Closing the Gap:

Scaling up sustainable supply chains

Contents

CDP's supply chain member organizations

In 2017, the following 99 organizations engaged their suppliers through CDP. As CDP supply chain members, they leveraged procurement spend in excess of US$3 trillion to request information from almost 10,000 suppliers, on which the data in this report is based.

Lead members

- Bank of America
- Barclays
- Dell Inc.
- Imperial Brands
- Juniper Networks, Inc.
- JT International S/A
- Lego Group
- L'Oréal
- Microsoft Corporation
- Nissan Motor Co., Ltd.
- Northrop Grumman Corp
- Novartis
- NRG Energy Inc
- PepsiCo, Inc.
- Philip Morris International
- Philips Lighting
- Royal Philips
- Virgin Money
- Wal-Mart Stores, Inc.

Standard members

- Abbott Laboratories
- Accenture
- Acer Inc.
- Ajinomoto
- Alliance Data Systems
- Amdocs Ltd.
- Arcos Dourados
- AT&T Inc.
- Banco do Brasil
- Banco Bradesco S/A
- BMW Group
- Braskem S/A
- Bridgestone Corporation
- Bristol-Myers Squibb
- British American Tobacco
- BT Group
- Caesars Entertainment
- Caixa Econômica Federal
- California Department of General Services (DGS)
- CIA Ultragaz
- Cisco Systems, Inc.
- CNH Industrial NV
- Colgate Palmolive Company
- CSX Corporation
- Deutsche Telekom AG
- Diageo plc
- Eaton Corporation
- Ecorodovias Infraestrutura e Logística S/A
- Electronic Industry Citizenship Coalition
- Enagás
- Endesa
- Fiat Chrysler Automobiles NV
- FIRMENICH SA
- Ford Motor Company
- Gas Natural Fenosa
- General Motors Company
- Givaudan
- Grupo CCR
- Hewlett Packard Enterprise Company
- Honda Motor Co Ltd
- Honda UK
- HP Inc
- ICL
- Intel Corporation
- Itaú Unibanco Holding S/A
- Jaguar Land Rover Ltd.
- JBS
- Johnson & Johnson
- KAO Corporation
- Kellogg Company
- Klabin
- KPMG UK
- Los Angeles County Metropolitan Transportation Authority
- Mastercard
- McDonalds
- MetLife, Inc.
- METRO AG
- National Grid PLC
- Nestlé
- Nissan Motor Co., Ltd.
- Nokia Group
- Pirelli
- Restaurant Brands International
- S.C. Johnson & Son, Inc.
- Santander Brasil
- Sky plc
- Stanley Black & Decker, Inc.
- Swisscom
- SSE
- Symrise
- Taisei Corporation
- TD Bank Group
- The Coca-Cola Company
- Toyota Motor Corporation
- U.S. General Services Administration (GSA)
- Unilever plc
- Vodafone Group
- Volkswagen Group
- W.W. Grainger, Inc.
- Wal Mart de Mexico
- World Resources Institute (WRI)

- Climate change
- Forests
- Water

Foreword from Patricia Espinosa

Executive Secretary, United Nations Framework Convention on Climate Change

Delivering ambition needed to keep temperature rise as close to 1.5 degrees Celsius as possible requires businesses to reduce emissions, manage water resources and limit deforestation within both their own operations and their supply chains.

In the lead-up to last year's UN Climate Change conference in Bonn, or COP23, we saw extreme climate disasters across the world. We also saw temperatures soar, with 2017 being one of the hottest years on record. While there has been real and strong progress in the global economy, this planetary reality makes climate change action more urgent than ever before.

Political leaders, in ratifying the Paris Agreement and bringing it into force, have made a commitment to create an enabling environment for businesses, investors and governments at all levels to reduce emissions and build resilience. Global solidarity from the business community to complete this work and private sector support for more ambitious action on the ground are critical for keeping us on track to achieve the goals laid out by nations.

Businesses continue to be at the forefront of climate action. In 2017 more than 4,800 companies – the largest data set ever collected by the CDP supply chain program – reported emissions reductions amounting to 551 million metric tonnes CO_2, which translates into US$14 billion in cost savings. This shows how actionable and quantifiable emission reduction targets can help businesses to plan ahead and manage climate risks, while reaping the bottom-line benefits of this climate action. We need more and more of these targets from the private sector, and we need more action from all areas of public and private life.

This report shows how businesses can leverage the power of purchasing to push for more action on climate change. Despite unprecedented disclosure, only 23% of supplier organizations that responded to the 2017 CDP supply chain questionnaire report engaging on climate with their supply chains. This indicates that large portions of the global supply chain network are not considering climate in their decision making, which represents significant untapped opportunities and financial savings.

Delivering the ambition needed to keep temperature rise as close to 1.5°C as possible requires businesses to reduce emissions, manage water resources and limit deforestation within both their own operations and their supply chains. This report connects the dots between these business actions and the benefits they provide – in terms of the profits and the long-term prosperity that comes from moving towards sustainable development and a climate-safe future.

Bending the emissions curve by 2020 will pave the way for a just and prosperous transition to net-zero emissions early in the second half of the century and a climate-resilient global economy. It also keeps the Sustainable Development Goals within our reach.

Innovative solutions to address climate change are available right now, and I am pleased to see that an ever increasing number of companies reporting to CDP are integrating sustainability-thinking into their business models.

I applaud the members of the CDP supply chain program for being pioneers in this regard. I also encourage these businesses to work with suppliers to raise ambition across their supply chains. COP23 clearly showed the urgent need for pre-2020 climate action, implementation and ambition. Now is the time for the global economy to heed this call.

Background to the report

Last year may come to be seen as a watershed in our collective political will to address climate change, marked as it was by an intensification of climate change impacts and a growing realization, in much of the world, of the urgency of the problem. According to the World Meteorological Organization, 2017[1] was set to be either the second or third warmest on record. Around the world, the frequency of extreme weather events increased, giving us a foretaste of what we can expect as the world warms.

Last year was the costliest on record for climate- and weather-related disasters in the United States, costing the country US$309 billion – US$90 billion more than the previous record year. Those costs make it all the more ironic that the year also marked the announcement from the US Administration that it plans to withdraw from the 2015 Paris Agreement on climate change. At the UN climate talks in November (COP23), negotiations on the implementation of the Paris Agreement advanced, with China, France and others stepping up in terms of global climate change leadership. China and France have taken on leadership roles during 2017 to shape the future of the climate change narrative. China announced a national emissions trading market and a new ESG disclosure law for companies, and furthered global collaboration through the Ministerial on Climate Action coalition, consisting of the EU, China and Canada. Meanwhile, France continued the momentum into the One Planet Summit in December, which focused on public and private finance in support of climate change action.

Around the world, countries continue to introduce national-level policies and regulations to promote clean energy and curb emissions. In response, investors and businesses are pulling back from high-carbon investments, and increasingly plowing capital into the low-carbon economy.

Political leaders, in ratifying the Paris Agreement, have made a commitment to creating an enabling environment for businesses, investors and governments to reduce emissions. In this regard, 2017 has seen clear progress; within the transport sector, major auto manufacturers are racing to scale up production of electric cars, while a growing number of governments have set dates to phase-out sales of cars powered by internal combustion engines. And, as the cost of clean technology continues to fall, the global economy is adding record levels of renewable energy.

But the challenge is immense. To date, temperature rises have already reached 1°C above pre-industrial levels. The Paris Agreement calls for warming to be held to 2°C at the most, with the ambition to meet a lower threshold, of 1.5°C. Research indicates that it is possible to achieve this more ambitious 1.5°C goal, but this will require a significant step up in effort, and this is where businesses need to lead.

1. http://www.bbc.co.uk/news/science-environment-42736397

Executive summary

Suppliers disclosed reductions equivalent to

551 million tonnes

of CO_2 with associated cost savings of

US$14 billion

GHG emissions reductions equating to

118 million passenger cars

driven for one year

Delivering on the 1.5°C ambition will require businesses to play a key role to reduce emissions within their operations and supply chains. While most of the largest companies in the world now account for and report on the emissions from their direct operations and from the electricity they purchase (Scopes 1 and 2), they need to think beyond their direct operations to consider the carbon emissions of upstream and downstream supply chain links, and actively manage their Scope 3 emissions.

There is more reason than ever to engage with suppliers – there are clear drivers to increase climate action

It is, of course, in companies' own self-interest to curb the worst impacts of global warming. Climate change directly impacts business by reducing agricultural productivity, disrupting logistics and supply chains, and causing damage to buildings and infrastructure. Businesses need affordable and reliable supplies of energy and natural resources. In addition to these direct consequences, businesses also face indirect risks such as regulatory and policy change and shifts in consumer behavior. By engaging with their supply chains, businesses can help to reduce the risks they face from climate change, as well as identifying business opportunities and ways to deepen relationships with key business partners.

The report finds that responding suppliers are doing more to reduce emissions, demonstrating greater impact

This year, CDP collected primary data from over **4,800 companies** on behalf of 99 supply chain members. This represents the largest data set ever collected by the CDP supply chain program. This data comes from companies across **51 different industry groups/segments** and based in **86 different countries**.

Collectively, companies realized monetary savings amounting to **US$14 billion** and disclosed emissions reductions in the order of **551 million metric tonnes of carbon dioxide equivalent (CO_2e)**. These emissions are equivalent to[2]:

- Greenhouse gas emissions from over **118 million passenger vehicles** driven for one year
- CO_2 emissions from over **62 billion gallons of gasoline** consumed
- Carbon sequestered by over **649 million acres of US forest**

However, the data shows that the gap between leading companies and a large sub-section of their suppliers persists. There is a need for greater engagement to enable suppliers to catch up

Emissions from companies' supply chains typically exceed the emissions over which they have direct control. In recognition of this, companies have increasingly begun focusing on their indirect emissions, in other words, their Scope 3 footprint. **More than one-third (34%) of responding suppliers disclosed Scope 3 emissions**. Almost as many (31%) responding suppliers report a year-on-year decrease in emissions, while 23% disclosed rising emissions, indicating that there is a significant opportunity to improve on emissions actions. Only 23% of supplier organizations that responded to the 2017 CDP supply chain questionnaire report engaging their suppliers, which shows that large portions of global supply chains remain untapped, representing foregone business opportunities, overlooked carbon reductions, and unrealized financial savings.

2. DOE Equivalency from 551 million metric tons: https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator

Only

23%

of responding suppliers engage their own suppliers on emissions reductions

21%

of responding suppliers anticipate setting a science-based target in the next two years

However, responding suppliers are doing more to close the gap, demonstrating high internal awareness of climate change risks and opportunities, and reporting targets, including science-based targets

Of responding suppliers:

- **76%** have identified inherent **climate change risks** that have the potential to generate a substantive change in their business;
- **70%** have identified some **climate change opportunities** that could lead to a substantive change in their business;
- **43%** report **board-level engagement** with and responsibility for climate change;
- **42%** say they have integrated climate change into multi-disciplinary company-wide **risk management** processes; and
- **52%** report that they have integrated climate change into their **business strategy**.

Equally, this report notes that actionable and quantifiable emissions reduction targets are a reality.

- **47%** of responding suppliers have an emissions or renewable energy target;
- **20%** of responding suppliers indicated their emissions targets were science-based; and
- **12%** of responding suppliers report consuming renewable energy.

Despite over 900 suppliers indicating that their emissions targets were based on climate science, the Science Based Targets initiative shows only 330 organizations currently acting formally, **with Europe-based companies taking the lead ahead of those based in the Americas and Asia**. However, this report highlights an encouraging statistic: **21%** of responding suppliers anticipate setting science-based targets within two years.

More suppliers than ever are being recognized for their water stewardship, demonstrating an increased awareness of water risks, and setting company-wide water targets in response to these risks

The number of supply chain members requesting their suppliers to report water information has reached a new high this year, with nearly **1,500** suppliers disclosing water data through the CDP supply chain program, out of 4,850 companies that were engaged. Moreover, **58% of all responding suppliers report integrating water risk management into their business strategies**, while **62%** report **company-wide water-related targets**. The number of suppliers awarded the highest score for their water disclosure also rose, with 41 suppliers figuring on the Supplier Water A List in 2017, highlighting companies that have taken an active approach towards water stewardship.

However, suppliers demonstrate low levels of awareness and maturity vis-à-vis deforestation risks, highlighting the need for deeper supplier engagement

In 2017, the CDP supply chain program collected data from suppliers on their management and risk assessment of forest-risk commodities for the first time. In total, 88 suppliers disclosed information as part of a pilot disclosure request through the supply chain program and indicated their commitment to limit deforestation in their operations. Generally, disclosure demonstrates the need for deep and meaningful supplier engagement leading to improved awareness of the risks and capacity to realize opportunities.

CDP and McKinsey conducted analyses on responses from companies in eight select countries. It found that 33% of suppliers perceived risks arising from a changing regulatory environment, while 29% reported corresponding benefits. Against the backdrop of the global sustainability agenda, this report notes large variations in country-level disclosure and performance on climate change, water and deforestation.

62%

of responding suppliers report a company-wide water target

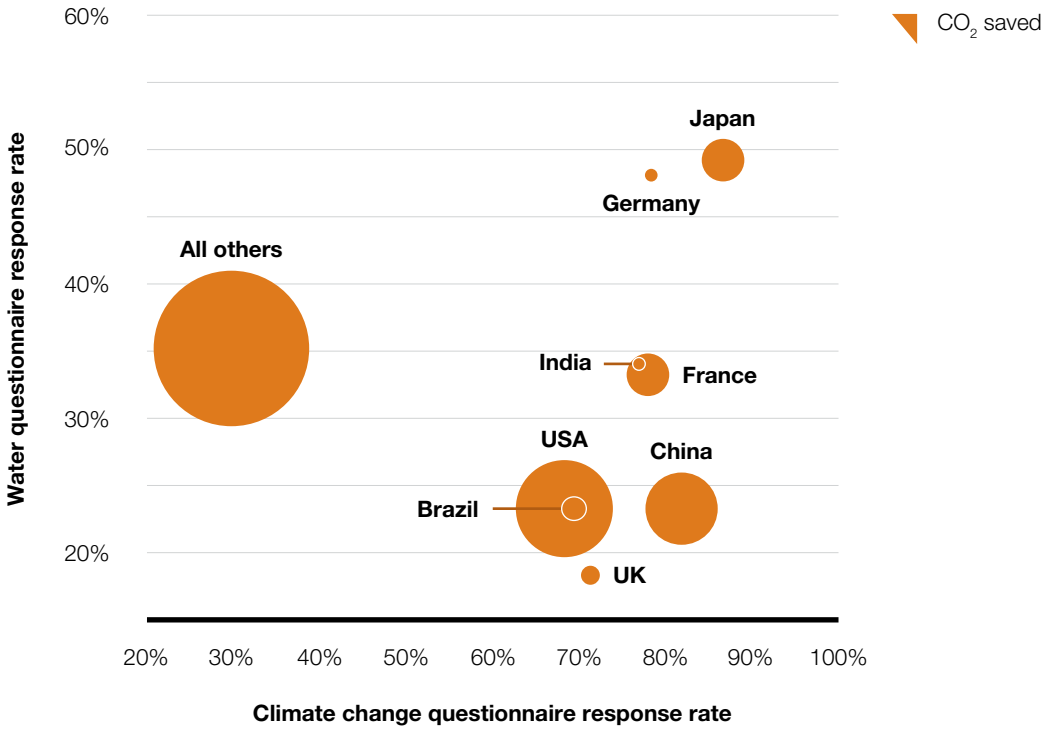
- France has become a leading player in the global fight against carbon emissions in recent years, and French companies, on average, were the strongest performer in the peer group regarding climate change disclosure data in all critical areas.
- This coincides with the adoption of a law establishing a "duty of vigilance" for large multinational firms carrying out all or part of their activity in France to prevent human rights violations and environmental impacts throughout their chain of production.
- Strong responses across many questionnaire categories, shows that Japanese companies are more aware of sustainability risks, opportunities and their role in driving down emissions than the peer group.
- China has placed a high priority on climate action at home and internationally. Out of 564 Chinese companies approached, 82% responded to the climate change questionnaire.
- US-based suppliers are trailing most among the countries analyzed in terms of responding to the CDP supply chain questionnaire and are underperforming in almost all metrics.

