keen to engage around the topic of carbon and climate change.

This Report

The key learnings from the CDP Supply Chain member companies in relation to processes for managing carbon and climate change in their supply chain are looked at in this report. Further analysis of supplier responses by geography and industry is then provided in later sections, including a look at respondent patterns, governance arrangements, risks, opportunities, emissions reduction activities and the number of suppliers disclosing emissions across regions and sectors.

Learnings from CDP Supply Chain member companies

As part of the CDP Supply Chain Project 2008, member companies shared their views on managing carbon and climate change in their own supply chains and provided insights on what has been seen to work and what hasn't. These views are broken down into five areas:

- Understand the market;
- Prioritise categories of spend;
- Prepare internally;
- Engage suppliers; and
- Plan practically for projects.

1 Understand the market

Regulation and the level of maturity of others in managing carbon in the supply chain are two common areas where suppliers and customers alike are lacking information.

Regulation

Many have struggled to deal with how regulation affects their own business let alone considering the impacts it could have on their supply chain. This is hardly surprising given the complexity and inconsistencies between different jurisdictions, which in the short term are only likely to increase. An overview of current regulation by region is shown on page 31 of this report.

A current example cited by member companies of regulatory challenges is in the United States. Many have found it difficult to deal with the varying legislative requirements of individual states, created due to a prior lack of country wide regulation. For example: there is a lack of consistency between different state legislations and industry specific legislation.

The new U.S. President, Barack Obama, has already called for the development of a federal cap-and-trade scheme to cut emissions 80% by 2050. This is excellent news on a global scale, but does mean that companies need to undertake activities in response and preparation, including understanding what regulations they and their suppliers are exposed to and the financial and business implications these may pose.

The CDP Supply Chain questionnaire asks suppliers how they consider themselves to be exposed to regulatory risks and what they are doing to manage them. For CDP Supply Chain member companies, having access to this information from their suppliers means they can highlight exposures to the organisation and identify where further education and action is required. It will also identify leading practice examples of how to prepare for, and manage, regulatory risks and opportunities.

Maturity of response

Many businesses believe they are behind the curve on managing carbon with their suppliers, and some are even under the impression that most other companies already have a mature and strategic way of dealing with this subject in their own supply chain. This is not the case, but concerns have been expressed by many suppliers that open disclosure of what they are (or are not) doing may result in penalties or loss of contract. This demonstrates the need for conversation, education and ultimately trust both up and down the supply base.

“Some suppliers find access to standardised information is one of the biggest challenges to identifying and reducing their emissions.”

Royal Mail

“Dealing with the differences in legislation is challenging but it's the differences and contradictions in reporting requirements across geographies that are the real difficulty.”

National Grid

“Carbon emission reporting information will definitely increase in importance in the future as we’ve increasingly been seeing specific requests from customers asking IBM to supply or validate the GHG emissions inventory for its operations and, in some cases, its entire supply chain operations.”

IBM

Key learnings and recommendations from the CDP Supply Chain 2008 Project

Maturity of the supply chain market

Few businesses are very far along the path of fully managing carbon and climate change in their organisation. Many are just starting out and some are still trying to work out where to start.

Reporting requirements

Detailed emissions figures were not provided by many responding suppliers.

In future years, customers will expect to see progress on measurement and reporting of emissions. Many suppliers will need to do this anyway to demonstrate reductions required by new regulation and to manage their costs.

A useful educational tool is the CDP Supply Chain questionnaire. By simply reviewing the questions and subject areas covered in the questionnaire, businesses can understand what sort of information they need to start gathering, and what activities they need to start undertaking within their own businesses to start preparing for the future.

Understand the regulatory environment

Member companies recommend spending time understanding the regulatory frameworks that apply to the procurement categories and markets in the supply chain, and then to share this knowledge with suppliers. As the cost of carbon is internalised through regulation, companies will have to work closely with their suppliers to minimise potential cost increases.

Where impacts are greatest, member companies suggest getting actively involved in regulatory developments. In many countries regulation is still being formulated and companies are often able to input to the process. Also, in those countries where regulation is already in place, companies can still participate in regulatory reviews to help shape and simplify new laws and directives.

Long term supply risks

Member companies stated that no matter how carbon intensive or efficient a business and its supply chain may be, it is extremely likely that the future impacts of climate change will pose some level of risk to all operating businesses in the supply chain.

Businesses therefore need to understand the risks posed to their sources of supply from the impacts of climate change such as: temperature increases, sea level rises, extreme weather events, water scarcity and the associated cost instability. The impacts of this price volatility and availability of key raw materials will have major impacts on some industries.

Procurement and management teams then need to take longer term views to firstly understand which procurement categories may be exposed. Then to develop sourcing strategies which mitigate these risks at a category level. This may then result in the development of climate change adaptation strategies for suppliers in high risk categories or the identification of new geographical sources of supply and new supply chain partnerships.

Done well, the business can help secure future supplies and ultimately the long term viability of the business.

Were responding suppliers aware of the risks they face?

Climate change will create risks and opportunities for many businesses. If suppliers are managing their risks and maximising their opportunities, positive results and long term business improvements will be seen.

The CDP Supply Chain questionnaire aims to establish suppliers' awareness in this area by asking respondents to describe the regulatory, physical and general risks to their business and how they are managing them. This section is seen by many companies as one of the most important in the questionnaire, and in the 2008 project was the area that received the most detailed answers.

Although respondents' knowledge of risks varied greatly across regions and industries, a significant number of respondents (42% on average across regulatory, physical and general risks) considered that climate change posed no risk to their business or chose not to even answer the question. See figures 1 and 2.

As there are very few businesses that are not exposed to all three of the main types of risk, the charts below suggest many suppliers need to increase awareness of the business threats posed by climate change.

As shown in figure 2, the main risks identified by suppliers were those that are common across almost all businesses – extreme weather

events, climate related changes (eg: changing temperature/rainfall patterns), flooding & sea level rise, regulation/cap-and-trade schemes and consumer demand.

Interestingly, security of supply, biodiversity, disease, economic challenges and employee related risks all seemed low on the agenda as individual subjects, but were often picked up as part of the more mainstream risks above.

It will be interesting to see if this pattern is repeated in future iterations of the CDP Supply Chain Project, or whether the risk profiles of these issues change over time.

Fig. 1: CDP Supply Chain respondents' awareness of risk

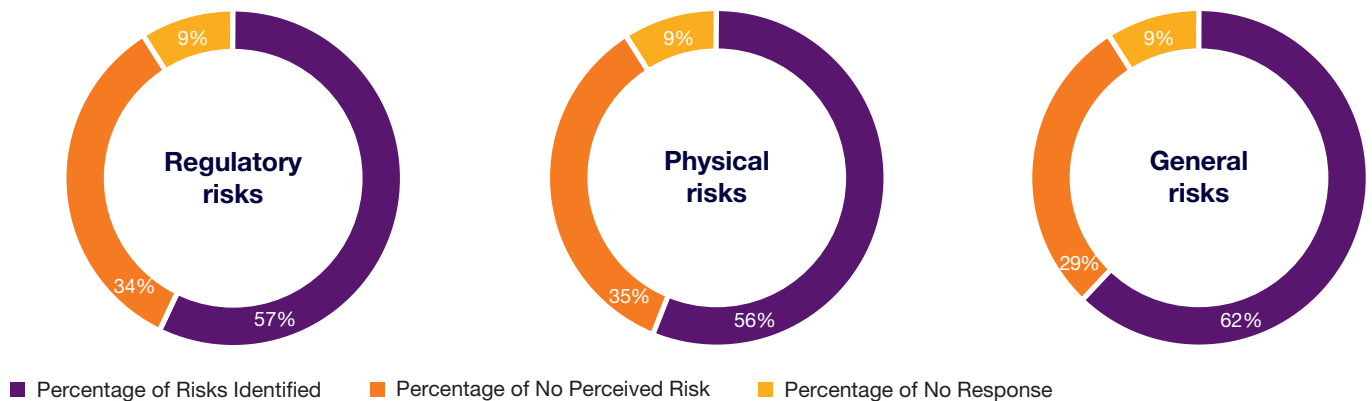
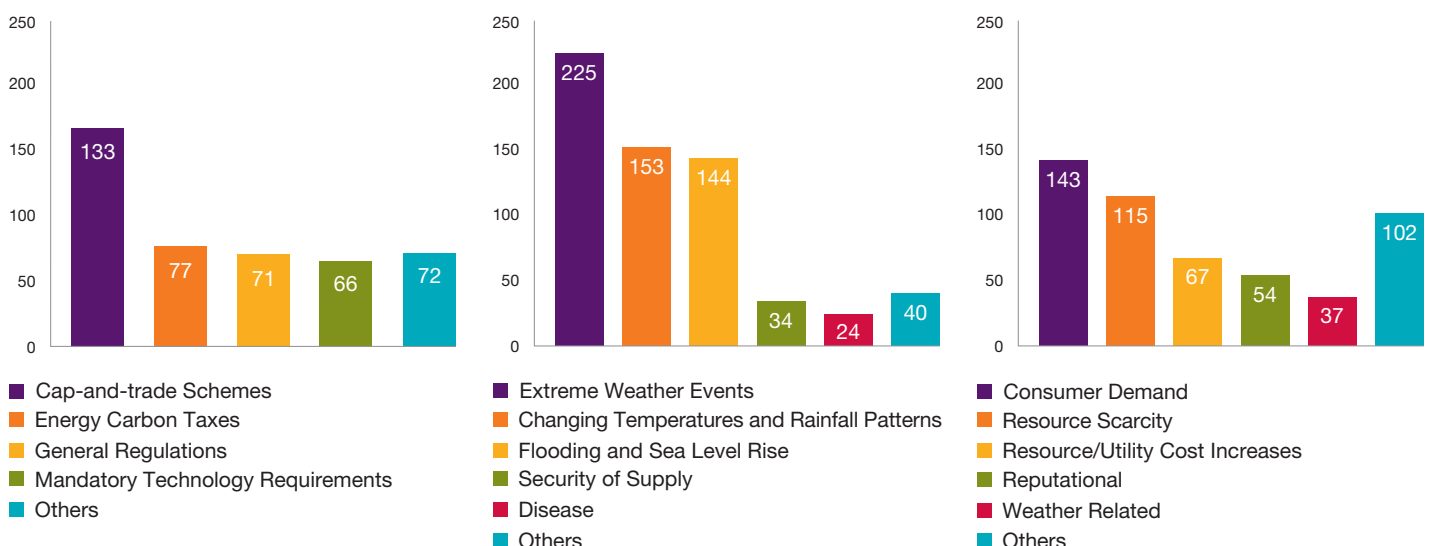


Fig. 2: CDP Supply Chain respondents' selection of core risks



“We took for granted that a big spend equals big emissions, but this was not the case when we looked further.”

National Grid

“Starting the process is not the challenge, knowing what to do with the data and how best to use it, in order to help our suppliers is the real difficulty.”

BT Group

“For Colgate, quantifying our carbon emissions has helped inform our strategy and guide our goal setting process, and we anticipate that our suppliers and others engaged in the CDP SC will see a similar benefit.”

Colgate-Palmolive

2 Prioritise categories of spend

The conversations held with the CDP Supply Chain member companies confirm that a key initial step for any business seeking to manage its climate change risks is to determine the priority impacts they need to manage.

Some member companies initially thought that they could make reasonable assumptions about where the greatest concentrations of emissions in their supply chain were likely to be. They based that on their own understanding of the sort of raw materials they source, or services they buy, and in some cases, assuming that ‘the more we spend with a supplier, the higher their impacts are likely to be’. But a number of them later found that these assumptions proved wrong. Some of the greatest sources of carbon in the supply chain were frequently in unexpected areas.

Another common learning point for member companies was to avoid looking too deep into the detail too soon. This often resulted in spending too much time up front analysing areas of limited impact. The key is to know how far to drill down to get the level of detail needed, without overloading either the suppliers, or the procurement teams involved.

The focus should instead be on quickly and simply highlighting where to concentrate future efforts in a company’s supply chain. As member companies explain, the aim here should be to have a summary understanding of the impacts of each of the main procurement categories so that a plan can be established, leading on to the next step of mapping the maturity of supplier management of these impacts.

Some companies are using Lifecycle Assessment, or LCA, to help them analyse the carbon-intensity of their product categories. Used well, it can be extremely useful in identifying emissions ‘hotspots’ and specific areas that need particular attention.

But as companies who have used it would testify, it takes time and resources to do properly, and can produce an overwhelming quantity of data. The CDP Supply Chain member companies suggest, the best approach is to start by evaluating the wider supply chain at a higher level, and then use this insight to determine whether a full LCA might be helpful for specific products or processes in priority areas. In these circumstances LCA is found to be extremely useful, and many companies are using it as a key emissions reduction tool, and one which is delivering multiple and tangible results.

The key is to be practical, companies should scale their efforts to the size of their organisation, and the nature of their business. This is a long term process, but member companies and suppliers can be rewarded with short term savings and long term insights and benefits at every stage.

Key learnings and recommendations from CDP Supply Chain Project 2008

Identify the highest impact areas in the supply chain first

Several member companies commented that taking the time to conduct a high level supply chain impacts review of key procurement categories or products prior to investing time and resources into detailed analysis, resulted in more buy-in from procurement teams and suppliers, and enabled greater results to be achieved faster because activities were focused on the right areas.

The high level review should consider for each key procurement category: where the most significant contribution to the carbon footprint occurs, and what impacts broader climate change risks may have and the associated commercial implications.

There are a number of different ways to complete this up-front review: by asking suppliers directly, by outsourcing the process to a

specialist consultancy, or by drawing on the support offered by regulatory, industry or public advisory bodies.

Member companies also found that publicly available information was very useful in deciding where to focus, but that it should be supplemented with input from industry bodies or supply chain specialists for more specific areas.

The key is to keep it simple, so that you can prioritise your efforts where they will make the most difference.

Understand your suppliers positioning to identify areas for collaboration

Many of the CDP Supply Chain member companies are hoping to use their suppliers' responses to the 2008 questionnaire to identify the strengths, weaknesses and climate change adaptation strategies in their supply base. This will help them further prioritise their activities and identify suppliers to approach for possible collaboration on joint emissions reduction projects in the high impact procurement categories selected.

The CDP Supply Chain Project enables customers to not only identify where their suppliers are in terms of maturity and performance, it can also provide useful insights into approaches and successes seen in a particular process or industry.

"We want to get to a place where we have shared targets and be open/public about them."

Tesco

Concentrate on what can be influenced

When establishing priorities, member companies said, make sure to factor in the ability to influence and make a difference.

"For L'Oreal, it is not just about engaging with the product but consistency with your position in the market and your wider business."

L'Oréal

Knowing when to use LCA

LCA is a very valuable tool for establishing carbon intensive areas for a particular product, process or service, but given the complexity and resource involved with doing a detailed LCA, it is not a tool that is easy to apply across an entire product portfolio or supply chain.

Instead, member companies advised using LCA only after having prioritised where to focus; which suppliers to work with; and the time and resources it will demand.

A first step to LCA could be to map from 'cradle to gate' (manufacture through to delivery to consumer) rather than the full 'cradle to grave' cycle (manufacture through to disposal). By considering LCA only for the right areas rather than as a default for everything, companies have seen time and resource savings, faster results (due to ability to focus) and increased buy-in internally and in the supplier base.

Only gather the data that's really needed

Some CDP member companies found that it was easy to become overwhelmed by the volume of information and analysis available, without really knowing what to do with it. Their recommendation is to be very clear about what information is needed and why.

Member companies see that the challenge is to become more sophisticated in how to process, analyse and understand data related to climate change. Then to build trust in the industry to be able to share findings with suppliers and others in the sector as a means of conserving efforts.

"You have two choices, particularly in the current climate, you can put all your resources into continuing to measure or you can focus them on managing."

Unilever

"The main accomplishments achieved by inviting suppliers to reply were raising supplier awareness and driving the supplier initiatives of establishing long-term goals and set strategy; suppliers realize that climate change performance is important to us."

PepsiCo

"We have worked with our suppliers on new processes and product-specific improvements needed. We prefer a two-way street with our suppliers in sharing ideas to reduce waste, reduce emissions, and reduce costs through process/product improvements. This approach helps suppliers to reduce the risk of incidents that can interrupt supply and allows Heinz to improve our holistic sustainability performance. This is important not only to our customers but as a socially responsible company, we understand the critical role we can play in improving the world we live in."

Heinz

“Selecting which suppliers should receive questionnaires raised the procurement organization’s level of awareness regarding energy use and CO₂ emissions inventories in the IBM supply chain.”

IBM

“The diversity of supply chains is a challenge when looking how to set a common standard.”

Tesco

3 Prepare internally

The procurement function of a business often has the greatest pressure of all to cut costs and reduce spending. Often, this goal is not seen as a natural ally to many sustainability initiatives due to a long standing misconception that ‘green costs more’.

Preparing business for the future though, requires a need to incorporate the longer term outlook into today’s actions. Procurement teams are rarely measured on the long term, they are often just set year-on-year cost reduction targets and expected to meet them. If ‘green’ or ‘ethical’ criteria ever make it on to the agenda, they are often the first to go when times get hard.

The challenge is to get the right level of buy-in and information to make the right decisions. Most of the issues experienced by procurement teams in trying to manage this area effectively relate to just two things – a lack of support and a lack of knowledge.

Progress will be difficult without a change in mindset. In some organisations, green initiatives are rejected simply because they have the green ‘label’ before anyone has even understood the business improvements and sustainable cost reductions these could bring.

Procurement teams need to know how to build this in to their every day activities. The cost of a product needs to factor in the long term carbon cost. When evaluating or reviewing suppliers, buyers and procurement professionals also need to know what to look for, where, and what to do about it, preferably in a simple and consistent manner.

Member companies found that much of the needed information could be sought from CDP Supply Chain questionnaire responses on what suppliers are already doing, and by using the member company network as a great source of ‘customer level’ knowledge share.

The knowledge is available, and procurement teams should draw on internal and external experts. In-house sustainability teams should

also be called upon for support, guidance and specialist advice, both in the short and long term.

In summary, procurement teams and buyers need the appropriate training and tools to be able to embed carbon and climate change criteria into the decisions they make.

Key learnings and recommendations from CDP Supply Chain Project 2008

Internal management buy-in

The member companies and many supplier responses indicate that having internal Board level ownership and understanding of climate change risks and opportunities is vital to make real progress. For those businesses that already have this level of ownership, it is important to feed back the results of activities to maintain momentum.

