

CASCADING COMMITMENTS:

Driving ambitious action through supply chain engagement

Written on behalf of 115 organizations representing US\$3.3 trillion of procurement spend



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Lead members

- ▼ Bank of America
- ▼ Barclays
- ▼ Dell Inc.
- ▼ Imperial Brands
- ▼ Juniper Networks, Inc.
- ▼ Kellogg Company
- ▼ Koninklijke Philips NV
- ▼ The LEGO Group
- ▼ L'Oréal
- ▼ Microsoft Corporation
- ▼ Novartis
- ▼ NRG Energy Inc
- ▼ Philip Morris International
- ▼ Signify NV
- ▼ Target Corporation
- ▼ U.S. General Services Administration (GSA)
- ▼ Virgin Money Holdings
- ▼ Walmart Inc.
- ▼ Wells Fargo & Company

Standard members

- ▼ Abbott Laboratories
- ▼ Accenture
- ▼ Acer Inc.
- ▼ Ajinomoto Co.Inc.
- ▼ Alliance Data Systems
- ▼ Ambev - Cia de Bebidas das Américas
- ▼ Amdocs Ltd
- ▼ Anheuser Busch InBev
- ▼ Arcos Dorados
- ▼ ARKEMA
- ▼ AT&T Inc.
- ▼ Avianca Holdings S.A.
- ▼ Banco Bradesco S/A
- ▼ Banco do Brasil S/A
- ▼ BMW
- ▼ Braskem S/A
- ▼ Bridgestone Corporation
- ▼ Bristol-Myers Squibb
- ▼ British American Tobacco
- ▼ BT Group
- ▼ Caesars Entertainment
- ▼ Caixa Econômica Federal
- ▼ California Department of General Services (DGS)
- ▼ Cellnex Telecom SA
- ▼ Chungwa Telecom
- ▼ CIA ULTRAGAZ S/A
- ▼ Cisco Systems, Inc.
- ▼ CNH Industrial NV
- ▼ Colgate Palmolive Company
- ▼ Companhia de Concessões Rodoviárias - CCR
- ▼ Croda International
- ▼ CVS Health
- ▼ Deutsche Telekom AG
- ▼ Diageo Plc
- ▼ Eaton Corporation
- ▼ Ecorodovias Infraestrutura e Logística S.A
- ▼ Endesa
- ▼ Fiat Chrysler Automobiles NV
- ▼ FIRMENICH SA
- ▼ Ford Motor Company
- ▼ Fujitsu Limited
- ▼ Gatwick Airport Limited
- ▼ General Motors Company
- ▼ Givaudan SA
- ▼ Grupo Santander Brasil
- ▼ Hewlett Packard Enterprise Company
- ▼ Honda Motor Co., Ltd.

- ▼ Honda North America, Inc.
- ▼ Honda of the UK Manufacturing Ltd.
- ▼ HP Inc
- ▼ HTC Corporation
- ▼ Intel Corporation
- ▼ International Flavors & Fragrances Inc.
- ▼ Itaú Unibanco Holding S.A.
- ▼ Jaguar Land Rover Ltd
- ▼ JBS S/A
- ▼ Johnson & Johnson
- ▼ JT International SA
- ▼ KAO Corporation
- ▼ Klabin S/A
- ▼ KPMG UK
- ▼ Los Angeles Department of Water and Power
- ▼ MasterCard Incorporated
- ▼ McDonald's Corporation
- ▼ MetLife, Inc.
- ▼ Michelin
- ▼ Mitsubishi Motors Corporation
- ▼ MRV Engenharia e Participações
- ▼ National Grid PLC
- ▼ Naturgy Energy Group SA
- ▼ Nissan Motor Co., Ltd.
- ▼ Nokia Group
- ▼ Northrop Grumman Corp
- ▼ PepsiCo, Inc.
- ▼ Pirelli
- ▼ Restaurant Brands International
- ▼ Royal Bank of Canada
- ▼ S.C. Johnson & Son, Inc.
- ▼ Sky plc
- ▼ SSE
- ▼ Stanley Black & Decker, Inc.
- ▼ Swisscom
- ▼ Symrise AG
- ▼ Taisei Corporation
- ▼ TD Bank Group
- ▼ Tesco
- ▼ The Coca-Cola Company
- ▼ Toyota Motor Corporation
- ▼ Unilever plc
- ▼ VMware, Inc
- ▼ Vodafone Group
- ▼ Volkswagen AG
- ▼ W.W. Grainger, Inc.
- ▼ Wal Mart de Mexico
- ▼ Walmart - Brasil