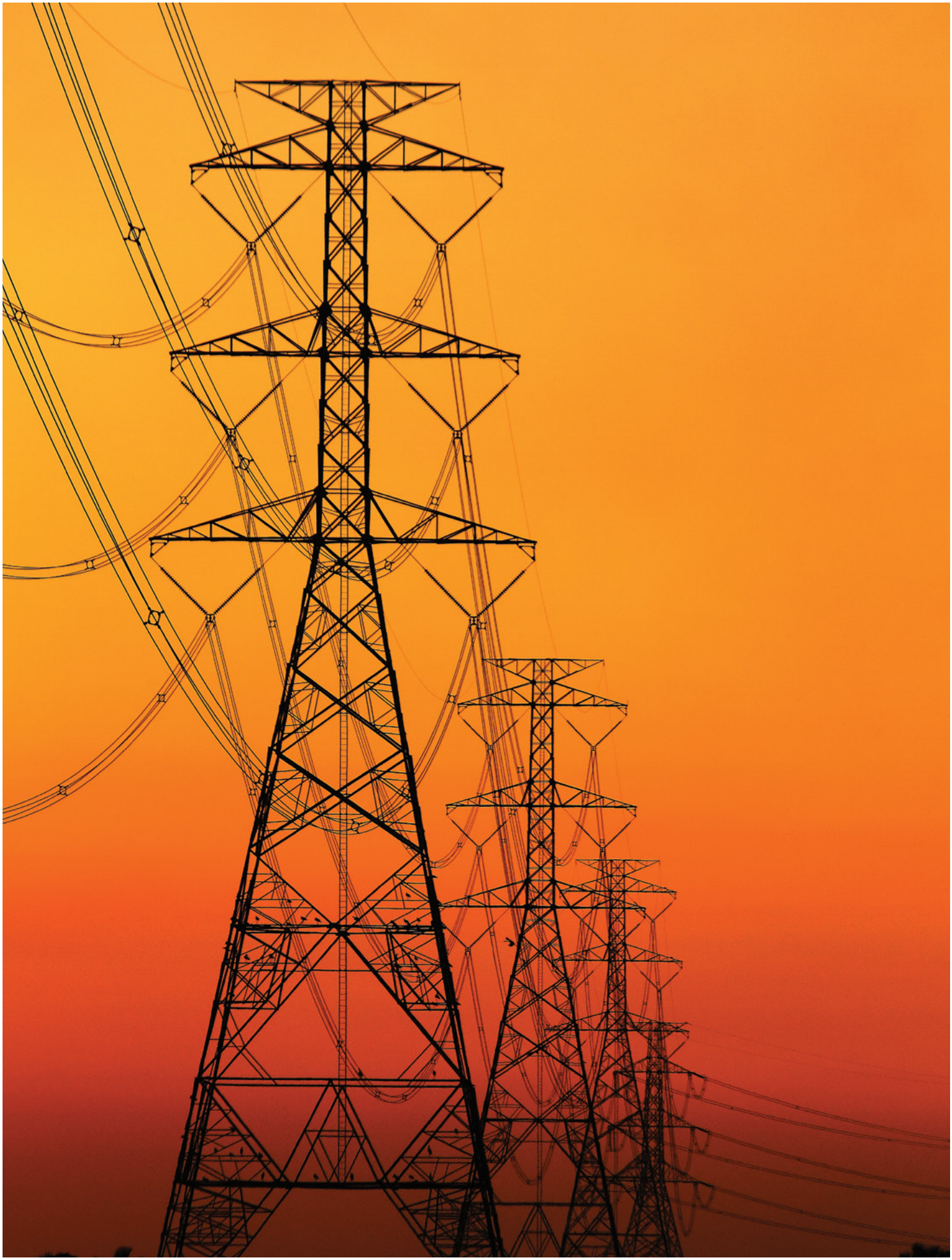
  However, in response to a retreating US government, many US companies, at the forefront of sustainability and climate change stewardship, have publicly reiterated their commitment to the Paris Agreement and efforts to reducing their emissions.

  Through the *We Are Still In* coalition, companies are committing to setting science-based targets, using renewable energy, and working collaboratively to address climate change.

  The US also features the highest number of companies in the 2017 Supplier Engagement Rating (SER).

Figure 1: Response rates, %





About this report

Climate questionnaire response rate:

53%

Water questionnaire response rate:

30%

Forests questionnaire response rate:

36%

The report uses CDP's supply chain program data submissions to evaluate the activities of reporting organizations as a group, and to identify meaningful insights about the private sector's impact on climate change, water, and deforestation.

The CDP supply chain program, representing 99 member organizations with US$3 trillion in annual procurement spend, requested that suppliers report to members on their climate, water, and deforestation risks and opportunities. Suppliers responded to standardized questionnaires: a full climate change questionnaire or a shorter version for small and medium-sized enterprises (SMEs, or organizations with fewer than 250 employees and annual turnover of less than US$50 million or EUR50 million), as well as a water questionnaire.

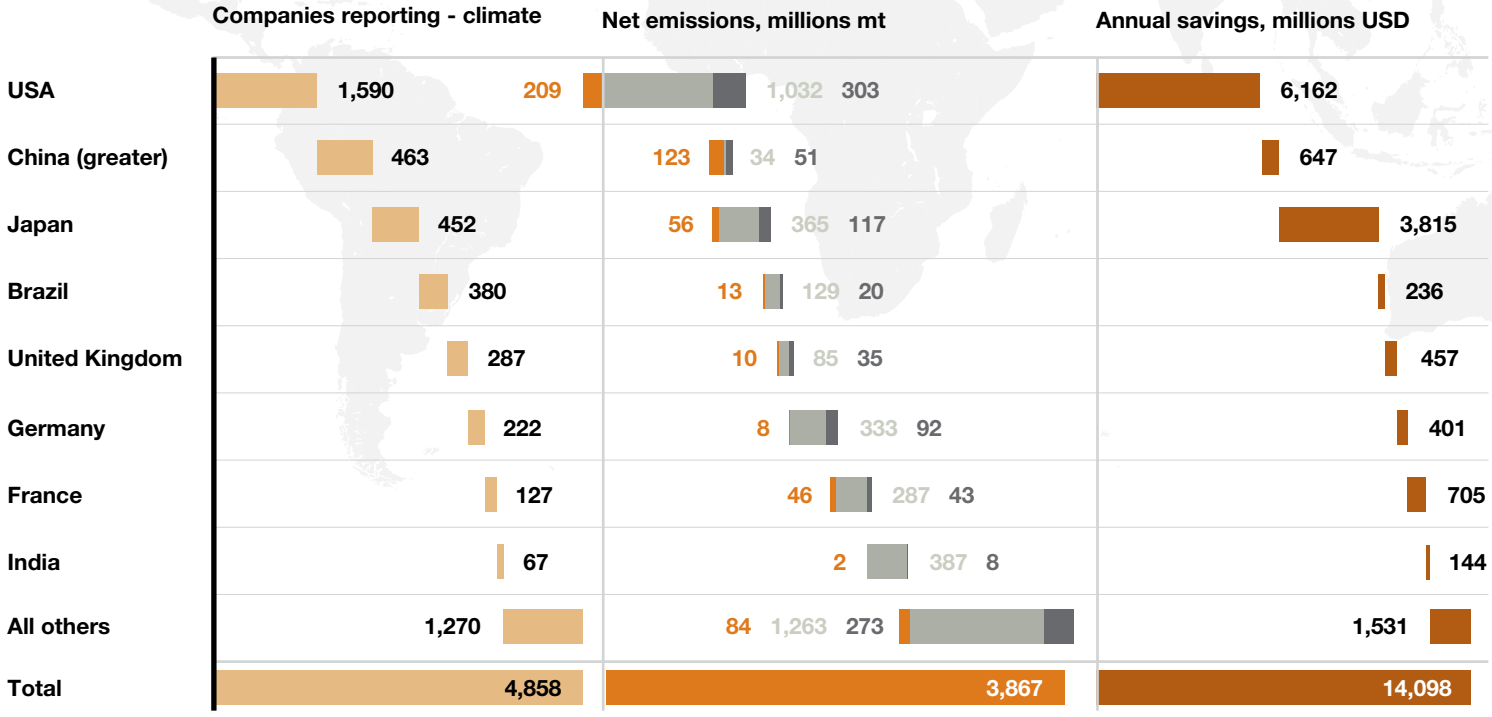
McKinsey & Company, the global management consulting firm, provided analytical support to this report. Analyses were conducted using data from CDP's climate change questionnaire (total companies invited to participate, n=9,139), water questionnaire (n=4,850), and forests questionnaire (n=244). In total, 4,858 supplier organizations responded to the climate change questionnaire, 1,452 answered the water questionnaire, and 88 suppliers completed the forests information request.

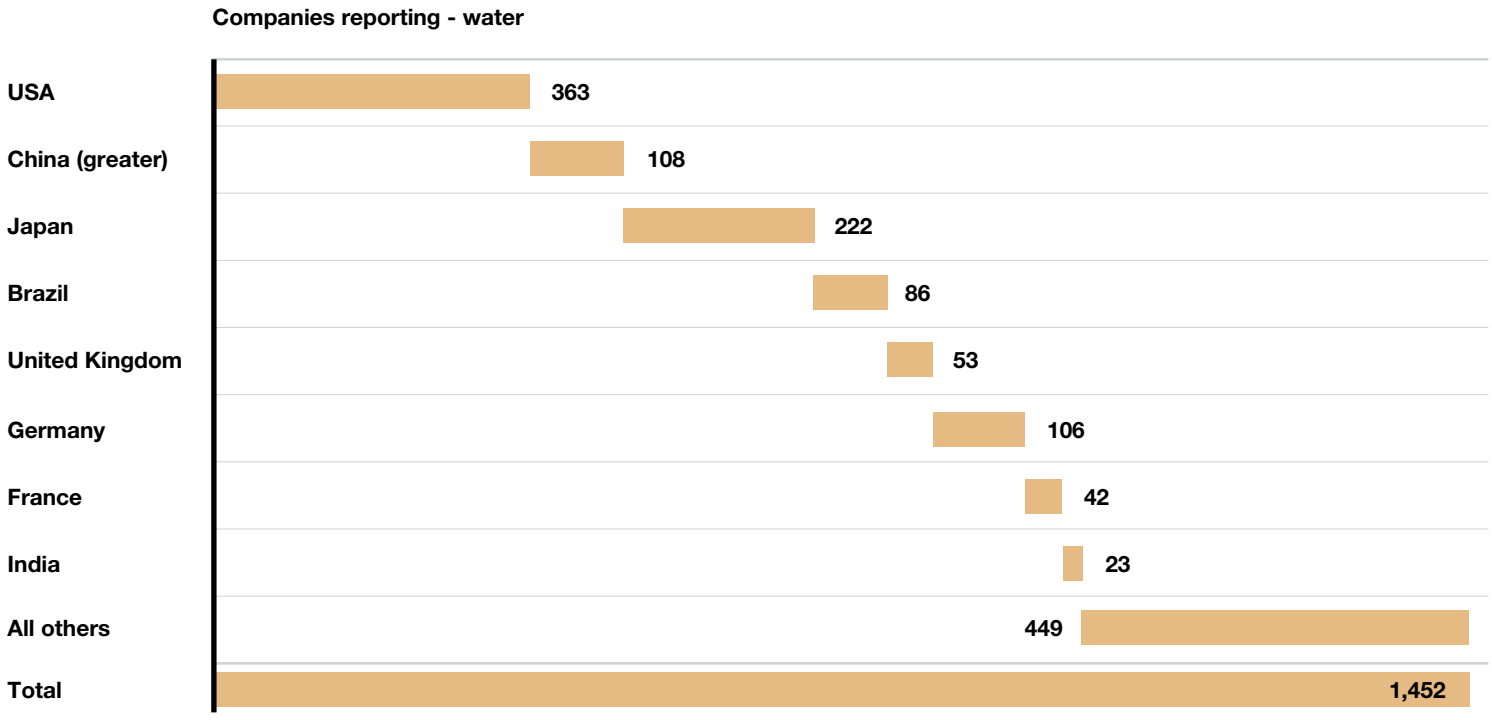
The analysis in this report is representative of the CDP supply chain program data only. Within the CDP supply chain dataset, there are 2,589 organizations that were invited to the climate change questionnaire that did not respond and are not attributable to a specific country. For completeness and transparency, global and aggregated analysis results do include these to calculate global response rates. However, results presented in the country level profiles are not able to account for these country agnostic data points. Country level profiles are based upon only those data points which geographical location is attributable.

Country analysis

- CO_2e saved
- Scope 1 emissions
- Scope 2 emissions
- Annual savings

This report considers the data for eight developed and emerging countries that have pivotal roles in the global sustainability agenda and have robust data from which meaningful insights could be drawn. These countries are, listed in order of the number of responding companies, the United States, China, Japan, Brazil, United Kingdom, Germany, France and India. The charts below are derived from all responding companies.