Adjust objectives

If the supply chain targets and objectives set by the Board remain focused on short term costs, the bigger picture savings may well be lost and extremely difficult to regain. Targets need to consider both the short term cost pressures and the objective to achieve the long term savings.

The CDP Supply Chain member companies observe that many suppliers haven’t yet realised that factoring in carbon and climate change is regularly seen to only result in minimal or no cost differences, or even immediate increased savings. Short term savings targets can still be met, but by including carbon and climate change considerations in procurement decisions, buyers further reduce risks and cost to the business in the long term too.

Align procurement and sustainability teams

Sustainability teams have the expertise that procurement teams will need to understand what to do to manage the carbon and climate change impacts of procurement categories. Procurement teams know what will work in practice when it comes to managing their suppliers.

Member companies found that aligning procurement and sustainability resources and clearly communicating the challenges and opinions of each team means workable and practical processes can be designed.

Provide training and tailored tools

Several member companies commented that some management teams were concerned about the costs of providing extensive training or creating full toolkits for their procurement teams because they misunderstood the level and value of what was to be provided.

Procurement teams do not need to become sustainability professionals, but they do need to understand the key carbon impacts in their supply chain and the strategic implications of climate change on their sourcing strategies. Detailed analysis could be outsourced to internal or external sustainability experts and then translated into practical training. Toolkits can be simple templates or knowledge sources. The key is to be practical and tailor what is provided to the needs of the organisation.

Establish measurement criteria

Both member companies and suppliers are struggling to understand how best to set and compare emissions reduction targets. Different targets used range from absolute reductions to emissions intensity measures. The issue is made more complicated by the lack of consistency in base years used to measure improvement.

Most member companies are addressing this issue by focusing instead on softer measures, and qualitative assessments of how well their suppliers are managing their carbon and climate change impacts. The challenge for the future is to create rigorous criteria that can incorporate qualitative measures, while including emissions figures, intensity and emissions targets in the longer term.

“Acer wants to know the attitude of supplier company policies toward these kinds of issues and is more interested in seeing if their suppliers come along on the journey rather than whether they can be reported on right now.”

Acer

Companies that have a clear understanding of the carbon and climate change performance expected from individual suppliers will be able to articulate these expectations and effectively measure performance.

4 Engage your suppliers

If customers abuse the trust of their suppliers and do not consider the efforts being made by their supply base, they will quickly lose the support, knowledge and loyalty they will need to be able to make any progress in this area.

“It’s not one way traffic. It’s the suppliers supporting and educating us as well.”

National Grid

Suppliers can also be sceptical about spending substantial amounts of time collecting data when it is not clear to them how it will be used, or whether it may in fact be used against them.

This needs to be addressed with clear communication and transparency around year-on-year carbon and climate change reporting and the reduction improvements needed in the supply chain.

Companies who have made the most progress in this area have taken the time to understand what is actually going on inside their suppliers, and how they can be encouraged to improve.

“Trust can be an issue, suppliers, especially larger companies, can worry what we will use the data for. For us this year is all about identifying areas for projects and any pockets of best practice.”

Tesco

“Many suppliers had never looked at their environmental performance through this lens, and for some, it was a bit daunting from a time and science perspective. To alleviate this initial anxiety, we hosted information sessions to help suppliers better understand the survey and use of the GHG calculator tools.”

Exelon

This year's CDP Supply Chain Project demonstrates that it is usually more productive – all the more so in the current downturn – to engage in dialogue about the nature of the challenge, and develop common ideas about how best to address it, taking the supplier's own circumstances and resources into account. As Cadbury say, "We are aiming to help the supplier base help itself." Indeed, the most frequent reason companies give for participating in the CDP Supply Chain Project is the opportunity it provides to initiate a conversation with suppliers, and communicate to them how important this issue is. The emphasis here is on what the company can offer its suppliers by way of help and support, rather than solely what it might request in the form of data.

The CDP Supply Chain Project hopes that by providing a global framework for disclosing emissions information, suppliers will not need to respond to multiple customers' individual requests for data. Instead, CDP can act as a consistent, comparable method of reporting carbon performance, accessible to all businesses in the supply chain.

Key learnings and recommendations from CDP Supply Chain 2008 Project

Clearly communicate what, why and how

Suppliers need to know what level of data is required at this stage, why customers want them to provide it, and how they plan to use it both now and in the long term. CDP Supply Chain member companies have found that explaining to suppliers that the data provided will not be used against them – to terminate contracts or demand cost reductions/shared savings – has greatly increased supplier support and even opened the door to suppliers bringing savings opportunities to them.

"CDP has provided a mechanism to open more dialogue with suppliers around environmental issues and the impact of our operations."

FIJI Water

Don't ask too much

Some suppliers are now being inundated with requests for information, often in different formats. Member companies found that using the CDP framework can be a real help as it is designed to be a standard information request from multiple customers to their suppliers and offers the flexibility for suppliers to provide whatever level of detail they are able to.

"There are a lot of environmental initiatives that suppliers are asked to participate in, so it is important to prioritize and choose which activities to focus on."

Juniper Networks

Establish suppliers' positioning and performance, and manage them accordingly

Identify the market leaders and those already employing leading practice. Take into consideration the various challenges each supplier may face in terms of geography, industry and company size, and develop a relationship management strategy that learns from the leaders, and encourages the rest.

"For Vodafone this is about encouraging suppliers to manage carbon and supporting their development."

Vodafone

If a supplier has a high awareness of climate change and carbon risks it's usually a positive indicator of good management practice. On the other hand, suppliers who are poorly informed or see these risks as irrelevant could indicate a wider inability to manage their business – and their supply contracts – effectively.

"What is important to Carrefour is to know that [our] suppliers have a system in place to manage their sustainability risks or that they are taking steps to manage them. This is an indicator of progress and commitment."

Carrefour

Reward those who are willing to share their knowledge

Of the few suppliers that have reached the stage of delivering tangible benefits from carbon reduction projects, many are exhausted with being asked to share their expertise and knowledge. To encourage knowledge share activities to continue, suppliers need to be incentivised, for example through supplier awards, long term contracts or awarding them 'preferred' status.

Using carbon performance in procurement decisions

Member companies were divided about the value of using carbon and climate change performance to determine procurement decisions. Some have said it can be a useful incentive to encourage poorly-performing or ill-informed suppliers to improve their performance and take the issues seriously. The view of some other member companies is that the danger is any decision made on these criteria will be overly dependent on achieving targets and ticking boxes, and may exclude suppliers who are open and willing to improve. There is, however, a broad feeling that, although it is important to work towards more rigorous and measurable targets, at this stage in the evolution of these issues, qualitative measures have an important role to play.

Member companies agreed that the most important priority is to create criteria that can also take into account the actions suppliers are taking to improve their performance, and not their emissions record alone. For example, the focus – at least initially – should be around suppliers' processes, plans, achievements and management, and not only on their year-on-year emissions statistics.

The impact of carbon and climate change on business in the future may be an important screening factor as to who the company does business with. Those companies that embed this into their procurement functions are ultimately more likely to gain the greatest benefit.

5 Plan practically for projects

The previous four sections have all been focused on the member company learnings and recommendations on the up-front preparation and groundwork needed to make a start on managing carbon and climate change in the supply chain. This section is about their recommended actions on conducting actual emissions reduction projects.

Activities in each of the four key elements of carbon and climate change supply chain management (suppliers' emissions reporting, emissions reductions, procurement consideration, and risk management) need to be covered. The elements of activity are all equally important, but taking on too much up-front has been a challenge experienced by many member companies. Detail of what projects and activities member companies include in these areas is detailed in the key learnings and recommendations below.

This is a long term area, and to maintain support and results, projects need to be managed well and followed up on appropriately. By taking on a small number of focused initial projects, results are also often delivered faster – giving credence to the investment companies have made and demonstrating the value early on.

Most 2008 CDP Supply Chain members are already working on a number of emissions reduction projects in their supply base. Some have already achieved excellent results, not only in cutting their supply chain emissions, but saving money and improving their relationships with key suppliers. The advice given by those further on in delivering projects is to take it step by step and continue to focus activities on the highest impacts and value areas.

Key learnings and recommendations from CDP Supply Chain Project 2008

Improving suppliers' emissions management, reporting and accuracy of data

Some of the most valuable projects completed by member companies have been in providing training, information or support to suppliers to educate them on emissions measurement and reporting. These have included; working with industry bodies, holding supplier training days, creating supplier forums or summits where suppliers share knowledge amongst their group, and once further along the line, developing supplier portals for self informing, evaluation and disclosure.

“We are open to benchmarking and sharing our knowledge with our suppliers [to help with collecting and reporting emissions].”

Proctor & Gamble

Influencing and supporting decreases in suppliers' actual emissions and impacts

This is the most obvious area for activity. Most member companies usually start by selecting one or two products or processes (using the high impact review discussed earlier as a pointer) on which to conduct a lifecycle assessment. The results of LCA should highlight the follow on activities required by suppliers to reduce or remove the relevant impacts. These will vary considerably based on the type of business, but could include; improving building or

“Enhancing emissions reporting in the value chain is crucial to get an integrated vision and to provide the basis to form partnerships with suppliers to the reduction of green house gas emissions.”

Vale

process operational energy efficiency, reducing or changing product sizes or weights, improving farming methods, utilising better technology, reducing packaging, or reviewing transportation and distribution systems.

Reducing the company’s own emissions by considering ‘carbon costs’ in procurement decisions

There are many types of projects that can be conducted purely on internal products to reduce the carbon and climate change impacts of the business such as; mapping carbon costs per product, developing consistent templates and policies for supplier evaluation, working with industry bodies or in competitor collaborations to develop a consistent measurement criteria and standard, working with Research & Development teams at the design phase to consider the carbon costs of different design choices, conducting ‘alternative product’ requests and trials, or requesting product use advice and information from suppliers to identify additional areas for performance improvement.

“Right now we are trying to develop what ‘good’ looks like for different commodities.”

Royal Mail

Managing supply risks related to future climate change impacts

The importance of suppliers’ risk awareness and management has already been clearly established. Projects in this area generally fall into three categories;

Risk mapping – When mapping risks the member companies suggest considering short term impacts, but also to focus on the long term scenario planning. Also mentioned was the need to look at risks on a geographic as well as product basis. Risk mapping projects can be broken down into smaller chunks (for example by procurement category or supplier group) or completed in full to enable prioritisation. Depending on the

business capability, external specialists were often found to be extremely beneficial in this task as they can also provide suggested mitigation or management activities against each risk.

Supplier risk awareness evaluation

– Risk awareness and identification is built into the CDP Supply Chain questionnaire and responses are comparable across the supply base, making evaluation a far simpler task. Member companies also suggest creating simple processes to help build risk awareness evaluation into daily procurement processes, for example during audits, tendering or supplier reviews.

Risk management – This needs to be implemented internally and evaluated in suppliers. Again, the CDP Supply Chain questionnaire asks suppliers to provide information on risk management activities that is comparable and consistent. The projects to be conducted here should use what has been learnt while mapping impacts and evaluating suppliers’ risk awareness, and identify what should be managed. Internal activities should be added to the businesses risk management and continuity planning agenda.

Collaborate

One approach being used by member companies is to work collaboratively with one supplier on a pilot project in a focus area, then use the findings to develop self informing toolkits for all other suppliers in that industry to roll out themselves. This has been an extremely positive process for those involved, but they stress that the messages raised earlier around ‘recognising those willing to share and invest’ are extremely important here. By using this technique, one supplier is investing time and resource in developing something that will benefit their competitors. A great deal of trust and loyalty is being shown by the pilot supplier and they should be rewarded accordingly.

“Bradesco’s strategy aligns social-environmental actions with business opportunities. To engage with suppliers is to create authentic partners for sustainable development because without partnerships there are no means to achieve sustainability.”

Banco Bradesco

Use a programme management approach

A core learning here was to use a programme management approach to schedule projects. Start to build the plan by taking one or two projects from each of the four core areas and map them out to show what is manageable and when. Then only start further projects once resources are available and the learnings from the projects already completed or underway have been gathered and can be factored into planning for the future.

Factor in savings measurement to project design

The last message the CDP Supply Chain members have flagged is to consider how the results of these projects will be reported and where. It is important whenever starting projects to look at how and where the savings will be captured and reported. Data measurements and ongoing reporting can then be built into the up-front project design.

Having this consistently defined then builds the foundation for effective emissions reduction and cost saving benefits to be reported to stakeholders. The true value of managing carbon and climate change in the supply chain can then be clear and visible to all stakeholders concerned.

Undertaking Scope 3 Emissions Management

Pankaj Bhatia, Director, GHG Protocol Initiative, World Resources Institute

Have you defined your company's long term carbon strategy? Is your company's carbon strategy designed to manage risks and opportunities broadly across your supply chain including Scope 3? Should you account for Scope 3 emissions, and if so how? Few companies have the information and guidance to answer these questions reliably. Those assessing their carbon footprint usually begin with an inventory for Scope 1 (direct emissions) and Scope 2 (energy related indirect emissions) categories as per the GHG Protocol Corporate Standard. The Scope 3 category, also part of the GHG Protocol framework, is an optional reporting category allowing for the treatment of all other indirect emissions that are a consequence of the activities of the company, but occur from sources they do not own or control, including extraction and production of purchased materials; transportation of purchased and sold products; and the use of sold products and services by consumers. A successful corporate carbon strategy will likely incorporate all three Scopes with a focus on a multiple set of decision-makers including current and future investors, customers, and regulators.

Why are companies doing Scope 3 accounting?

The importance of understanding and managing global supply chains has risen sharply in a world that has increasingly become an interdependent economy and marketplace. Any significant changes in consumption of goods and services in one part of the world closely reverberate in factory productions or service business in another part. For companies that operate in such a dynamic global business context, success lies in the ability to monitor and manage key interdependencies towards broader supply chain emissions management.

Specifically two major drivers are:

- Ensure competitive advantage in the marketplace: Companies are pursuing a more comprehensive assessment of their GHG impacts along the value chain to gain clarity about what makes a company's carbon footprint impact and reduction strategy distinctive, in order to ensure a successful competitive advantage and positioning; and
- Prepare for future markets and regulations: Emerging product carbon labelling initiatives are indicative of a shift that is occurring in consumers' perceptions and demand of climate-friendly product features or corporate brands, as well as a possibility that future climate regulations will push to capture information and reduce GHG emissions beyond a typical corporate boundary or country borders.

The process of developing a Scope 3 inventory is also unique in that it involves a diverse group of data providers that may include employees, suppliers, users, and business partners, making it potentially a powerful driver of engagement and change within and outside the organization.

What are the quantification challenges in Scope 3 accounting?

The framework presented by GHG Protocol has proved durable as businesses worldwide have implemented it to build their inventories. But Scope 3 has recently emerged as a key accounting area that needs guidance to address a number of important issues such as how to prioritize and categorize Scope 3 sources; how to allocate emissions between various products, suppliers, and customers; how to account for product use phase and disposal emissions; and what information to provide in reporting Scope 3 inventory to a registry or in communicating GHG benefits of products or services to customers.

What is the aim and purpose of the current development process?

To provide a credible and practical approach to quantify Scope 3 and product life cycle emissions, the GHG Protocol has launched a global process that will develop a broad set of guidelines for companies, suppliers, and consumers to track and manage their emissions in Scope 3 and in the products they buy and sell. The guidelines will standardize, harmonize, and build upon emerging initiatives to assess supply chain and life cycle emissions.

Building on the GHG Protocol's successful experience in creating its previous standards, our broad multi-stakeholder process includes key players such as ISO, Wal-Mart, UNEP/SETAC, CDP, the Carbon Trust, and key government agencies from major economies including US EPA, UK DEFRA, and NDRC China. The GHG Protocol will seek frequent stakeholder input through expert and stakeholder consultation, workshops in 3-4 countries, and extensive road testing of the draft standard by major global programs such as CDP and selected multinational companies with their suppliers in key countries including China, India, and Brazil. The GHG Protocol plans to complete the new Scope 3 and product life cycle standard over two years (September 2008-December 2010). For more information, visit www.ghgprotocol.org.

2

Geographical trends

For the purposes of the CDP Supply Chain Project 2008, we have split the responding suppliers into four geographical regions by origin of the parent company: Europe, North America, Asia and the Rest of the World.

In an increasingly globalised world, most companies now trade goods or services in many different geographical locations. But as far as climate change and carbon are concerned, there are wide differences between these different regions, ranging from varying levels of acceptance, to unique local risks or issues, through to different levels of regulation. The challenge for companies – both customers and suppliers – is to understand the various environments they operate in, and have a strategy that ensures local risks and opportunities are managed effectively on the ground.

This section looks at the geographical trends identified in the CDP Supply Chain Project 2008. Overall trends from the supplier responses are drawn out, alongside the experience of CDP Supply Chain member companies. There is also a look at the state of play in regulation in key regions, and at how the international agenda might evolve in the future.



Who was invited, and who participated?

In all, 2,318 suppliers, selected by the CDP member companies, were invited to complete the CDP Supply Chain 2008 questionnaire. Of these, 634 responded, with 453 of them being first time respondents to CDP. Although the overall percentage response rate was 27%, when looking on an 'inviting customer' (by member company) basis, this ranged from 6% up to 88%. Generally, the response rate of suppliers to the questionnaire is a good indicator of the level of engagement and maturity in the subject as a group.

Figure 3 shows the geographical spread of the suppliers who took part in the 2008 Supply Chain Project against those that were invited, but either declined to participate or did not submit a response and figure 4 shows the distribution of these 634 respondents by geography. Member companies used a range of criteria when selecting suppliers to participate in the process and the distribution of invitees varied widely across geographies.