- ▼ Climate change member
- ▼ Forests member
- ▼ Water member



FOREWORD FROM YOSHIAKI HARADA

MINISTER OF THE ENVIRONMENT GOVERNMENT OF JAPAN



We are now in a world where companies work to enhance corporate values by integrating climate change into their business strategies, rather than considering environmental actions simply as costs.

I think it is crucial that we work to achieve a 2°C target for sure, and make further efforts to achieve a 1.5°C target.

The task before us is clear. We need to achieve an ambitious target to create a better and sustainable future for all, by tackling climate change that is a common challenge for all humankind. In order to achieve this, we need an economic system that can support sustainable prosperity of humans whilst safeguarding our planet.

Like any transformation, a transition to a decarbonized economy will pose us many challenges, but it will also generate business opportunities. If we act now, we can both enhance corporate values and lay the groundwork for an economy that works for people and the planet.

Since the adoption of the Sustainable Development Goals (SDGs) and the Paris Agreement in 2015, the world is heading to a decarbonized society. Businesses, mainly global corporations, recognize the risks and opportunities of climate change and are beginning to take actions to decarbonize their whole supply chains by setting medium to long term GHG reduction targets and committing to RE100. With the advancement of ESG financing, many wise corporate leaders are now aware that these actions raise corporate values.

Japan has decreased greenhouse gas emissions every year for the last four years, and with our vision of "Circulating and Ecological Economy – localizing SDGs" to achieve decarbonization as well as SDGs in regional communities, we aim to create a model of a virtuous cycle between the environment and growth. In order to implement this vision, decarbonization through businesses and a collaborative leadership of public and private sectors are essential. The Ministry of the Environment will fully support Japanese companies that take these actions and will also engage in calculating and reducing emissions from our own supply chain and using renewable energy ourselves.

As part of this effort, the Ministry of the Environment has decided to participate in CDP Supply Chain Program this year. Companies that take actions by setting medium to long term targets and disclosing information can achieve even higher target, for example, by reducing emissions from supply chains. Ministry of the Environment will make efforts to be the model for those companies by engaging in our supply chains.

In addition to the support for companies to calculate their emissions from their supply chains, in 2017, we started to support them in setting science-based targets. There are currently 33 Japanese companies

with science-based targets, compared to 5 before we started our support. Aiming for 100 companies with science-based targets by 2020, we will continue to provide support.

Considering the RE100 campaign, where the users of energy proactively choose renewables as an effective approach to expand the growth of renewable energy, the Ministry of the Environment decided in June 2018 to become the first government organization in the world to participate in RE100. We also promote investment for renewables, for example, by supporting the issuing of green bonds.

Furthermore, the Ministry of the Environment expressed support for the Taskforce on Climate Related Financial Disclosure (TCFD) in July 2018, and we have been providing support for companies to analyze scenarios in terms of climate risks and opportunities in line with TCFD. It includes technical support for scenario planning by experts so that companies can ensure sustainability by analyzing multiple scenarios and finding out climate change risks and opportunities for their businesses. We are also working on the world's first-ever platform for companies and investors to have a dialogue based on the information that companies disclose, including the information from CDP's questionnaires, with the participation of investors from both inside and outside Japan.

We are aiming for very high targets including the SDGs and the Paris Agreement. We believe that it is possible to create a virtuous cycle between the environment and economic growth. Achieving a decarbonized sustainable economic system is possible by having a good collaboration between the public and private sector all over the world.

EXECUTIVE SUMMARY

115 members
representing
US\$3.3 trillion
in procurement spend

633 MtCO₂e
suppliers reported emissions savings greater than 1% of all global emissions

US\$19.3 billion
in supplier annual monetary savings associated with action to reduce emissions

A decade of disclosure driving action

There is power in procurement. For most organizations, the environmental impact within their supply chain significantly outstrips the impact related to their own operations. The decisions they make when purchasing goods and services, and the way they influence their suppliers, offers a far greater opportunity for positive change than could be achieved through acting only on areas within their direct operational control.