United States of America

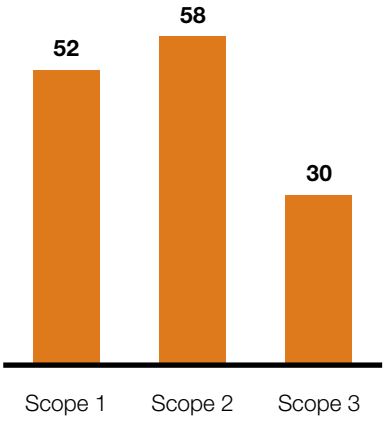
CO_2 saved:

209 million mt

Savings from initiatives implemented:

US$6.2 billion

Figure 2: Companies reporting emissions, %



Overview

As the world's largest economy, the United States plays a leading role in shaping global economic policies and their impact on corporate sustainability and climate change. Last year was marked by signifcant weather-related events, including hurricanes and wildfires, that caused billions of dollars worth of damage and disruption. Meanwhile, the new U.S. administration is stepping back from many areas of climate policy, announcing an intention to withdraw from the Paris Agreement, repeal the 2015 Clean Power Plan, and reverse numerous regulations aimed at reducing greenhouse gas emissions and protecting waterways.

Supplier data disclosed to CDP's supply chain program shows that these political realities may be reshaping companies' operating environments. US-based suppliers are trailing behind many countries represented in CDP data and are underperforming global averages in almost all categories.

Among the countries analyzed in this report, US supply chain respondents scored lowest in terms of setting emissions reduction targets, whether climate targets in general, or science-based targets (SBTs) in particular. Responding companies also reported lower than average levels of managerial awareness around environmental risk management, the integration of sustainability considerations in core business strategies, and board-level responsibility for climate change and water concerns.

Nevertheless, in response to new political realities unfolding on the ground, a large number of US companies have reiterated their commitment to the Paris Agreement as part of the We Are Still In coalition, applying emissions reduction strategies to their operations. Equally, the US accounts for the highest absolute number of companies in CDP's Supplier Engagement Rating, ahead of the UK and Japan.

Emissions

Given the size of the US economy, it accounts for the largest total number of supplier companies disclosing to CDP, as well as the largest magnitude of emissions (1.33 billion metric tons of CO_2e, across Scope 1 and 2) and savings/avoided emissions (209 million metric tons CO_2e) in the 2016-17 disclosing year. These latter represent annual savings of US$6.2 billion from initiatives implemented in the reporting year.

Just over half (51%) of companies disclosed year-on-year changes in their gross global emissions (Scope 1 and 2 combined). The remainder were either disclosing for the first time or did not disclose gross global emissions.

Science-based targets

Only 36% of US-based suppliers responding to the supply chain questionnaire set overall climate change targets, and only 27% have set, or plan to set, SBTs – representing the joint second lowest response rate within the eight countries analyzed. However, more than 60 companies have either set, or have committed to set, an SBT through the Science Based Targets initiative.

Climate change practices

Slightly fewer US-based respondents than the global average disclosed climate and renewables targets, board-level climate oversight, climate risk management policies, and business strategies which incorporate climate issues.

US respondents are also lagging when it comes to existing renewable energy consumption/production targets, with just 8% of participating US companies disclosing such targets, compared with the global average of 12%.

The largest gap for respondents in the US region was for board-level responsibility for climate change within organizations, at just 33%, compared with the global average of 43%.

Nonetheless, US-based respondents disclosed a wide array of emissions reductions initiatives, with initiatives related to energy efficiency services/projects, such as LED lighting replacement, being most frequently cited. The most impactful initatives in terms of reducing emissions related to renewable energy procurement and migration to less carbon-intensive power generation.

The findings clearly show opportunity for improvement in the performance of US-based respondents in terms of climate change practices, particularly with regards to elevating direct responsibility for climate change action to the highest levels of the organization.

Water practices

US-based suppliers perform well across all sections of the water questionnaire. Nonetheless, a relatively high percentage of US companies (17%) report water-related compliance issues compared with the global average (9%).

Climate change response rate:

69%

Water response rate:

23%

Forests response rate:

74%

19

US companies listed on the Supplier Engagement Rating

Figure 3: Climate change practices, %

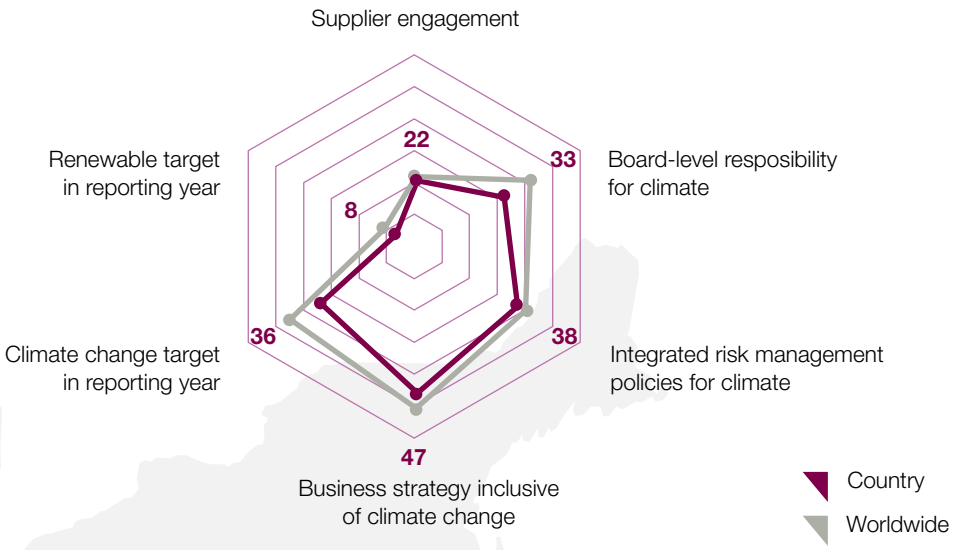
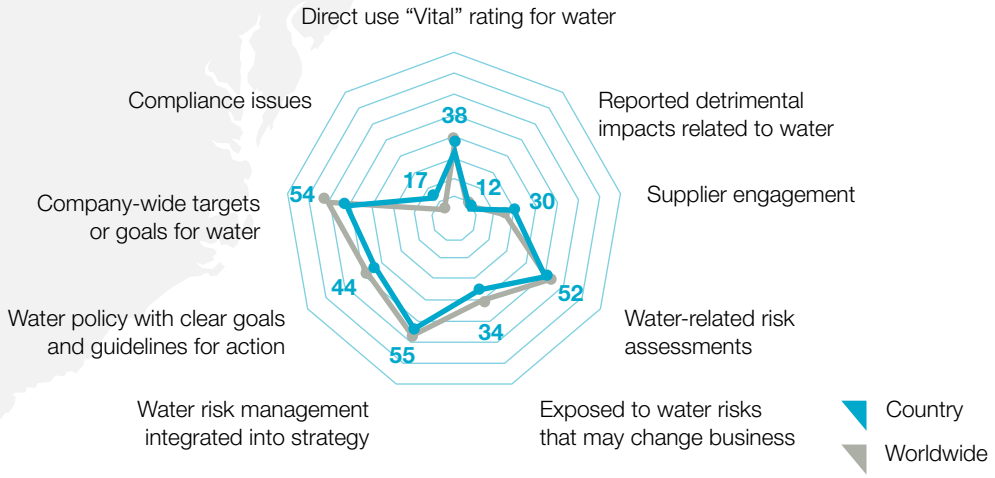


Figure 4: Water practices, %



Hewlett Packard Enterprise

HPE has launched the world's first comprehensive supply chain management program that requires suppliers to set science-based emissions reduction targets. The company estimates that if this goal is met it would help suppliers avoid 100 million tonnes of greenhouse gas emissions, the equivalent of taking 21 million cars off the road for a year. Working collaboratively with direct suppliers is fundamental to delivering on these ambitions. HPE is overcoming some of the complexities involved in developing science-based targets through providing active guidance and feedback to companies, alongside practical tools they are able to use.

China

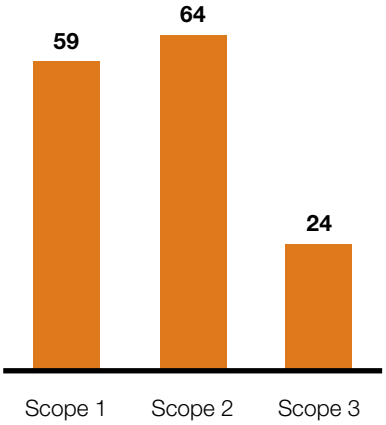
CO_2 saved:

123 million mt

Savings from initiatives implemented:

US$647 million

Figure 5: Companies reporting emissions, %



Overview

China places a high priority on addressing climate change. Domestically, its 13th Five-year plan emphasized environmental protection; internationally, China is playing an active role in global climate diplomacy. Nonetheless, China is the world's largest emitter of greenhouse gases and the successful implementation of its emissions reduction policies will be crucial from both local and global perspectives.

In common with other regions of the world, China has had its share of recent extreme weather events, including heat waves and flooding. From a policy standpoint, in late 2017 China formally launched its national carbon market and has announced plans to invest US$360 billion in renewable energy by 2020. But questions remain over how quickly China can begin to reduce its emissions, given growth in coal consumption in 2017 after declining demand in recent years. Additionally, a new policy adopted in Shanxi province, aims at doubling, if not quintupling, water prices for companies exceeding standard water usage[3].

For the 2016-17 reporting year, the 463 Chinese companies that disclosed reported emissions of 85 million metric tons of CO_2e (Scope 1 and 2), savings/avoided emissions of 123 million metric tons, and US$647 million in annual savings associated with those initiatives implemented in the reporting year. Companies in China were the second most likely to respond to the climate questionnaire, after those in Japan.

Emissions

Only 16% of companies disclosed year-on-year changes in gross global emissions (Scope 1 and 2 combined). Most companies were either disclosing for the first time or did not provide gross global emissions for either this reporting year or the previous one. Of the country peer group, China has the lowest percentage of companies reporting year-on-year emissions decreases or changes.

Science-based targets

Encouragingly, 14% of Chinese companies disclosed the intention to set SBTs within the next two years. This could lead to a step-change in corporate climate action in China.

Climate change practices

Disclosure by Chinese suppliers was close to the average for most climate change-relevant questions. China had near average or higher disclosure percentages for companies setting a climate change target, for including climate change in their business strategy, and for placing responsibility for climate at the board level. However, Chinese companies lagged in terms of engaging their own suppliers, with only 15% doing so compared with the global average of 23%.

Responders disclosed a wide array of emissions reductions initiatives, with initiatives related to process energy efficiency such as waste energy recovery and new equipment upgrades most frequently cited. The most impactful initatives related to LED lighting and reduced utilization of emissions intensive equipment, which delivered 22% of the total 123 million metric tons of CO_2e reduced.

Water practices

A high number of Chinese companies disclosed company-wide targets or goals for water and say they are integrating water risk management into their strategy,

This is despite the surprisingly low importance attributed to the availability and use of water. While just under half (49%) of responding companies, above the global average, have identified water-related risks, these risks may be underestimated given that 40% of companies don't conduct a water-related risk assessment.

It is important to note the low response to the water questionnaire in the region, indicating that disclosing companies may not be representative of the market. Disclosure is an important first step to identify clear opportunities for improvement, to progress towards better water stewardship, and to build resilience against water issues.

3. https://www.reuters.com/article/us-china-water/chinas-coal-rich-shanxi-orders-water-curbs-for-steel-cement-aluminum-production-idUSKBN1DX075

Climate change response rate:

82%

Water response rate:

23%

Forests response rate:

None requested

Figure 6: Climate change practices, %

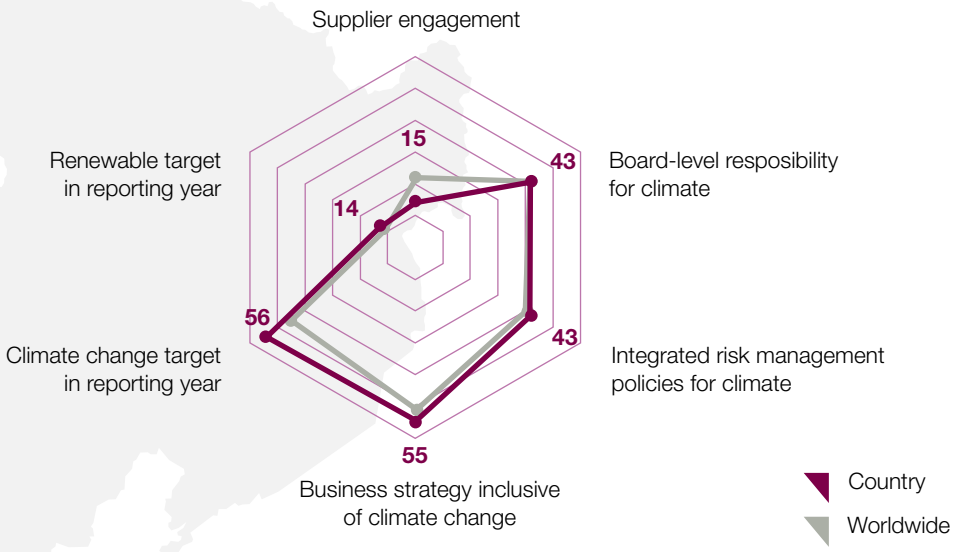
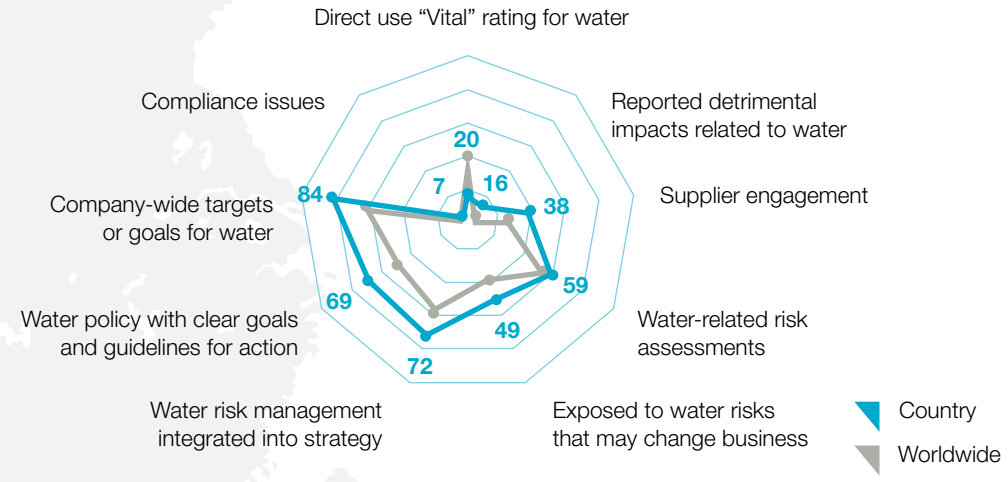


Figure 7: Water practices, %



Japan

CO_2 saved:

56 million mt

Savings from initiatives implemented:

US$3.8 billion

Overview

Japan had the highest response rate of the peer group of countries disclosing to the CDP supply chain program in 2017. This, coupled with strong responses across many questionnaire categories, indicates that Japanese companies are generally aware of sustainability risks, opportunities and their role in driving down emissions.