32%

of respondent suppliers have a strategy for engaging suppliers on GHG emissions

- 40% in Europe
- 30% in Asia
- 26% in North America
- 18% in Rest of the World

Fig. 3: CDP Supply Chain invitees and respondents by region

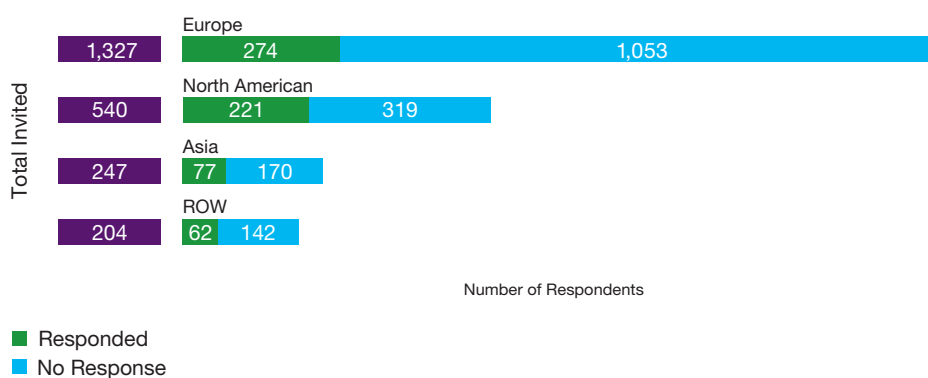
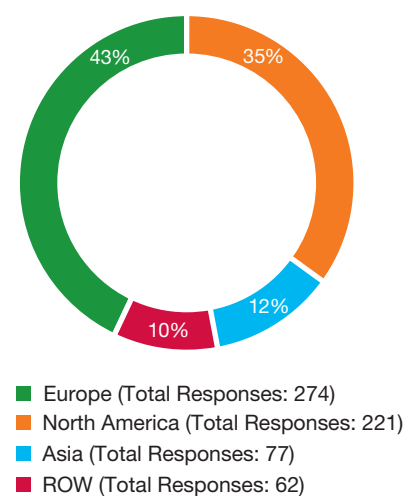


Fig. 4: CDP Supply Chain respondents split by region



Key trends: Regional analysis

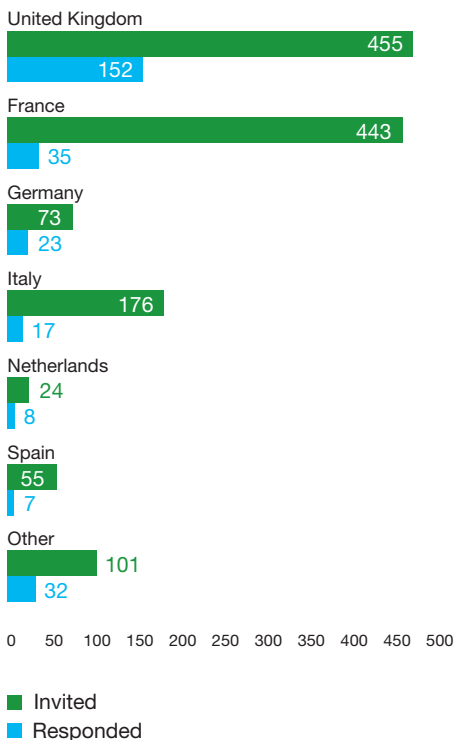
Europe

Over half of all suppliers invited to participate in the CDP Supply Chain Project – a total of 1,327 (57%), were from Europe. Of these, two countries accounted for the majority of the population sample, with 455 (34%) from the UK and 443 (33%) from France.

When looking at response rates from the four largest European economies on a percentage of invitee's basis, we see that the UK and Germany were comparatively high at 33% and 32%, while Italy at 10% and France at 8%, were low. Of the remainder, the Scandinavian countries (Sweden, Denmark, Norway, Finland) manage a combined 70% response rate (14 of the 20 suppliers contacted) while Spanish suppliers response rate was low again at just 13%.

This results in the breakdown of 274 total European respondents being dominated by the UK with 152 (55%), followed by France and Germany with 35 (13%) and 23 (8%) respectively.

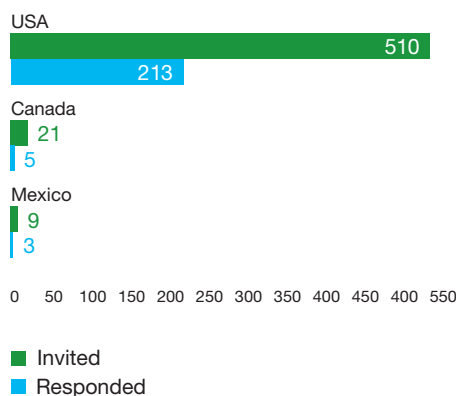
Fig. 5: European CDP Supply Chain respondents by country



North America

A total of 540 suppliers from North America were invited to participate, of which 510 (94%) were from the USA, 21 (4%) from Canada and 9 (2%) from Mexico. Of the 540 North American invitees, 221 (41%) responded, giving North America the highest regional response ratio against invitees. Together they make up 35% of the total global respondents.

Fig. 6: North American CDP Supply Chain respondents by country



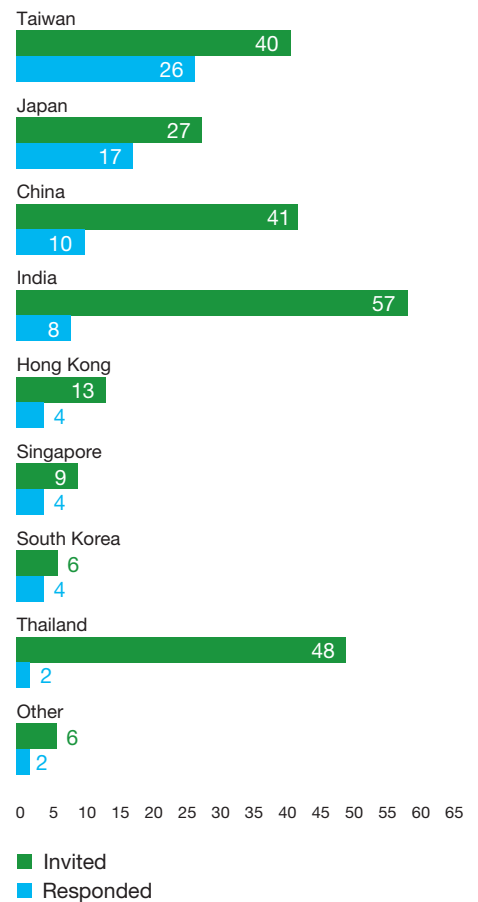
Asia

The number of CDP Supply Chain invitees in Asia was comparatively low at just 247 (11% of the total). However, a slightly above average response of 77 (31%) means that suppliers from the region still make up 12% of the total global respondents.

When reviewing global response rates on a country level, Asia had some of the highest and lowest percentage response rates globally, Taiwan and Japan had 65% and 63% of suppliers responding respectively, and at the lower end India had a response rate of 14%, with Thailand on just 4%.

As a result, the breakdown of Asian respondents is dominated by Taiwan and Japan who together make up 56% (43) of the 77 total suppliers responding from the region.

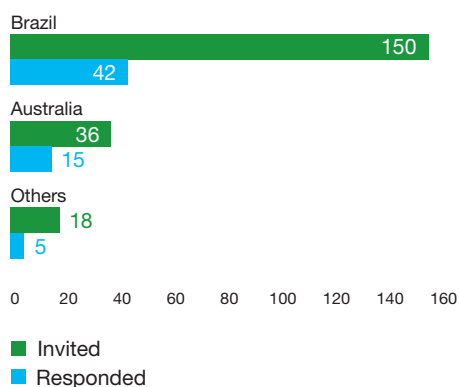
Fig. 7: Asian CDP Supply Chain respondents by country



Rest of the World

The majority of the 204 'Rest of the World' countries had less than 5 invitees each, often with little response. Invitees were dominated by Brazil with 150 (74%) and Australia with 36 (18%). Australian suppliers managed an above average response rate of 42% with Brazil somewhat lower at 28%. However, given the language barrier and the relatively high absolute number of respondents from Brazil at 42, this is considered positive. Indeed, Brazil's response rate of 28% compares favourably to major non-English speaking European countries such as France (8%) and Italy (10%) and is only marginally behind that of Germany (32%).

Fig. 8: ROW CDP Supply Chain respondents by country



Summary

In summary, Europe dominates the invitee group but the relatively low response rates mean the number of European and North American supplier responses are relatively balanced at 274 and 221 suppliers respectively.

On a country level, the highest response rates (from countries with an invitee group larger than 2) were in Sweden (88%), South Korea (67%), Taiwan (65%), Japan (63%) and Denmark (63%). The lowest response rates (from countries with an invitee group larger than 2) were in Thailand (4%), France (8%), Italy (10%), Belgium (11%), Czech Republic (11%), Spain (13%), and India (14%).

This has meant the total respondent population is dominated by suppliers in the USA (213) and the UK (152) who make up 34% and 24% of all respondents respectively. Brazil is the third best represented country with 42 responses (7% of respondents). Despite a very low response rate of 8%, suppliers in France are the fourth best represented (with 35 suppliers) in the respondent population due to the comparatively high number of invitees (443 – nearly double that of all those invited from the entire Asia region).

“If suppliers cannot or do not respond to the questionnaire, Acer wants to work with the company, so they can identify the reasons why and help them overcome those barriers.”

Acer

“Vale’s mission acknowledges the relevance of the company’s contribution towards sustainable development in the regions and communities where we operate, through the engagement and involvement of our stakeholders.”

Vale

Did the CDP Supply Chain members have the same findings in practice?

As well as analysing the supplier responses, interviews were conducted with member companies. During these discussions, a number of very useful observations were shared on how companies manage carbon in their own supply chains. Similar to earlier trends, there remain wide differences in the level of interest from suppliers, even within the same regions or markets. A number of these differences are highlighted below:

- European suppliers were generally thought to be more responsive to member company requests around climate change and carbon than those in other regions. However, some exceptions were noted, for example amongst European logistics and haulage companies who were perceived as less willing to engage;
- Western European suppliers were seen by some members as more supportive but by others as more defensive/disengaged. German suppliers were specifically mentioned by several members as being ‘disengaged’;
- Some members commented that within Europe they found that southern and eastern countries seemed less willing to engage and saw this as less of a priority than those in western areas;
- Member companies looking to engage suppliers in North America found that reactions varied greatly with little consistency in the reasons for this. Some asserted that larger companies were more engaged on regulation, but equally, larger companies were often thought to be less willing to consider Scope 3 emissions due to the complexities in their own supply chains;
- One common message was that suppliers in Asia were often the most positive and responsive to member company enquiries. Some said that they found

suppliers in the region ‘asked more questions’ and showed a genuine interest in engaging;

- A number of members were surprised to find that suppliers in China in particular were quite advanced in their efforts, especially those providing products for western consumption;
- An interesting perspective is one company’s observation that carbon and climate change tended to be higher on the agenda within countries where energy was relatively more expensive; and
- Although only a few members commented on suppliers in developing countries, they were all in agreement that climate change issues tended to be further down the agenda for these suppliers than issues of poverty, education and water/energy supply. This is to be expected but equally may change over time as climate change impacts start to hit these countries harder and a global deal on climate change seeks to drive increasing energy efficiency in the new emerging economies and beyond.

Approximately 50% of those asked said they saw no consistent patterns in supplier responses on the basis of geography. Company size was considered a factor, and most identified that larger, global companies were more aware of carbon and climate change. Smaller companies, although less well informed, were more flexible and willing to engage on the subject, though lack of resources was often seen to be a limiting factor. As a result of this CDP has developed a simpler questionnaire for smaller suppliers in 2009.

In summary, there are few consistent trends seen by member companies across geographies. Suppliers appear more likely to be influenced by the markets to which they supply rather than where they are based, the degree of visibility of issues within their industry and the level of focus their customers currently give to carbon and climate change issues.

Key trends: Governance and ownership

Figure 9 shows how many supplier companies had a Board or executive director taking responsibility for climate change in their business within each geographical region. There is broad agreement that Board-level ownership indicates that a business is taking these issues seriously, which can be a useful indicator when evaluating a potential or existing supplier.

Amongst CDP Supply Chain respondents, Asian suppliers are the leaders in terms of board level ownership of climate change at 66%. European suppliers were still relatively strong at 60%, while North American and Rest of the World suppliers have 47% and 34% respectively.

The alignment between executive remuneration and sustainability targets was analysed as this can be one of the most important levers for incentivising real change.

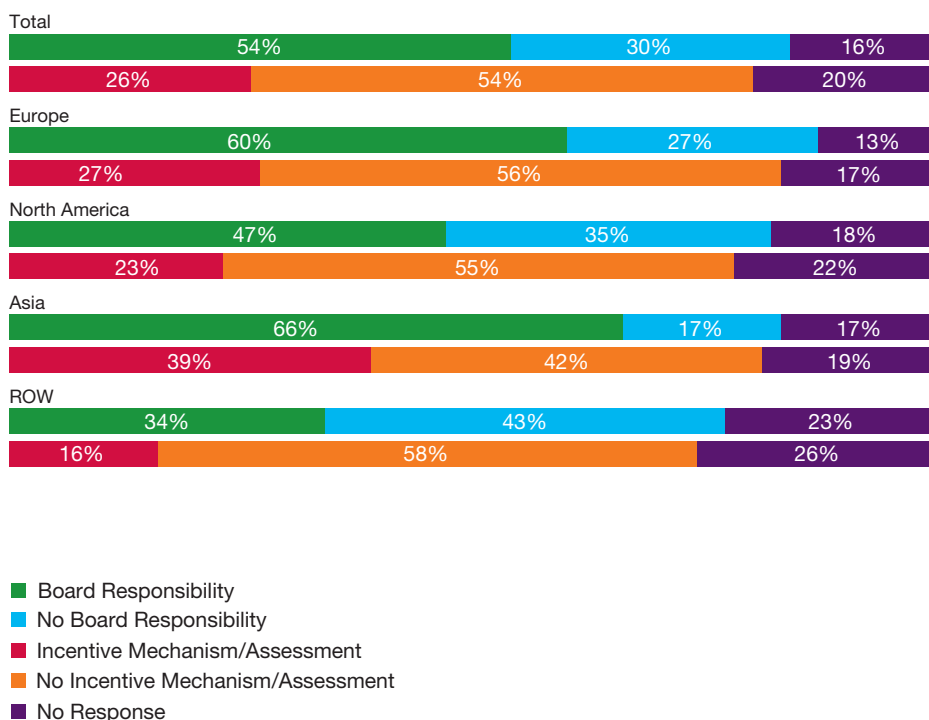
Figure 9 shows the responses revealed one instructive pattern in this respect, namely that suppliers in Asia are the most likely to have the appropriate governance and remuneration incentives in place to drive positive activity in carbon and climate change management.

Overall though the number of suppliers with the appropriate incentive mechanisms in place is very low at just 26%. North America notably lags both Asia and Europe on this measure. This may indicate that climate change is still an emerging issue for North American businesses, and one that has yet to reach the majority of Boardrooms. This may change now that the Obama administration is in place, and will be an interesting comparative measure for the next cycle of CDP Supply Chain analysis.

“To date a major trend we have identified is that suppliers who have board room level support on this agenda are often more engaged and willing to work together with us.”

Vodafone

Fig. 9: Climate change governance and incentive mechanisms by region



Regional regulatory overview

International

International negotiations will be intensive throughout 2009 to progress a successor to the Kyoto Protocol which expires in 2012. It is hoped that agreement will be reached at COP15 in Copenhagen in December. Under the Kyoto Protocol binding emissions targets currently apply to most OECD countries, and there are no targets for developing countries. Key topics under discussion for a new agreement include: overall level of targets and distribution across countries; nature and magnitude of financial and technology transfers to developing countries; and, the role of sectoral approaches.

Europe

The EU Emissions Trading Scheme (EU ETS) was introduced in 2005 and remains the cornerstone of European policy efforts to regulate greenhouse gas emissions. Covering around 40% of EU-27 emissions, this mandatory cap-and-trade scheme applies to over 11,000 industrial installations across the power and heat generation, oil refining, iron and steel, cement and ceramics sectors. EU ETS will extend its scope to cover primary aluminium producers and airlines from 2012/2013. The market had a traded value of €67 Billion in 2008.

United States

President Obama's New Energy for America plan calls for an economy-wide cap-and-trade program to reduce greenhouse gas emissions 80 percent by 2050. Bi-partisan approaches to climate change policy at federal level have been proposed previously, but have not passed into law. At state level, there are various initiatives either in operation or under development including the Regional Greenhouse Gas Initiative (RGGI) which applies to the power generation sector, the Western Climate Initiative (WCI) and California's AB32 plans which would be multi-sector and cover all GHG's.

Canada

The federal government has proposed a cap-and-trade system that could be implemented by 2010. The caps would be set on an intensity basis and would be unique to each industry, with companies having flexibility as to how they achieve compliance. There are additional market-based instruments addressing carbon emissions already in place or under development in the provinces of Alberta, British Columbia and Quebec.

Japan

The Japanese government has set a long term goal of reducing emissions by 60-80% by 2050, and additional interim targets are under discussion. Japanese climate change policy measures currently include voluntary measures for industry, and the creation of public/private funds for the purchase of UN-certified carbon credits.

Australia/New Zealand

The Rudd administration published a White Paper in December 2008 setting out proposals for a mandatory cap-and-trade scheme to start in July 2010. The Carbon Pollution Reduction Scheme (CPRS) is extensive in scope and will cover around 75% of Australia's total emissions with auctioning as the preferred allocation method. The New Zealand Government released its framework for implementing New Zealand's Emission Trading Scheme in September 2007. A change of administration in November last year has resulted in a review of climate change policy, implementation of the scheme is now expected by 2011.

Emerging Economies

Countries which do not currently have binding targets under the Kyoto Protocol will play a crucial part in getting to a new UN global agreement on climate change, and this is particularly true for the large emerging economies of China, Brazil and India. Developing countries have long maintained that poverty alleviation and economic growth are higher priorities for them than reducing emissions, however countries that took targets under the Kyoto Protocol are unwilling to take new targets without the participation of the key emerging economies. Dialogue is ongoing via the G8, the UN and the US-led Major Economies process, and it is hoped that by December 2009 this stand-off can be overcome through the right mix of emissions reduction commitments, financial assistance for low-carbon technology and adaptation, and strengthening of the global carbon market. Domestic policy approaches to climate change vary widely among the emerging economies, with varying degrees of attention paid to energy efficiency, renewable energy and adaptation but as yet very few explicit emissions reduction targets.

Key trends: Risks and opportunities

We have already established the importance of understanding suppliers' awareness and management of risk. Figures 10, 11, 12 and 13 show the comparative levels of awareness on a region by region basis, and the current state of play on action plans to tackle these issues.

