

Supply Chain Sustainability Revealed: A Country Comparison

Supply Chain Report 2014–15



Report written for CDP by:



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Supply Chain Member Companies*

Forward by Christiana Figueres, Executive Secretary of the **UN Framework Convention on Climate Change (UNFCCC)**

Lead Members

- British American Tobacco Bank of America
- ▼ Dell Inc. Goldman Sachs Group Inc.
- Imperial Tobacco Group
- JT International SA
- Juniper Networks, Inc. L'Oréal
- Microsoft Corporation PepsiCo
- Phillip Morris International PricewaterhouseCoopers LLP The Coca-Cola Company Walmart. Inc.

CDP's supply chain water members

* One member has chosen not to be listed for commercial reasons

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Corporate Members

Abbott Laboratories Accenture Acer Inc. Amdocs Ltd. AT&T Inc. Banco Bradesco S/A

BMW AG Braskem S/A Bristol-Myers Squibb British Sky Broadcasting BT Group Caesars Entertainment Cisco Systems, Inc. CNH Industrial NV Colgate Palmolive Company CSX Corporation Deutsche Telekom AG Diageo Plc. Domtar Corporation Eaton Corporation Elopak ENAGAS Endesa

Eni SpA Fiat Chrysler Automobiles Nv Ford Motor Company Gas Natural SDG S.A.

- General Motors Company Groupe Steria ola IMI Jaguar Land Rover Ltd Johnson & Johnson Johnson Controls
- KAO Corporation KPMG UK Marfrig Alimentos SA MetLife, Inc. National Grid
- Nestlé Nissan Motor Co. Ltd. Nokia Solutions and Networks Pirelli Rexam Roval Philips S.C. Johnson & Son. Inc. SABMiller Starwood Hotels & Resorts Worldwide, Inc Swisscom Taisei Corporation
- Unilever plc Vodafone Group





If there is one thing that climate change teaches us, it is that we cannot prosper in isolation. No one country can ignore atmospheric science, or the reality that our collective greenhouse gas emissions will dictate whether or not we risk tipping the world towards dangerous climate change.

This is a lesson that many progressive companies have learnt. Modern businesses depend on supply chains stretching around the globe. They appreciate that floods thousands of miles away, or drought striking a distant watershed, can make the difference between their own profit and loss.

Forward-looking companies - such as the 66 members of CDP's supply chain program - also appreciate that successful, resilient suppliers are good for business. Suppliers that are better able to tackle sustainability challenges, such as climate change and water risk, are simply better business partners.

The CDP supply chain program has, year in and year out, demonstrated the environmental and financial advantages of cooperation along supply chains. By encouraging their suppliers to manage and disclose climate issues, multinational companies have helped them reduce risk and spot opportunities.

customers.

In December the world's governments will come together in Paris to forge a new universal agreement able to set the world on track to a deep decarbonization of the global economy en route to climate neutrality in the second half of the century.

Momentum is building. Already countries are putting forward national contributions and most will have met this aim by the first quarter of this year.

Despite this growing momentum, however, the aggregate of these national contributions is unlikely to get us to our 2°C goal in the short term. More will need to be done.

Here, the CDP supply chain program member companies, and the close to 3,400 suppliers who provided climate change data, have a vital role to play. They have shown that taking action to address climate change can help provide an edge in the global marketplace. They now need to become powerful advocates for the government policies and regulations that will drive climate action across entire economies.

Improved sustainability performance will make economies more competitive, more resilient and, as we move towards a low-carbon future, more successful. More than that, however, it can also empower governments to the ever higher ambition that will be needed across Continents and sectors to reach the 2°C goal that will define our future and that of our children.



By exerting pressure on their suppliers, they have used their influence to improve the sustainability performance of entire supply chains. In turn, suppliers have come to realize that improved performance can confer competitive advantage - not only making them more efficient, but also more attractive to sustainability inclined

This year is set to be a landmark one in the fight against climate change and the fight for a far more sustainable, healthy and prosperous world.

> United Nations Climate Change Secretariat

Executive Summary

Climate change is once again rising up the global agenda. Physical climate, regulatory and consumer preference changes expose supply chains to growing levels of climate risk. Uneven responses among suppliers present threats and opportunities for companies at the top of supply chains.

This year's supply chain program involved 66 corporations with \$1.3 trillion in procurement spend. They requested that their suppliers disclose information on how they are approaching climate and water risks and opportunities, generating the largest ever set of such data, from 3,396 companies worldwide, up from 2,868 in 2013.

Supply chain climate risks compared

For the first time, CDP and Accenture have analyzed this data at the national level to assess the relative climate risk faced by supply chains in 11 key markets, the preparedness of these supply chains to manage these risks and the propensity of suppliers to work with their customers to reduce risk and seize climate opportunities.

Key findings from the analysis include:

High levels of climate risk in key supply chains, and inadequate supplier response.

- Supply chains in the **US**, China and Italy are considered 'vulnerable'.
- Suppliers in India and Canada are not doing enough to manage climate change risks. Indian companies, in particular, demonstrate a low propensity to report on emissions.
- Suppliers in **Brazil** have done the least to manage climate exposures and recent water shortages indicate these may be higher than the risk/response matrix suggests.

But opportunities exist for collaboration and high-return investment.

This is particularly the case in developing economies. Suppliers in **China** and **India** demonstrate a high propensity to collaborate with supply chain partners to reduce climate risk and, where they do invest in emission reduction initiatives, they deliver the greatest return on investment.

Presented in a sustainability risk/response matrix, the information allows international buyers to guickly assess the sustainability of their supply chains at the country level. Pages 12-33 provide detailed country-level analysis.

The global picture

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This year's report also looks at overall trends, allowing comparison with previous editions. This year's responses show an increasing level of climate risk management within supply chains, which in turn is generating better climate risk outcomes.

However, in percentage terms, emissions disclosure is down, and collaboration has fallen back compared with last year. Water risk remains a concern – despite its potential for shocks - with 45% of exposed companies not carrying out a water-risk assessment.

CDP recommends

The suppliers that responded to this year's request for information are to be applauded, as are the program's 66 members. In doing so, they have recognized the importance of climate change issues and have taken steps towards addressing them.

The onus for changing this in the first instance, lies with the customers, the large multinational companies whose procurement spend drives the global economy. Leading companies, such as the 66 supply chain members, understand their ability to drive change among their suppliers.

It is incumbent upon more of their peers to require that their suppliers measure and disclose their carbon footprint, and work with their suppliers to find and, if necessary, incentivize emission reduction initiatives. Many of CDP's supply chain members are driving further action through CDP's Action Exchange initiative which provides a forum for change by promoting collaboration between major purchasers, suppliers and solutions providers.

Suppliers, meanwhile, should recognize that it is in their own interest to embrace more sustainable modes of operation. Not only do these offer a means to reduce costs by driving efficiency in resource use, but sustainability is likely to become a key differentiator in the marketplace.

Finally, CDP urges policymakers must acknowledge their responsibility, and provide regulatory support to encourage companies to address climate risks.

Despite the growing threat posed by climate change, the global response is falling short of what is needed. All the key metrics tracked in this year's supply chain program are either stagnant or only marginally improving. Uncertain regulatory environments, volatile energy prices and economic challenges all continue to create headwinds. To respond, companies must expand their sustainability strategies to exploit digital technology.

In earlier supply chain reports, we have sought to demonstrate the business case for addressing sustainability issues, and to explain how suppliers and their customers can enable action on climate change and water. But the business case in itself is not sufficient. Projects and initiatives compete for limited organizational resources. Customers struggle to extend their influence beyond Tier 1 suppliers. Progress remains slow.

Action on climate change, then, should offer clear competitive advantage to pioneers. We believe that such competitive advantage can be harnessed by expanding your sustainability strategies to exploit the opportunities presented by digital technologies, efficiently leveraging talent, and reimagining operating models - while maintaining focus on the ultimate outcome, namely

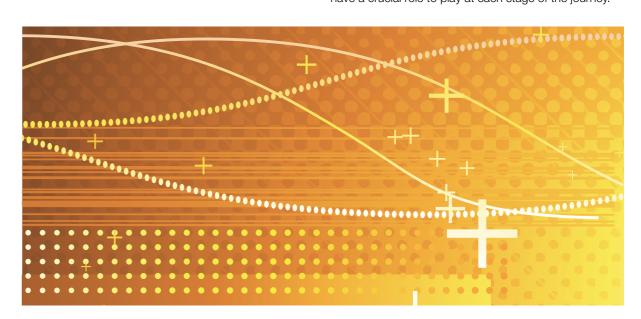
sustainability goals.

Digital technologies promise to transform how business operates. They offer four advantages - connectivity, intelligence, scale and speed. Connectivity can promote transparency, traceability, real-time information exchange and collaboration between partners in supply networks. Connected suppliers can spread awareness, share knowledge and co-create to find new solutions to carbon and water challenges. Intelligence drawn from connected supply networks can help companies identify carbon hotspots and water-related business risks in their value chains. Plug-and-play access to talent and infrastructure, enabled by digital technologies, would help address these concerns at a scale and speed never seen before.

Talent, meanwhile, will remain crucial to delivering advantage. But sustainability outperformance, in particular, requires a new range of skillsets that may not be readily at hand. Companies will need support. Fortunately, technological advance and digital transformation means that support can be more easily accessed than in the past, whether through closer connections up and down the supply chain or, indeed, outsourced to specialist firms.

Technology is also enabling greater flexibility in operating models. While operating models traditionally have been somewhat fixed, companies will increasingly have the ability to align their operating models to drive their sustainability agenda and derive value. For example, companies focused on cost would find aligning their operating models towards addressing resource and energy efficiency-related challenges more relevant. Those which are brand or quality conscious would find supply chain traceability and brand communication more important hotspots. Each of these priorities would require involvement of different functions across the organization at different levels of intensity.

Digital transformation is central to each of these themes. As suppliers move from reporting, to target setting, to performance improvement and innovation, digital will have a crucial role to play at each stage of the journey.





Every business is now a digital business and every high performing supply chain is a digital supply chain. As supply chains transform into digital supply networks, we can expect sustainability performance to improve.