Central to Japan's plan to reduce emissions is the evolution of the country's energy mix[4]. It has meaningful policies in place to drive renewable adoption and create a market environment to promote sustainable growth[5].

Japanese companies reported emissions of 482million mt CO_2e (Scopes 1 and 2), savings/avoided emissions of 56 million mt CO_2e in the disclosing year, and US$3.8 billion in annual savings associated with initiatives implemented in the reporting year.

Emissions

More than three-quarters (76%) of companies disclosed a year-on-year change in carbon emissions. However, of those, more than half (41 percentage points) reported higher emissions this year than last.

Science-based targets

Japan generally scored well in terms of companies setting science-based targets. Among the countries analyzed, it has the second highest percentage of respondents who anticipate setting an SBT in less than two years, at 48%.

Climate change practices

In line with their high disclosure rates, Japanese suppliers also demonstrated high levels of policy setting and management practices relating to climate change, clearly exceeding global averages across almost all metrics. The exception was in setting renewable energy targets, with only 10% of Japanese companies doing so, compared with the global average of 12%.

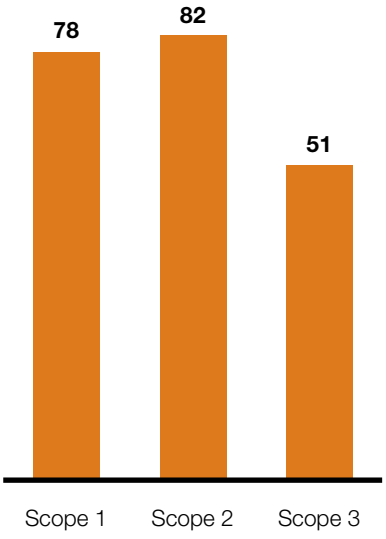
However, while policy and management may be advanced, the fact that 41% of Japanese companies disclosed increased emissions shows performance in managing climate risk is clearly lagging.

Water practices

Japanese suppliers also demonstrated high awareness of water-related issues, with the highest percentage of companies responding to the water questionnaire.

Japanese suppliers have outperformed the global average across the board with the majority (56%) of suppliers having implemented a water policy and 61% integrate water risk management into their business. This shows the strong importance Japanese suppliers place on water management and perhaps why compliance issues affect just 3% of companies. However, further action is needed amongst Japanese suppliers to engage with their own supply chain where much of the material water risk lies. Currently only 30% of suppliers are doing so.

Figure 8: Companies reporting emissions, %



4. http://www.enecho.meti.go.jp/en/category/brochures/pdf/japan_energy_2016.pdf
5. http://www.enecho.meti.go.jp/en/category/whitepaper/pdf/whitepaper_2017.pdf

Climate change response rate:

87%

Water response rate:

49%

Forests response rate:

100%

10

companies listed on the Supplier Engagement Rating

Figure 9: Climate change practices, %

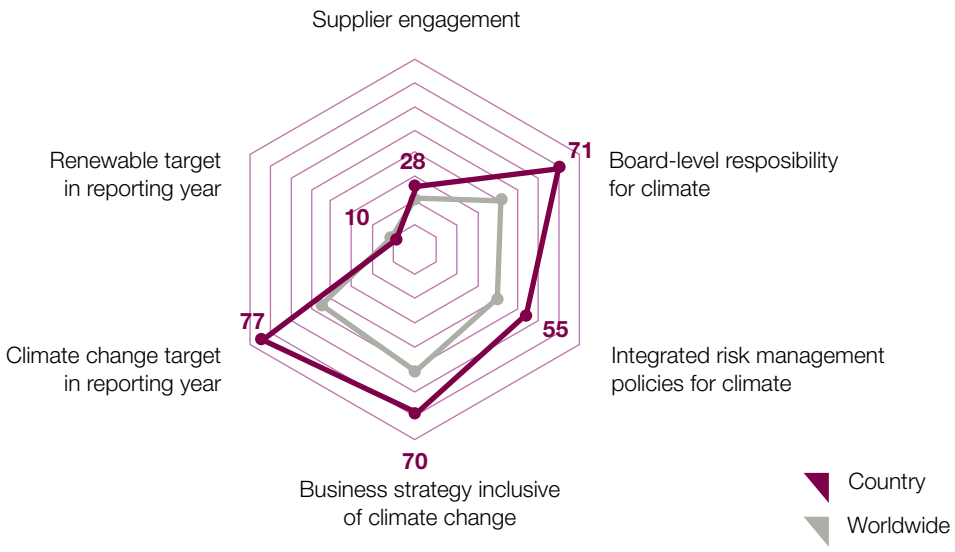
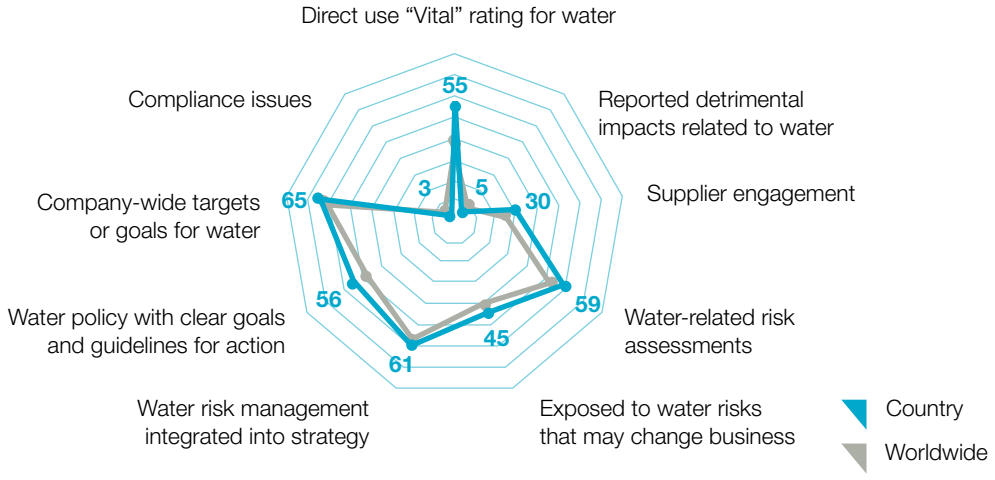


Figure 10: Water practices, %



Ajinomoto

As a company with a strong focus on R&D, one of the biggest areas of success for Ajinomoto has been through packaging innovation and redesign. To ensure a consistent approach is taken across all group companies Ajinomoto launched an updated environmental assessment procedure to be used before releasing any new or revised product. Ajinomoto AGF worked alongside the company's packaging supplier, Toyo Seikan Group, to pioneer technologies that take post-consumer plastic bottles and recycle them into heat-resistant PET resin. Thanks to this work Ajinomoto has become the only company worldwide to sell drinks in 100% recycled heat-resistant PET bottles, reducing the use of virgin plastics from fossil fuels by around 2,000 tonnes a year.

Brazil

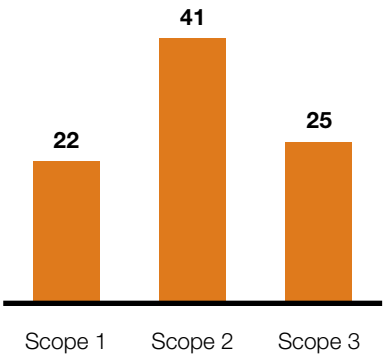
CO_2 saved:

13 million mt

Savings from initiatives implemented:

US$236 million

Figure 11: Companies reporting emissions, %



Overview

Brazil boasts abundant natural resources, including substantial capacity for renewable energy development. Levels of environmental awareness are high. Brazil was one of the first and few developing countries to commit to an absolute emissions reductions target following the Paris Agreement in 2015. Brazil has faced political uncertainty, ongoing battles to curtail deforestation[6], economic recession, and rising emissions in the past few years.

Disclosures to the supply chain program show Brazilian suppliers visibly underperforming compared to the global average in terms of climate change practices. Brazil accounted for the lowest number of companies:

- Disclosing Scope 1 and Scope 2 emissions;
- Engaging suppliers in disclosing emissions;
- Setting targets, whether for emissions or renewables; and
- Planning to set science-based targets within the next two years

Brazilian companies reported emissions of 150 million mt CO_2e (Scopes 1 and 2), savings/avoided emissions of 13 million mt CO_2e in the disclosing year, and $236 million annual savings associated with initiatives implemented in the reporting year.

Emissions

Only 29% of companies disclosed changes in carbon emissions. Encouragingly, however, the vast majority of these – 23 percentage points – reported that their emissions decreased, year on year.

Science-based targets

Only one supplier disclosed either committing to or having set a science-based target. The majority of disclosing companies did not set nor anticipate setting a science-based target within the next two years. However, over 60% of Brazilian companies who responded in 2017 were SME's, including 100 new responders in the earlier stages of awareness on climate change and water. Here we see huge opportunities for members to engage with them and build capacity. Recognition of the SBTi is generally lower for Brazilian suppliers given that the majority are SME's in early stages of awareness and possibly looking into or already engaged with local sustainability standards.

Climate change practices

Brazilian suppliers report low levels of action on climate change. Only 6% of companies disclosed engaging their own suppliers, and only 8% have set a renewable energy target. Across all metrics, Brazilian companies lag behind the global average.

The high overall response rate indicates that awareness among Brazilian companies of climate change issues is not lacking, but companies are doing relatively little. Enhanced incentivization of companies as well as targeted capacity-building measures may prove effective in helping Brazilian companies pick up the pace.

Water practices

Brazil has recent experience of an extensive drought, it has a large agricultural sector, and it relies on hydro-electricity for much of its power. As a result, safeguarding water should be a high priority for its companies. Unfortunately, it seems that there is still a substantial gap to be addressed – especially in terms of disclosure and engagement.

Considering that only 23% of companies responded to the water questionnaire, it is difficult to draw robust conclusions. On the other hand, it is worth noting that companies that did disclose exhibited much better performance compared with the global average than Brazilian companies responding to the climate change questionnaire.

Almost half of suppliers (48%) acknowledged water risks that could have a material impact on their business, yet only 36% of suppliers report conducting a water risk assessment. Moreover, risk mitigation tends not to extend beyond direct operations, with only 13% reporting that they engage with their suppliers on water issues.

6. https://www.reuters.com/article/us-brazil-amazon-mining/brazil-to-reinstate-protection-for-amazon-reserve-idUSKCN1C02VT

Climate change response rate:

70%

Water response rate:

23%

Forests response rate:

25%

1

company listed on the Supplier Engagement Rating

Figure 12: Climate change practices, %

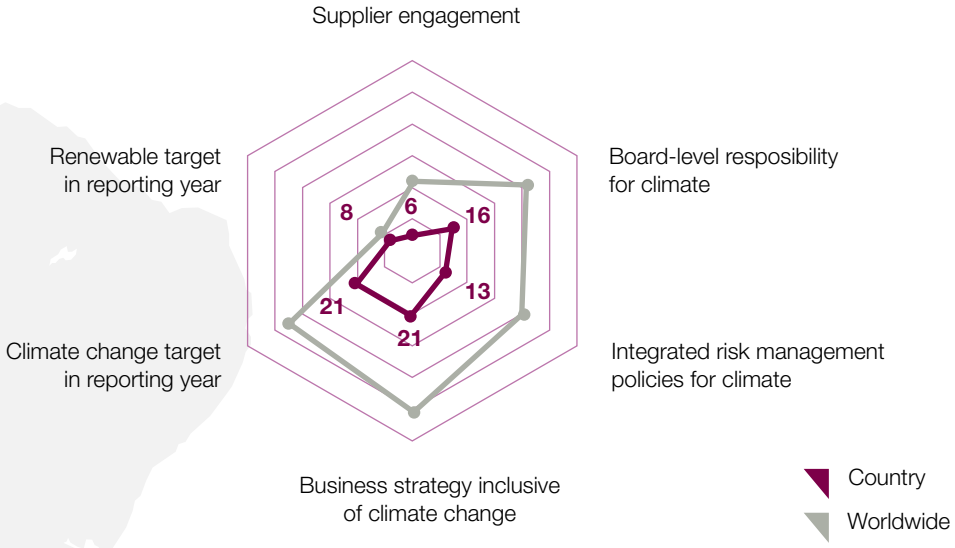
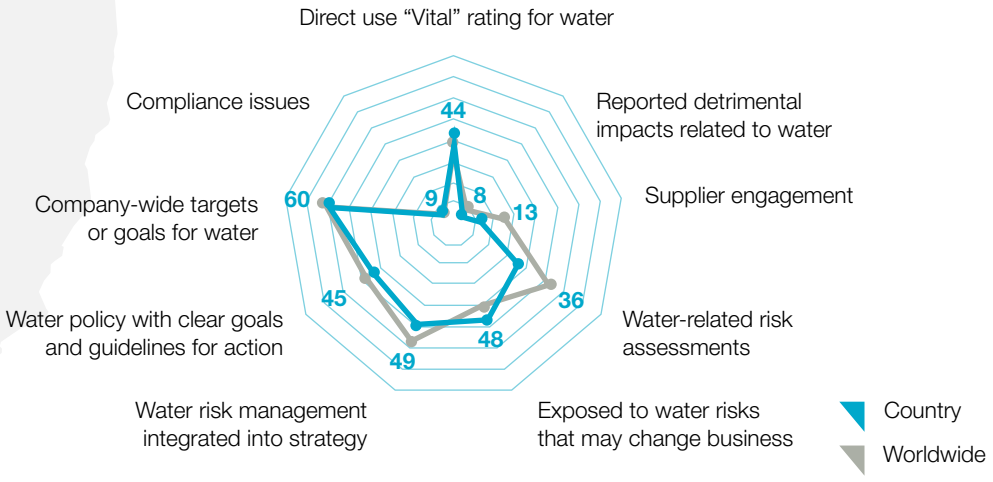


Figure 13: Water practices, %



Arcos Dorados

For many companies, such as those in the food and beverage sector, the supply chain is where the majority of their water risk lies. Arcos Dorados Holdings Inc., McDonald´s largest franchise, has more than 900 restaurants in Latin American, serving 1.8 million customers per day. The company is a member of the CDP supply chain water program, and 250 of its suppliers across Latin America were asked to respond to CDP's water questionnaire in 2017. In 2015, Arcos reduced the total water consumption in its supplier restaurants by 25%.