A number of trends are evident here:

- Across all three risk categories North American suppliers show a marginally lower awareness of risk than both European and Asian suppliers with Asian suppliers leading in all categories;
- Suppliers in the 'Rest of the World' countries consider themselves to be less exposed to regulatory risks than suppliers in

other regions do, despite the fact that carbon regulation is looming in Australia, and Brazil is a highly regulated market in other respects;

- European suppliers have a relatively high awareness of regulatory risk which reflects the level of existing regulation in that market, although the high awareness amongst Asian suppliers is less easily explained; and
- Asian suppliers are the most likely to have a risk management plan in place, perhaps driven by their tendency to have Board level ownership of climate change issues as noted above.

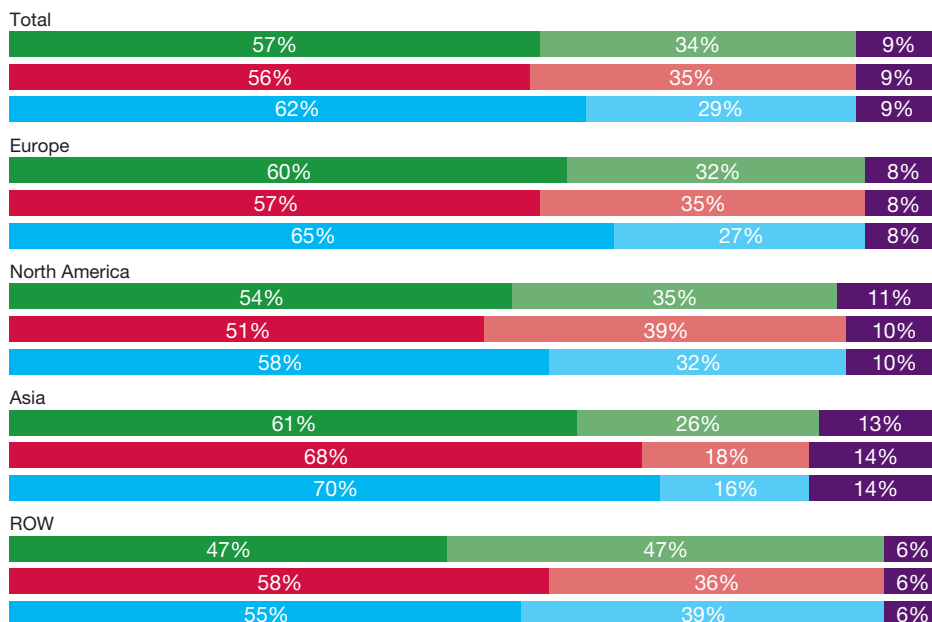
“What we are interested in is helping our suppliers to manage carbon and climate change risks and opportunities, we are not just interested in a number.”

Unilever

“As part of our business continuity planning, we identify and qualify complementary capabilities at our various facilities across the globe, increasing our capability to respond quickly and effectively in the event of any natural disaster or weather-related event caused by climate change.”

Bemis Company

Fig. 10: CDP Supply Chain respondents awareness of risks by region



- Identify Regulatory Risk
- No Perceived Regulatory Risk
- Identify Physical Risk
- No Perceived Physical Risk
- Identify General Risk
- No Perceived General Risk
- No Response

“HP takes a holistic approach to organizational carbon emissions disclosure. It is a symbiotic relationship: we design our products and services to be efficient. Then, we engage the supply chain in transparent and socially responsible production practices through management training and faithful emissions data reporting. These processes enable everyone to achieve important efficiency goals.”

HP

Key trends: Risk management

Despite an awareness of the carbon and climate change risks faced, there are some suppliers from every region without a risk management process to systematically identify key risks and opportunities.

Ultimately, risk management practices need to be able to identify and quantify long term risks that will require fundamental changes to the supply chain. Charts of this nature will help companies understand the maturity of particular markets, and may therefore be a good indicator of where they will need to invest more time and resources in supplier awareness and engagement.

What these charts do not show, however, are the different levels of understanding of the nature of these risks, which varied considerably across all markets, with few discernible regional trends.

Key trends: Types of risk

CDP Supply Chain respondents were also asked to identify which specific types of risk they were exposed to.

Regulatory risk

In the area of regulatory risk, respondents from Rest of the World countries were notably more inclined to cite emerging risk from cap-and-trade schemes. This is perhaps

unsurprising given that this group has significant representation from Australia where a national carbon trading scheme is pending. Asian respondents appeared more concerned about risk from energy and carbon taxes while in North America mandatory technology requirements were perceived as significantly more of an issue than in other regions.

Physical risk

With respect to physical risk, North American respondents were more likely to identify extreme weather events as the key area, perhaps unsurprisingly given the devastation caused by recent natural disasters in the region. Across all regions comparatively few CDP Supply Chain respondents were concerned about the security of their own supplies.

General risk

In the area of general climate change related risk it is striking that Asian respondents were considerably more concerned about changes in consumer demand than in other regions. This may well be driven by the markets that they principally supply to, namely Europe and North America, and their alertness to changing consumer tastes. Respondents from ‘Rest of the World’ countries were the most likely to identify resource scarcity as a general climate change risk.

Fig. 11: CDP Supply Chain respondent risk management by region

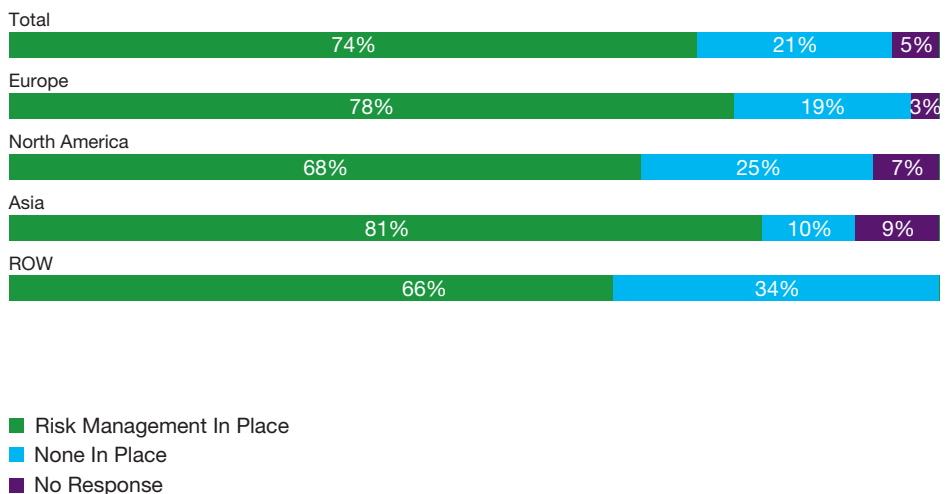


Fig. 12: Number of CDP Supply Chain respondents identifying different types of risks relating to climate change



“Disease, water shortages, and massive relocation of populations are also potential impacts. Extreme weather and climate changes may effect the heating and cooling requirements of our facilities and may contribute to power shortages, blackouts and fluctuation in the supply continuity and pricing of electricity and fuels. These same effects may impact the financial stability of our global suppliers and customers.”

Dell

“Mobile communications offer the significant opportunity of ‘avoiding emissions’, through reduced vehicle transport arising from [technology enabled] flexi-working, tele-conferencing and other applications.”

Vodafone

Key trends: Opportunities

In addition to disclosing perceived risks, suppliers were also asked if they could identify opportunities in relation to climate change. These were categorised as opportunities relating to current or anticipated climate change regulation; current or anticipated physical impacts resulting from climate change or any other general opportunities.

Figure 13 shows the percentage of suppliers in each region identifying opportunities in each of these categories. The pattern is broadly similar across all regions although ‘Rest of the World’ suppliers were slightly less likely to identify regulatory and general opportunities than suppliers in other regions.

The overall message here appears highly positive with a significant majority of suppliers in all regions feeling that climate change presents real business opportunities of some form or other.

Examples of opportunities identified by CDP Supply Chain respondents

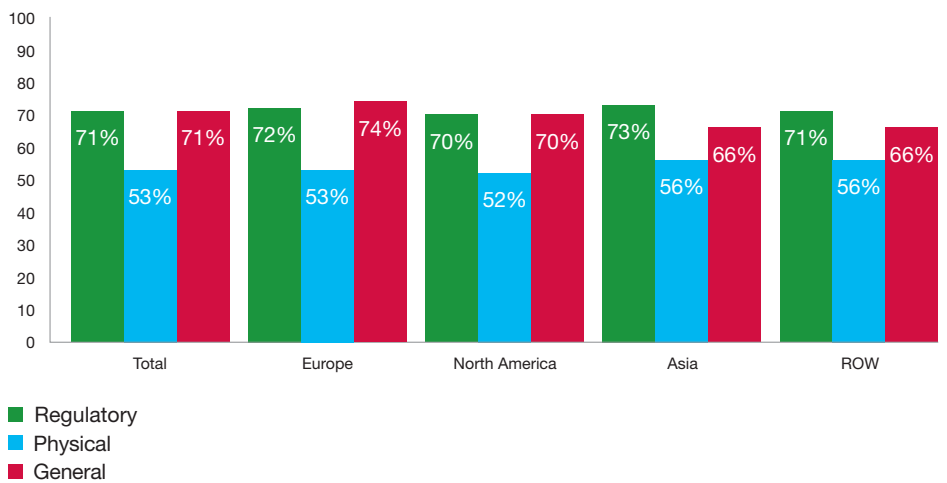
“Changes in customer/consumer attitude and demand associated with environmental issues and climate change have already led to SCA being picked as a prime supplier by some large customers. SCA is Europe’s largest private forest owner. SCA provides “green” electricity and biofuel to the society and have invested in wind power technology.”

SCA

“In 2007, AkzoNobel has assessed its complete product portfolio and established that 18% of its revenue is from “eco-premium” products, i.e. products that have a better eco-efficiency performance than mainstream products in their markets. In many cases the eco-premium includes a high carbon efficiency. AkzoNobel is convinced that these eco-premium products offer great business opportunities. Therefore, the Board of Management has set a strategic target of 30% revenue from eco-premium products in 2015.”

AkzoNobel

Fig. 13: Percentage of CDP Supply Chain respondents identifying climate change opportunities by type and by region



Key trends: Emissions reporting

As shown in figure 14, the number of suppliers disclosing their Scope 1, 2 and 3 emissions is quite low. As this is the first full year of the CDP Supply Chain Project and 71% of respondents are disclosing information for the first time, the emphasis at this point is on supplier engagement, rather than on numbers. Ultimately, suppliers will have to accurately monitor and report emissions to quantify emissions reductions achieved to meet both customer requests and regulatory demands.

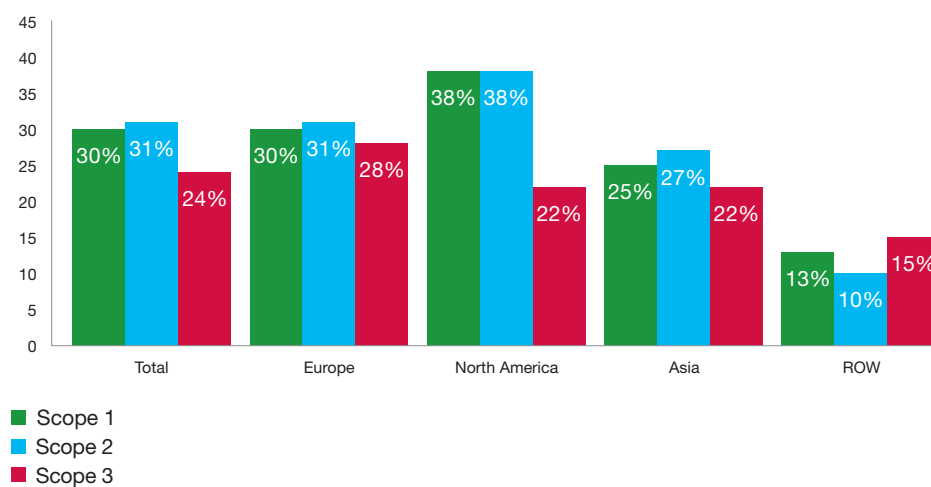
Figure 14 shows that overall, a lower proportion of CDP Supply Chain respondents disclosed Scope 3 emissions, and that this trend was particularly evident in North America

As illustrated in figure 15 the total figure of 24% of all CDP Supply Chain respondents disclosing Scope 3 emissions is perhaps misleadingly high in as much as it includes all companies who disclose any form of Scope 3 emissions. The majority, as we can see, are disclosing just their travel emissions, with a smaller proportion venturing figures for their logistics, their supply chain, and/or the use and disposal of their products or services. It is indicative of the early stage that this form of carbon reporting is at, that few if any CDP Supply Chain respondents provide a rigorous and comprehensive assessment of their Scope 3 emissions.

19%

of European respondents (14% globally) have facilities covered by the EU Emissions Trading Scheme (EU ETS)

Fig. 14: Comparative percentage of CDP Supply Chain respondents by region disclosing emissions



44%

of suppliers have GHG reduction plans in place

55% in Asia, 50% in Europe, 37% in North America and 27% in Rest of the World

“In 2007, about 17 percent of our emissions came from the energy we used in our buildings, including electricity and heating. Our ambition is to make our future buildings CO₂-neutral or even CO₂-positive (where the net CO₂ equivalent emissions from activities are positive). While contributing positively to our CO₂ footprint, it will also offer cost savings and a better working environment for our employees...”

TNT

Key Trends: Emissions reduction

One of the most positive messages coming from the responses to the questionnaire is the number of suppliers who have reduction targets in place and the amount and variety of activity underway to reduce emissions.

The targets provided by suppliers tend not to be immediately comparable due to the variety of types and the detailed circumstances under which each is set. Some examples cited by the CDP Supply Chain 2008 respondents of this diversity are shown in the two reduction target types headings below:

Examples of emissions intensity targets

“...reduce the GHG emissions from its U.S. operations by 30% per manufacturing index from 2003 to 2010.”

Fairchild Semiconductor

“...reduce its GHG emissions by 30 percent per dollar revenue from 2002 to 2012.”

Johnson Controls

Examples of absolute emissions reduction targets

“9% reduction by 2012, compared to 2006 baseline from energy use in UK managed ‘significant’ offices and shopping centre portfolio. Annualised targets are equivalent to 1.56% reduction in carbon emissions every year.”

Buying Force

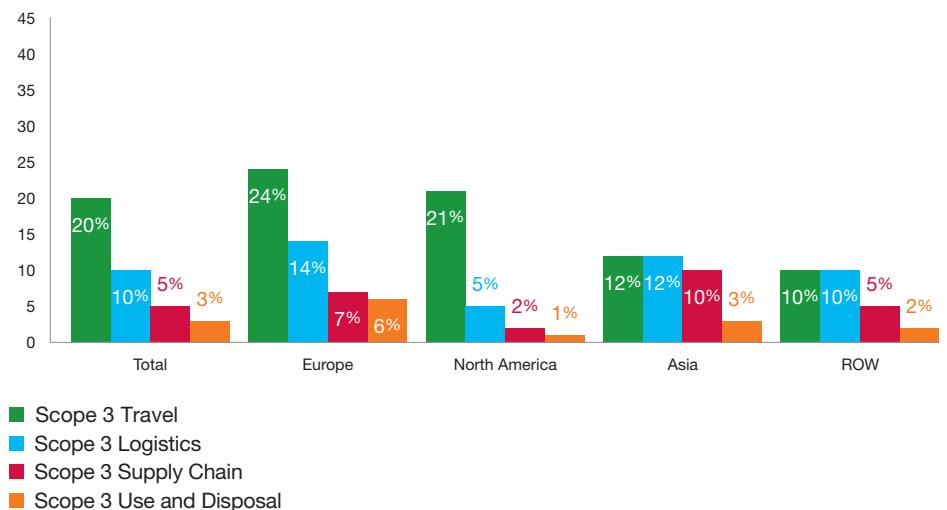
“...in line with the government target to reduce emissions by at least 20% by 2010 and at least 60% by 2050 on 1990 levels.”

Cable and Wireless

“With EcoVision4, we have committed to further increase the energy efficiency of our operations by 25% by 2012. In line with this target... we are striving for an absolute reduction of our operational carbon footprint of 25% by 2012. The baseline year for EcoVision4 is 2007.”

Philips Electronics

Fig. 15: Comparative percentage of CDP Supply Chain respondents by region disclosing detailed Scope 3 emissions



However we are able to identify the most common activities by which companies aim to achieve these targets. These are shown in figure 16.

There are few trends across regions when looking at the comparative popularity of the different activities suppliers are using to reduce their GHG emissions. The only slight difference is the proportion of suppliers in Asia and Rest of the World using sequestration compared to other methods. Although the total number of suppliers is also low, it is the comparative popularity compared to offsets or renewable energy use that differs from most suppliers in other regions.

The positive trends shown here are the number of suppliers using energy efficiency and process/supply chain modifications, 37% and 28% globally respectively. These tend to be areas that require buy-in and activity to complete, indicating that suppliers selecting these opportunities are taking genuine action to target their carbon emissions.

Examples of emissions reduction activities

Some further examples of specific emissions reduction activities cited by the CDP Supply Chain respondent group include:

“A total of nine European sites are now fully powered by renewable energy, representing 30% of Sony’s total electricity consumption in Europe...some of our plants generate renewable energy on their own: Sony Chemical Corporation’s Kanuma Plant and Sony EMCS Corporation Togane Site introduced solar power generation systems at their properties. In North America, Sony Pictures Entertainment has introduced solar panels on the roof top of their studios.”

Sony Corporation

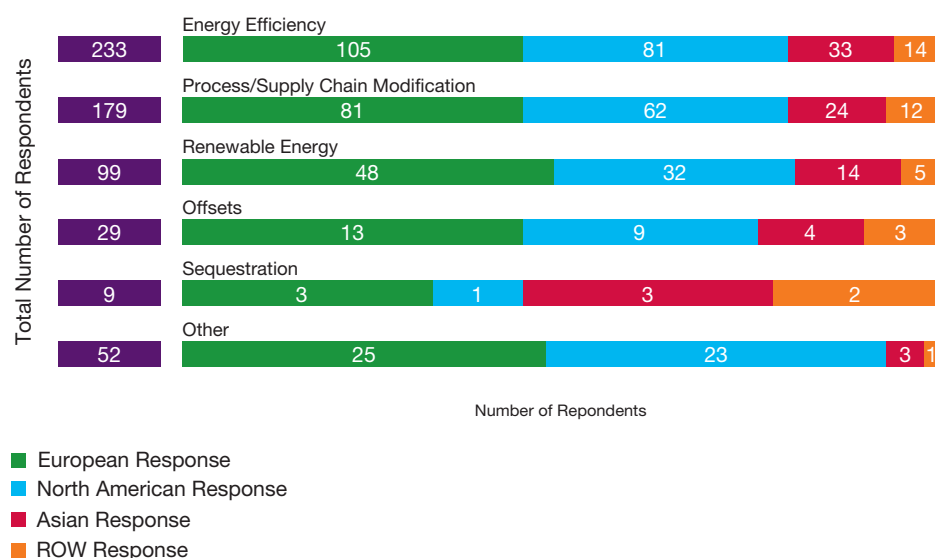
“All SKF sites with significant energy consumption now have a designated energy coordinator, responsible for running energy saving activities at the site...”