Introduction

The context

Climate change is, once again, rising up the global agenda. Not since the failed Copenhagen climate talks at the end of 2009 has the issue been so widely discussed. At the end of this year, the climate talks in Paris are set to deliver an international agreement to replace the 1997 Kyoto Protocol.

Momentum is building. The US, China and the EU have proposed the domestic emissions reduction plans that they plan to 'bid in' to the negotiation process. Analysts expect a growing flurry of commitments, backed with tougher domestic policies and regulations, as 2015 unfolds.

These international negotiations and the associated domestic policies are not occurring in a vacuum. They are taking place in the context of growing scientific certainty around the effects of greenhouse gas emissions, and growing public support for taking action to avoid dangerous climate change.

More extreme temperatures and patterns of precipitation. New climate-related regulations and policies. Growing consumer concerns. Changing patterns of consumption. These are the realities that businesses must factor in, both in regard to their own operations, and in their supply chains.

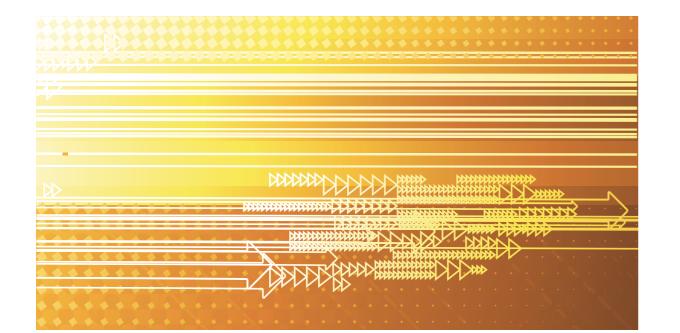
The CDP supply chain program

CDP runs its supply chain program to better understand how global businesses are managing climate risks and how they are positioned to exploit the associated opportunities - and to encourage both purchasing companies and their suppliers to take action. For this year's report, the 66 multinational companies that make up the program's membership requested that 6,503 of their suppliers answer a series of questions on climate risks and opportunities. Of these, 1,313 in sectors considered water-exposed were also asked about water risk exposures and management.

The response was the highest yet: 3,396 companies answered the climate risk questionnaire. The response rate of 52% was up marginally on last year, when 51% of suppliers, a total of 2,868 companies, responded. Among the water-exposed sub-set, 50% (666) responded.

The questionnaire has generated the world's largest data set addressing corporate climate risk management. CDP has, once again, worked with Accenture Strategy to analyze this data, and draw insights about how supply chains around the world are responding to the risks and opportunities presented by climate change.

In addition to the analysis carried out on the global data set, this year we have also analyzed the supply chain data at the country level, examining trends in 11 key jurisdictions: Brazil, Canada, China, France, Germany, India, Italy, Japan, Spain, the United Kingdom and the United States. This analysis offers a first-of-itskind snapshot of the climate risks and opportunities faced by suppliers in these countries, and an objective assessment of how prepared they are to manage and seize them.



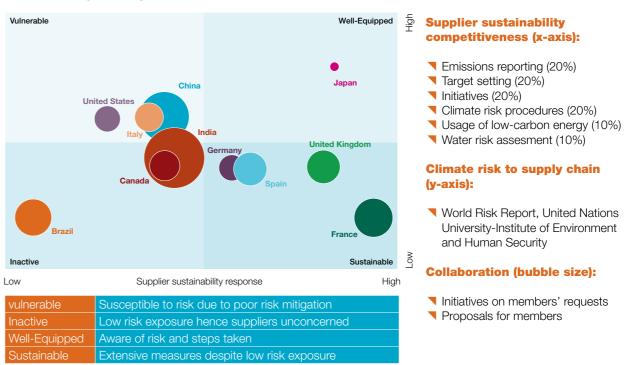
The company responses to this year's supply chain program allows a picture to emerge of the climate resilience of supply chains at the national level – and allows those countries to be compared with each other. Eleven jurisdictions were analyzed, chosen based on the number of supplier responses, and with the aim of covering the major global economies and the home markets of the majority of CDP supply chain member companies.

1. Sustainability risk/response matrix

chain

supply

2



Sustainability risk/response matrix

The Y-axis measures the climate risk faced by each country. This is based upon research carried out by the United Nations University's Institute of Environment and Human Security,¹ which seeks to provide an objective assessment of the environmental risk faced by each country. The assessment is based on the extent to which entities (population, conditions of built-up areas, infrastructure component, environmental area) are exposed to the impacts of one or more natural hazards (earthquakes, cyclones, droughts, floods and sea level rise)



We have mapped the eleven countries on a Sustainability Risk/Response Matrix to show how they relate to each other across an aggregated number of metrics. Put simply, the Y-axis offers a measurement of the inherent climate risk faced by each country, while the X-axis measures how well suppliers are placed, on average, to address sustainability issues - CDP data is used to assess how well prepared they are to meet the inherent environmental risk in that jurisdiction.

The X-Axis, meanwhile, measures the preparedness of suppliers to meet the climate risks they face. The country positions are derived from the suppliers' average scores for emissions reporting, target setting, emission reduction initiatives, climate risk procedures, uptake of lowcarbon energy and water risk assessment.²

The combination of the two scores places each country in one of the four quadrants, which are labeled as follows:

- **Vulnerable:** susceptible to environmental risk due to poor risk mitigation.
- **Inactive:** low risk exposure, leading to low levels of concern among suppliers.
- **Well-equipped:** high levels of risk, but matched with awareness and action taken.
- **Sustainable:** low risk exposure, but extensive action taken nonetheless.

Meanwhile, the size of each bubble indicates the willingness for suppliers in that jurisdiction to collaborate with their value chain partners on emission reduction initiatives. It shows how open they are to pursue initiatives suggested by their customers, and how likely they are to propose collaborative initiatives themselves. Companies which collaborate along their value chain are more likely to reduce emissions, and more likely to generate financial savings from emission reductions than those which do not.

A country's position on the Y-axis is, to some extent, fixed, in that it is dictated by physical environmental exposures. However, the size of each country's bubble is an indicator of the potential of its supply chains to collectively move from the left to the right of the matrix.

A more detailed commentary for these 11 countries is provided on pages 12-33 of this report. But the matrix offers some striking takeaway findings of crucial importance to global supply chain managers.

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High levels of climate risk in key supply chains, and inadequate supplier response

- The US, China and Italy fall within the 'vulnerable' guadrant. Suppliers in these countries both face high climate risks and have undertaken relatively little in the way of mitigation.
- US suppliers show limited appetite for cooperation, raising concerns given the relatively high vulnerability of the country to climate-related disasters such as superstorm Sandy.
- India and Canada are slightly less exposed to climate risks, but also suppliers in these countries are not doing enough to manage these risks. Indian companies, in particular, demonstrate a low propensity to report on emissions.
- Suppliers in Brazil have done the least to manage climate exposures – and recent water shortages indicate these may be higher than the risk/response matrix suggests.
- Among European countries, which have traditionally been relatively proactive on climate risk, Italy is lagging the pack, and its suppliers show limited openness to cooperation.

But opportunities exist for collaboration and high-return investment

- Suppliers in China and India demonstrate a high propensity to collaborate with supply chain partners to reduce climate risk.
- Further analysis shows that companies in China and India deliver the greatest return on investment in terms of carbon and monetary savings reported - further suggesting the fruitful opportunities for collaboration that exist in these two countries (see figure below).



The message is unambiguous: suppliers in major economies in both the developed and developing world are underperforming. They are not responding to high and potentially rising levels of climate exposure, and they are imperiling their economic sustainability and that of their customers.

The matrix necessarily only tells part of the story, and the averaging involved masks the performance of leaders and laggards within a jurisdiction. The matrix does allow, however, supply chain program member companies and other international buyers to guickly assess the aggregate sustainability position of its supply chains, and should prompt an initial high-level analysis of supply chain vulnerability and opportunity.

> In addition to the country-level comparison, the CDP supply chain program data also provides a wealth of data and insights about global trends. It also provides numerous examples of how suppliers and their customers are responding to the climate risks they face.

Guest commentary – The Business Case for Corporate Water Stewardship in Your Supply Chain

For many companies and industry sectors, the vast majority of their water use and water-related risks and impacts are located in their supply chain, rather than their direct operations. For example, only 6% of Nike's water footprint comes from its owned- and operated-facilities, while 73% is used in the production of its raw materials, especially cotton. MolsonCoors reports that 98% of its water footprint is accounted for by its supply chain, as a result of the production of barley and other agricultural commodities.

This should not come as a great surprise; according to the Food and Agriculture Organization (FAO), agriculture accounts for about 70% of the world's water withdrawals. As such, for companies with significant agricultural inputs, the majority of their water footprint is linked to agricultural suppliers. As water stress continues to grow more severe and expand into new regions, companies are much more likely to experience rising costs of supplies, if not actual disruptions to supply. This means higher input costs, lower profits, and potentially an inability to maintain production rates.

PACIFIC INSTITUTE



For example, supply chain managers might consider the following questions:

Is my supply chain overly concentrated in jurisdictions with high climate risk?

Are my suppliers in a particular jurisdiction sufficiently aware of the climate risks they face?

Vhat is the propensity of companies within my supply chain to collaborate to reduce sustainability exposures?

What is the propensity of my supply chain to respond to those risks?

However, water use is not the only way in which water-related risks and impacts emanate from suppliers. Many suppliers still do not provide adequate access to drinking water and sanitation for their employees. This not only stymies productivity, but makes the suppliers – and the companies associated with them – vulnerable to brand damage. Similarly, many suppliers across the world discharge contaminated wastewater into drinking water sources and ecosystems, often leading to community outcry and a vulnerable license to operate. Corporate water stewardship offers a tool to better understand and manage this wide range of water-related risks and impacts in the supply chain.

The Global Picture

Globally, the information we've collected shows progress in some areas, a plateauing in others and, in some metrics, a reversal of the progress seen in earlier years. It is important to note that more suppliers than ever before have responded to the questionnaire. More responding suppliers are setting emissions targets and tapping clean energy sources than ever before, in both absolute and percentage terms.