Now in its tenth year, the CDP Supply Chain program has continuously grown its impact over the past decade. Since its launch in 2008 with 14 members, the program has now expanded to bring together 115 major purchasing organizations around the world, collectively representing US\$3.3 trillion in procurement spend.

As part of their efforts to strengthen supply chain sustainability, in 2018 these 115 members made disclosure requests to 11,692 of their suppliers. This asked them to provide details about relevant impacts related to climate change, deforestation, and water. Over 5,600 companies based in 90 different countries responded to this request.

From 5,545 responses on climate change, suppliers reported combined annual scope 1 and 2 greenhouse gas emissions equivalent to 7,268 million tonnes of carbon dioxide, a total larger than the entire national annual emissions from both the United States¹ and Canada.²

These suppliers also reported emissions savings this year equivalent to 633 million tonnes of carbon dioxide – an amount greater than 1% of all current global emissions.³ And these were associated with annual monetary savings in excess of US\$19.3 billion for those companies, highlighting the frequently compelling business case for taking action on climate change.

Water is a more recent addition to the Supply Chain program. Although there has been strong growth in the number of respondents to the water questionnaire each year – and despite the critical importance of this resource to the economy – there are still considerably fewer respondents than on the climate change questionnaire.

This year the 1,709 suppliers submitting responses on water reported US\$62 billion of revenue being associated with identified water security risks. But fewer than half of reporting companies reported C-suite oversight on this issue. However there has been an increase in reported water targets, growing from 51% in 2017 to 69% this year, demonstrating an improvement in the approach companies are taking to the measurement and management of this vital resource.

And a total of 305 suppliers provided disclosures related to the use of key commodities that are particularly associated with deforestation risks: timber, palm oil, cattle, soy, and rubber. This was a substantial 247% increase on the 88 businesses that responded in 2017's pilot phase for reporting on forests.

However, many of these companies were unable to provide detailed information to suggest they are properly recognizing and taking action on deforestation risks. Just 17% of suppliers report setting any sort of target related to deforestation.

Cascading change through supply chains

It can be challenging to drive sustainable change in the supply chain. There is often limited visibility of impacts that occur away from an organization's areas of direct control. In some cases this can be further obscured by diversionary marketing, commercial confidentiality, or simply a hesitation to address areas of risk.

But as organizations seek to create positive change, data that is being disclosed is playing an increasingly important role in their decision-making. This year 43% of CDP Supply Chain program members confirmed that they currently deselect existing suppliers based on their environmental performance. And a further 30% are considering implementing this in the near future.

Having a single, common disclosure platform is also proving to be beneficial. Amongst program members, 63% are either currently using, or considering using, data from CDP disclosures to influence whether they contract with suppliers or not.

1 United States Environmental Protection Agency (2018) *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2016*.

2 Environment and Climate Change Canada (2018) *Canadian Environmental Sustainability Indicators: Greenhouse gas emissions*.

3 United Nations Environment Program (2018) *Emissions Gap Report 2018*.

The lesson from a decade of the CDP Supply Chain program is that large public and private sector organizations really can lead effective change through using their substantial procurement spend as a powerful lever for action. If others can follow their example, and suppliers continue to cascade good practices and commitments further down the supply chain, this can play a huge role in the rapid transition to a sustainable, low carbon economy.

Paul Simpson, Chief Executive Officer, CDP

Over 1/3

of suppliers are driving upstream change in their own supply chain

In turn, as suppliers become more mature in their understanding of sustainability issues and advance their approaches for taking action, there is evidence that they too are improving in their efforts to cascade positive change downwards through their own supply chains. This year 35% of supplier respondents reported that they are engaging with their suppliers on climate change. This compares with just 23% doing the same in 2017.

Now in its third year, corporate respondents have been evaluated using CDP's Supplier Engagement Rating methodology, to assess how well they are performing in influencing their suppliers on climate change. A record 128 companies, headquartered across 21 different countries, have been recognized as a leader for demonstrating global best practice.

Yet despite the considerable progress made over the past decade, it is clear that current levels of action are still insufficient to address some of the world's most pressing sustainability challenges.