SKF

“Xerox employees responsible for technical support...are driving less because of increased reliability of digital systems like multifunction products as well as remotely diagnosing technical issues. In the U.S. alone, technical service engineers drove 34 million fewer miles in 2006 than in 2002, resulting in a reduction of 26,000 metric tons of greenhouse gases.”

Xerox Corporation

Fig. 16: Comparative popularity of most common emissions reduction activities amongst the CDP Supply Chain respondent group



“The biggest success at this point would be awareness within extended supply base as to how we are managing their emissions. Given the visibility this process has created, suppliers increasingly may want to get more involved before reporting becomes a regulation.”

Johnson Controls

Summary of geographical trends

The highlights of this section include:

- Asian businesses are the most likely to have governance and remuneration incentives in place to drive positive activity in carbon and climate change management, indeed suppliers in the region seem to fare well in all areas with the exception of their ability to provide Scope 1 and 2 emissions data, although this was only marginally behind other regions.
- North American respondents led on providing Scope 1 and Scope 2 data but were less likely than European or Asian suppliers to have a GHG emissions reduction target in place. In fact North American suppliers in general tended to be behind Europe and Asia on most sections, especially on the two key areas of governance/Board level ownership and risk awareness.
- Member companies considered Europe as being generally marginally ahead on performance, with North America followed by Rest of the World just behind – but in practice there are many inconsistencies.
- Some customers praised their suppliers in Europe and others found the region to be less engaged than Asia, and this is shown in the response rate of just 21%. The North American market seems to be more company size focused, and language barriers affect many South American and Eastern European suppliers.

One conclusion drawn from both the 2008 responses and the contact with CDP member companies is that carbon management and disclosure in the supply chain is not only about numbers and targets, it is about relationships and knowledge sharing. Although developing standardised metrics and measurement systems will be important in the longer term, for now, making a start and collaborating are key.

The good news is that there are also pockets of positive engagement, activity and leadership across all geographies, which indicates that no matter where respondents are based and from where companies source, there are likely to be suppliers who are actively managing carbon and are open to leading practice.

Given the expected growing regulatory demands and increasing customer engagement in this area, companies shouldn't put off action any further. They should start introducing measurement and management systems for carbon now, to make the most of the support and advantage that is available.

The green light - The challenges and opportunities of a changing climate

John Hirst, Chief Executive, UK Met Office

A rapidly changing climate puts a great strain on the environment. Around the world, business and political leaders are realising that climate change also has profound consequences for individuals, communities and economies. Reliable predictions of the future climate are therefore essential to reduce (mitigate) and prepare for (adapt to) the effects of climate change.

At the Met Office – a world-leading authority on climate change – there is the expertise needed to guide people through. Scientists in research centres around the world use different models to predict the global climate, and different models can give different projections, but all agree that a certain amount of warming is now inevitable even with large cuts in emissions.

The Intergovernmental Panel on Climate Change (IPCC) takes this and other climate-related research and publishes the worldwide consensus on climate change. Its latest report (2007) found that full use of available mitigation options is not being made in either industrialised or developing nations. Even with current climate change mitigation policies and related sustainable development practices, the IPCC says, global CO₂ and other greenhouse gas (GHG) emissions will continue to grow over the next few decades.

In fact, recent reports show that GHG emissions are growing measurably faster than even the worst-case scenarios predicted by the IPCC. As a minimum, it says, we are locked into a 0.2°C rise in temperature per decade until 2030. That may not sound like much, but means that in

my lifetime the type of summer we experienced in 2003 will become average. Summer 2003 was the hottest on record and led to over 30,000 heat-related deaths in Europe. Just imagine travelling on London's underground network in a hotter than average summer, if the temperatures we endured in 2003 were now considered average.

Flooding across the UK in summer 2007 also sends a warning of what we can expect in the future. Insurance claims ran to over £3 Billion (Association of British Insurers) and the event destroyed significant infrastructure and assets (including one-half of the pea harvest according to the National Farmers' Union). Whilst individual events cannot be used as the smoking gun for climate change, the trends in claims and natural disasters worldwide show that there is cause for concern in the short-term – including within the five-year timescale associated with many governments' and companies' planning cycles.

Perceived and actual vulnerability to climate change varies strongly from one sector to another. Supply chain managers will vary in their views depending on their interpretation of the data – which is plentiful – and the lead times within the industries in which they work. Retailers may worry about the sourcing and longevity of commodities as diverse as coffee and local strawberries. Transport companies may worry about the durability of their fleet. Long-life capital equipment for energy provision, water management and, yes, London's underground network may need to be envisaged sooner rather than later.

Organisations within sectors will differ markedly in their views on what a changing climate means to them. But the evidence shows that ignoring climate change will eventually damage economic growth while mitigation should be seen as an investment – a cost that is incurred now in order to avoid the risks of very severe consequences in the future. If these investments are made wisely, the costs will be manageable and there may be opportunities for growth and development along the way. Meanwhile, the increasing risks suggest that climate change adaptation strategies should become integral to all areas of business and government, joining sustainability as a core management activity. In short, action to fully understand the impacts of climate change now could mean profits later.

The transformation of an environmental risk into an opportunity or a threat depends on a host of factors, from the resilience of the local workforce, to the temperature at which production of certain goods is optimal; from the availability of imported raw materials to the volatility of the global financial markets. A key task for the Met Office is to find and understand that underlying network of risks, thus helping companies to adapt and public policy to be informed.

Weighed against the greater economic and environmental burdens of inaction, the climate challenges facing all of us – although considerable – must seem less overwhelming.

3

Industry trends

This section breaks down the respondent population to industry level to compare and contrast how each sector of suppliers performs in the various aspects of carbon and climate change management and disclosure.

Awareness of climate change and carbon issues varies widely, not only from one industry to another, but between different suppliers in the same industry. The challenge for companies, therefore, is to develop a supply chain engagement strategy that can cope with these different levels of understanding, commitment and performance.

“HP supports standardized, consistent, comparable, scalable and reliable reporting among suppliers to advance transparency and accountability across the technology industry.”

HP

This section discusses how suppliers from different industries view climate change and how they believe it will shape their businesses in the years to come. The commentary is driven by an analysis of supplier responses to the CDP Supply Chain 2008 questionnaire but also includes input from the interviews held with the member companies.

Industry definitions

In order to facilitate more concise sector identification, CDP has now condensed, reclassified and integrated its previous sectors lists to match those of the 10 sectors and the 24 industry groups classified under the Global Industry Classification Standards (GICS). Definitions of the 10 GICS sectors (referred to in this report as industries), are available online at:

<http://www2.standardandpoors.com/spf/pdf/index/GICSIndexDocument.PDF>



Who was invited and who participated?

In total 634 (27%) of the 2,318 suppliers who were invited to take part in the CDP Supply Chain process provided a response. Figure 17 shows the distribution of the 634 respondents by industry. Member companies used a range of criteria when selecting suppliers to participate in the process and the distribution of invitees varied widely across industries.

The largest single group of respondents were from the Industrial sector (193 companies/31%), followed by Consumer Staples (146 companies/23%) with the Information Technology sector also well represented (98 companies/15%).

Figure 18 illustrates that the geographical distribution of industry respondents was far from uniform. The majority of Industrial sector respondents were from Europe and North America, the Consumer Staples and Consumer Discretionary sectors were dominated by European respondents, and Information Technology respondents were largely from North America and Asia. The Rest of the World's only substantial representation is in the Industrial sector.

Within each sector there were suppliers that either exceeded or under-performed the respondent average. Some of the most comprehensive responses were provided by suppliers in Financial Services, while Energy suppliers tended to offer less detail.

Establishing this kind of information for a supply base helps to identify future risks and opportunities. It may also provide a good indicator of which suppliers need more support, as well as those who are already employing leading practice, and therefore may be prepared to share their experience with others in the supply chain.

Fig. 17: CDP Supply Chain respondents by industry

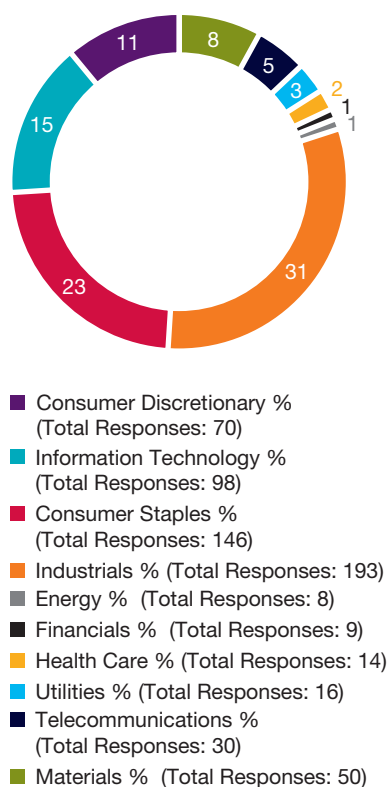
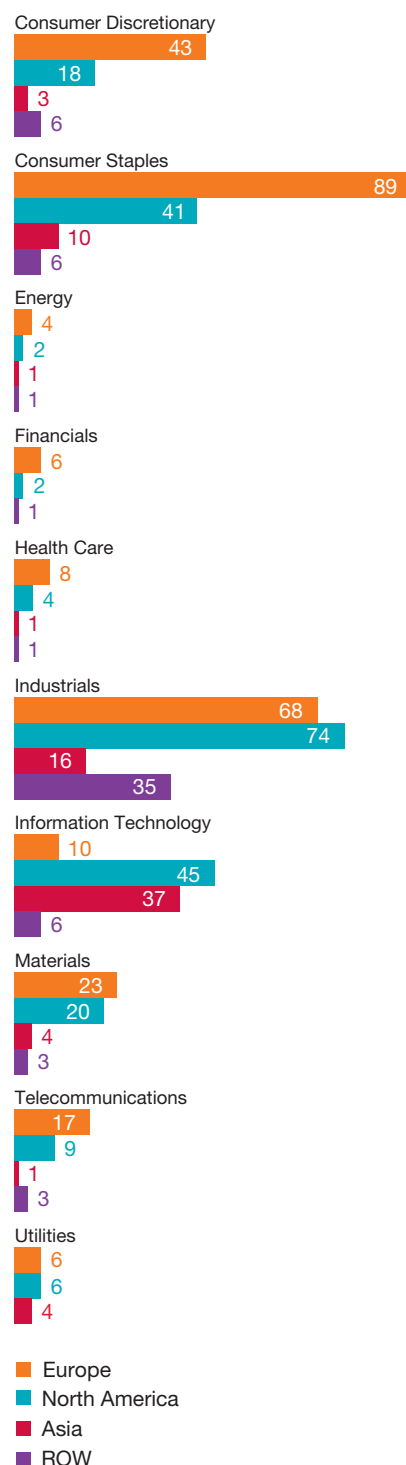


Fig. 18: Location of CDP Supply Chain respondents by industry



Key trends: Governance and ownership

Having an executive director or Board member with responsibility for climate change and sustainability issues is often seen as a positive sign of a genuine commitment to reducing a company’s environmental impacts. Figure 19 breaks this down by industry, for those suppliers who responded to the 2008 CDP Supply Chain questionnaire.

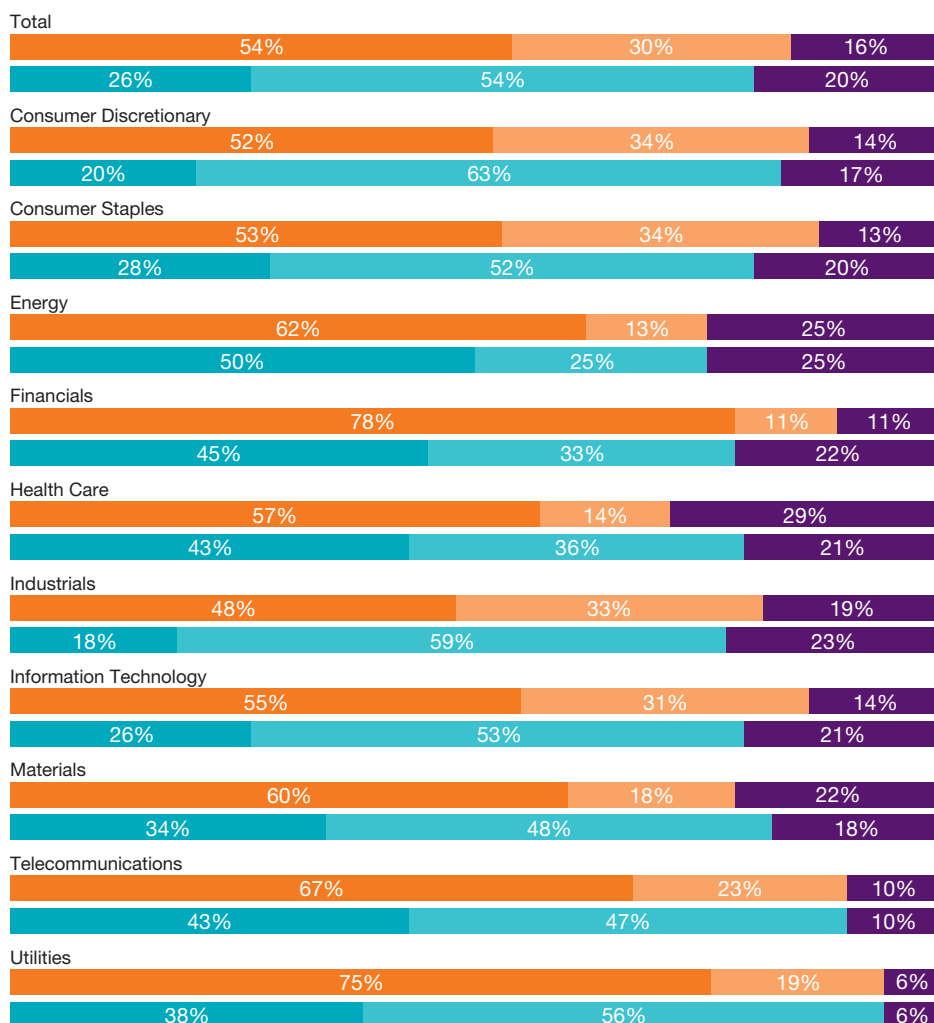
Industrials (48%) was the only industry sector in which less than half

of responding suppliers reported that they have Board level representation on climate change related issues. Board level representation ranged from 51% to 78% in the remaining sectors with Financials (78%), Utilities (76%) and Telecommunications (67%) most likely to have representation. These responses are indicative of the growing awareness of climate change within the sectors.

When executive remuneration is considered (see figure 19) a different pattern emerges to that of Board level responsibility for climate change.

None of the sectors showed that more than half of CDP Supply Chain respondents linked executive remuneration and performance appraisals to the GHG emissions and wider climate change performance of the company. The Financial, Telecommunications and Health Care sectors were amongst the most likely to have incentives in place but the Energy sector was the clear leader (albeit based on a small sample of Energy company respondents).

Fig. 19: Climate change governance and incentive mechanisms by industry

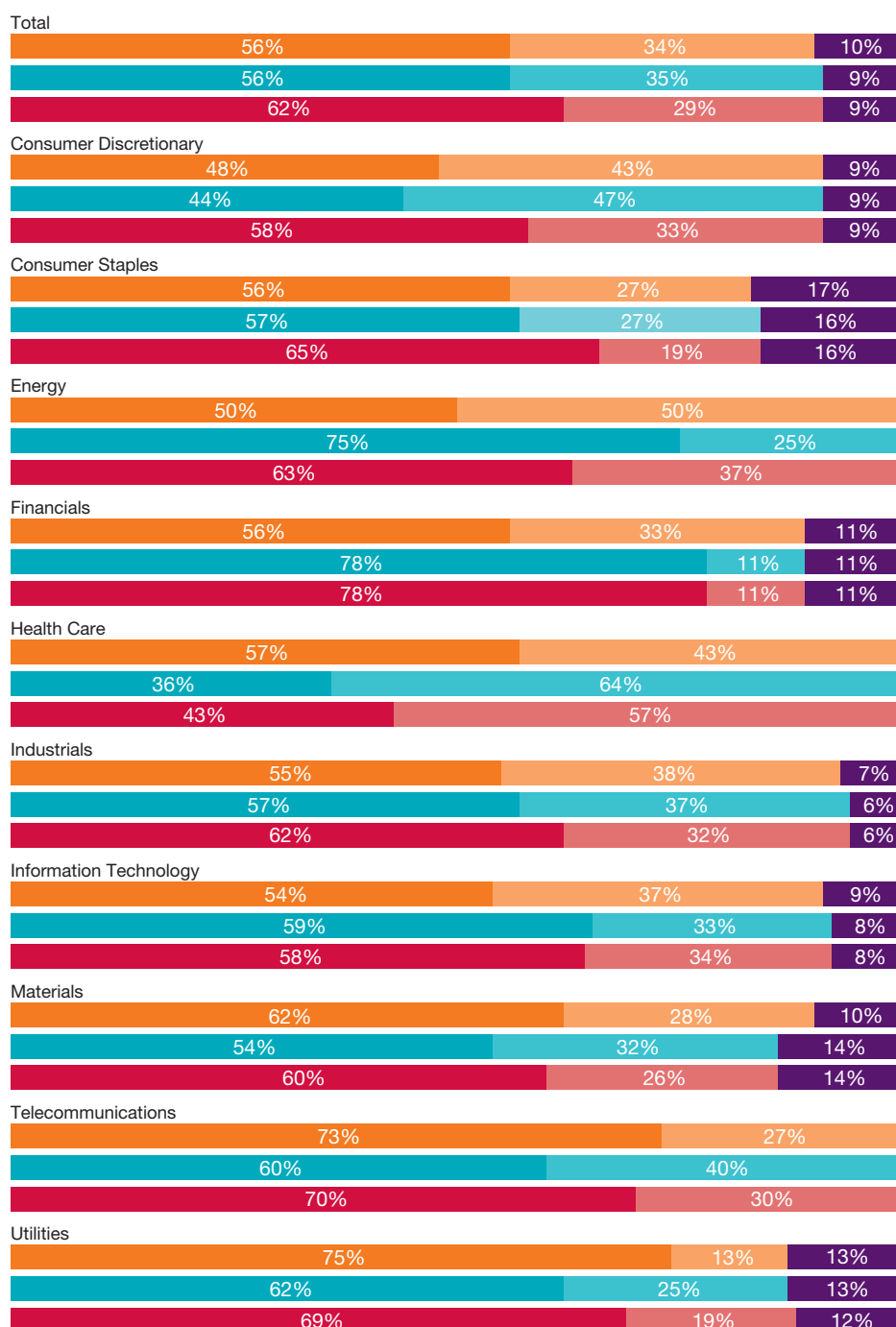


- Board Responsibility
- No Board Responsibility
- Incentive Mechanism/Assessment
- No Incentive Mechanism/Assessment
- No Response

Risks and opportunities overview by sector

The importance of a supplier's awareness and management of risk has already been stressed in this report as a key indicator of how well prepared that company is to face future challenges. The following graphs (figures 20, 21, 22, 23) show the comparative levels of risk awareness on an industry by industry basis, and the current state of play on action plans to tackle these issues.