But, although the absolute number of suppliers reporting emissions through the program is higher than ever, but the proportion of companies responding relative to the number asked remains constant – and collaboration between suppliers and customers along the value chain has fallen back. In 2014, 50% of suppliers engaged with value chain partners - down from 56% in 2013.

Climate risk management on the rise

The good news is that the data shows that suppliers are becoming better at managing climate change risk. The percentage of suppliers setting emissions targets – a crucial and advanced component of climate risk management – is showing a steady upward trend. In 2014, 48% of suppliers set targets, up from 44% in 2013 and 39% in 2012.

Leading examples include Waste Management, Inc., which aims to reduce its scope 1 and mobile GHG emissions by 15% by 2020, offering its customers reduced scope 3 emissions, and materials firm DuPont, whose current target is a 15% reduction from 2004 levels by 2015.

There are also positive trends in a number of other climate risk management metrics. The percentage of suppliers implementing procedures to tackle climate change has remained steady at 62%, despite the increased number of respondents.

For example, Brazilian food processor Marfrig has responded to requests from a number of major customers by, among other things, introducing a webbased global data collection system to support its carbon management. And as part of its environmental commitment with its manufacturers including Imperial Tobacco, Spanish logistics company Grupo Logista has revised its environmental policies and established a group-wide strategic plan to address climate change issues.

This increased focus on climate risk management is producing results. There has been a small improvement in the percentage of suppliers reporting that their emission reduction initiatives are producing monetary savings, while those reporting carbon dioxide savings has held steady. Globally, 33% of suppliers report monetary savings, up from 32% in 2013 and 29% in 2012. Meanwhile, the figures for those reporting carbon savings stood at 40% in 2014, 40% in 2013 and 34% in 2012.

Examples include German pharma giant Baver, which has reported an investment of \$5 million in process improvements that deliver annual reductions of 51,000 tonnes of carbon dioxide and \$5.2 million in cost savings. Packaging manufacturer Tetrapak has reported annual savings of \$6.3 million and emission reductions of 30,000 tonnes from \$16.5 million-worth of building energy efficiency investments. Italian equipment maker CNH Industrial has reported \$4.3 million in annual savings from a total of \$12.4 million of energy efficiency and renewable energy investments that also reduce emissions by 12,437 tonnes/year.

"We set a goal that by the end of 2015 the majority of our supply chain spend with strategic suppliers would be with those suppliers who tracked their own greenhouse gas emissions and have specific greenhouse gas goals". - AT&T Inc.

Suppliers are embracing low-carbon energy

The percentage of those suppliers reporting emission reduction initiatives who are implementing low-carbon energy projects is holding steady at 22% this year, the same level as in 2013. Across the world, the falling cost of wind and solar power is encouraging companies to shift away from fossil fuel energy. However, there are countervailing forces at play. In a number of jurisdictions, in Europe particularly, cash-strapped governments have reined in renewable energy subsidy programs, increasing the costs paid by end-users.

Nonetheless, companies are continuing to invest. For example, British pharmaceutical company GlaxoSmithKline has installed a turbine at one of its Scottish sites, and plans to install additional turbines there and at a site in the Republic of Ireland, investing some \$6 million. Swedish pulp and paper company Holmen has co-developed a 51-megawatt wind farm at Varsvik, at a total cost of \$91 million. And US telecoms company Verizon has invested some \$160 million in both fuel cells and solar power, and is on target to become the largest solar-power producer amongst U.S. communication companies.

Emissions disclosure is stagnant

This year's data also reveals some more worrying trends. Of particular concern is a plateau in the percentage of suppliers disclosing emissions data. This year, 65% of suppliers reported scope 1 emissions - that is, those emissions from their own direct operations. That figure has dipped slightly, from 66% last year. Similarly, 64% disclosed scope 2 emissions, those associated with the consumption of bought electricity, compared with 65% in 2013.

The monitoring and disclosure of greenhouse gas emissions is the starting point for climate change management. No meaningful assessment and management of climate change risk can be attempted without an accurate picture of the emissions footprint of an organization, preferably using standardized methodologies and with third-party verification.

The story behind the data is clear: where there is regulatory certainty around measurement and reporting. such as in Japan or France, high percentages of suppliers also disclose - even when they are not explicitly captured by regulation. Where the signals from government are weak or non-existent – such as in Brazil, China, India and the US – reporting levels are disappointing.

Collaboration along the value chain is lacking

Collaboration between suppliers and their customers in addressing climate risks and opportunities is fundamental to making supply chains more resilient and more efficient. It is only through collaboration that companies can tackle climate risks that lie outside their direct control. And collaboration often helps companies identify opportunities or spot risks that might have gone unnoticed.

As the data continues to show, companies that engage with one or more of their suppliers, consumers, or other partners are more than twice as likely to see a financial return from their emissions reductions investments, and almost twice as likely to reduce emissions, than those who do not engage with their value chain.

Examples include Walmart working with Californiabased Java Apparel Group, which encouraged the latter to formalize its carbon footprinting and efficiency improvement goals. The process helped the clothes maker discover its "risks and opportunities in scope 1, scope 2, and scope 3" emissions, it said.

Similarly, leading companies such as L'Oréal realize the importance of collaboration through effective supplier evaluation framework.

"Engaging and training L'Oréal buyers has made it possible to mobilise suppliers and convince that measures aimed at reducing greenhouse gas emissions play an inevitable part of a company's global performance. CDP supply chain scoring is then part of supplier's evaluation. Suppliers' performance on climate change is fully included in supplier relationship and challenged during business reviews." - L'Oréal

Meanwhile, transportation services company Penske provided its customer General Motors with data collection and application requirements that enabled GM to join the US Environmental Protection Agency's SmartWay Program, allowing the car giant to identify opportunities to save fuel and reduce emissions. And IT giant Dell reports that it engages actively with 132 suppliers who collectively constitute 90% of its total procurement spend.

But the percentage of suppliers working with their value chain partners has slipped this year. As noted above, half of suppliers (50%) said they are engaging along the value chain in 2014, down from 56% in 2013.

However, it also has the potential to hit operations and revenue more rapidly than climate risk. While most climate-related issues – such as tightening regulations - tend to be somewhat gradual in their effects, water risk can have immediate impacts. A lack of water, or a lack of water of adequate quality, can lead to operations being shut down. Flooding can quickly paralyze supply chains.

Moreover, there is a lack of integration of water risk into wider corporate risk management systems. This poses risks to suppliers and to their customers. Only 16% of those responding to the water risk guestionnaire have carried out an integrated water-risk assessment covering both direct operations and their supply chain. And only 27% of responding companies have allocated board-level responsibility for water risk.

resilience.

metrics.

Anecdotal evidence from the responses suggests that some suppliers have been disappointed in terms of the response from partners in earlier years, making them less inclined to continue with collaboration initiatives.

Water risk remains a concern – despite its potential for shocks.

Water risk assessment is, generally speaking, less advanced than climate risk management. As a discipline, it is more novel, and it is arguably more complex to assess water risk than it is to analyze carbon exposures.

So it is a concern that little more than half (55%) of those suppliers to whom the water questionnaire was sent had carried out a water risk assessment in 2014. Of those, more than one third (34%) discovered at least one facility exposed to water risks that could generate a "substantive change" in their business, operations, revenue or expenditure.

Regulation remains crucial to supply chain resilience

A supportive regulatory and policy environment is critical to effective water and climate action. Across a range of factors and metrics, regulation and policy leadership proves to be a key predictor of supply chain climate

In Japan, close cooperation between business and policymakers has ensured high levels of reporting, target setting and carbon savings. Across most European countries, the combination of clear guidance from Brussels, complemented by national-level policy, has led to similarly above-average performance across most

In contrast, countries with limited policy guidance are underperforming. They are accumulating climate risks that could either manifest themselves in a lack of preparedness when climate-related disasters strike, or a loss of competitiveness in the eyes of customers who risk switching to more sustainability-oriented suppliers.

CDP believes that policymakers need to better recognize the risks and opportunities presented by climate change, and respond with regulatory support for action by suppliers.

Brazil

Suppliers unconcerned about substantial climate risks (118 responses)

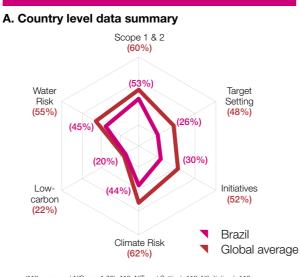
Country Snapshot



Brazil benefits from abundant natural resources – including substantial renewable energy capacity – while sustainability regulation is moving in the right direction. But suppliers are proving slow to embrace the opportunities presented and are insufficiently concerned about climate change risks – especially those posed by water issues. This is particularly troubling given Brazil's role in a number of global natural resource supply chains such as coffee, livestock and timber.

More positively, government at the state and federal levels are introducing environmental regulations, such as vehicle emissions standards and air pollution controls, which should improve performance.

- Brazilian suppliers come last in terms of emissions target setting and investment. Just 26% of suppliers in Brazil set emission reduction targets – the lowest proportion among the 11 countries analyzed. The country is also a laggard in terms of implementing emissions reduction initiatives, with the percentage of suppliers doing so slipping to 30% from 35% last year, well below the global average of 52%.
- Suppliers are underestimating climate risks. Low levels of reporting and target setting may lead to companies underplaying the risks they face from climate change. Suppliers report lower levels of concern than the global average about regulations, physical risks and other climate risks.
- A lack of water risk management is of particular concern. Brazil is frequently hit by droughts, water shortages and flooding, and climate change will magnify these threats. The main reservoirs in Såo Paolo region, home to 40% of Brazil's industrial production, could run dry in early 2015³. However, half of those suppliers that responded to the water risk questions said they do not assess water risk, despite operating in sectors deemed to be exposed.