A growing, but still comparatively small number of leading companies are taking ambitious action. This can be seen in increasing popular trends such as committing to 100% renewable electricity through the RE100 campaign, an initiative of The Climate Group and CDP, and adopting science-based targets on climate change.

This sort of practice will need to become far more widespread to successfully achieve global ambitions on climate change. And progress appears to be lagging even further behind on water and deforestation issues, where effective approaches for taking action are still maturing and many companies are just setting out on their journey. Organizations will need to cascade their own commitments upstream through the supply chain to drive the action that is urgently needed.

128

leading companies recognized through CDP's Supplier Engagement Rating

73%

of CDP Supply Chain program members expect to deselect suppliers based on environmental performance

63%

of CDP Supply Chain members either use, or are considering using, CDP data to influence supplier contracting decisions

ABOUT THIS REPORT

This report has been written by CDP in conjunction with Carbon Trust, using CDP's Supply Chain program data submissions to evaluate the activities of reporting organizations as a group, and to identify meaningful insights about the supply chain impacts on climate change, deforestation, and water security.

The CDP Supply Chain program, representing 115 member organizations with US\$3.3 trillion in annual procurement spend, requested that suppliers report to members on their current and future risks and opportunities related to these environmental issues.

Suppliers responded to standardized questionnaires on climate change, forests and water security: a full version and a simplified version made available for organizations with an annual turnover of less than US\$250 million or €250 million, which can also be used by larger organizations disclosing for the first time. In total 11,692 companies were invited to participate, with over 5,600 total responses received.

Most respondents provided information on climate change, with 5,545 disclosing suppliers. A smaller number of businesses were asked to respond on forests and water issues, as these are more recent additions to the CDP Supply Chain program and of less relevance for companies operating in some sectors. Forests information requests were sent to 519 companies, with 305 responses received. And there were 3,804 companies invited to respond on water, with 1,709 completing a questionnaire.

The analysis in this report is representative of the CDP Supply Chain program data only. Responses have been quality assured by the Carbon Trust and a small number of outlier data points have been manually excluded to avoid reporting misleading statistics.

Recognizing success

Each year supplier responses to information requests are analyzed and scored against the CDP scoring methodology, assessing the companies' response across four dimensions: disclosure, awareness, management and leadership. This results in the production of the CDP A List, recognizing top performers demonstrating best practice in the previous CDP reporting year.

Inclusion on this list demonstrates that a company is proactively taking a leadership position on one of these issues. The A List for this year's respondents are included in relevant sections of this report, following analysis of responses on climate change, forests and water.

This report also includes a Supplier Engagement Rating, evaluating how well corporate respondents are cascading action through the supply chain by engaging their own suppliers on climate change issues. This looks at responses made by both corporate suppliers and CDP Supply Chain program members relating to supplier engagement, governance, scope 3 emissions accounting, targets, and overall CDP climate change score.

The responses from organizations that feature on the A list and Supplier Engagement Rating leader board are available on the CDP website, alongside disclosures from other organizations that responded publicly.

Global supply chain scoring partner:



CASCADING ACTION: 10 YEARS OF THE CDP SUPPLY CHAIN PROGRAM



When starting this journey 10 years ago, we couldn't imagine the scale of impact we would have through a decade of asking suppliers for environmental information. The number of companies reporting to purchasers about climate change, deforestation and water security over the past decade now exceeds the number reporting to investors.

We've seen how major purchaser requests have really helped bolster levels of transparency and action in developing economies, especially China. It has also been successful in engaging smaller companies. But to meet the potentially devastating environmental issues the world faces, we need every business to be engaged and taking action, not just a handful of leaders. This is where the power of purchasing can play a huge role bringing everyone to the table by setting expectations and making sustainability a financial issue.

Sonya Bhonsle, Global Head of Supply Chain, CDP



There is huge power in this scale of procurement spend. But with great power comes great responsibility. And over the past 10 years we have seen a fundamental shift in expectations around business action on climate change and other environmental sustainability issues.

The program launched in 2008, a time when many governments were acting far too slowly to address climate change; a fact emphasised by the disappointing final outcome from the landmark Copenhagen climate talks in 2009. Partly as a result of this, subnational actors – particularly large corporates, but also some large public sector organizations – have started to play an increasingly important role driving climate action internationally. In many cases they are moving considerably faster and further than governments have required.