United Kingdom

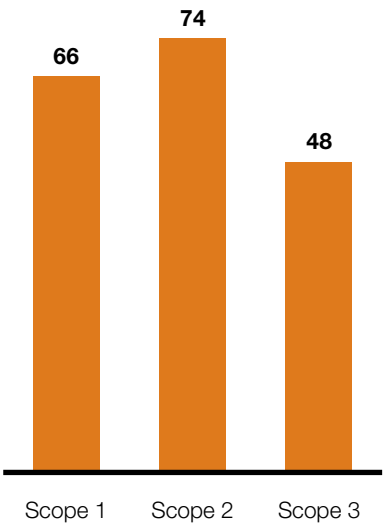
CO_2 saved:

10 million mt

Savings from initiatives implemented:

US$457 million

Figure 14: Companies reporting emissions, %



Overview

The UK has a largely positive track record in addressing environmental issues, both domestically and abroad, and UK-based suppliers disclosed high levels of engagement with the climate change, water and forests programs. The UK continues to reduce greenhouse gas emissions[7], and the government is looking to forge post-Brexit environmental policy with initiatives such as its Clean Growth Strategy[8].

UK suppliers perform particularly well across the following dimensions:

- Climate change policies;
- The number of companies disclosing a year-on-year decrease in emissions;
- Participation in the Science Based Targets initiative; and
- Awareness of water risk

UK companies reported emissions of 120 million mt CO_2e (Scope 1 and 2), savings/avoided emissions of 10 million mt CO_2e in disclosing year, and US$457 million annual savings associated with initiatives implemented in reporting year.

Emissions

Most (68%) UK companies disclosed year-on-year changes in their carbon emissions. Of these, almost two-thirds (45 percentage points) reported a fall in emissions. This is the joint highest result (tied with France) across the eight countries analyzed.

Science-based targets

One third of companies disclosed an intention to set science-based targets within the next two years. Although at 45%, the number of UK-based respondents that does not expect to set one is considerably higher than in many other countries. The UK is well represented in the official SBT initiative, with 36 companies that have targets set or have committed to do so, representing 11% of the total, the third highest behind the US and Japan.

Climate change practices

UK suppliers performed above average across all climate change practice metrics apart from renewable energy, where only 10% disclosed setting a renewable energy target. UK companies were particularly strong in climate change management, with 65% demonstrating climate leadership in the form of board-level oversight, 53% integrating climate into risk management, and 63% integrating climate change into business strategy. Companies disclosed a signifncant amount of emissions reductions initiatives with the most frequent initiatives, by a large margin, related to building efficiency while the most impactful initatives related to fleet transportation vehicle optimization and procurement of less carbon-intensive energy.

Water practices

Given that the UK is typically seen as a water-abundant country, it may come as a surprise that UK companies disclosed higher-than-average exposure to material water risk. But future scenarios indicate that water quality and availability will be at risk, and it is encouraging to see that companies are recognizing and acting on this. For example, there is a high level of target- and goal-setting among UK companies. These targets need to reflect the ambition of member companies, such as Diageo which aims to ensure that by 2020, 100% of waste water is returned safely to the environment. However, UK companies can improve on integrating water risk management into their business strategy, and in engaging suppliers. For many UK companies, a large proportion water risk will lie outside of direct operations, often in countries all over the world. UK companies must raise the issue of water with their suppliers, to ensure that risks are appropriately managed.

7. https://www.carbonbrief.org/analysis-uk-cuts-carbon-record-coal-drop
8. https://www.gov.uk/government/publications/clean-growth-strategy/clean-growth-strategy-executive-summary

Climate change response rate:

71%

Water response rate:

18%

Forests response rate:

88%

9

companies listed on the Supplier Engagement Rating

Figure 15: Climate change practices, %

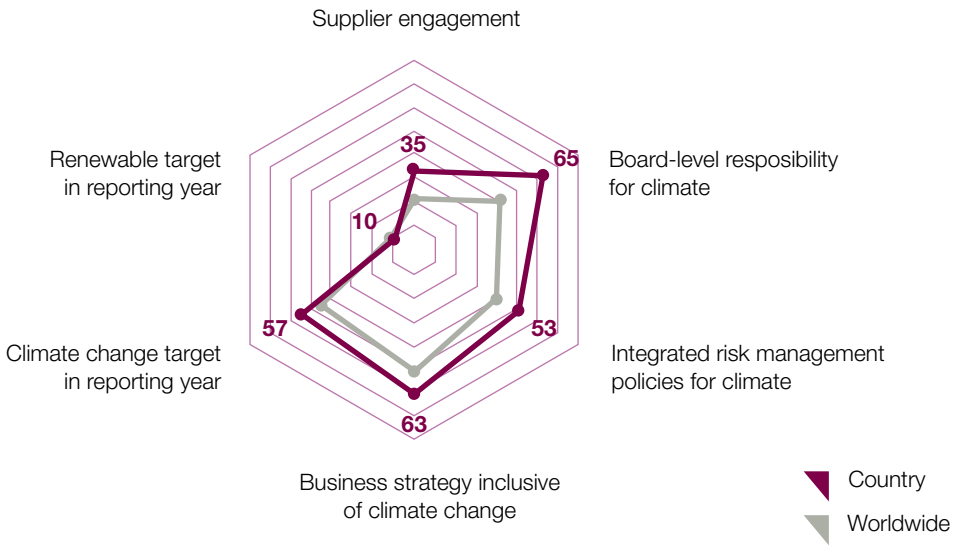
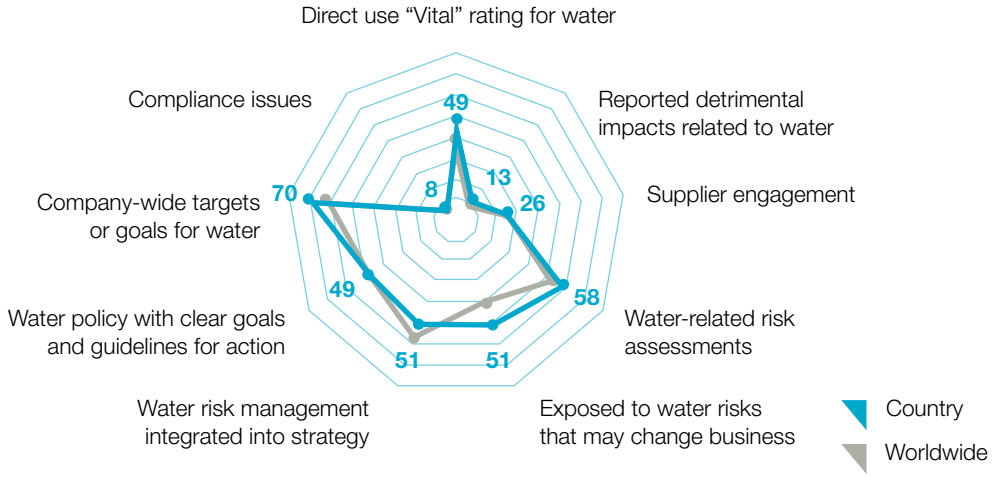


Figure 16: Water practices, %



Sky Plc

Sky has put an emphasis on reducing the embedded emissions within set-top boxes. Regular life cycle analysis has helped to identify hotspots of emissions where improvements can be made. The company has gone beyond just auditing suppliers, providing consultancy support to improve performance and jointly develop a strategy to cut emissions. Despite all this progress, Sky is now going one step beyond just reducing impacts and is now looking to close the loop with its new Sky Q set-top boxes. These have been designed with the circular economy in mind. As well as helping to perfect its closed loop system, the company is focusing efforts on phasing out all single use plastics from both its own operations and its manufacturing supply chain.

Germany

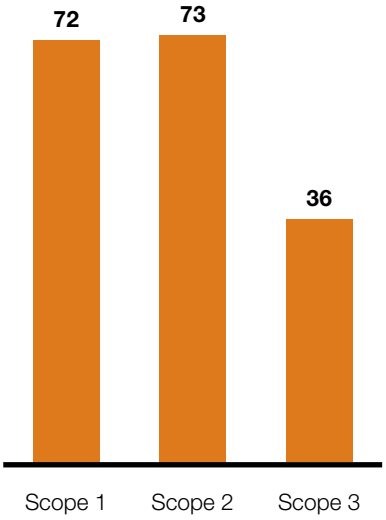
CO_2 saved:

7.8 million mt

Savings from initiatives implemented:

US$401 million

Figure 17: Companies reporting emissions, %



Overview

In many regards, Germany is a leader in sustainability issues, with its ambitious 'Energiewende' renewable energy transition policy, and high levels of public concern regarding environmental issues. However, it is struggling to meet its carbon reduction targets, partly as a result of increased coal consumption following its nuclear shutdown. At the time of publication, the ongoing negotiations to form a new government are creating additional uncertainty and have the potential for weakening of environmental ambition.

Nonetheless, disclosure rates among German suppliers are high across the climate, water and forests programs, and German companies have done well in terms of climate performance.

German companies reported emissions of 425 million mt CO_2e (Scopes 1 and 2), savings/avoided emissions of 7.8 million mt CO_2e, and US$401 million annual savings associated with initiatives implemented in the reporting year.

Emissions

Just under three-quarters of German companies disclosed Scope 1 and 2 emissions, but only a third (36%) disclosed Scope 3 emissions, indicating a capacity gap. Two thirds (65%) disclosed year-on-year changes in carbon emissions, with 41% of these reporting an increase in emissions.

Science-based targets

Germany is roughly in line with global averages for setting science-based targets. Given the country's advanced economy and high levels of environmental engagement, it might be expected that more companies would be planning to set such targets. One-fifth (19%) of companies disclosed the intent to set science-based targets within the next two years.

Climate change practices

Germany scored at or above the global average in all of the climate change metrics, with particularly high scores on business strategy and board-level responsibility for climate issues. However, while the 16% that have set renewable energy targets is above the global average of 12%, it is somewhat low given Germany's embrace of clean energy.

The most frequent emissions reduction initiatives disclosed related to process energy efficiency and building energy efficiency while the most impactful initatives related to producing more efficient products and utilizng more innovative production processes.

Water practices

German suppliers demonstrated average or below-average performance regarding water risk issues.

Although only 22% of suppliers rate water as vital in direct operations, just under half (42%) disclosed that indirect water use is important to the successful operation of their business. Given the importance given to water throughout the supply chain it's of concern that only 18% engage their own suppliers on water.

Climate change response rate:

78%

Water response rate:

48%

Forests response rate:

50%

Figure 18: Climate change practices, %

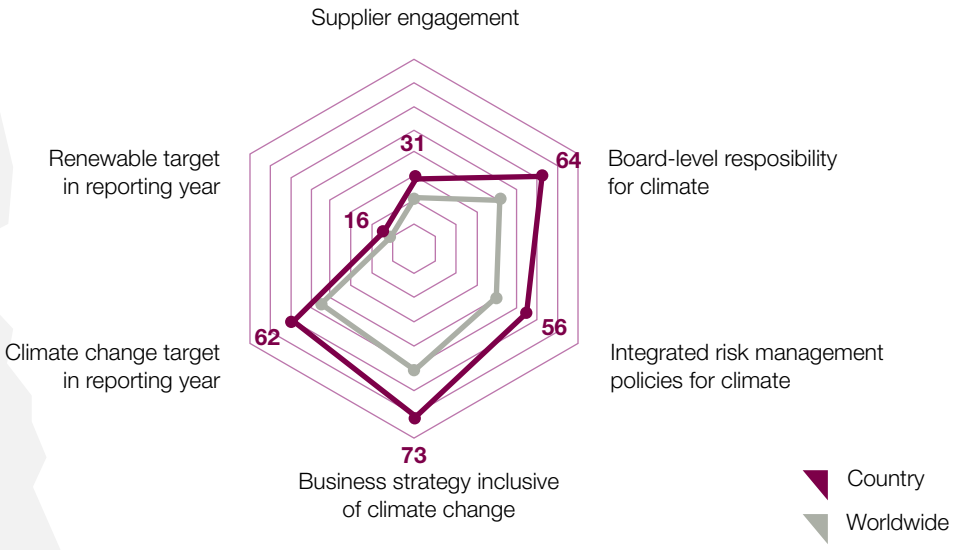
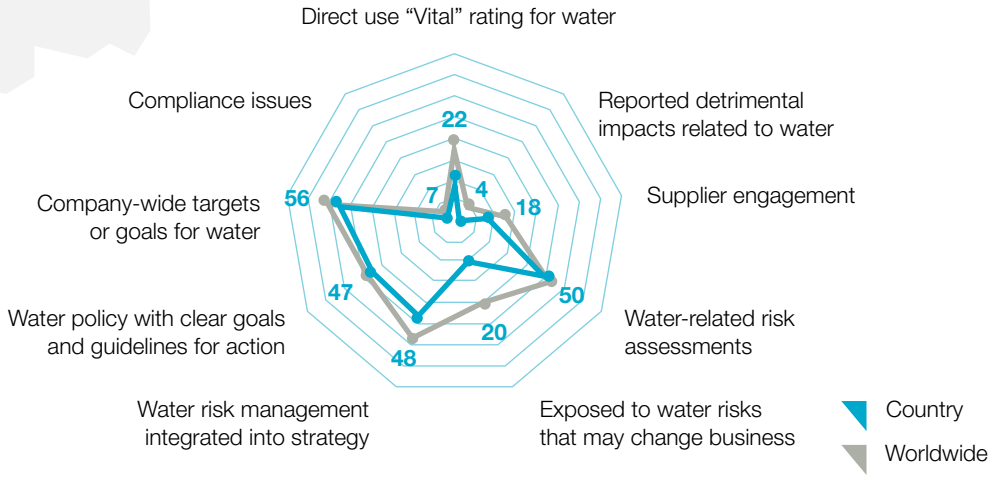


Figure 19: Water practices, %



Metro

Whilst the company actively works to support its smaller suppliers on sustainability, Metro has taken a different approach with larger suppliers, looking to leverage its own position within the overall supply chain to improve sustainability. This approach has been put in action through METRO Water Initiative, a global commercial campaign to raise awareness on promoting water conservation, which also helps to support NGOs working on these issues. This reflects the fact that water scarcity and pollution have become major concerns around the world, with the consequences already being felt in a number of key markets in which the business operates such as Turkey, China and India. The METRO Water Initiative has proven to be a success so far, with the company stepping up efforts to grow it even further in 2018 and 2019, moving it into new countries and product categories such as dry packaged foods.