Fig. 20: CDP Supply Chain respondents' awareness of risk by industry



- Identify Regulatory Risk
- No Perceived Regulatory Risk
- Identify Physical Risk
- No Perceived Physical Risk
- Identify General Risk
- No Perceived General Risk
- No Response

67%

of suppliers in the Financial sector have a strategy for engaging their own suppliers on GHG emissions, compared to just 14% in the Energy sector

55% of Telecommunications suppliers also have a strategy in place compared to just 21% in the Health Care and Information Technology sectors

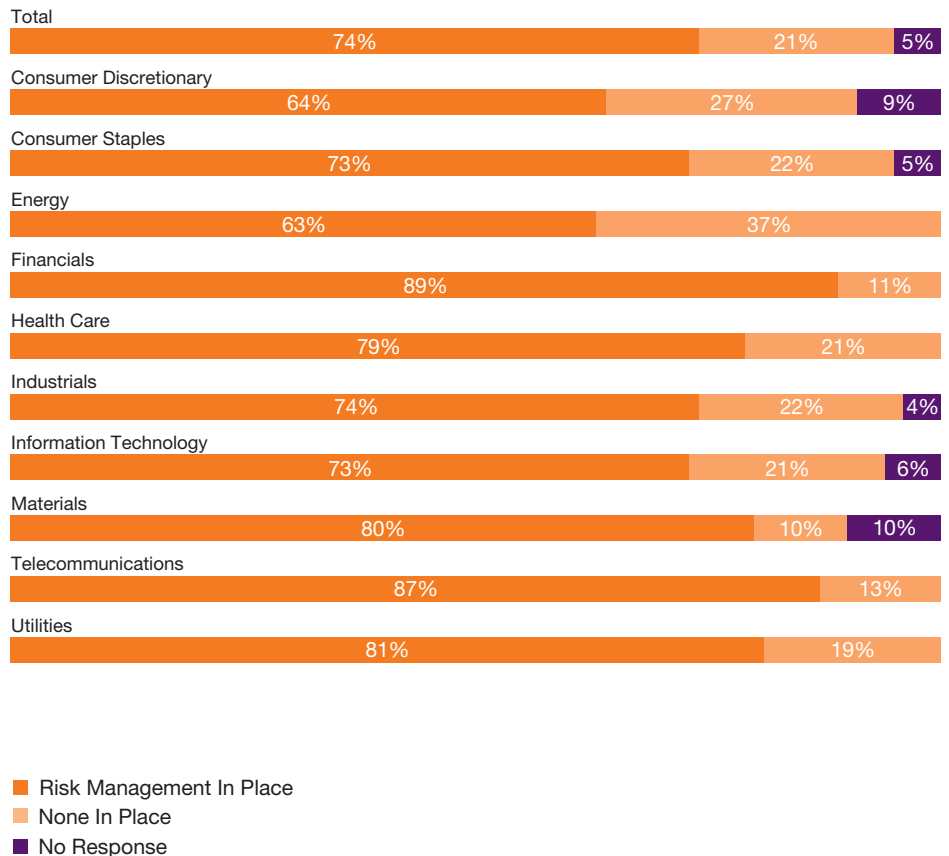
Consumer Discretionary

CDP Supply Chain respondents in the Consumer Discretionary sector showed a below average awareness of climate change risks across all three risk categories – regulatory, physical and general. The most commonly cited specific risk types in their responses were around resource scarcity and the security of their own supply lines and, interestingly, they did not often cite concerns around changing consumer demand. Perhaps driven by the sector’s apparently low overall levels of concern about climate change risk, only 64% of respondents indicated that they have a specific risk management plan in place. Perception of opportunities in the Consumer Discretionary sector was close to the average of the other sectors. The highest number of respondents identified general opportunities over regulatory and physical for their businesses.

Consumer Staples

Respondents in the Consumer Staples sector were marginally above average in their awareness of general and physical risks associated with climate change, although they also had the highest levels of no response to the risk questions. This is an indicator that this industry may have pockets where understanding and awareness is low and requires further education. Respondents in this sector showed most concern about consumer demand, energy and carbon taxes and security of supply. 73% indicated that they have a risk management plan in place; just below the overall average of 74%. Respondents in the Consumer Staples sector were also marginally less likely than average to identify opportunities resulting from climate change, although 64% thought that climate change regulation would yield opportunities.

Fig. 21: CDP Supply Chain respondent Risk Management by industry



Energy

Although based on a small sample, respondents in the Energy sector were noticeably more likely to perceive physical risks from climate change than either regulatory or general risks. Cap-and-trade schemes dominated Energy companies' responses around regulatory risk while changing consumer demand was the key general risk. Overall, Energy was the least likely sector to have a risk management plan in place with only 5 of the 8 suppliers responding positively to this section of the questionnaire. However, 7 out of the 8 Energy respondents identified both regulatory and general opportunities arising from climate change.

Financials

Respondents in the Financial sector show the highest levels of awareness of both physical and general risks at 78% in both cases. This said there was no discernable pattern in the specific risk types identified by Financial institutions in their responses. In line with their high demonstrated awareness and general organisational attitudes to risk, Financial institutions were the most likely to have a risk management plan in place. The sector was also well tuned to opportunities with all but one of the respondents identifying opportunities across all categories – regulatory, physical and general.

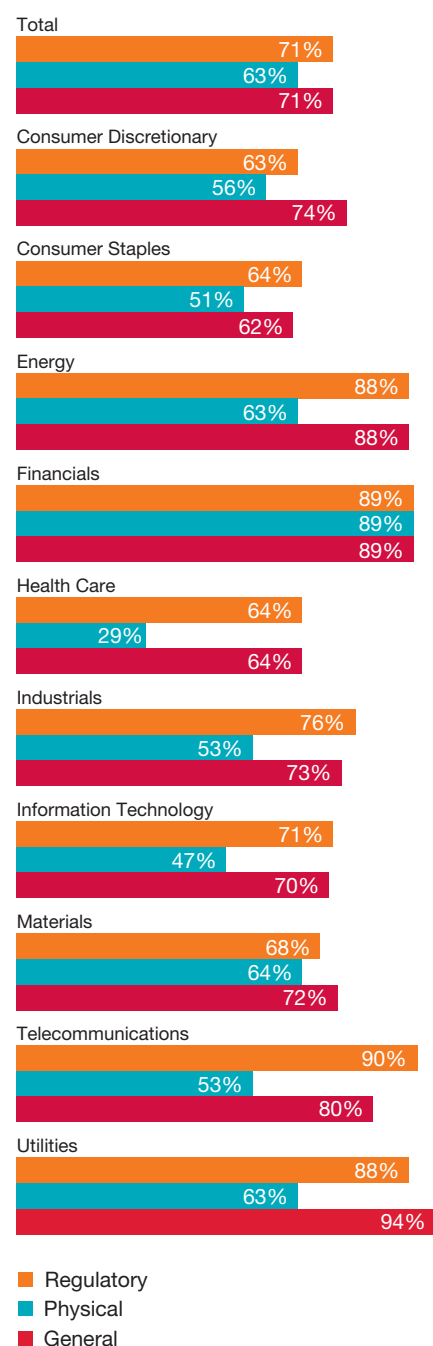
Health Care

Respondents in the Health Care sector were distinctly below average in their awareness of climate change related risks; with only 36% identifying physical risks and 43% general risks. Of those identifying physical risks the majority cited extreme weather events but seemed to overlook the potential impact of longer term changes in temperature and rainfall patterns, which may result in long term shifts in disease patterns. A high proportion (79%) of Health Care respondents confirmed that they do have a risk management plan in place. However, they were distinctly less likely than almost all sectors to identify opportunities as a result of climate change. Only 29% felt that the physical impacts of climate change would provide opportunities. Although this may reflect a reluctance to talk publicly about opportunities in this context, it is worth members engaging with suppliers in this sector to highlight Health Care related opportunities which will feed through to their own activities to ensure that members themselves are well placed.

Industrials

Respondents in the Industrials sector were close to average in their awareness of risk across all three categories – regulatory, physical and general. In responses they commonly cited cap-and-trade schemes and extreme weather events as major sources of risk. 74% of Industrial respondents indicated that they have a risk management plan in place, exactly equal to the overall average. Respondents in the Industrials sector were also close to average in their likelihood of identifying opportunities resulting from climate change across all three categories. 76% foresaw opportunities stemming from regulation which, when taken against their risk concerns around cap-and-trade schemes neatly illustrates the double edged sword of climate change regulation.

Fig. 22: Percentage of CDP Supply Chain respondents identifying climate change opportunities by type and by industry



43%

of Energy and Health Care suppliers have facilities covered by the EU Emissions Trading Scheme (EU ETS) compared to just 4% in the Information Technology sector and 3% in both Telecommunications and Consumer Discretionary

Information Technology

Respondents in the Information Technology sector showed marginally below average awareness of general and regulatory risk but were above average on physical risk. The most commonly cited physical risk was extreme weather events which may reflect the type of business continuity risk work they are often required to perform on behalf of clients. Under regulatory risk, Information Technology respondents were most aware of mandatory technology requirements which is doubtless driven by the technology intensive nature of their businesses. But may also be a reaction to increased press coverage in recent months of the climate change impact of large data centres. 74% of Information Technology respondents indicated that they have a risk management plan in place, exactly equal to the overall average. Interestingly, despite their apparent risk awareness, when identifying opportunities only 47% perceived opportunities arising from the physical effects of climate change. Given the already established role of Information Technology in monitoring, reporting and interpreting climate change impacts at company, national and international levels, as well as many other well publicised roles for Information Technology in the emerging green economy, this seems surprising.

Materials

Respondents in the Materials sector showed an above average awareness of regulatory risks but were marginally below average in their perception of physical and general risk. When looking at their responses around regulation, the risks identified centred on cap-and-trade schemes and energy or carbon taxes. Predictably, given their position in the supply chain their overarching concerns related to resource cost and resource scarcity. An above average 80% responded that they have a risk management plan in place. Encouragingly, a significantly above average proportion (64%) identify opportunities arising from the physical effects of climate change. Paper and forest products companies in this sector were the most likely to perceive substantial opportunities.

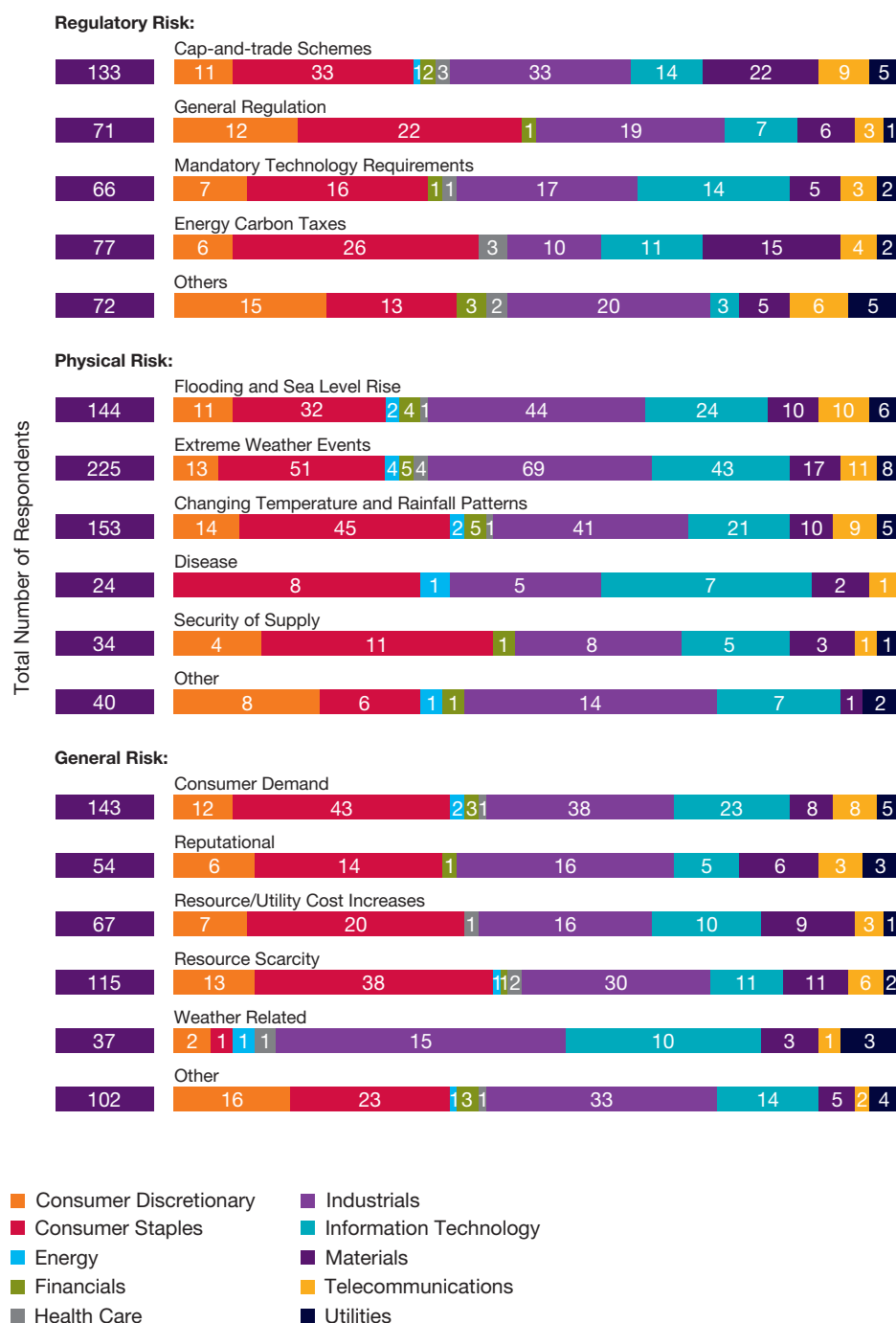
Telecommunications

Respondents in the Telecommunications sector showed the highest awareness of regulatory risk with 73% identifying risks in this category. They were also above average in their perception of physical and general risks. Building on this strong awareness an impressive 87% confirmed that they have a risk management plan in place to deal with the risks identified. Telecommunications respondents were also well tuned to the opportunities presented by climate change with 80% identifying a wide variety of general opportunities and 90% seeing opportunities as a result of climate change regulation. A number of Telecommunications respondents saw opportunities in helping consumers and businesses to 'avoid emissions' by using their products and services. Companies in this sector also commonly cited good performance against regulations, for example achieving a high position in the UK's Carbon Reduction Commitment league tables, as a significant opportunity to demonstrate their environmental credentials in the marketplace.

Utilities

Respondents in the Utilities sector were, as we might expect, acutely aware of regulatory risks. When looking at their responses, as well as highlighting the conventional concerns around cap-and-trade and energy or carbon taxes, they also commonly cited mandatory government requirements to purchase renewable energy as a significant risk and challenge. Utilities respondents were also distinctly above average in their perception of physical and general risks and reflecting this high awareness they were also amongst the most likely (81%) to have a risk management plan in place. Although only 25% of respondents from the Utilities sector are currently covered by the EU Emissions Trading Scheme, these have a direct impact on utility suppliers, and member companies should engage with these suppliers to assess their preparedness and may need to support their suppliers to manage these challenges. Utilities sector respondents were noticeably above average in their identification of opportunities with 94% seeing general opportunities and 88% identifying opportunities as a result of climate change regulation.

Fig. 23: Number of CDP Supply Chain respondents identifying different types of risks related to climate change



56%

of suppliers in the Financials sector have a GHG emissions reduction plan in place

55% in Telecommunications

53% in Consumer Staples

52% in Materials

47% in Information Technology

44% in Utilities

43% in Health Care

38% in Consumer Discretionary

38% in Industrials

29% in Energy

Key trends: Emissions reporting

The key message from member companies highlighted throughout this report was that this year was more about engaging suppliers and raising the subject than establishing concrete numbers for emissions. Next year however, member companies hope to see a shift to more accurate, detailed and open disclosure of emissions by suppliers.

By using the CDP Supply Chain process to establish how many suppliers are able to disclose different types of emissions, it is possible to see where suppliers are struggling and therefore where guidance and education may be required. Additionally, by highlighting pockets of good performance, companies can identify suppliers who may be willing to share tools and techniques.

As identified earlier in this report the total proportions of CDP Supply Chain respondents providing Scope 1, 2 and 3 emissions data were 30%, 31% and 24% respectively. Figure 24 shows the percentage of respondents who were able to provide emissions data in each industry sector.

Respondents from the Industrials and Consumer Discretionary sector were overall the least likely to be able to provide detailed emissions data. Materials sector respondents appeared to have particular difficulty identifying their Scope 3 emissions as did Industrials and Utilities sector respondents. Financials and Health Care sector respondents were the most likely to disclose emissions across all three emissions categories. To an extent it is surprising that respondents from energy intensive sectors including Utilities, Industrials, Energy and Materials, many of whom have already or will soon be impacted by measures such as Emissions Trading Schemes, do not consistently outperform other sectors in this form of emissions disclosure.