(118 responses) N(Scope 1 &2)=118; N(Target Setting)=118; N(Initiatives)=118 N(Climate Risk)=81; N(Low-carbon)=35; N(Water Risk)=11

- Scope 1 & 2: percent suppliers reporting scope 1 and scope 2 emissions
- Target setting: percent suppliers setting emission reduction targets
- Initiatives: percent suppliers implementing emission reducing initiative
- Climate risk: percent suppliers with procedures to assess climate risk
- Low-carbon: percent suppliers with low-carbon energy initiatives
- Water risk: percent suppliers with policies to assess water risk

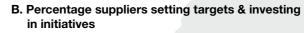
Supply chain implications and recommendations

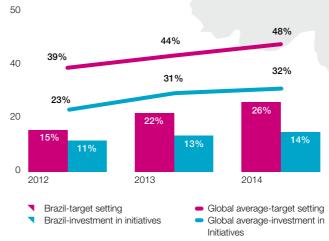
Performance starts with disclosure. Brazilian suppliers lag in reporting as well as target setting and investment. With a growing, increasingly environmentally concerned export base, Brazilian suppliers need to demonstrate progress in reducing emissions – and the first step must be to report their emissions.

Improved climate risk management is needed.

Fewer than half (44%) of suppliers have documented processes for managing climate risks – substantially lower than the global average of 62%. Rapid changes in rainfall and temperature patterns have adversely affected Brazilian suppliers, especially in agricultural sectors, while tightening environmental regulations require anticipation and preparation.

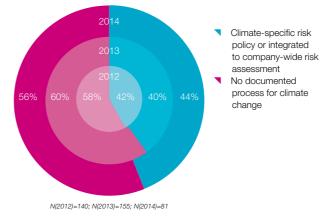
Water risk needs particular attention. Suppliers need to evaluate the effects on their operations of water rationing and flooding, and implement water management systems, with a view to reducing water waste and recycling water.





Brazil Target Setting N(2012)=197; N(2013)=192; N(2014)=113 Brazil Investment in Initiatives N(2012)=-202; N(2013)=197; N(2014)=118 Global Target Setting N(2012)=2380; N(2013)=278; N(2014)=-3396 Global Investment in Initiatives N(2012)=2415; N(2013)=2868; N(2014)=-3396

C. Risk management procedures for climate change (percentage suppliers)



D. Water risk assessment

Integrated into company-wide process—both direct operations & supply chain
18%

Integrated into company-wide process-direct operations only
18%

Not assessed

Independent of other risk assessments across some direct operations 9%

55%

Percentage of suppliers

3. http://www.businessinsider.com/r-election-year-water-crisis-taking-a-tollon-brazils-economy-2014-10?IR=T



Through the use of CDP supply chain program responses, Braskem aims to enhance its relationships with its suppliers and increase the network of companies engaged in sustainability. Those responsible for contracts with suppliers have a very important role, interacting with the companies that are just beginning the process of introducing climate change issues in their management.

Braskem



Canada

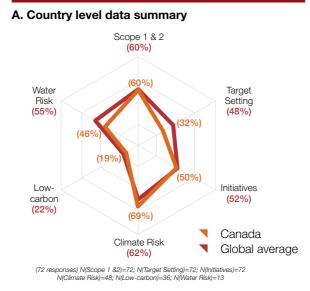
Performance needs to improve (72 responses)

Country Snapshot



Canada boasts historically high levels of concern and regulation around sustainability, although its ability to achieve its 2020 emissions targets is under question. Canadian suppliers have moved rapidly in recent years to introduce climate risk procedures, partly in response to climate-linked damages such as those from widespread flooding in 2013. A comprehensive greenhouse gas reporting program helps explain high levels of scope 1 and 2 reporting. But performance generally is below the global average and is sliding. Suppliers need to up their game.

- Few Canadian suppliers set emissions targets. This is a major concern. The percentage is the lowest among the developed economies analyzed, and has slid from 33% to 32% last year.
- They are also lagging in carbon and monetary savings. 33% of suppliers report that they have implemented initiatives that reduce emissions, below the global average of 40%, while those reporting monetary savings stands at 26%, seven percentage points below average. However, both of those metrics are moving in the right direction compared with previous years.
- Water risk assessment remains low. Despite recent water-related impacts on the Canadian economy,⁴ levels of water risk management by Canadian suppliers are second lowest among the 11 jurisdictions. Just 46% of suppliers responding to the water risk information request have carried out a water risk assessment.



- Scope 1 & 2: percent suppliers reporting scope 1 and scope 2 emissions
- **Target setting:** percent suppliers setting emission reduction targets
- Initiatives: percent suppliers implementing emission reducing initiative
- Climate risk: percent suppliers with procedures to assess climate risk
- Low-carbon: percent suppliers with low-carbon energy initiatives
- Water risk: percent suppliers with policies to assess water risk

Supply chain implications and recommendations

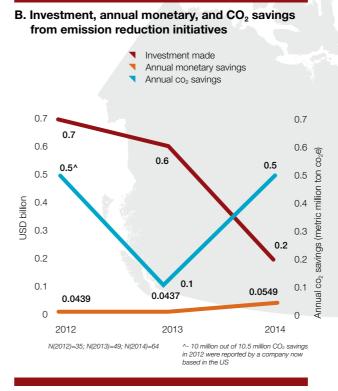
Major purchasing companies should encourage Canadian suppliers to set emissions targets. Target setting has been shown to drive performance. Specific attention should be paid to rapid investment in natural gas, which poses environmental challenges compared to low-carbon energy, and the overall dependence of Canadian suppliers on fossil fuel energy.

Suppliers and their customers should enhance

collaboration as a means to increase the effectiveness of emission reduction initiatives. Collaboration along the supply chain makes it more likely that those initiatives succeed in reducing carbon, and saving money. Suppliers in Canada have voiced a desire to collaborate around transportation optimization, and they are typically responsive to member requests.

Suppliers should improve performance on water risk management, especially in the context of recent flooding events, and carry out water risk assessment and invest in monitoring tools to reduce exposures. Major purchasers should specifically identify suppliers with crucial operations in flood-prone areas.

 http://www.cbc.ca/news/canada/calgary/alberta-floods-costliest-natural-disaster-in-canadian-history-1.1864599



C. Water risk assessment

Integrated into company-wide process—both direct operations & supply chain

Integrated into company-wide process-direct operations only

Not assessed

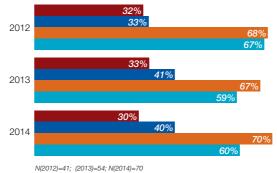
<u>54%</u>

Independent of other risk assessments across some direct operations
15%

Percentage of suppliers

N(2014)=13

D. Percentage of suppliers setting targetsemission reduction initiatives



- Percentage suppliers setting targets
- Percentage suppliers with targets and implementing initiatives
- Percentage suppliers not setting targets
- Percentage suppliers not having targets but implementing initiatives





At CN we offer various solutions to help our customers reduce their carbon emissions, including fuel efficient services and a GHG carbon calculator that enables our customers to calculate the carbon savings from switching from truck to rail, based on our modal shift quantification protocol.

Canadian National Railway Company, Industrial Transportation Supplier



China

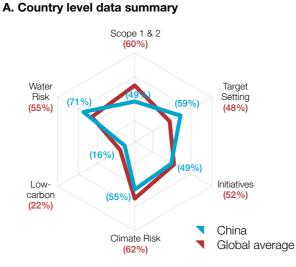
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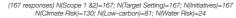
Climate risks are accumulating, but so is the response from the world's biggest emitter (167 responses)

Country Snapshot

China, the workshop of the world and its largest carbon emitter. faces acute climate risks and a comparative lack of enforced regulation encouraging more sustainable economic activity. However, the direction of policy from Beijing is clear, as are the demands of many of China's international customers for more sustainable supply chains. This year's study has revealed a big jump in emissions target setting among Chinese suppliers, and an aboveaverage embrace of water risk assessment.

- China scores poorest among the 11 countries analyzed for emissions reporting, with just 56% reporting scope 1 and 53% scope 2 emissions.
- The percentage of suppliers with climate risk processes in place lags the global average, standing at 55% compared with the average among the 11 jurisdictions of 62%. And, while the percentage has been steadily increasing, this has been in response to frequent climate-related disasters, meaning risk management tends to be reactive rather than forward-looking.
- The extent of engagement with value chains has fallen among Chinese suppliers, and remains substantially below the global average, with 59% failing to engage. Investment in emission reductions is also very low, and indeed fell in 2014. However suppliers are responsive to requests from their customers to explore collaborative initiatives.
- Chinese suppliers are trailing in terms of using low-carbon energy, despite high-level government support for greater renewable energy penetration. Only 16% of those who implemented emission reduction initiatives invested in low-carbon energy sources this year, down fractionally from 19% in 2013, and far below the global average of 22%.





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- Water risk: percent suppliers with policies to assess water risk

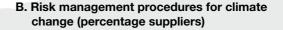
Supply chain implications and recommendations

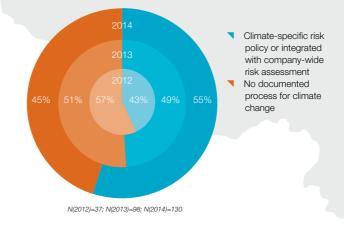
With China introducing mandatory cap-and-trade programs, including plans for a national system as early as 2016, **suppliers need to improve emissions data collection and reporting** in preparation. Suppliers need to report against internationally recognized standards, to ensure customer and consumer confidence.

Given they are very export-orientated, Chinese suppliers have a high propensity to execute requests from members. **Major purchasing companies should encourage target setting,** as such targets tend to prompt significant efforts from Chinese suppliers. 45% of Chinese suppliers report carrying out an emissions reduction initiative at a customer's request, compared with the global average of 19%.

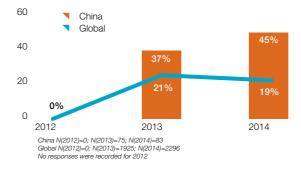
Purchasers need to urge Chinese suppliers to adopt lower-carbon energy sources, especially given looming stricter controls on fossil energy and greater incentives for renewables. Given its higher costs in China, private investment is key to making it a viable option.

Suppliers need to get ahead of climate risk by putting policies and processes in place before climate-related disasters cause disruption – not afterwards. Meanwhile, major purchasers would be advised to reassess their portfolio of suppliers in vulnerable regions and consider alternative sourcing strategies.