Where regulations have not pushed companies to act in many parts of the world, clear signals from major purchasers have made a real difference. And as the consensus on the need to act has developed, coalescing around major campaign groups such as the We Mean Business coalition, with involvement from some of the most significant players in the global economy. And this commitment to a sustainable, low carbon economic transition has helped to bolster international support for political change, helping secure the signing of the Paris Agreement in 2015.

Over the past decade, as CDP's remit has expanded beyond climate change to encompass other urgent sustainability issues, the Supply Chain program has similarly expanded to address these areas. Water was introduced in 2013, to address scarcity and stewardship issues around this critical resource. And more recently forests, added in 2017, in response to the need to act around deforestation risks associated with key commodities such as palm oil, timber, soy, cattle and rubber.

Increasing impact globally

This year CDP celebrates a decade of working with organizations to help them successfully reduce the environmental impact of their supply chain.

The CDP Supply Chain program began with just 19 members, largely from the retail and consumer goods sectors and headquartered in the USA and Europe. Today it brings together a diverse group of 115 major purchasing organizations from around the world, with an enormous US\$3.3 trillion in combined procurement spend – an amount greater than the annual GDP of the United Kingdom.⁴

500+
disclosing suppliers
headquartered
in China

2000+
disclosing SMEs

⁴ World Bank (2018) World Bank national accounts data, and OECD National Accounts data files.

Growth in supplier disclosure

Since 2008 the level of engagement with the CDP Supply Chain program has grown rapidly. In its first year just 2,318 suppliers were asked to provide disclosures by the program's 19 members. This year it was 11,692 requests going out from 115 members.

This has driven a fundamental shift in supplier behavior, changing the approach those companies take to environmental measurement and reporting. The number of suppliers disclosing to CDP has increased year-on-year: from 634 businesses and a 27% response rate in 2008, to 5,545 and a 64% response rate on climate change in 2018, with additional suppliers that just responded on forests or water.

From transparency to action

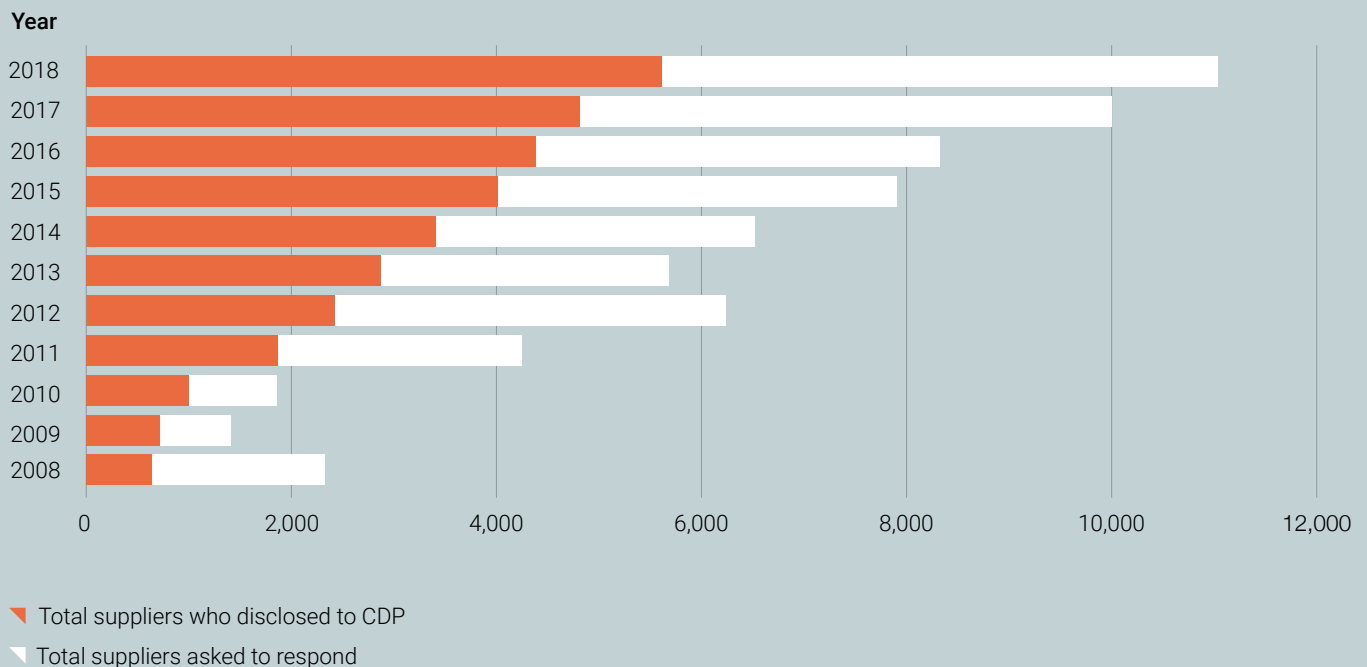
The extraordinary growth of the CDP Supply Chain program has been driven by the ambition of its members to make a difference, as procurement teams have taken increasing ownership for sustainability performance.