Looking in more detail at the types of Scope 3 emissions disclosed, shown in figure 25, we can observe a fairly consistent trend across the industry sectors that travel emissions are the most commonly available, followed by logistics emissions, with few respondents able to provide much detail on emissions from their own supply chains or the use & disposal phase of their products or services.

Looking at individual sectors we see that an impressive 89% of Financial sector respondents were able to disclose their emissions from business travel, evidence that suppliers in this sector are routinely tracking this information. Telecommunications respondents also outperformed in this area with 40% able to provide travel emissions data, although it is somewhat disappointing that this represents good performance. Aside from these outliers there is little to choose between the industry sectors in their reporting of Scope 3 emissions.

The evidence presented in these charts supports one of the central themes of this report, namely that very few companies have an understanding of the GHG emissions along their supply chain. Member companies will need to work closely with companies in their supply chain to encourage capacity building and share leading practice around the measurement, management and reporting of GHG emissions.

Fig. 24: Comparative percentage of CDP Supply Chain respondents disclosing emissions by industry

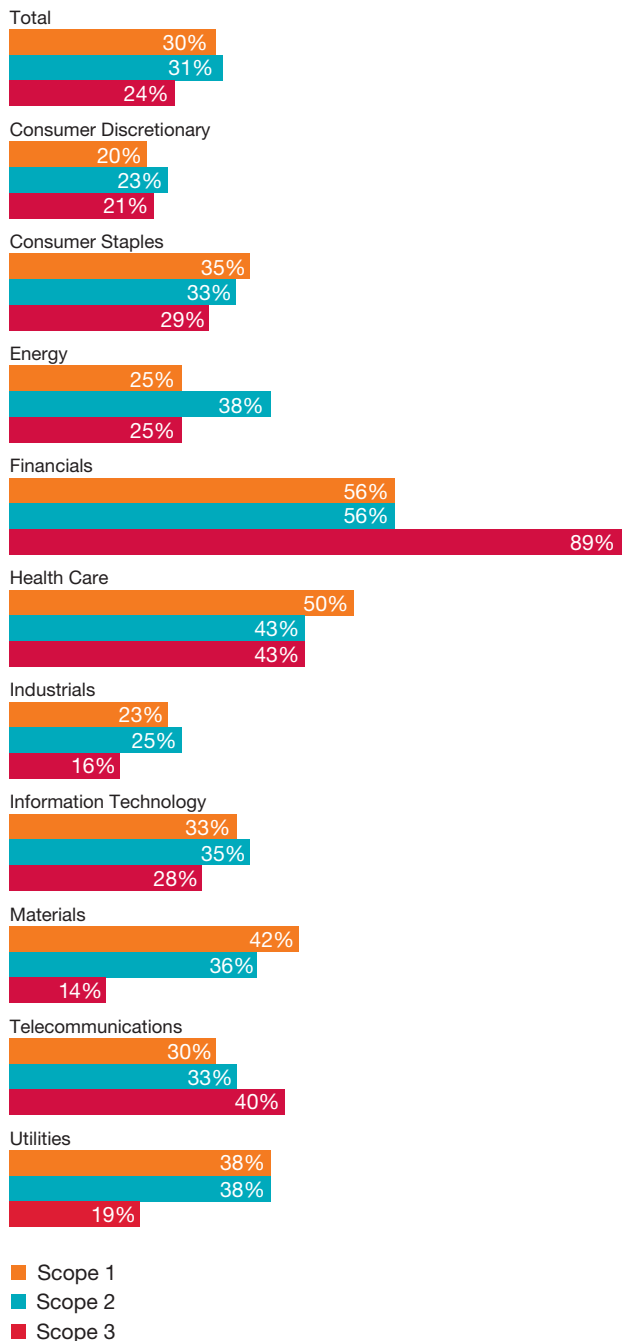
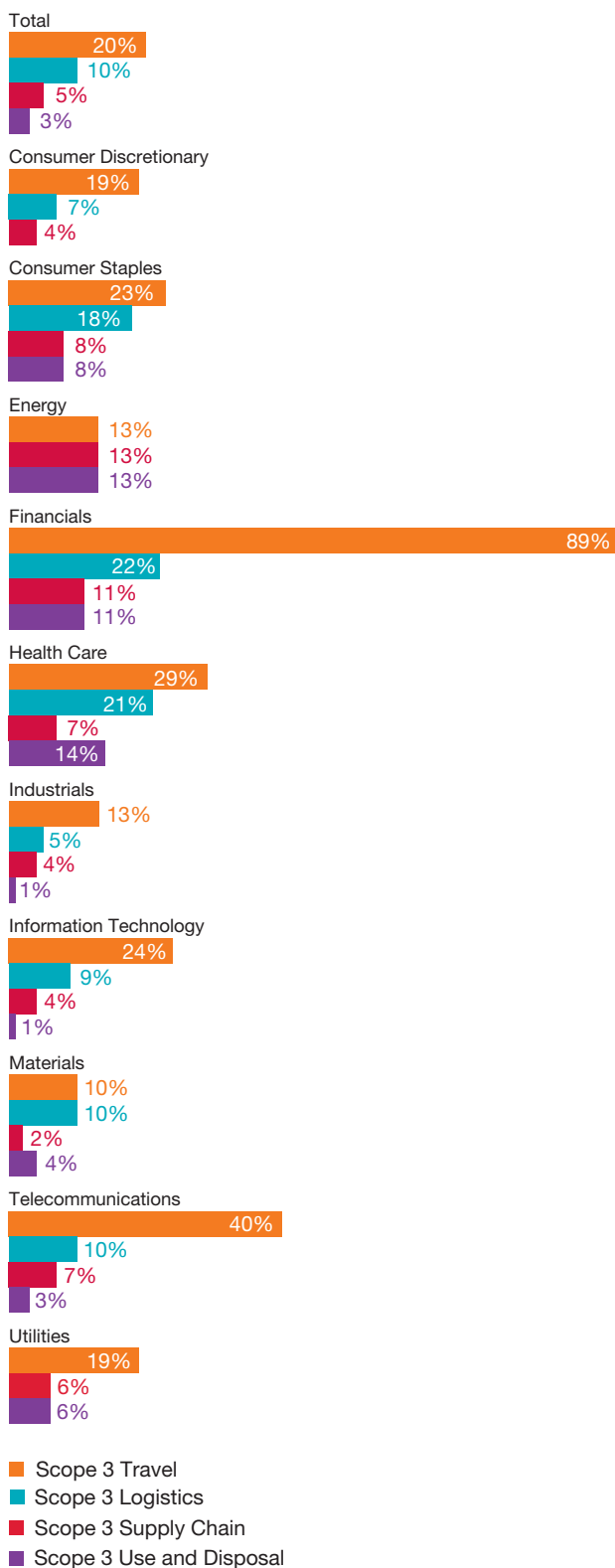


Fig. 25: Comparative percentage of CDP Supply Chain respondents disclosing detailed Scope 3 emissions by industry



“Dairy Crest has identified that the largest GHG contribution in our supply chain is from on farm activities – the use of fertilisers, feeds, machinery, vehicles and the cows themselves – at our 1500+ supplying farms. We have engaged with the farmers contracted to supply milk to our business either directly or through our sister organisation Dairy Crest Direct. A programme of farm visits and the provision of an electronic system for calculation of the GHGs and other environmental impacts on farms has been introduced. This program is aimed at showing the benefits good farm management practices can have in reduction of adverse environmental impacts.”

Dairy Crest Group

Key trends: Emissions reduction

The logical next step for any emissions measurement and reporting system is the setting of emissions reduction targets, and the development of plans to achieve them.

Earlier in this report comments have been provided on the challenges of comparing emissions targets due to the variety of measures used and the difficulties in establishing a long term comparable base in the face of ever changing business models.

Figure 26 provides a breakdown of the different methods used by suppliers to reduce their GHG emissions. Across the full range of industries a large share of suppliers (47%) stated that improving the energy efficiency of their operations was a vital aspect of their GHG reduction plan. These efficiency measures ranged from simple actions such as the use of energy saving light bulbs, to driving more fuel efficient cars and the design of energy efficient products and infrastructure.

Process modifications can be thought of as a subset of energy efficiency and include the re-engineering of production processes or systems to improve performance, output and reduce the consumption of raw materials and energy. One example of this is fuel switching from oil or diesel to natural gas which produces significantly less GHG in its combustion.

The uptake of renewable energy was quite low and this perhaps reflects a few characteristics of the current renewables market such as a lack of generating capacity in host countries, poor grid connectivity and high cost and inefficiency of stand alone units such as PV solar panels. However we would expect to see this change over time as more companies invest in renewable generation on the back of increasing energy prices and desire to reduce their emissions beyond what is achievable through typical energy efficiency measures.

Energy efficiency is fairly consistently (in all but one industry – Materials) the most popular methodology for reducing emissions, followed by process/supply chain modification. Reversely, offsets and sequestration were only used by a handful of suppliers, noticeably in the Consumer Discretionary, Information Technology and Materials industries. The Energy and Health Care suppliers seem to be using fewer methods for reducing their emissions than those in other sectors, but this may just be attributable to the smaller number of suppliers in these groups.

Examples of the variety shown in emissions intensity and reductions targets:

British Airways aims for a reduction of “...25% from 111 grams in 2005 to 83 grams in 2025. In 2007 our performance was 110.3 gCO₂/pkm.”
British Airways

“...reduce CO₂ emissions by 25% per ton of product produced from 2002 to year-end 2010.”

Colgate-Palmolive Company

“34 tonnes CO₂-e per 1000 square foot.”

EMC Corporation

“We targeted a 15% reduction in emissions intensity (CO₂-e/production (weight)) over a five year period, from Fiscal Year 2005 to Fiscal Year 2010.”

General Mills Inc.

“Our emission reduction targets are to maintain a budgeted energy spend of US\$ 1,255,000 for the year 2008.”

Amdocs Ltd.

“By 2010, HP will reduce the combined energy consumption and associated GHG emissions of HP operations and products to 25 percent below 2005 levels...”

HP

“...to reduce absolute GHG emissions 20% below 2007 levels by 2012.”

Intel Corporation

Examples of emissions reduction activities

Some further examples of specific emissions reduction activities cited by the CDP Supply Chain respondent group include:

“SCA uses co-generation power at many of the group’s pulp and paper mills. Briefly, this means that the steam required for production of pulp and paper is also used for electricity production. This technology makes optimal use of the energy content of the fuel.”

SCA

“National Grid metering has advanced the development of smart meters which will enable consumers to monitor their energy usage and also allow for energy generated in the home to be exported back to the grid. An online forum, the power of action blog, also enables employees to share information on energy efficiency measures and carbon offsetting ideas.”

National Grid

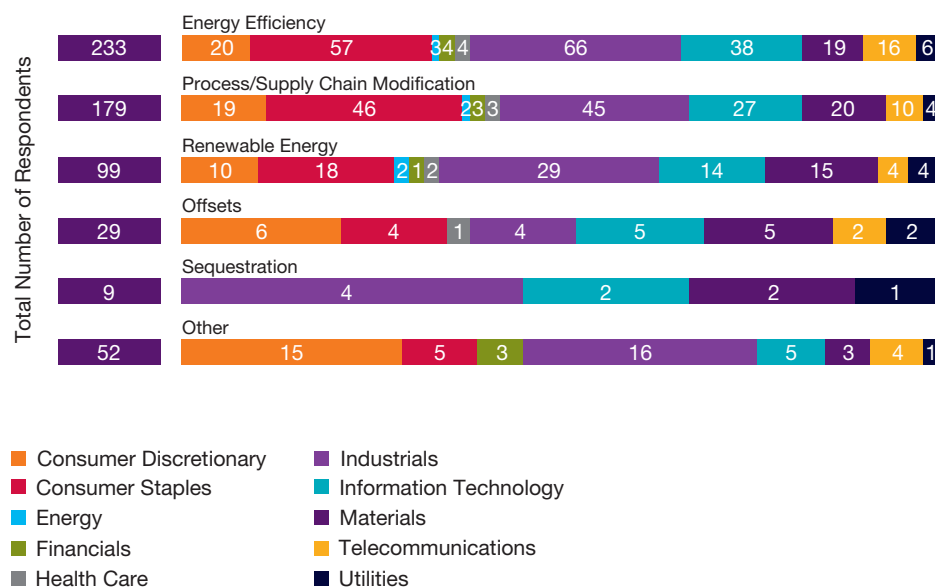
“HP is consolidating its 85 legacy data centers into 6 data centers in three cities, each equipped with the latest energy-efficient equipment and Dynamic Smart Cooling technology...we anticipate yearly energy savings from data center consolidation up to 380 million kWh, and annual cost savings of up to US\$30 Million.”

HP

“AA is undertaking a fleet renewal program that includes the planned delivery of 70 new fuel efficient Boeing 737s between 2009 and 2010. These 70 aircraft will replace less fuel efficient aircraft, which will be retired from the fleet. These less efficient aircraft carry fewer passengers than the new 737s, yet burn 20-25% more fuel.”

AMR Corporation

Fig. 26: Comparative popularity by industry of the most common emissions reduction activities amongst the CDP Supply Chain respondent group



“The sales of Philips Green Products, of which energy efficient products are a very important part, were at 20% (more than EUR 5.3 billion) of total revenues at year end 2007.”

Philips Electronics

Summary of Industrial trends

Although based on a small sample, Financial sector respondents were the most consistently high performing in terms of their disclosure. They were the most likely to have Board level responsibility for climate change and the second most likely to provide direct incentives for the successful management of climate change issues. They effectively identified risks across all categories, indicated that they had management plans in place to deal with these and were also quick to spot emerging opportunities. Financial sector respondents were also the most likely to be able to provide detailed information on their Scope 1, 2 and 3 emissions.

The only other noticeably high performing sector was Telecommunications although they were let down somewhat in their ability to provide detailed disclosure of emissions.

Utilities sector respondents showed consistently high awareness of risks across all categories and 81% indicated that they have risk management plans in place to deal with them. They were also highly likely to have Board level responsibility for climate change issues at 75%.

Health Care, Information Technology and Consumer Staples respondents were the least likely to identify opportunities as a result of climate change, with Health Care respondents particularly bearish about opportunities as a result of the physical impacts of climate change.

In summary, while some sectors are further along the supply chain management learning curve (as seen in the Financial and Telecommunications sectors responses for example) than others, there is generally little to choose between the full range of industries.

The opportunity is there for a company to look at the range of industries represented across their supply chain and to leverage their individual strengths to bring about collective learning, bringing the entire group to a suitable level of understanding far faster than would be possible by only working with one supplier or one industry.

4

Global response summary report

This global summary provides an overview of the responses to the CDP Supply Chain questionnaire conducted in 2008. Each CDP Supply Chain member company received a report in this format based on the responses from the suppliers they selected to participate.

The 34 CDP Supply Chain member companies nominated a selection of suppliers to receive a questionnaire on climate change looking at issues related to: carbon risks and opportunities, emissions reporting, reductions targets and plans, governance, supplier engagement and product lifecycles.

This summary attempts to convey the messages identified in the analysis of supplier responses and enhance understanding of the most significant climate change risks and opportunities in member company supply chains.

The scope of this summary is limited to analysis of the questionnaire responses. The data has not been verified and no other information has been reviewed or requested from suppliers.

Response summary

The supplier response rate (27%) is lower when compared to the response rate (47%) of the first CDP Investor Global 500 report in 2003. This suggests that a significant proportion of suppliers may not be engaged on the topic of carbon and climate change. However, 71% (453) of the respondents disclosed to CDP for the first time, which demonstrates a willingness to engage around topics in this area.

Over half (57%) of all suppliers invited to participate in the CDP Supply Chain Project were from Europe. However, Europe had the lowest response rate at 21% and North America had the highest at 41%. This may indicate that the increased regulation and awareness of carbon and climate change in businesses within Europe has not yet reached procurement teams.



Key facts

Responses

634 from 2,318 (27%)

Number of respondents disclosing

Scope 1 emissions: 317 (50%)

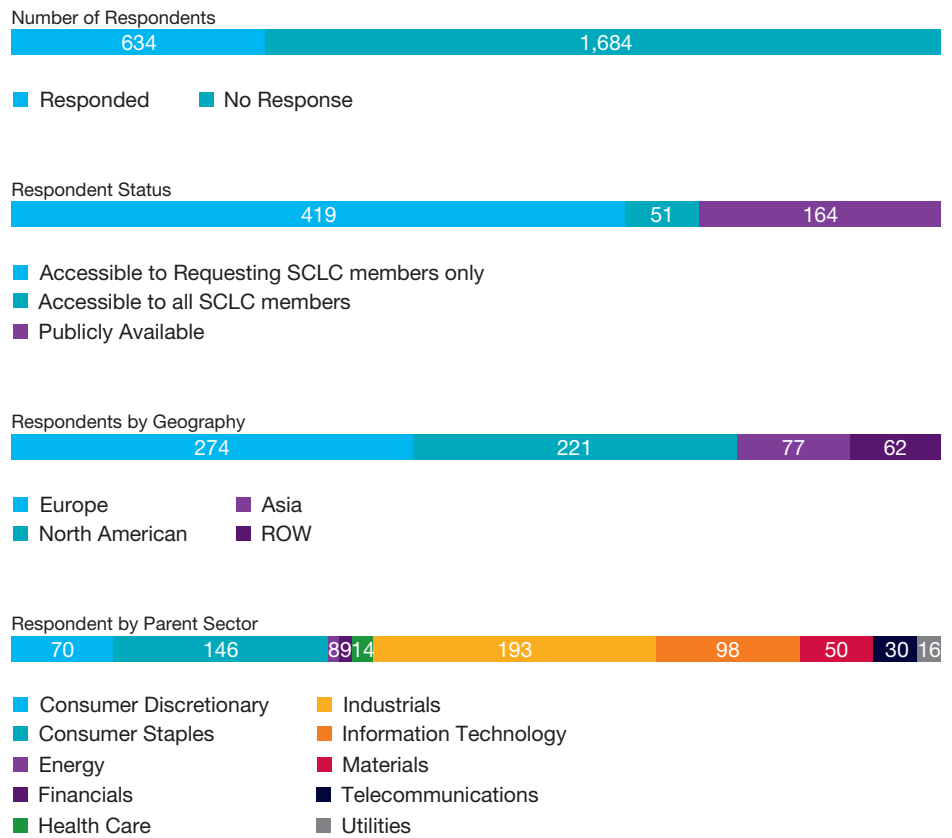
Scope 2 emissions: 293 (46%)

Scope 3* emissions: 153 (24%)

* Note that these suppliers disclosed at least one figure for Scope 3 emissions

By sector, the largest single group of respondents was from the Industrial sector (193 suppliers/31%), followed by Consumer Staples (146 suppliers/23%) and Information Technology (98 suppliers/15%). The majority of the Industrial sector respondents were from North America (74 suppliers) and Europe (68 suppliers). The Consumer Discretionary and Consumer Staples sectors were dominated by European respondents (43 and 89 suppliers respectively) and Information Technology respondents were largely from North America (45 suppliers) and Asia (37 suppliers).