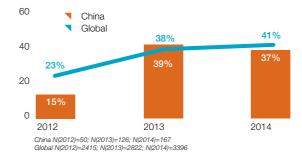




C. Initiatives on member request (percentage suppliers)



D. Proposals for members (percentage suppliers)



China represents a key market for Walmart's long-term sustainability strategy. In order to drive larger GHG impacts and realize significant potential savings, Walmart is inviting suppliers in China to participate in energy efficiency initiatives by the end of 2017. In total, this effort is designed to engage 70% of Walmart's sourcing business (by volume) in China while also building upon a strong history of collaboration in the region.

Walmart



France

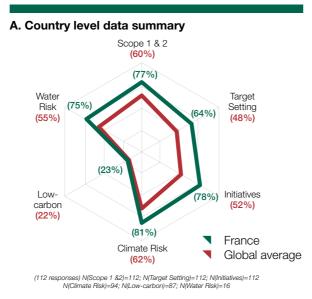
107

A leading position could be enhanced by greater investment (112 responses)

Country Snapshot

With a supportive policy and regulatory environment, and an engaged electorate, France boasts the second highest level of emissions disclosure among the 11 jurisdictions analyzed, and strong performance across most sustainability metrics. Its suppliers are particularly strong in engaging with their value chain partners to implement emission reduction initiatives. They are concerned, however, about the level of carbonand energy-related taxation, which they identify as a key climate risk.

- Target setting isn't embraced to the same degree as emissions reporting, which is widely adopted by suppliers. 77% report scope 1 and 2 emissions, while 64% of suppliers set targets, down fractionally from 65% last year, although comfortably above the global average of 48%.
- Customers' sensitivity towards climate change has increased, posing risks to French companies that do not sufficiently address their climate exposures. However, suppliers appear cognizant of these shifting attitudes, assisted by advanced risk management processes and procedures.
- Investment in emissions reduction initiatives has declined, from \$15.9 billion in 2013 to \$10.2 billion. While part of the reason is likely to be fall in equipment costs, cuts in subsidy payments for new projects and uncertainty about future support also took their toll.
- Two-thirds of French suppliers engage with their value chain partners – a higher figure than the global average of 50%. However, this means that **almost** one-third of suppliers do not engage their value chain on emissions reduction initiatives. French suppliers tend to be active in proposing initiatives to their customers, with 59% doing so, compared with the global average of 41%.



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- **Target setting:** percent suppliers setting emission reduction targets
- Initiatives: percent suppliers implementing emission reducing initiative
- Climate risk: percent suppliers with procedures to assess climate risk
- Low-carbon: percent suppliers with low-carbon energy initiatives
- Water risk: percent suppliers with policies to assess water risk

Supply chain implications and recommendations

Suppliers need to refocus investments in emissions reductions. With substantial investment already made, the 'easy wins' have most likely already been won. Suppliers need to focus on efficiency in project selection to ensure investments continue to deliver environmental and financial value.

French suppliers should consider investments in renewables in addition to the current focus on energy efficiency, as renewables are likely to become increasingly competitive.

Major purchasers should look to increase

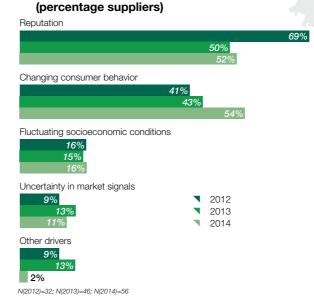
collaboration with French suppliers, who are likely to be open to proposals to work together on emission reduction initiatives. 59% of French suppliers have made proposals to members, but just 18% have carried out initiatives in response to member proposals.

B. Percentage suppliers reporting emissions & setting targets



Global Target Setting N(2012)=2380; N(2013)=2782; N(2014)=3396 Global Investment in Initiatives N(2012)=2415; N(2013)=2868; N(2014)=3396

C. Other climate-related risks



D. Collaboration across the value chain (percentage suppliers)



2014 N(2012)=0; N(2013)=68; N(2014)=98 No resources were recorded for 201



We prioritize engagement with suppliers by the volume of business, strategic significance and sustainability impact of the products and services they supply to us and our clients. We measure success by the number responding to CDP supply chain program, the scores and content of the responses.

Groupe Steria



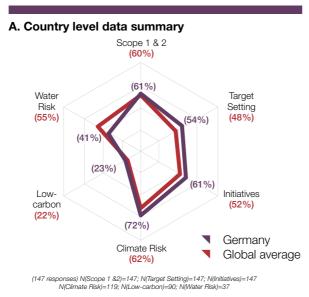
Germany

Sustainability leader needs to redouble efforts (147 responses)

Country Snapshot



Germany has an environmentally aware population and, by and large, a policy framework that is supportive of sustainability efforts. But high standards among German suppliers are slipping, and efforts need to be redoubled. At the national policy level, the accelerated nuclear phase-out has seen coal use jump dramatically, putting pressure on the country's climate targets.



- Scope 1 & 2: percent suppliers reporting scope 1 and scope 2 emissions
- Target setting: percent suppliers setting emission reduction targets
- Initiatives: percent suppliers implementing emission reducing initiative
- Climate risk: percent suppliers with procedures to assess climate risk
- ▼ Low-carbon: percent suppliers with low-carbon energy initiatives
- Water risk: percent suppliers with policies to assess water risk
- Emissions reporting across all scopes has fallen Supply chain implications between 2013 and 2014, with a particularly sharp drop in scope 1 reporting, from 78% in 2013 to 65% this year.
- Although German suppliers are collectively above average on target setting, CO₂ reductions, and monetary savings, all metrics have shown small declines year-on-year. Of particular concern is the sharp decrease in the percentage of respondents with climate risk management processes in place - from 82% to 72%.
- Suppliers are concerned about energy taxes, with 44% citing them as a key regulatory risk although almost as many (42%) consider them to represent an opportunity. Suppliers are responding by investing in renewables – 23% of the ones implementing emission reduction initiatives invested in low-carbon energy sources in the previous year.

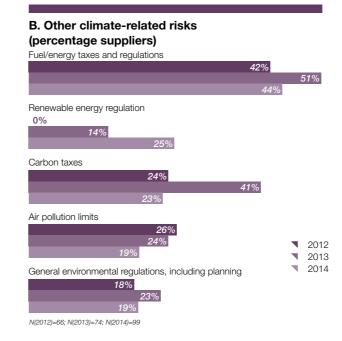
and recommendations

Major purchasers should redouble their encouragement of German suppliers to report and better manage their climate exposures, and collaborate on and invest in emission reduction initiatives.

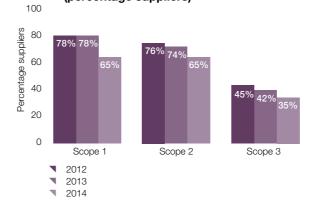
German suppliers have access to state-ofthe-art technologies and R&D capability, and should leverage these around energy efficiency, lowcarbon energy and process improvements to drive emissions reductions.

The sharp uptake in renewables is encouraging, and should be accelerated by suppliers – especially in the context of Germany's recent increased use of coal-fired energy in response to its nuclear phase-out.

German suppliers need to be mindful of increasingly environmentally conscious domestic consumers and should actively pursue product labeling programs.



C. Reporting trends in scope 1, 2 & 3 emissions (percentage suppliers)



N(2012)=82; N(2013)=107; N(2014)=147





After trying our own questionnaire with key suppliers, Deutsche Telekom decided to join CDP supply chain to reduce the reporting burden internally and externally. Our long-term objectives are to agree on specific emissions reductions - and help green our product portfolio.

Deutsche Telekom



ndia

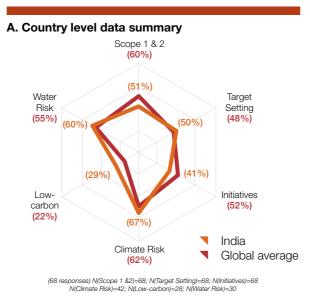
Policy paralysis raises climate risks (68 responses)

Country Snapshot



A steadily growing number of Indian suppliers are responding to CDP supply chain questionnaire, but – in percentage terms at least – disclosure and performance have been declining over the last two years. Despite the existence of dedicated ministerial departments for energy efficiency and renewable energy, a lack of policy direction from New Delhi is at least partly to blame. Nonetheless, multinationals could better engage with their Indian suppliers on emission reduction efforts.

- High levels of emissions reporting have fallen back – from 82% reporting scope 1 emissions in 2012 to 62% in 2014. The percentage decrease can be partly accounted for by increased supplier responses this year, against a background of mixed signals from the national government on the importance of tackling climate change.
- Investment in emissions reductions has fallen, despite the rising number of respondents. Just \$38 million of investments were reported in 2014, down from \$79 million in 2013. This is despite the country's enormous potential for reductions, with respondents citing policy uncertainty, poor infrastructure, failure to impose penalties and domestic-equipment rules as reasons for a disinclination to invest.
- India is relatively highly exposed to physical climate and water risks, such as flood and cyclones in coastal regions, and droughts in arid regions. However, one-third of suppliers still have no climate risk management processes in place. Concern about physical climate risk is low, with less than one-quarter of suppliers citing such risks.
- Indian suppliers are increasingly active in proposing emissions reduction initiatives to their value chain partners. But the percentage of suppliers implementing emissions reduction initiatives has dropped away, falling to 41% in 2014 from 65% in 2012.



- Scope 1 & 2: percent suppliers reporting scope 1 and scope 2 emissions
- **Target setting:** percent suppliers setting emission reduction targets
- Initiatives: percent suppliers implementing emission reducing initiative
- Climate risk: percent suppliers with procedures to assess climate risk
- Low-carbon: percent suppliers with low-carbon energy initiatives
- Water risk: percent suppliers with policies to assess water risk
- There has been an encouraging increase in the number of suppliers making investments in low-carbon energy – up to 29% of respondents who implemented emission reduction initiatives from 26% last year. This is despite concerns about continuing subsidy support.

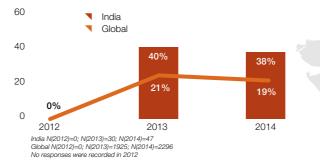
Supply chain implications and recommendations

Given the current lack of policy guidance from the national government, **suppliers should be more proactive around climate risk management.** Suppliers should be mindful of the need to cater to European suppliers, in particular, who are concerned about supplier sustainability performance.