Continued success has fueled this ambition, helping major purchasers go beyond simply asking for disclosure, moving towards driving positive action.

As organizations start to recognize the scale of financial and environmental benefits achieved in their own operations from becoming more energy and resource efficient, they feel confident when asking suppliers to do the same.

This has been supported through the development of practical tools to evaluate upstream environmental impact and set measurable targets to take action on it. Perhaps the most significant was the launch in 2011 of the Greenhouse Gas Protocol's Scope 3 Standard,⁵ helping companies to take a more consistent approach for understanding the carbon emissions in their upstream supply chain.

Growth in CDP Supply Chain disclosures, 2008 - 2018



5 WRI & WBCSD (2011) *Greenhouse Gas Protocol's Corporate Value Chain (Scope 3) Standard*.



We disclosed to CDP for the first time 10 years ago at the request of our clients. Recognizing the importance that clients place on sustainability performance has informed our own environmental strategy but also made us think about our own supply chain. KPMG UK are proud to be members of CDP Supply chain and have asked our suppliers to disclose to CDP since 2012. Our ambition is to create joint environmental action programmes with suppliers to deliver environmental benefits within our own organisation and cascade action further down the supply chain.

Roisin Sharkey & Roisin Murphy, Directors
Head of Corporate Responsibility, KPMG LLP (UK)



There have also been a series of robust methodologies developed that allow for individual businesses to establish how they can take science-based approaches to emissions reduction. This allows them to reduce emissions on a pathway in line with meeting the goals of the Paris Agreement, aiming to keep global warming well below 2°C and pursue efforts to limit it to 1.5°C. To date 47 members of the CDP Supply Chain program have either set or committed to set their own science-based target, with most of these including a scope 3 goal to reduce supply chain emissions.

But driving action in the supply chain requires real commitment and engagement from procurement teams. They need to be willing use their purchasing power as a lever to effect positive change.

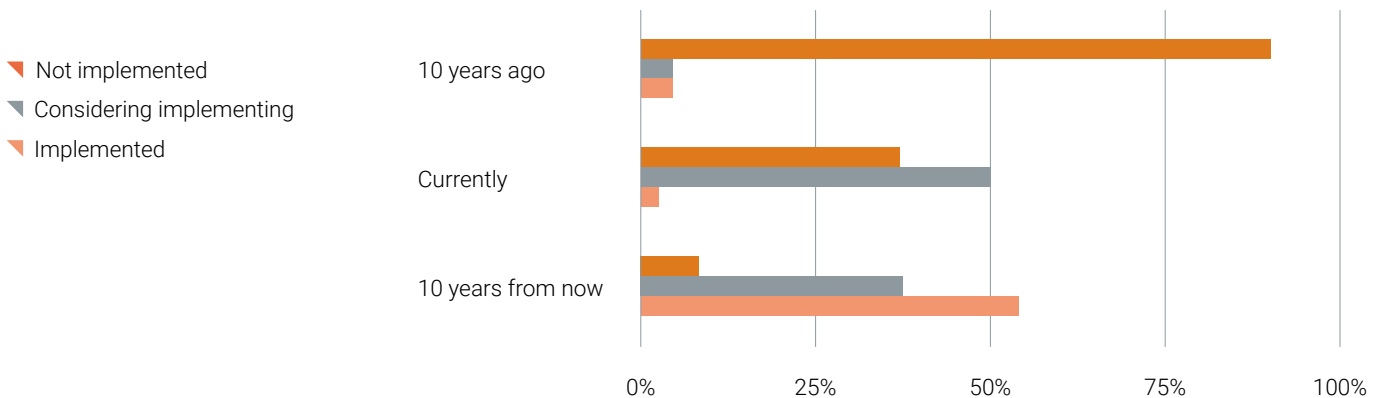
To understand how this is being done, CDP surveyed current program members, asking them how supplier environmental performance was factored into procurement decision-making 10 years ago, and