France

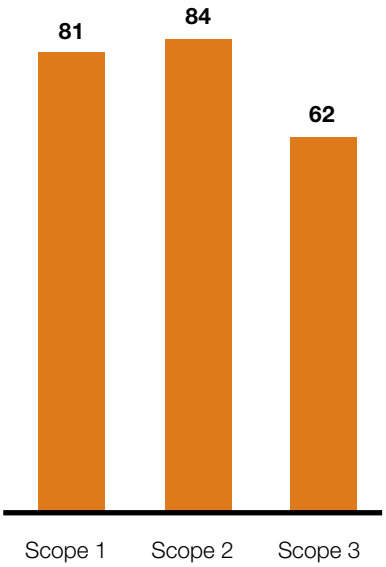
CO_2 saved:

46 million mt

Savings from initiatives implemented:

US$705 million

Figure 20: Companies reporting emissions, %



Overview

France has staked out a leadership position on climate change by, among other things, hosting the successful climate talks that delivered the 2015 Paris Agreement, and introducing a world-first regulation, Article 173, requiring investors to disclose how they are approaching environmental risks.

This policy environment has no doubt contributed to the strong performance of French suppliers, who achieved some of the highest average scores in terms of climate change practices.

French companies are leading in:

- Disclosure of emissions levels;
- Supplier engagement;
- Managerial awareness; and
- Setting of science-based targets

Organizations disclosing on water risk demonstrated good risk awareness vis-a-vis operations and supplier engagement.

French companies reported emissions of 331 million mt of CO_2e (Scopes 1 and 2), savings/avoided emissions of 46 million mt CO_2e, and US$705 million annual savings associated with initiatives implemented in the reporting year.

Emissions

Only 27% of companies were unable to provide figures for year-on-years changes to emissions. Almost half (45%) of companies reported falling emissions – the joint highest percentage among the eight countries analyzed.

Science-based targets

French companies showed the highest engagement and awareness in disclosures related to science-based targets. Only 5% of companies have not nor do not expect to set a science-based target within the next two years. Just over half of all companies said they intend to set science-based targets within the next two years. Similarly, France is well represented in the official SBT initiative, where 26 companies have committed to setting targets in the official listings, representing 8% of total participation.

Climate change practices

French suppliers outperformed the global average across all climate change metrics. The high priority given to climate change issues by successive French governments, not least in the context of hosting the Paris climate talks, and the close interest shown by investors in climate risk management have undoubtedly helped drive strong performance among French companies. Although more French companies report renewable energy targets than the global average, the fact that 83% of companies do not set clean energy goals remains a weakness in an otherwise positive picture. Energy procurement and fuel optimization were the emissions reductions initiatives disclosed with the most impact.

Water practices

Unfortunately, the progress French companies demonstrate in addressing climate change does not extend to water issues, where they are generally lagging behind the global average. This performance is likely contributing to one area where French companies are ahead of the global average – in reporting compliance issues relating to water. Encouragingly, 71% of suppliers report undertaking water risk assessments, thereby building a foundation for more sustained action on water.

Climate change response rate:

78%

Water response rate:

33%

Forests response rate:

67%

4

companies listed on the Supplier Engagement Rating

Figure 21: Climate change practices, %

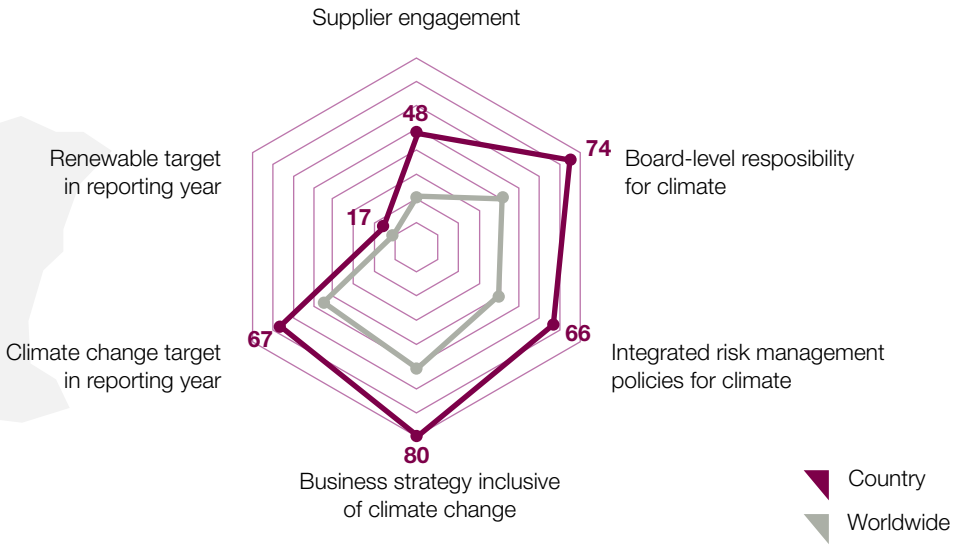
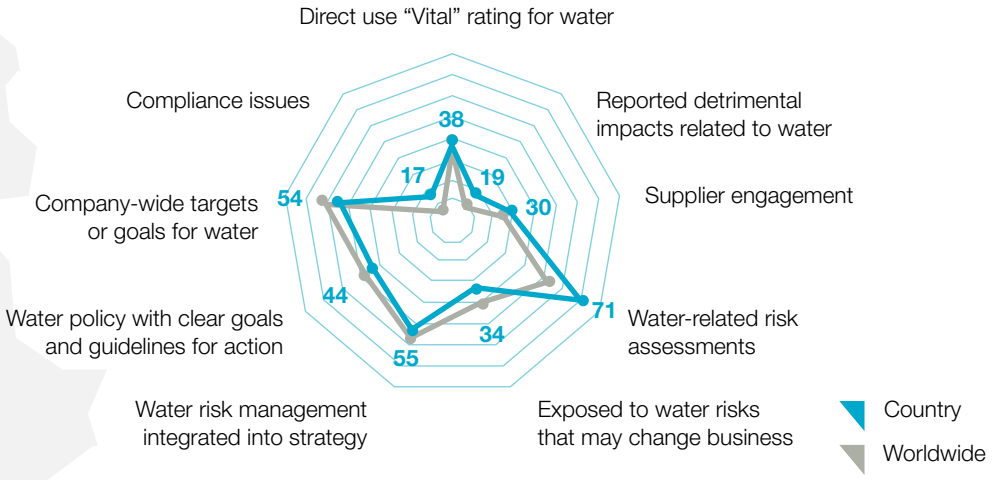


Figure 22: Water practices, %



Danone

By establishing water management incentives for suppliers, Danone minimizes its environmental footprint and creates supply chain stability. Implementation of a sustainable relationship with suppliers is a key component of Danone's activity. For Danone, the supplier relationship is evolving towards a relationship between partners, enabling a co-creation approach with mutual benefits, shared risks and economic development. This approach creates new sourcing opportunities and secures Danone's long-term supply.

India

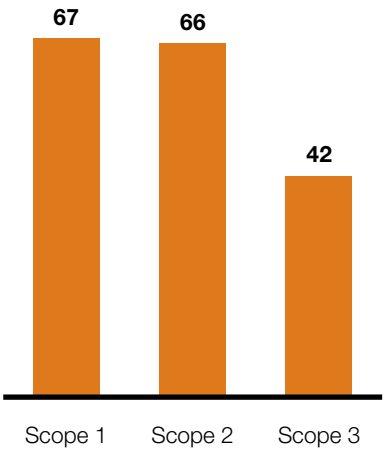
CO_2 saved:

2.4 million mt

Savings from initiatives implemented:

US$144 million

Figure 23: Companies reporting emissions, %



Overview

India has a diverse and fast-growing economy alongside a population that is set to be the world's largest within a decade[9]. The country faces climate-related risks such as extreme heat, catastrophic cyclones, and extreme monsoon seasons[10]. The country also faces severe water stress, with groundwater levels falling and supplies predicted to fall 50% below demand by 2030[11]. India has taken an aggressive stance to combat climate change, with particularly ambitious goals for renewable energy. However, the number of Indian organizations disclosing was small compared with the peer group, at just 67. Nonetheless, those respondents collectively performed above average across all critical areas, including:

- Emissions disclosure;
- Supplier engagement;
- Managerial awareness; and
- Renewable energy target setting

Indian companies reported emissions of 395 million mt CO_2e (Scopes 1 and 2), savings/avoided emissions of 2.4 million mt CO_2e in disclosing year, and US$144 million in annual savings associated with initiatives implemented in the reporting year.

Emissions

Almost two thirds (58%) of companies disclosed a year-on-year change in their carbon emissions. Of these, just over half (30 percentage points) said that their emissions had decreased.

Science-based targets

Indian companies showed average levels of engagement and awareness related to science-based targets. One-fifth (19%) of companies stated an intent to set science-based targets within the next two years.

Climate change practices

One-quarter (26%) of Indian suppliers reported having a renewable energy target in place, while two-thirds (66%) incorporate climate change in their business strategy. High numbers of Indian suppliers disclosed board-level responsibility for climate, intergrated risk management policies for climate change, and setting a renewable energy target.

India was the only country among the eight analysed which clearly outperformed the global average in the renewable energy category. This likely reflects strong national policy support for renewables in India, and should serve as an example for other emerging markets. The most frequently disclosed emissions reductions initiatives related to process energy efficiency improvements, while the most impactful were around utilization optimization of energy-intensive equipment and comissioning of less carbon-intensive fuel systems.

Water practices

Organizations disclosing on water demonstrated good awareness of the risks to their operations and high levels of supplier engagement.

Indian companies generally scored above the global average across most of the water questionnaire categories, with 91% of companies disclosing company-wide targets or goals for water, and 78% reporting the integration of water risk management procedures into their wider strategy.

Given the low absolute number of Indian companies responding to the water questionnaire, these findings should be treated with caution, as they are most likely not representative of the country in general.

9. http://www.un.org/en/development/desa/population/events/other/21/index.shtml
10. https://germanwatch.org/en/download/20432.pdf
11. http://www.wri.org/blog/2015/02/3-maps-explain-india%E2%80%99s-growing-water-risks

Climate change response rate:

77%

Water response rate:

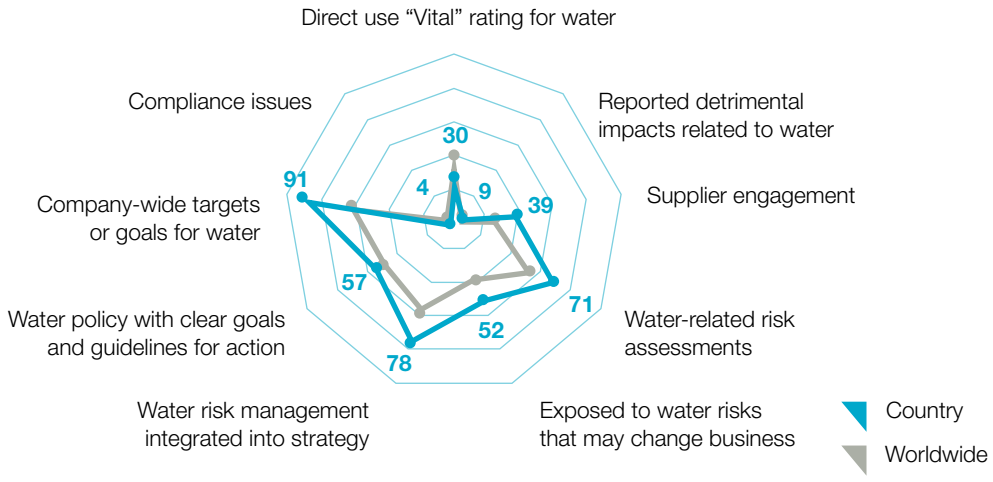
34%

Forests response rate:

None requested

Figure 24: Climate change practices, %

Figure 25: Water practices, %



Tech Mahindra

Through its Sustainability Roadmap, Tech Mahindra has established sustainability goals with water being a main focal point. Water is identified as an important material resource and the company has set targets to reduce per capita freshwater consumption by 5%, construct rainwater harvesting at two campuses and install water sensors to ensure optimum water usage. This strategy will reduce water stress and fresh water consumption, saving operational expenses and reducing water costs.

CDP supply chain – forests
Managing deforestation in the supply chain

In 2017, CDP, the world's largest platform for collecting environmental data, extended its supply chain program to forest-risk commodities to address a missing component of corporate environmental action.

Eight leading companies, including McDonald's Corporation and its franchisee Arcos Dorados Holdings, French luxury goods firm and CDP forests A-rated company L'Oréal S.A., and Swiss fragrance and flavor company Firmenich S.A., took part in a pilot funded by the Norwegian Agency for Development Cooperation (NORAD). It involved them requesting information from 244 of their suppliers regarding their production and sourcing of cattle products, palm oil, timber products and soy. These commodities are responsible for the majority of global deforestation and forest degradation.

88 (36%) suppliers replied, using a standardized questionnaire across the four commodities. Fifty-three were approached solely by their customers, while 35 were also invited to disclose to the CDP forests program by their investors. Ten percent of suppliers were approached by more than one customer, demonstrating the potential for scaling up disclosure whilst reducing the reporting burden to companies through a standardized multi-commodity reporting platform. The more suppliers that participate, the greater this benefit becomes.

For the pilot year, we began with a small group of suppliers requested by customers. Nonetheless, the pilot revealed valuable insights on the deforestation risks and opportunities within these commodity supply chains.

First, customers count. The percentage of companies responding to the information request from their customers, at 36%, is considerably higher than the 23% that responded to the request from investors.

Secondly, the supply chain pilot reached areas of particular concern regarding deforestation. More than two-thirds (68%) of supply chain respondents have operations in high-risk countries, such as Bolivia, Brazil, Colombia, Indonesia, Malaysia, Papua New Guinea and Peru.

Transparency

Report material deforestation information

Risk assessment

Assess and understand risks

Opportunities

Realize opportunities associated with deforestation-risk management

Governance

Put governance, policies and standards in place

Implementation

Introduce certification, traceability and supplier engagement systems

However, the pilot also exposed serious limitations to the extent to which risks related to deforestation are managed within commodity supply chains. It is clear that standard management practices required are still far from being mainstream. Specifically:

- Fewer than half (47%) of supply chain respondents report data relating to their consumption and or production of forest-risk commodities. This is the bedrock of effective management.
- Only 24% undertake risk assessments that cover direct operations and their supply chains, compared with 44% of respondents to the investor program.
- Under half (43%) reported commitments to reduce or eliminate deforestation or forest degradation from their supply chain, compared with 77% of respondents to the investor program.
- The biggest gap was found in terms of identifying opportunities related to addressing deforestation. While 87% of those disclosing in the investor program had found opportunities, that figure was just 38% in the supply chain program. Spotting these opportunities often creates the incentive to act on deforestation, and to do so profitably.

Across the suite of environmental risks, companies recognize that supply chains raise particular concerns and pose serious management challenges. It is clear from the supply chain - forests program that effective management of deforestation risks is not percolating down through value chains to the extent necessary. There is a strong case for action both by suppliers and by their customers to address these risks.