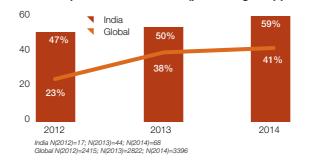
Major purchasers need to encourage Indian suppliers to consider their climate exposures more actively, as there is a clear under-analysis of climate risk.

India offers enormous potential for emissions reductions, and suppliers who are receptive to cooperation with their customers. **Major buyers should more actively explore collaboration opportunities,** but they should be prepared to help with funding and technology.

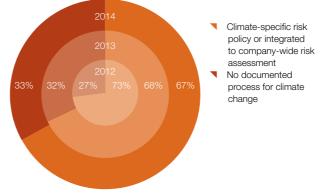
B. Initiatives on member request (percentage suppliers)



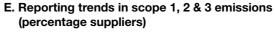
C. Proposals for members (percentage suppliers)

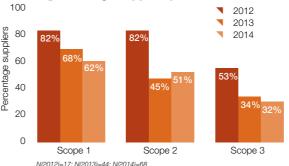


D. Risk management procedures for climate change (percentage suppliers)



N(2012)=15; N(2013)=31; N(2014)=42





22



The company has been engaging with the Government of India and local governments through sharing insights of the sector for the development of the right policy framework. It has been a participant in the Government of India's bilateral initiatives with Japanese and German institutions. The company participates actively in the associated technical discussions.

Tata Steel



Italy

Europe's laggard needs to step up (81 responses)

Country Snapshot



Italy is clearly lagging its European peers in its approach to emissions and climate risk. Two bright spots are to be found in its above-average uptake of low-carbon energy, and – in response to recent flooding episodes – its suppliers' integration of water issues into their risk management strategies.

Italy trails its European partners in terms of

three metrics have slipped since last year.

Less than half of suppliers have specific or

emissions reporting and is substantially below

the global average in target-setting. Fewer than

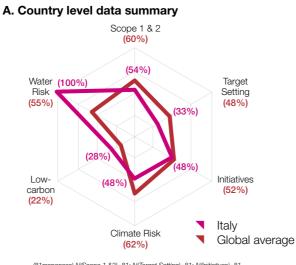
two-thirds of suppliers track scope 1 or 2 emissions,

while just 33% have emissions targets in place. All

integrated climate change procedures in place,

48% compared with a global average of 62%. This

percentage has declined since last year, when it



(81responses) N(Scope 1 &2)=81; N(Target Setting)=81; N(Initiatives)=81 N(Climate Risk)=58; N(Low-carbon)=39; N(Water Risk)=10

- Scope 1 & 2: percent suppliers reporting scope 1 and scope 2 emissions
- Target setting: percent suppliers setting emission reduction targets
- Initiatives: percent suppliers implementing emission reducing initiative
- Climate risk: percent suppliers with procedures to assess climate risk
- Low-carbon: percent suppliers with low-carbon energy initiatives
- Water risk: percent suppliers with policies to assess water risk

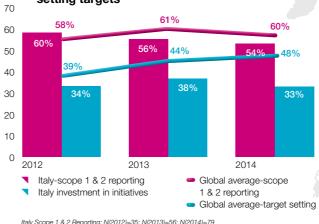
Supply chain implications and recommendations

Major purchasers need to encourage suppliers to more widely disclose, manage and reduce climate risks. Suppliers should start by assessing their climate risk exposure, and evaluating the effects of climaterelated events on their businesses in the past to build the case for action.

Suppliers should see rising energy taxes as an opportunity to explore greater uptake of renewable energy, given likely falls in the cost of low-carbon energy.

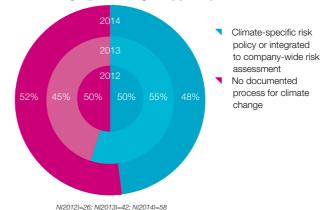
Italian companies should apply the lessons from integrating water risk assessment – where suppliers perform well – to wider climate change management.

B. Percentage suppliers reporting emissions & setting targets



Italy Scope 1 & 2 Reporting: N(2012)=35; N(2013)=56; N(2014)=79 Italy Investment in Initiatives: N(2012)=35; N(2013)=56; N(2014)=79 Global AV-Scope 1 & 2 Reporting: N(2012)=2415; N(2013)=2868; N(2014)=3396 Global Av-Investment in Initiatives: N(2012)=2415; N(2013)=2868; N(2014)=3396

C. Risk management procedures for climate change (percentage suppliers)



Reported investments in initiatives to reduce emissions have fallen by more than a half, to \$1.4 billion from \$3.5 billion, and more than half of suppliers (57%) don't engage with their value chain partners in implementing emission reduction initiatives.

stood at 55%.

Expenditure on energy has been rising across most industry sectors, primarily due to higher energy taxes, and earlier growth in the use of low-carbon energy – In 2013, 35% of suppliers used low-carbon energy but this has fallen back as the government trims incentives.



Pirelli is collaborating with its key suppliers to find opportunities to decrease its own organizational carbon footprint. Supplier engagement is substantially driven by the Pirelli Green Purchasing Policy, and is facilitated through CDP's supply chain request

Pirelli



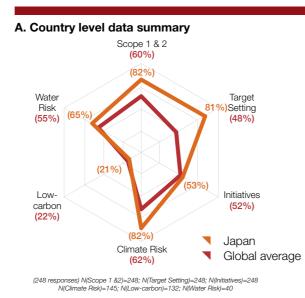
Japan

Policy leaves suppliers at a sustainability crossroads (248 responses)

Country Snapshot



Japanese suppliers can claim some of the highest levels of emissions reporting, target setting and climate risk awareness and management. But Japan's energy and environmental policy is in flux, with the current government backtracking on earlier commitments. Sustainability momentum among suppliers is stalling.



- Scope 1 & 2: percent suppliers reporting scope 1 and scope 2 emissions
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- Initiatives: percent suppliers implementing emission reducing initiative
- Climate risk: percent suppliers with procedures to assess climate risk
- Low-carbon: percent suppliers with low-carbon energy initiatives
 Water risk: percent suppliers with policies to assess water risk
- High levels of reporting and target setting. Japan's suppliers reporting to CDP lead the world,
 Supply chain and recommendation

on average, in terms of emissions disclosure, targets and climate risk management. However, several of these metrics have slipped since the last supplier questionnaire response, and levels of collaboration across the value chain are low.

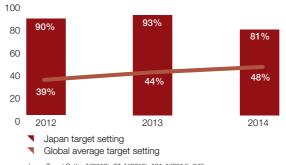
- Energy and climate policy in flux. The 2011 Fukushima nuclear incident led to the shutdown of Japan's nuclear fleet, and an increased reliance on fossil fuel generation.⁵ This is putting the country's climate targets in doubt, and has also raised energy costs. More positively, it has increased interest among suppliers in renewable energy – although policy uncertainty has discouraged low-carbon investment.⁶
- Water risk is insufficiently integrated. The country's exposure to a range of climate risks has meant that suppliers tend to be well prepared. However, there is evidence that they are somewhat complacent about potential water risks.

Supply chain implications and recommendations

Major purchasers should encourage Japanese suppliers to rediscover their motivations for disclosing emissions and setting targets – namely, to ensure compliance with regulations and to do their part in addressing climate change.

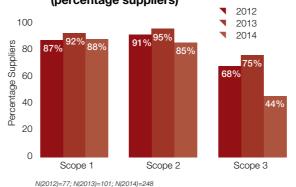
Suppliers should increase investment in renewables, as failure to do so could leave them overly reliant on unsustainable and potentially expensive fossil fuel energy.

Suppliers and members should seek opportunities to collaborate on sustainability initiatives, given the likely existence of low-cost emission reduction opportunities. B. Percentage suppliers setting targets



Japan Target Setting/N(2012)=77; N(2013)=101; N(2014)=248 Global Target Setting N(2012)=2380; N(2013)=2782; N(2014)=3396

C. Reporting trends in scope 1, 2 & 3 emissions (percentage suppliers)



D. Water risk assessment

Independently of other risk assessments across the supply chain 0%

Other 5%

Independently of other risk assessments—both direct operations and supply chain

Integrated into company-wide process—both direct operations & supply chain
18%

25%

35%

Integrated into company-wide process-direct operations only

Integrated into company-wide process—supply chain only 0%

Not assessed

Independent of other risk assessments across some direct operations

Percentage of suppliers
 N(2014)=40

- http://www.theguardian.com/environment/2012/may/03/japan-nuclearpower-post-fukushima
- See US Energy Information Administration website http://www.eia.gov/ countries/cab.cfm?fips=ja

Nissan believes engagement with the entire value chain is the key for our sustainable business operations. The CDP supply chain program helps us to promote collaboration with suppliers towards achievement of the company's environmental philosophy, 'Symbiosis of People, Vehicles and Nature'.

Nissan



Spain

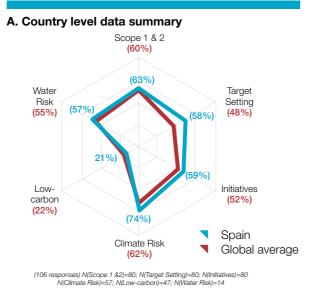
A strong performer, but with room for improvement (106 responses)

Country Snapshot

107 In common with other European countries, Spain is around or above average for most sustainability metrics measured by CDP supply chain program. Companies have historically enjoyed strong support for renewables and energy efficiency measures from regional and national governments. Suppliers' investment in low-carbon energy is somewhat encouraging, with the percentage jumping to 21% from just 5% of those who implemented emission reduction initiatives two years ago. However, this progress is likely to slow or reverse in the face of cutbacks to support programs.

- Emissions reporting levels have plateaued, with around two-thirds reporting scope 1 & 2 emissions

 although fewer than half report scope 3 emissions.
 Similarly, the percentage of companies setting emissions reduction targets is the same this year, at 58%, as last.
- There has been a sharp fall in the percentage of suppliers engaging with their value chain partners, to 51% from 81% last year. Levels of collaboration are low, with fewer than 10% carrying out requests from customers over the past two years, half the global average of 19%.
- Suppliers are relatively sophisticated in terms of climate risk management, although more than one-quarter (26%) have no documented climate change processes in place – up from 22% last year.