Fig. 27: Breakdown of CDP Supply Chain respondents



Risks and opportunities

Respondents generally recognised a wide range of risks, with a number providing detailed information. However, in general, a greater number of respondents identified opportunities that arise from climate change. For example, 60% of European respondents noted regulatory risks but 72% identified business opportunities arising from climate change related regulatory requirements. Likewise in North America, 58% of respondents identified general risks but 70% identified general business opportunities to arise from climate change. The only exceptions to these are physical and general risks in Asia and physical risks in the Rest of the World, where the number

of respondents identifying risks is higher than those identifying business opportunities. Some of the key opportunities around climate change identified by suppliers include increased demand for eco-friendly products (increased market share) and reducing production costs through the use of renewable alternatives and more energy efficient equipment.

In total 393 of the 634 respondents (62%) indicated that they are taking action to assess the present and future business and financial implications of climate change related risks. Some key business and financial implications identified include having adequate insurance coverage, increased energy costs and the need for business continuity planning.

Fig. 28: CDP Supply Chain respondents' awareness of risk

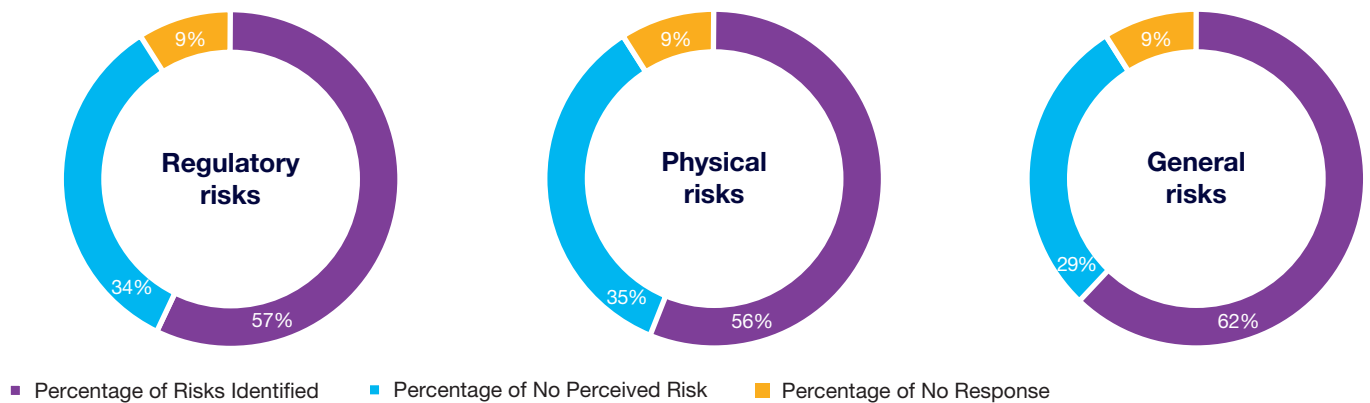
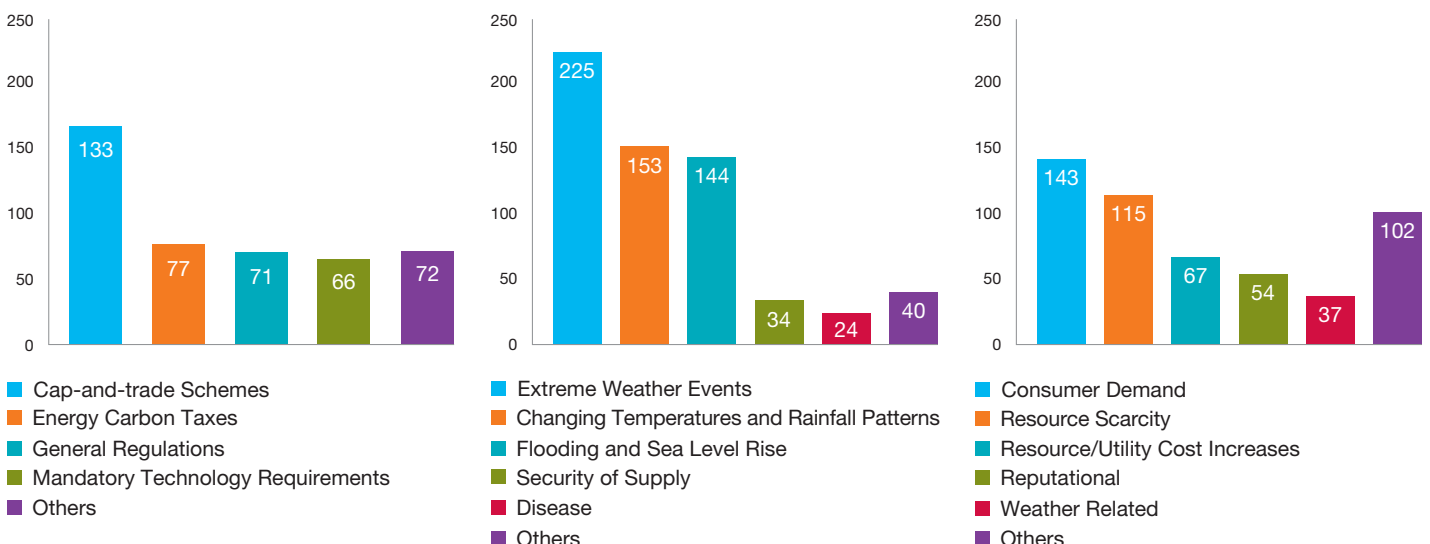


Fig. 29: CDP Supply Chain respondents' selection of core risks



39%

of respondents have a system in place to assess the data accuracy of GHG emissions

40%

of respondents are able to break down their total Scope 1 and 2 emissions within their business

Existing and planned risk management activities

The key risk management activities cited by suppliers are the creation of business continuity plans, environmental management plans and systems such as ISO14001, setting carbon reduction strategies, forming dedicated groups for sustainability and carbon reduction, internal energy management systems, creation of dedicated risk management teams and involvement in cap-and-trade initiatives. As part of reducing risks, a number of suppliers are engaged in activities such as energy efficiency, waste reduction and calculating carbon footprints in order to reduce their environmental and carbon impact.

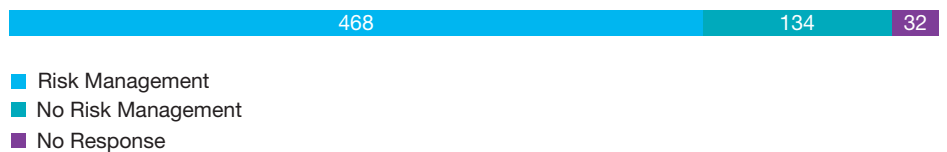
Energy costs

Energy spend data was provided by 270 (43%) of the 634 responding suppliers totalling approximately US\$ 92.6 Billion. Of these suppliers, 228 provided information on the percentage of operating costs that is accounted for by energy purchases. This ranged from 0% to 100% with an average of 6.8%. However, it is extremely unlikely that any business would have a profile of either 0% or 100% which highlights the need for further supplier education on this subject.

The 6.8% average provides a reasonable estimate of the actual proportion, given that 168 (82%) of the 228 suppliers providing this information reported that the share was less than 10%.

Information on the percentage of energy costs incurred from renewables is provided by 193 respondents and ranged from 0% to 100% with an average of 7.1%. In this case, the average may be misleading since 115 (60%) of the 193 respondents stated that renewables accounted for 0% of their energy costs.

Fig. 30: Existing and planned risk management activities



Reported emissions

Of the total Scope 3 emissions disclosed in figure 31, 521 Mt/CO₂-e (47%) of the 1,100 Mt/CO₂-e is attributable to one supplier, a large international oil and gas company. The emissions industry split figure 32 also shows -39.84 Mt/CO₂-e for the Materials sector, this is as a result of one supplier disclosing -83.5 Mt/CO₂-e for use and disposal of services. This supplier includes carbon emissions saved as a result of the use of its products over their useful life in its Scope 3 emissions, resulting in negative emissions values.

The most commonly cited methodology used to calculate emissions among the CDP Supply Chain respondent group is the GHG Protocol, with 263 (41%) of responding suppliers stating that they use this method. Other methods cited include in-house methodologies, indicators and reporting protocols, online conversion websites such as DEFRA, the International Energy

Agency and the National Energy Foundation, ISO 14064, WRI/WBCSD guidelines and government department prepared methodologies, workbooks, guides and reports.

Some of the main challenges cited by suppliers in breaking down emissions within their business (rather than as a total figure) include: obtaining information from third party suppliers, defining operational boundaries, measuring emissions by business unit and product level, the cost of collecting data from hundreds of different locations, changing emission factors and uncertain legislation. The commercial sensitivity of the data is also cited as a key concern. Suppliers identified the use of electronic data monitoring, sub-metering, pilot studies and proactively engaging with industry initiatives and suppliers as helping to overcome the challenges in breaking down emissions. However, it is vital that the value of calculating emissions is made clear and that it outweighs the costs.

11%

of respondents have facilities covered by the EU Emissions Trading Scheme (EU ETS) and have provided some data on annual emissions and allowances

Fig. 31: Emissions by Scope (Mt/CO₂-e)

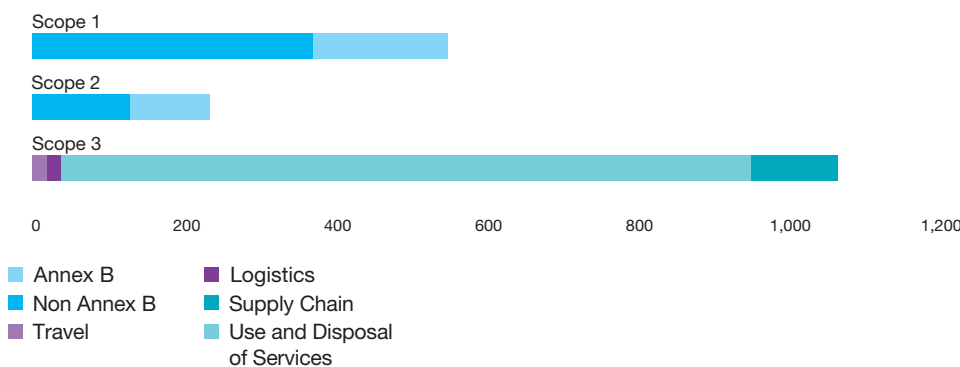
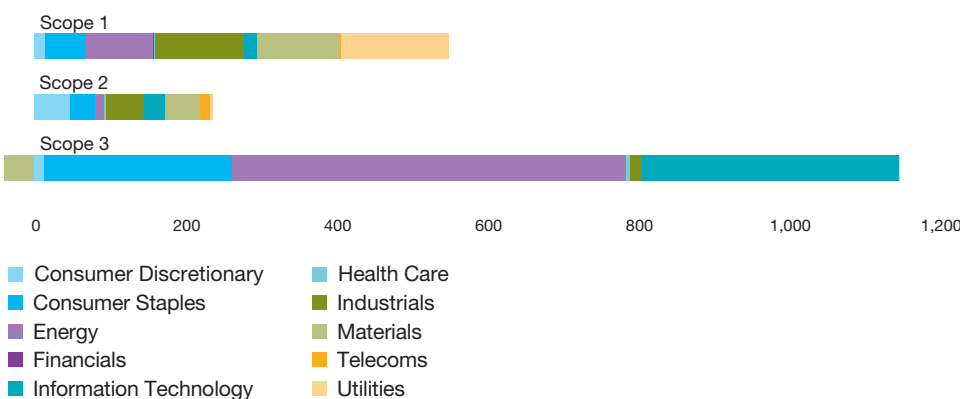


Fig. 32: Emissions industry split (Mt/CO₂-e)



31%

of respondents have developed emissions reduction targets

19%

of respondents have developed emissions intensity targets

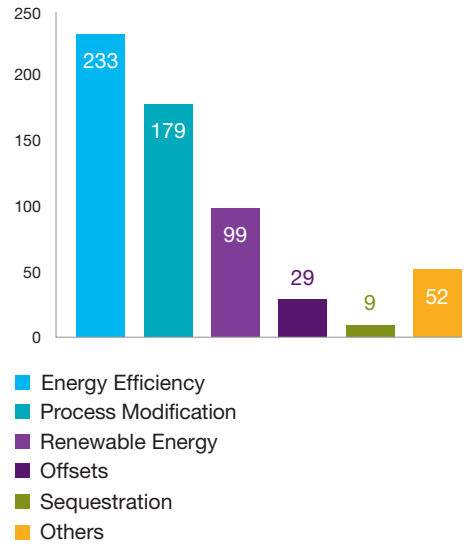
44%

of respondents have a GHG emissions reduction plan in place

Targets and plans

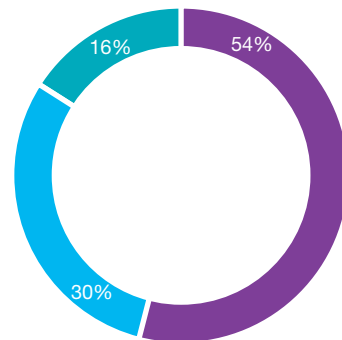
Targets on both emissions reduction and intensity are generally very varied. For example, Cadbury has set a target for all sites to reduce energy consumption per tonne of production by 10% by 2010, Atlas Copco aims to reduce CO₂ emissions by 2% on a yearly basis, including transports to and from production, AMR Corporation intends to increase GHG emission efficiency by 30% by 2025 versus the base year of 2005 and WIPRO aims to be carbon neutral by 2010 with progressive reduction of 25%, 35% and 40% of the baseline levels of energy intensity i.e. kWh per person.

Fig. 33: Approaches to reducing GHG emissions



Governance

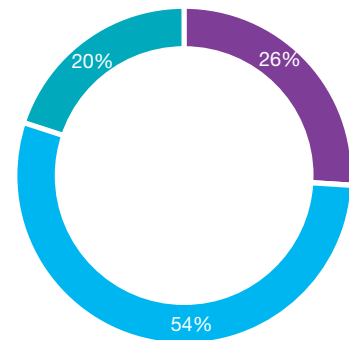
Fig. 34: Board level responsibility



- Board level
- No Board level
- No Response

54% of the responding companies had a Board member or senior executive responsible for sustainability and climate change related issues.

Fig. 35: Sustainability based performance incentives



- Sustainability Based Performance Incentive
- No Sustainability Based Incentive
- No Response

26% of respondents assess or provide incentives for individual management of climate change issues.

Supplier engagement

Of the 634 respondents, 201 (32%) have a strategy for engaging their suppliers on GHG emissions and the impact of climate change on their business.

Geographically, Europe had the highest number of respondents (109 suppliers or 40%) with a strategy for engaging suppliers on GHG emissions, whereas the Rest of the World had the lowest number (11 suppliers or 18%). By sector, respondents from the Financial sector had the highest percentage of suppliers (67%) with a strategy for engaging their own suppliers on GHG emissions, whereas respondents from the Energy sector had the lowest percentage (13%).

Some examples of engagement activities include: lifecycle analysis and data gathering of GHG emissions, partnering with suppliers to conduct GHG emission reporting surveys, educating suppliers on measuring emissions, supporting suppliers to implement environmental management systems such as ISO14001, working with industrial groups and participation in the GHG Protocol and supply chain leadership collaboration initiatives.

Product lifecycle analysis case study

A total of 352 suppliers (56%) provided information on successes or planned activities to reduce GHG emissions in the lifecycle of groups of products or individual products. Although the level of detail in these responses varied greatly there were some obvious pockets of good practice. Examples include:

Tesco, who through its carbon labelling project, is looking at lifecycle product level emissions using the PAS 2050 methodology. It has undertaken trials on a number of products and plans to measure and reduce the footprint of further products in the future. Tesco is also working to reduce packaging of its own brand and branded products with a target to reduce packaging by 25% by 2010. Its approach aims to remove unnecessary packaging, make packaging thinner and to use different materials to reduce the carbon impact of the product.

Vodafone has analysed the lifecycle of suppliers' products (e.g. mobile phones) with some of the findings of the analysis included in the "Earth calling..." report by Forum for the Future. The findings were also used to design Vodafone's environmental programmes to target key impacts.

Summary

Overall, supplier responses were mixed in their level of detail, although some suppliers did respond fully to most sections of the questionnaire. The most detailed areas of response from suppliers include identification of risks, risk management and approaches adopted to meet emission reduction targets. Even with this level of awareness, many suppliers still seem to struggle with emission disclosure and reporting.

Despite the level of detail provided in some responses, 176 of the responding suppliers (28%) either did not respond or did not perceive that their business is exposed to any form of regulatory, physical or general risks from climate change. As the majority of businesses are exposed to risk in one or many forms, this may be more a result of limited understanding and awareness than there being no actual risk.

Where suppliers identify regulatory, physical and general risks, the main types cited include extreme weather events (225 suppliers), changing temperatures & rainfall patterns (153 suppliers), flooding & sea level rise (144 suppliers), changes in consumer demand (143 suppliers), the introduction and expansion of cap-and-trade schemes (133 suppliers), and resource scarcity (115 suppliers). This shows that some suppliers are more aware of the wider risks associated with climate change that could impact their business.

Areas where fewer responses or detail may indicate less activity include supplier engagement and lifecycle analysis. For example, only 32% of respondents have a strategy for engaging their own suppliers on GHG emissions and the impact of climate change on their business. This suggests that many suppliers are in the early stages of these activities and indicates a possible opportunity for companies to become involved in supporting or working with suppliers to ensure more consistency throughout their supply base.

Advisor and Report Writer



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