On the plus side, the pilot does show suppliers beginning to take action to address supply chain deforestation risks. This new disclosure platform provides a powerful tool to help companies move from commitments to implementation. This follows increasing pressure on suppliers to address deforestation from initiatives such as the Consumer Goods Forum, which represents corporate buyers with some US$4 trillion in revenue.

It has also been successful in bringing together customers and suppliers and forging relationships that will help reduce risk, and identify collaborative opportunities. We encourage more organizations to join the supply chain - forests program to improve transparency, build capacity for risk assessment, and identify solutions to deforestation that will benefit suppliers, customers, investors and the global environment.

Global Canopy

To build a more sustainable global economy, we must first build a deforestation-free one. This relies on businesses shifting away from unsustainable practices in their production and sourcing of key forest-risk commodities, and capitalizing on opportunities to build sustainability into their supply chains.

CDP's supply chain program brings together buyers and suppliers of all sizes to better understand how they are linked to deforestation risk and to drive action to remove deforestation from commodity supply chains. The traceability of the forest-risk commodities used by business is fundamental to this understanding, and can provide the basis for collaborative action to tackle deforestation.

To date, however, this traceability has been limited, slowing effective action. In response, Global Canopy, in partnership with the Stockholm Environment Institute, has developed a tool to address this gap in an entirely new way.

Trase allows users to map supply chains of internationally-traded agricultural commodities from the jurisdictions where they are produced to the countries that import them, identifying key supply chain companies along the way. Its pioneering approach provides supply chain information at scale. With resolution to municipality level, it can reveal how supply chain actors are connected to specific production landscapes - and to the risks and opportunities associated with them.

Use of Trase can enhance the effectiveness of CDP's supply chain program by allowing buyers to prioritize their engagement with suppliers. Both to address potential regulatory, operational or reputational risks, but also to identify new opportunities for sustainable sourcing and investment.

Niki Mardas
Executive Director, Global Canopy

The Carbon Trust perspective
Follow the leaders

Many of the solutions we need to build a sustainable future already exist. We just need to see a lot more organizations follow in the footsteps of the leaders putting them into practice.

In 2018, we are fast approaching a tipping point. The impacts of climate change, water scarcity and deforestation are no longer hiding somewhere in an uncertain future. They are becoming ever more obvious. Investors and the general public are starting to sit up and take serious notice. The question is no longer whether things need to change, but how quickly that change can come.

It is still not coming quickly enough to prevent some of the worst consequences of these impacts. But with many dark clouds looming on the horizon, some of the world's biggest companies are proving to be a bright spot. A small number of the most progressive public-sector bodies are also making similar strides forward.

These organizations are setting themselves objective targets, based on what the best available evidence tells us will be needed to deal with the environmental challenges the world is facing. Then they are aligning their long-term strategy and actions with what is genuinely required to deliver on those ambitions.

Often, they are going far beyond what government regulations require and the majority of people are demanding today, so that they are ready to seize the opportunities that they see in the shift to a low-carbon, sustainable economy. This is enlightened self-interest. It is also the right thing to do.

Importantly, these leaders know that they cannot succeed in acting alone. They are working to build strong, resilient supply chains to support them in the transition they are making. And they are using their scale and influence to drive positive behaviors outside of their own operational control, bringing others along to share in their commitments and match their achievements.

In preparing our contribution to this report we have been able to interview the individuals responsible for sustainability and procurement within many of these leading organizations. It has been enormously encouraging to see how many innovative and effective practical solutions are already being successfully implemented, which have real potential to help solve the world's sustainability challenges.

These solutions include companies redesigning and reimagining their core products so that they use fewer resources or are able to be turned back into an economic resource when they reach the end of their useful life. There are inspiring examples of organizations that are choosing to collaborate together on initiatives, where their joint impact becomes far greater than what could be achieved alone. And we have seen a real commitment to developing skills and capabilities throughout the supply chain, helping to accelerate learning and evolve best practice.

By proving that it is possible to change for the better and succeed at the same time, these organizations are helping to prove the case for ambitious action. They are moving what matters into the spotlight, both through setting an example and directly influencing their supply chains.

Many of the solutions we need to build a sustainable future already exist. We just need to see a lot more organizations follow in the footsteps of the leaders putting them into practice. I hope that our case studies in this report prove to be interesting and inspiring.

Tom Delay CBE
Chief Executive, The Carbon Trust

What's next?
Finding entry points for climate action

Overall, 2017 was a year of strong climate action as governments around the world took steps to affirm their commitments under the Paris Agreement, while the number of companies reporting environmental data to CDP and taking action has reached unprecedented levels. With business operations stretching across many countries and regions, purchasing organizations are in a strong position to encourage wide-ranging adoption of environmental standards within their global supplier network.

Command-and-control measures, such as integrating sustainability criteria into purchasing decisions or supplier scorecards, are an effective means of cascading change through supply chains. Alongside the stick, purchasers can offer carrots: members of the CDP supply chain program recognize that supplier incentives, reward and recognition can go a long way to instill sustainable change. Capacity- and awareness-building approaches, as well as peer-to-peer learning, are often hallmarks of effective and sustainable supplier engagement programs.

As in prior years, this report notes a clear performance gap between leading companies and their suppliers across all regions. However, the gap is narrowing.

A significant number of companies have embedded management of climate change and water issues into their way of working, through integration into their business strategies and plans.

More than two-thirds of suppliers have identified inherent **climate change risks** that have the potential to generate a substantive change in their business, a number which grew from 74% in 2016 to 76%. Equally, more suppliers see clear opportunities in addressing climate change than ever before.

- **This year**, **3721 suppliers identified risks**, up from 3230 in 2016
- **3400 supplier organizations** have identified **climate change opportunities** that could lead to a substantive change in their business, up from 2968 in 2016
- 2530 suppliers report that they have integrated climate change into their **business strategy**, up from 2270 suppliers in 2016
- **2359 suppliers** report emissions **reduction initiatives**, up from 2189 companies in 2016

Building on internal awareness, companies have begun paying more attention to their indirect emissions, but significant opportunities to reduce these emissions remain unexploited. The engagement gap between direct and indirect emissions represents missed and untapped opportunities for reaping cost savings.

- Only 34% of respondents disclosed their Scope 3 emissions, compared to 56% disclosing Scope 1 and 62% disclosing Scope 2 figures
- Purchased goods and services account for the largest share of Scope 3 emissions, and there is significant potential to engage suppliers upstream/downstream

This report notes that heightened risk awareness and target-setting are becoming standard practices among CDP's disclosing companies.

What can companies do to close the gap and cascade climate action further down their supply chains?

- Engage with programs, such as CDP's Action Exchange initiative, to take the next steps in encouraging suppliers to take action. Assist suppliers with managing impacts, build capabilities if needed, and incentivize where appropriate
- Link supply chain emissions reduction goals to science-based targets and the global sustainability agenda

Braskem

Addressing environmental challenges from an increasingly diverse supply chain to support business growth in more sustainable product lines

Braskem has created the Ser + Realizador programme to support key waste management cooperatives in Brazil's recycling supply chain, at the same time as helping to strengthen its own supply of recycled raw material input. This provides training and environmental education to waste pickers, as well as management consultancy support to waste-sorting cooperatives. Through the programme Braskem also provides new equipment for waste pickers and investment for cooperatives to upgrade infrastructure. To date this has benefitted 1,300 waste pickers and 35 cooperatives. Braskem is currently working towards a 2020 target of providing development support for waste pickers in order to help them raise their incomes by 70%. In addition, the company aims to benefit 4,000 workers through training and better work conditions. These combined efforts are allowing Braskem to expand its sustainable product lines and drive future business growth. As result of these efforts the company has recently been able to launch 100% recycled polypropylene and polyethylene resins produced entirely from recycled big bags and sacks.

Kellogg Company

Developing a climate-resilient agricultural supply chain that is compatible with the 2°C Paris Agreement goal

Kellogg Company is one of the world's largest food businesses, selling its products across 180 countries. It is the world's largest manufacturer of cereals, the leading producer of frozen foods in North America, and since acquiring the Pringles brand in 2012 the second largest producer of snack foods globally.

At COP21 in Paris – in advance of the signing of the Paris Agreement – Kellogg formally announced that it would align its own emissions reductions with a below 2°C pathway, becoming one of the first global companies to commit to a science-based target. This involved setting the goal of reducing its own scope 1 and 2 emissions by 65% on an absolute basis compared to 2015, alongside a challenging scope 3 target of achieving a 50% reduction from the same baseline.

One of the first obstacles to delivering on Kellogg's supply chain target is simply getting an accurate baseline for its 2015 scope 3 emissions. This is still being refined through asking direct suppliers to report high quality primary data through the CDP Supply Chain program, with the company now in its third year of data collection.

The company has set policies and developed initiatives to engage its direct suppliers on climate and water issues, finding ways work together to reach farmers and help them improve their practices. Kellogg is now actively engaging with over 70 major suppliers of its priority ingredients, ensuring they are measuring their impacts, driving continuous improvement and investing in farming communities.

Companies are beginning to realize that emissions reduction targets must be in line with climate science. More than 1,100 companies reporting to the CDP supply chain questionnaire in 2017 have stated their commitment to setting a **science-based target** within two years. Such targets can help companies reduce regulatory uncertainties around future emissions reductions, while ensuring efficient operations in a global economy marked by resource scarcity and rising commodity prices.

Integrate climate risk thinking by adopting an internal price on carbon

Last year has seen notable developments in carbon markets, not least with the launch of China's national emissions trading system (ETS), in addition to announcements in North and South America and Asia to extend existing programs, or launch new ones that set a price on carbon. An internal price on carbon can help companies manage hidden climate change risks, thereby internalizing the expected price of carbon from an ETS, carbon tax or national carbon pricing policies. **Nine percent of responding suppliers reported using an internal carbon price in 2017**. While using price signals to mitigate regulatory risks, companies also use an internal carbon price to identify potential opportunities in transitioning towards a low-carbon economy, as well as to incentivize low-carbon activities, such as investments in energy efficiency or clean energy.

Encourage the uptake and use of renewable energy

A growing number of forward-looking companies are setting ambitious targets to source 100% renewable energy, while many more are committing to increase their use of clean energy. Indeed, **12% of CDP's responding suppliers report a renewable energy target and 16% report consuming renewable electricity**. While companies have largely focused on their direct emissions, members of the RE100 initiative encourage the use of renewable electricity within their supply chains.

Although the number of renewable energy initiatives relating to supply chain management is modest, the potential for realizing CO_2 reductions is clear; implementing a comprehensive renewable electricity program aimed at corporate supply chains can be an impactful way to reduce a company's indirect emissions, while helping increase the global demand for renewable electricity.

Rethink product design & undertake innovative R&D

Increasing pressure on manufacturers to improve sustainability necessitates an integrated, life-cycle approach to creating products. Product design strategies to reduce the environmental footprint will have direct knock-on effects across the supply chain. Thus, coordination across the supply chain is crucial and beneficial as products with better energy efficiency and a lower carbon footprint can be better deployed.

Retailers – the final link in the global supply chain

Whether purchased online or in a store, the goods that power the global economy often pass through a major retailer on the way into the hands of a consumer. As consumers increasingly demand transparency, accountability and traceability, retailers are being called upon to provide a clear understanding of not only the products they are selling but the entire value chain producing them.

Furthermore, as more retailers commit to setting science-based targets (SBTs), collaborating with suppliers to manage supply chain impact, becomes even more vital. CDP's data shows that a retailer's supply chain emissions footprint can be over nine times the size of their own operations; clear accounting, engagement and mechanisms to track performance are therefore imperative to establish well before an SBT can be submitted and approved.

CDP has seen over the last eight years that a key driver to increase levels of environmental action is starting at the top (or gate end) of the supply chain and cascading the request for disclosure and performance improvement, down. Members of CDP's Supply Chain program have seen the influence this can have firsthand – the "big four" flavor and fragrance companies (Givaudan, Firmenich, International Flavors and Fragrances (IFF), and Symrise) are all actively engaging their own suppliers through CDP due to a strong signal being amplified through the tiers of the retail supply chain.

As retailers such as Walmart and Tesco commit to ambitious SBTs that encourage their suppliers to set and achieve SBTs of their own, the impacts will be amplified exponentially.

Supplier engagement leader board

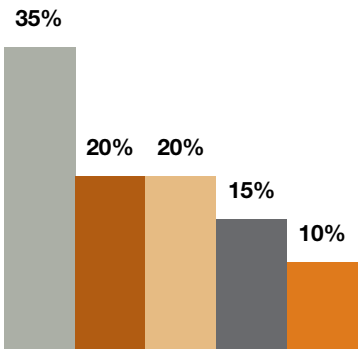
Purchasing organizations can incentivize significant environmental changes in their supply chain. In 2016, however, only 23% of suppliers responding to the CDP supply chain questionnaire reported that they engage with their own suppliers on reducing their GHG emissions and around climate change strategies.

Following on from a successful pilot year, CDP learned that all participating companies in the Supplier Engagement Rating (SER) thought it helped raise their supplier engagement work. Additionally, over half used it as a tool to help shape their supplier climate profile.

Companies were evaluated on their supplier engagement through their responses to questions in four key areas of the CDP supply chain climate change questionnaire related to governance, ambition, management (Scope 3) and supplier engagement. In addition, each company's CDP climate change score was factored into their rating as an overall assessment of company performance on climate change. Information provided through the supply chain water questionnaire or supply chain module (climate change or water) were not evaluated.

CDP questionnaire section: Weighting in supplier engagement rating

- Supplier engagement
- Governance
- Scope 3 emissions accounting
- Targets
- Overall CDP climate change score



Company name	Country
Consumer discretionary	
Bridgestone Corporation	Japan
Hankook Tire Co Ltd	South Korea
Honda Motor Company	Japan
Husqvarna AB	Sweden
Pacific Market International	USA
Panasonic Corporation	Japan
Sky plc	United Kingdom
Sodexo	France
Yokohama Rubber Company, Limited	Japan
Consumer staples	
Ajinomoto Co. Inc.	Japan
Coca-Cola HBC AG	Switzerland
Imperial Brands	United Kingdom
KAO Corporation	Japan
Kellogg Company	USA
Nestlé	Switzerland
Philip Morris International	USA
Tereos	France
Unilever plc	United Kingdom
Financials	
Bank of America	USA
BNY Mellon	USA
ING Group	Netherlands
MetLife, Inc.	USA
PricewaterhouseCoopers LLP	United Kingdom
Société Générale	France
TD Bank Group	USA
Healthcare	
Johnson & Johnson	USA
Industrials	
Companhia de Concessões Rodoviárias - CCR	Brazil
Daikin Industries, Ltd.	Japan
Interserve Plc	United Kingdom
ISG plc	United Kingdom
Koninklijke Philips NV	Netherlands
Metso	Finland
Owens Corning	USA
Philips Lighting	Netherlands
Reynders Label Printing	Belgium
Rolls-Royce	United Kingdom
Information technology	
Accenture	Ireland
Adobe Systems, Inc.	USA
Advanced Micro Devices, Inc	USA
Apple Inc.	USA
Atos SE	France
Cisco Systems, Inc.	USA
Fujitsu Ltd.	Japan
Hewlett Packard Enterprise Company	USA
HP Inc	USA
Intel Corporation	USA
Juniper Networks, Inc.	United Kingdom
Konica Minolta, Inc.	Japan
Microsoft Corporation	USA
Taiwan Semiconductor Manufacturing	Taiwan
Tech Mahindra	India
United Microelectronics	Taiwan
Telecommunication services	
BT Group	United Kingdom
Utilities	
ACCIONA S.A.	Spain
NRG Energy Inc	USA
PG&E Corporation	USA
Red Eléctrica S.A.U.	Spain
Tokyo Gas Co., Ltd.	Japan

The Supplier Climate & Water A List

Each year, with our valued scoring partner Adec Innovations- we analyze and score supplier responses to CDP's climate change information request against the CDP scoring methodology, assessing the companies' response on four levels: disclosure, awareness, management and leadership. The Supplier Climate A List recognizes companies that are leading in their actions to reduce emissions and mitigate climate change in the previous CDP reporting year.