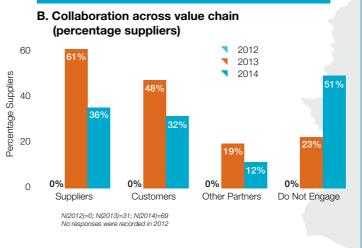
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Supply chain implications and recommendations

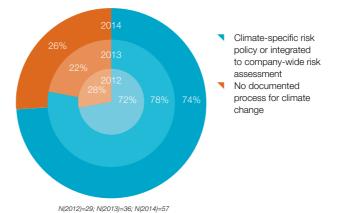
CDP supply chain member companies need to encourage lagging companies to disclose more information on emissions levels, and invest in the systems to monitor and manage climate risks.

Levels of collaboration need to be higher – Spanish suppliers are too often acting in isolation on sustainability initiatives, potentially foregoing opportunities.

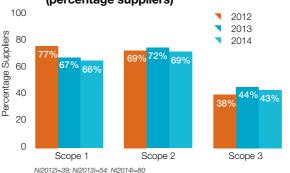
The outlook for continued renewable energy uptake is highly uncertain, given the government's rollback of subsidy support. Government and suppliers should recognize the climate and energy security benefits of low-carbon energy sources.



C. Risk management procedures for climate change (percentage suppliers)









As a supplier of components to the automobile sector, our added value lies in our technological capacity to develop new products and innovative solutions that allow us to obtain lighter parts that help our customers reduce their CO₂ emissions, as less weight means less fuel consumption and fewer emissions generated during the vehicle use stage.

Gestamp, Automotive Component Manufacturer



United Kingdom

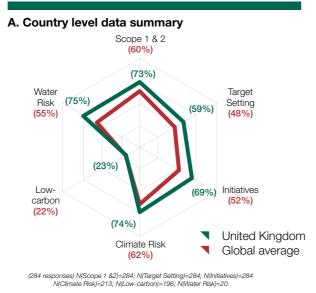
Longer-term policy perspective could help build on performance (284 responses)

Country Snapshot



The United Kingdom has put in place comprehensive climate change regulation, leading to high levels of emissions reporting, target setting and climate risk management. The introduction of mandatory carbon reporting for listed companies from October 2013 provided an additional boost to already high levels of disclosure. **UK** suppliers demonstrate sophisticated water risk management. In addition, consumer preferences are encouraging companies to become more sustainable.

- The percentage of UK suppliers engaging with their value chain partners dropped between 2013 and 2014, although, at 60%, it remains above the global average of 50%.
- There has been a sharp decline in investment in emission reduction initiatives over the last year, from \$12.3 billion in 2013 to \$4.6 billion. There has been a similar drop in cost savings, from \$1.1 billion to \$0.6 billion. This is due to mixed signals from government on climate change policy.⁷
- The uptake of low-carbon energy has fallen marginally, to 23% of suppliers implementing emission reduction initiatives, down from 24% last year. This is likely an effect of **uneven regulatory** support for renewables.
- UK companies are better aware of water risks to their businesses than companies in most other countries, but they struggle to effectively integrate water risk management into their overall strategies. Nearly half of those responding either do not assess water risk, or do so independently of other risks.



Scope 1 & 2: percent suppliers reporting scope 1 and scope 2 emissions

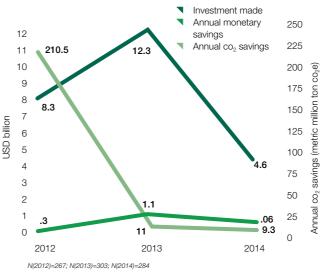
- Target setting: percent suppliers setting emission reduction targets
- **Initiatives:** percent suppliers implementing emission reducing initiative
- Climate risk: percent suppliers with procedures to assess climate risk
- Low-carbon: percent suppliers with low-carbon energy initiatives
- Water risk: percent suppliers with policies to assess water risk

Supply chain implications and recommendations

There is a need for greater cooperation between suppliers and members on emission reduction initiatives. In particular, members need to be more prepared to respond to supplier requests. Suppliers in the UK are particularly focused on energy efficiency and transportation optimization initiatives.

There is clear demand from suppliers and the business community at large for more long-term certainty on climate-related regulation. More than 90% cited regulation as the biggest climate risk they face.

B. Investment, annual monetary, and CO₂ savings from emission reduction initiatives





N(2012)=0; N(2013)=187; N(2014)=246 No responses were recorded in 2012

2014

D. Water risk assessment



Diageo's strategy for engaging with our suppliers on climate change reflects increasing international awareness of the importance of climate change management along the full value chain. We strongly believe in encouraging our suppliers to measure and report their emissions and identify reduction opportunities.

The high response rate from our suppliers and identification of specific areas for collaboration indicates a strong willingness by them to engage with us on climate change issues.

Diageo



^{7.} See "Perfect storm" sees attractiveness of UK renewables fall to its lowest level in five years, EY press release, 16th September 2014

United States of America

Cli

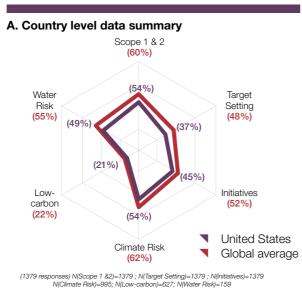
Climate complacency is starting to retreat (1379 responses)

Country Snapshot



The United States has applied a light regulatory touch as far as climate change is concerned. **Opposition remains strong to** cap-and-trade programs at the national level, while there remains considerable mainstream political resistance to any meaningful action on climate change. This lack of policy guidance means that climate risk may be building up in **US-based supply chains. Suppliers** have welcomed steep falls in energy costs, linked to oil and gas fracking. And increased interest in implementing low-carbon energy initiatives – to 21% from 18% of those who implemented emission reduction initiatives last year - is a positive.

- Emissions disclosure rates remain low. In the absence of any regulatory imperative, just 58% of US suppliers report scope 1 emissions, compared with a global average of 65% (although it should be noted that a large number of US suppliers responded to the information request). Similarly, the percentage reporting CO₂ reductions and monetary savings is below average. More suppliers are setting emissions targets, but the 2014 percentage of 37% remains below the global average of 48%.
- Barely half of US suppliers have climate risk management processes in place, compared with a global average of 62%, despite recent climaterelated disasters causing billions in damages.
- Opportunities that suppliers saw in product efficiency regulations and standards have receded and suppliers are generally less optimistic about the potential offered by new regulations. Just 12% identified opportunities from product efficiency regulations in 2014, down from 36% two years earlier.
- Water risk assessment is also lagging the global average, with 51% of those suppliers answering the water risk questions not evaluating their water exposures. This is despite high levels of water risk in parts of the US, compounded by growing demand, poor levels of infrastructure investment, and the effects of climate change.



Scope 1 & 2: percent suppliers reporting scope 1 and scope 2 emissions

- Target setting: percent suppliers setting emission reduction targets
- Initiatives: percent suppliers implementing emission reducing initiative
- Climate risk: percent suppliers with procedures to assess climate risk
- Low-carbon: percent suppliers with low-carbon energy initiatives
 Water risk: percent suppliers with policies to assess water risk
- Supply chain implications and recommendations

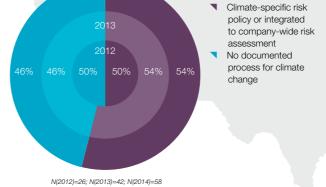
A lack of regulatory intervention means that US suppliers trail much of the rest of the industrialized world in most supply chain program metrics. This raises the pressure on major buyers to encourage disclosure, target setting and risk management.

To the extent that cheaper natural gas displaces coal, fracking provides sustainability benefits. However, **there is a risk that cheap natural gas crowds out more sustainable low-carbon energy sources,** storing up climate risk for the future. Suppliers need to ensure renewables are part of a diversified energy portfolio.

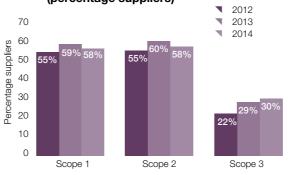
An underevaluation of water risk means infrastructure has been poorly maintained, storing up risk and compounding the investment necessary to ensure resilience. For example, 87% of irrigated corn is grown in areas of high or extremely high water stress.⁸

8. Water & Climate Risks Facing U.S. Corn Production, Ceres, June 2014 https://www.ceres.org/issues/water/agriculture/the-cost-of-corn





C. Reporting trends in scope 1, 2 & 3 emissions (percentage suppliers)



N(2012)=1218; N(2013)=1222; N(2014)=1379

D. Water risk assessment

Independently of other risk assessments across the supply chain



Independently of other risk assessments—both direct operations and supply chain

Integrated into company-wide process-both direct operations & supply chain

9%

Integrated into company—wide process-direct operations only 16%

Integrated into company—wide process-supply chain only 0%

Not assessed

51%

Independent of other risk assessments across some direct operations 16%

Percentage of suppliers
 N(2014)=159





Through CDP supply chain program, Bank of America engages our suppliers on their climate change management, including questions about greenhouse gas emissions, energy use, goals and governance. Through it we're better able to understand our suppliers' practices, and identify risks and opportunities that might impact us indirectly.

Bank of America



FCS 2014 Score Commentary

Global Trends:

This year saw the largest disclosure response to date from suppliers to the supply chain information request. CDP received 3396 disclosures from 79 countries, including 755 small to medium enterprises, all of which were scored according to CDP's scoring methodology. With 1036 companies disclosing to CDP's supply chain questionnaire for the first time in 2014, it was very encouraging that the average CDP disclosure score improved 18% year over year and 47% since 2012. The average CDP disclosure score rose from 36 in 2012 to 45 in 2013 and to 53 in 2014. This is a testament to the commitment of supply chain members and suppliers all focused on increasing transparency on climate change impacts.

While average disclosure scores have been steadily rising, average performance scores – which assess the action being taken to mitigate climate impacts have remained the same the past 2 years at a C band. Performance score trends are attributed to the fact that there are more companies receiving a performance band for the first time this year. Companies who have received performance bands in years past are more likely to improve performance year over year; whereas it is not uncommon for companies who are receiving a performance band for the first time ever to have below average scores.

With the 2014 average CDP disclosure score above 50 for the first time ever, over half the suppliers met the criteria to qualify for a performance score than suppliers who failed to meet it. In fact, of the 3396 companies who disclosed, 1870 of them were evaluated and received a performance score.

That stated, CDP scoring partners, including FirstCarbon Solutions, continue to see persistent areas where suppliers have not fully capitalized on opportunities to improve their performance. This includes target setting, verification of scope 1 and 2 emissions, financial analysis of reported climate change risks and opportunities, as well as reporting year on year emissions reductions.

Regional Trends:

The graphs below show average scoring trends for countries featured in this year's report. Interestingly nearly all countries have increased their average disclosure score year on year, with the exception of India, Japan & Canada who reported a small decrease.

How can suppliers improve their CDP performance?

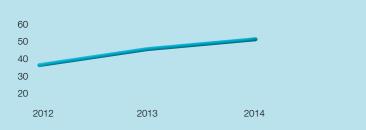
FirstCarbon Solutions top tips for improving your score:

4 years of scoring over 11,000 CDP disclosures and 15 years of corporate sustainability support, has provided us with insights into the common areas that can help suppliers improve their scores.

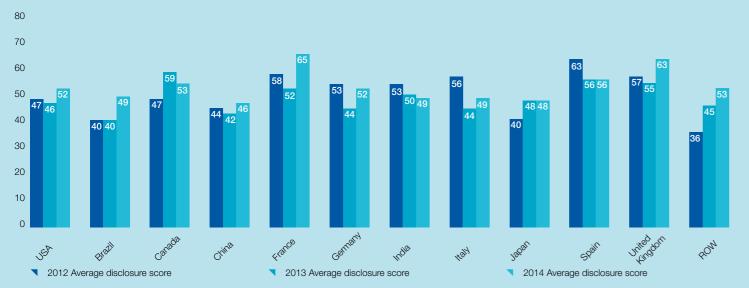
- Review the CDP guidance it highlights scoring
- Budget time and resources to successfully complete CDP process
- Establish targets for emissions reductions
- Report activities to reduce emissions
- Institute board-level sponsorship for climate management
- Verify Scope 1 and Scope 2 emissions



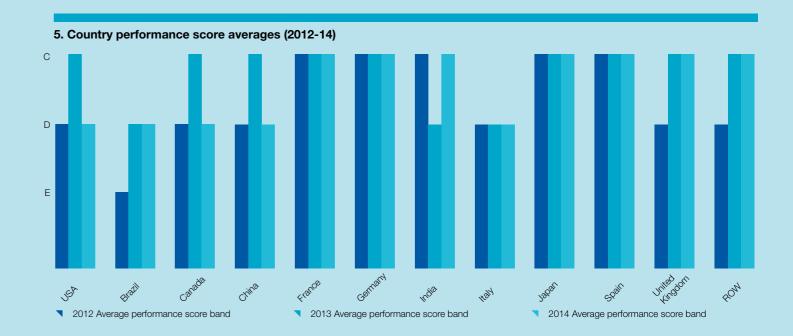
3. Average disclosure score







Performance scores per country are showing dips in 2014 for the USA, UK, Canada and China, predominantly from the increase in number of companies achieving a performance score - this is a promising development.



Find out how you can improve your 2015 CDP performance & compare yourself to your peers.

Suppliers scored by FirstCarbon Solutions are entitled to:

- Free score review report summary highlighting how your score compares to the average in your industry and region.
- Free 30 minute personalized score feedback telephone call. This call will talk through your areas of strength and highlight areas of improvement for next year.



SCPLI report summary

Each year, supplier responses to CDP's climate change information request are analyzed and scored against two parallel scoring methodologies: disclosure and performance. Introduced for the first time last year, the SCPLI highlights suppliers that are leading on performance.

The performance score assesses the level of action, as adaption and transparency. Its intent is to highlight positive climate action as demonstrated by a company's CDP response. A high performance score signals that a company is measuring, verifying and managing its carbon footprint, for example by setting and meeting carbon reduction targets and implementing programs to reduce emissions in both its direct operations and supply chain.

Many members use supplier scores in their assessments reported by the company on climate change mitigation, of suppliers. The CDP scoring methodology is the highest rated sustainability rating system.9

Name	Score	Country	Sector
Beirholms A/S	A-	Denmark	Consumer Discretionary
Gi Solutions Group Ltd	A-	United Kingdom	
Delta Beverage (Ers)	A-	Canada	Consumer Staples
Mayorga Coffee	A-	USA	
Neal Mast & Son Greenhouse	A-	USA	
Soapworks	A-	United Kingdom	
Varun Agro Processing	A-	India	
Italfluid Geoenergy Srl	A-	Italy	Energy
Ap Broome Landscapes	A-	United Kingdom	Industrials
Christy Metals	A-	USA	
Com Divers Logistic Srl	A-	Romania	
Mod Line Solucoes Corporativas Ltda	A-	Brazil	
Tep - The Environment Partnership	A-	United Kingdom	
Van Opdorp Transportgroep	A-	Netherlands	
Arets Graphics NV	A-	Belgium	Information Technology
Diamond Packaging	A-	USĂ	
Symetal	A-	Greece	

9. http://www.sustainability.com/projects/rate-the-raters

* One SCPLI company has chosen to remain anonymous for commercial reasons

Supplier climate performance leadership index – corporates

Name	Score	Country	Sector
Bloomberg	А	USA	Consumer Discretionary
BMW AG	А	Germany	,
Daimler AG	А	Germany	
DIRECTV	A	USA	
Fiat Chrysler Automobiles Nv	A	Italy	
General Motors Company	A	USA	
Johnson Controls	Â	USA	
Lego Group	A	Denmark	
LG Electronics	A	South Korea	
Reed Elsevier Group	A	United Kingdom	
Renault	А	France	
Sekisui Chemical Co., Ltd.	A	Japan	
Volkswagen AG	А	Germany	
Anheuser Busch InBev	А	Belgium	Consumer Staples
Associated British Foods	А	United Kingdom	
Coca-Cola HBC AG	A	Greece	
Danone	A	France	
Diageo Plc	A	United Kingdom	
Heineken NV	A	Netherlands	
_'Oréal	Â	France	
Unilever plc	A	United Kingdom	
Banco Santander	A	Spain	Financials
Bank of America	А	USA	
BNY Mellon	А	USA	
Commerzbank AG	А	Germany	
HSBC Holdings plc	А	United Kingdom	
KPMG UK	А	United Kingdom	
Zurich Insurance Group	А	Switzerland	
AstraZeneca	А	United Kingdom	Health Care
Bayer AG	A	Germany	
Novozymes A/S	A	Denmark	
Olympus Corporation	A	Japan	
Balfour Beatty	A	United Kingdom	Industrials
Canadian National Railway Company	A	Canada	
	A	United Kingdom	
Cnh Industrial Nv	A	United Kingdom	
Csx Corporation	А	USA	
Dai Nippon Printing Co., Ltd.	А	Japan	
Daikin Industries, Ltd.	А	Japan	
Deutsche Bahn Ag	А	Germany	
Ferrovial	А	Spain	
hi Corporation	А	Japan	
J Murphy & Sons Ltd	А	United Kingdom	
Komatsu Ltd.	А	Japan	
Van Se	A	Germany	
Royal Philips	A	Netherlands	
Schneider Electric	A	France	
Sgs Sa	A	Switzerland	
-			
Shimizu Corporation	A	Japan	
Siemens Aktiengesellschaft	A	Germany	
Stanley Black & Decker, Inc.	A	USA	
The Standard Register Company	А	USA	
Toppan Printing Co., Ltd.	А	Japan	
Toshiba Corporation	А	Japan	
Toto Ltd.	А	Japan	

Supplier climate performance leadership index – corporates

Name	Score	Country	Sector
Accenture	А	Ireland	Information Technology
Adobe Systems, Inc.	А	USA	
Akamai Technologies Inc	А	USA	
Atos SE	А	France	
Autodesk, Inc.	А	USA	
Cap Gemini	А	France	
Disco Systems, Inc.	А	USA	
Delta Electronics	А	Taiwan	
Ericsson	А	Sweden	
Fujitsu Ltd.	А	Japan	
Google Inc.	А	USA	
Groupe Steria	A	France	
Hewlett-Packard	A	USA	
Hitachi, Ltd.	A	Japan	
Juniper Networks, Inc.	A	USA	
Konica Minolta, Inc.	A	Japan	
Aicrosoft Corporation	A	USA	
Nokia Group	A	Finland	
Samsung Electro-Mechanics Co., Ltd.	A	South Korea	
Samsung Electronics	A	South Korea	
Samsung SDI	A	South Korea	
SAP AG	A	Germany	
SK Hynix	A	South Korea	
Tata Consultancy Services	A	India	
ech Mahindra	A	India	
	A	Finland	
√aisala Oyj Nipro	A	India	
FIRMENICH SA	A	Switzerland	Materials
Holmen	A	Sweden	
Johnson Matthey	A	United Kingdom	
G Chem	A	South Korea	
Syngenta International AG	A	Switzerland	
eck Resources Limited	А	Canada	
Belgacom	А	Belgium	Telecommunication Services
3T Group	А	United Kingdom	
(T Corporation	А	South Korea	
Vippon Telegraph & Telephone Corporation (NTT)	А	Japan	
Drange	А	France	
Sprint Nextel Corporation	А	USA	
elefonica	А	Spain	
Telenor Group	А	Norway	
FeliaSonera	A	Sweden	
ACCIONA S.A.	А	Spain	Utilities
Centrica	A	United Kingdom	Otilities
Endesa	A	Spain USA	
Entergy Corporation	A		
Gas Natural SDG SA	A	Spain	
RWE AG SSE	A	Germany United Kingdom	
	А	Linitad Kingdom	

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CDP 2015

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