The aim is to highlight positive climate action as demonstrated by a company's CDP response. A high score signals that a company is measuring, verifying, and managing its carbon footprint- for example, setting and meeting carbon reduction targets and implementing programs to reduce emissions in both its direct operations and its supply chain. Equally, the Supplier Water A List highlights companies that have taken an active approach towards water stewardship. Many members use supplier scores in their assessments of suppliers. The CDP scoring methodology is the highest-rated sustainability rating system.

Global supply chain scoring partner:

ADEC INNOVATIONS
WHERE IMPACT MATTERS

Supplier Climate A List

The following companies represent 2% of total climate change disclosures in 2017.

Company name	Score	Country
Consumer discretionary		
BMW AG	A	Germany
Brembo SpA	A	Italy
LG Electronics	A	South Korea
Sky plc	A	United Kingdom
Sony Corporation	A	Japan
Consumer staples		
Coca-Cola European Partners	A	United Kingdom
Coca-Cola HBC AG	A	Switzerland
Colgate Palmolive Company	A	USA
Diageo Plc	A	United Kingdom
L'Oréal	A	France
Nestlé	A	Switzerland
Unilever plc	A	United Kingdom
Financials		
Bank of America	A	USA
Bankia	A	Spain
BNY Mellon	A	USA
Goldman Sachs	A	USA
ING Group	A	Netherlands
KPMG UK	A	United Kingdom
MAPFRE	A	Spain
Healthcare		
Biogen Inc.	A	USA
Lundbeck A/S	A	Denmark
Novo Nordisk A/S	A	Denmark

Company name	Score	Country
Industrials		
Canadian National Railway Company	A	Canada
CTT- Correios de Portugal SA	A	Portugal
Deutsche Bahn AG	A	Germany
FERROVIAL	A	Spain
Grupo Logista	A	Spain
International Consolidated Airlines Group, S.A.	A	United Kingdom
Kawasaki Kisen Kaisha, Ltd.	A	Japan
Komatsu Ltd.	A	Japan
Koninklijke Philips NV	A	Netherlands
Lockheed Martin Corporation	A	USA
Mitsubishi Electric Corporation	A	Japan
Nabtesco Corporation	A	Japan
Obrascon Huarte Lain (OHL)	A	Spain
Owens Corning	A	USA
Philips Lighting	A	Netherlands
Schneider Electric	A	France
Waste Management, Inc.	A	USA
Information technology		
Adobe Systems, Inc.	A	USA
Alphabet, Inc.	A	USA
Apple Inc.	A	USA
Atos SE	A	France
Cisco Systems, Inc.	A	USA
Fujitsu Ltd.	A	Japan
Hewlett Packard Enterprise Company	A	USA
HP Inc	A	USA
Infosys Limited	A	India
Konica Minolta, Inc.	A	Japan
LG Display	A	South Korea
Microsoft Corporation	A	USA
Oracle Corporation	A	USA
Ricoh Co., Ltd.	A	Japan
Samsung Electro-Mechanics Co., Ltd.	A	South Korea
Samsung Electronics	A	South Korea
Sopra Steria Group	A	France
Materials		
Braskem S/A	A	Brazil
FIRMENICH SA	A	Switzerland
Givaudan SA	A	Switzerland
International Flavors & Fragrances Inc.	A	USA
Koninklijke DSM	A	Netherlands
LANXESS AG	A	Germany
Metsä Board	A	Finland
Symrise AG	A	Germany

Company name	Score	Country
TETRA PAK	A	Sweden
Thyssenkrupp AG	A	Germany
Telecommunication services		
BT Group	A	United Kingdom
Deutsche Telekom AG	A	Germany
Proximus	A	Belgium
Swisscom	A	Switzerland
Telefonica	A	Spain
Utilities		
ACCIONA S.A.	A	Spain
National Grid PLC	A	United Kingdom
Red Eléctrica S.A.U.	A	Spain

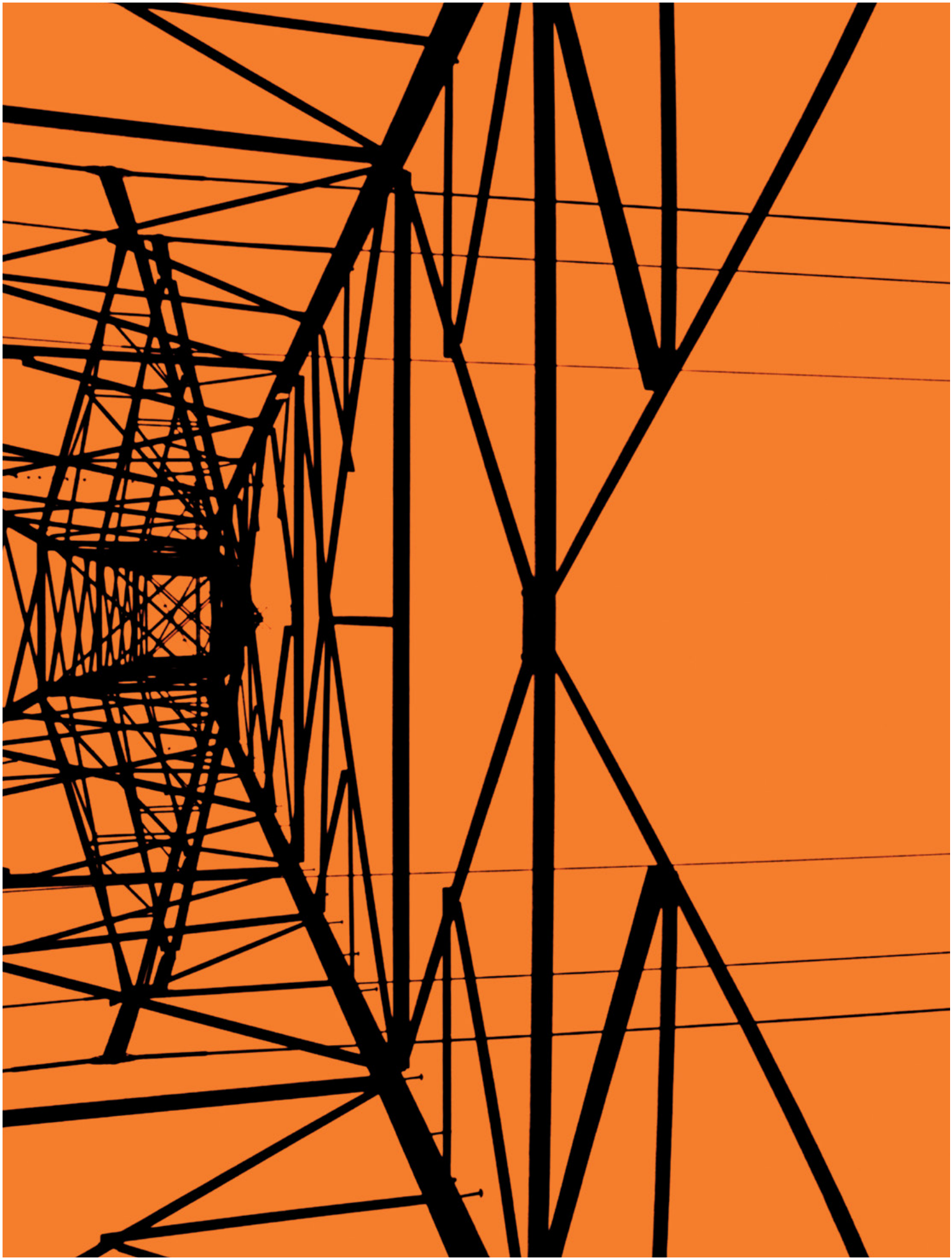
SME company name	Score	Country
Consumer staples		
Mario Camacho Foods, Llc	A-	USA

Supplier Water A List

The following companies represent 3% of total water disclosures in 2017.

Company name	Score	Country
Consumer discretionary		
BMW AG	A	Germany
Bridgestone Corporation	A	Japan
Fiat Chrysler Automobiles NV	A	United Kingdom
Ford Motor Company	A	USA
General Motors Company	A	USA
Sony Corporation	A	Japan
Volkswagen AG	A	Germany
Consumer staples		
Anheuser Busch InBev	A	Belgium
Associated British Foods	A	United Kingdom
Colgate Palmolive Company	A	USA

Company name	Score	Country
Conagra Brands Inc	A	USA
Danone	A	France
Diageo Plc	A	United Kingdom
Kellogg Company	A	USA
L'Oréal	A	France
SCA	A	Sweden
Unilever plc	A	United Kingdom
Healthcare		
Bayer AG	A	Germany
GlaxoSmithKline	A	United Kingdom
Novartis	A	Switzerland
Roche Holding AG	A	Switzerland
SANOFI	A	France
Industrials		
Mitsubishi Electric Corporation	A	Japan
Obrascon Huarte Lain (OHL)	A	Spain
Information technology		
FUJIFILM Holdings Corporation	A	Japan
Fujitsu Ltd.	A	Japan
HP Inc	A	USA
Intel Corporation	A	USA
LG Innotek	A	South Korea
STMicroelectronics International NV	A	Switzerland
Materials		
BASF SE	A	Germany
Braskem S/A	A	Brazil
Ecolab Inc.	A	USA
FIRMENICH SA	A	Switzerland
Koninklijke DSM	A	Netherlands
Metsä Board	A	Finland
Mitsubishi Chemical Holdings Corporation	A	Japan
Mondi PLC	A	United Kingdom
Symrise AG	A	Germany
Utilities		
ACCIONA S.A.	A	Spain
ENGIE	A	France



Acknowledgements

CDP would like to thank the members and responding companies consulted during the research of this report. We would also like to thank the United Nations Framework Convention on Climate Change (UNFCCC). We are very grateful to our Brazilian scoring partners Gestão Origami and Valore Consultores, and our Japanese scoring partner, Propharm. We are deeply indebted to our global scoring partner, Adec Innovation for its help and support. We would also like to thank Steve Swartz from McKinsey & Company and Tom Delay from the Carbon Trust.

CDP's supplier engagement ranking of how global corporations are managing climate change in their supply chains have been made possible through the generous support of ClimateWorks Foundation, in particular Dan Hamza-Goodacre, Prodipto Roy, and Michael Marx.

Dexter Galvin
Global Director, Corporations & Supply Chains

Our sincere thanks are extended to the following:

Individuals and organizations

Jane Z Lee, Bartlomiej Walentynski, Michael Hsia at McKinsey, Aleyn Smith-Gillespie, Jamie Plotnek, Marta Iglesias, and Sarah Laidler at the Carbon Trust, Mark Nicholls at MRG Comms, Adec Innovations, Christina Copeland, Orlaith Delargy, and James Lott at the CDP Water program, Sareh Forouzesh at the CDP Forests Program, and NORAD

CDP supply chain lead members 2017

Typesetter

www.see-design.com

CDP contacts

Paul Dickinson
Executive Chairman

Paul Simpson
Chief Executive Officer

Frances Way
Co-Chief Operating Officer

Dexter Galvin
Global Director, Corporations & Supply Chains

Sonya Bhonsle
Head of Supply Chain

Europe

Christy Cooke

Matthew Slate

Rea Lowe

Conor Hartnett

Nicola Brennan

Grace Hamer

Kate Redington

Sora Utzinger

North America

George Hodge

Betty Cremmins

Andrew Cummings

Varsha Doshi

Julia Silberman

Giovanna Crozier-Fitzgerald

Latin America

Lauro Marins

Rebecca Peres de Lima

Maria Camila Yepes

Japan

Ken Yamaguchi

China

Wanyu Sung

Hong Kong & Southeast Asia

Rosalind Keller-Liang

India

Damandeep Singh

CDP Board of Trustees

Chairman: Alan Brown

Annise Parker

Jane Ambachtsheer

Stephen T. Chow

Jeremy Burke

Rachel Kyte

Ramakrishnan Mukundan

Sonia Medina

Jeremy Smith

Takejiro Sueyoshi

Martin Wise

CDP Headquarters
71 Queen Victoria Street, London, EC4V 4AY,
Tel: +44 (0) 20 3818 3900

CDP North America
132 Crosby Street, 8th Floor
New York, NY 10012
Tel: +1 (212) 378 2086

www.cdp.net
info@cdp.net

CDP 2018
This report and all of the public responses from corporations are available for download from www.cdp.net

Report writer contacts

McKinsey & Company, Inc.
55 East 52nd Street New York
New York 10022 United States
Telephone +1 (212) 446 7000

Steven Swartz
Partner
Steven_Swartz@mckinsey.com
+1 424 249 1196

Jane Z Lee
Engagement Manager
Jane_Z_Lee@mckinsey.com
+44 758304 0139

Michael Hsia
Client Development Specialist
Michael_Hsia@mckinsey.com
+1 470 455 9951

Bartlomiej Walentynski
Senior Business Analyst
Bartlomiej_Walentynski@mckinsey.com
+48 22 820 5714

The Carbon Trust
4th Floor, Dorset House
27-45 Stamford Street
London SE1 9NT

Aleyn Smith-Gillespie
Associate Director, Business Services
Aleyn.Smith-Gillespie@CarbonTrust.com
+44 (0) 20 7832 4637

Jamie Plotnek
Senior Corporate Communications Manager
Jamie.Plotnek@CarbonTrust.com
+44 (0) 20 7832 4693

Marta Iglesias
Consultant
Marta.Iglesias@CarbonTrust.com
+44 (0) 20 7832 4636

Sarah Laidler
Analyst
sarah.laidler@carbontrust.com
+44 (0)20 7832 4665