how this is being done today. The results revealed that a major transformation has occurred over this time, with a clear direction of travel showing that engagement on sustainability is becoming business-as-usual.

Looking back to 2008, just 4% of members said they were deselecting suppliers based on environmental performance. Today 43% are doing exactly that, with a further 30% indicating that they considering implementing a similar process in the near future.

Over the same time period the relevance of environmental disclosures and data in the contracting process has exploded, from just 9% that would have at least considered using this in 2008, to 63% this year. And when asked to look ahead a decade into the future, this number grows to more than of 90% of members.

Use of CDP environmental disclosure/data supplier in supplier contracting decisions



Accelerating action

In order to address the urgent environmental challenges faced by the planet, a comparatively small group of leaders cannot succeed alone. Transformation needs to be rapid and widespread. So despite the considerable scale and reach of CDP Supply Chain program members, they need to extend their influence far beyond the suppliers they engage with directly. And this means their efforts will need to ripple upstream throughout the supply chain, cascading change.

Currently, this does not appear to be happening often enough. Across the board, suppliers are still reporting low levels of engagement with their own supply chain on climate change, forests and water security.

The most progress has been seen on climate change, with onward engagement increasing from 23% in 2017 to 35% this year. And with upstream emissions on average around 5.5 times greater than those related to a company's direct operations, the potential impact here can be substantial.

To understand and tackle deforestation, most companies have little choice but to engage with suppliers and other policy stakeholders. This is because outside of a small number of sectors, such as agriculture and forestry, companies have limited direct control over deforestation, but it is their demand for forest products that is driving it.

But this year only one-third of suppliers reported that they were working with direct suppliers to support and improve their capacity to supply sustainable raw materials. And only 17% reported working beyond the first-tier to manage and mitigate forests-related risks.

Action on water also appears to be an area where considerable improvement is needed. Just 17% of responding suppliers reported onward engagement with their suppliers on the crucial topic of water security.

Creating the cascade

Across 10 years of experience of the CDP Supply Chain program there have been numerous successful collaborations, where sustainability commitments and positive change have cascaded upstream through supply chains.

One place where it is possible to clearly see the cascade being put into practice involves three clusters of membership within the program: major retailers, consumer major FMCG companies, and strategic suppliers to those FMCG companies. These companies have become closely aligned in their environmental ambitions, helping to inspire higher levels of action and supercharge action further downstream.

This cascade can be illustrated through the stories of just **three individual members** that all operate within the same value chain: the world's largest grocer, **Walmart**; the world's largest cosmetics company, **L'Oréal**; and the world's largest privately-owned fragrance & flavor company, **Firmenich**.



Walmart has proudly worked with CDP over the past decade to encourage transparency amongst suppliers. Disclosure starts suppliers on the journey towards setting and tracking targets, which is why we continue to leverage CDP's Supply Chain program in helping suppliers establish emission-reduction projects and make commitments to Project Gigaton – an initiative that aims to avoid a gigaton (1 billion tonnes) of emissions from global value chains by 2030. CDP's work on standardization of sustainability metrics is a key prerequisite for transparency as well as collective action in global value chains.



Zach Freeze, Senior Director of Strategic Initiatives for Sustainability, Walmart Inc.



As a major consumer goods manufacturer, we have an important role in the supply chain, with the opportunity to influence a wide range of suppliers across multiple industries and geographies. We take this responsibility seriously and joined CDP Supply Chain as a founding member for climate, water and forests.

This involvement has influenced the environmental performance of some of our most important strategic suppliers. Many are now engaging their own suppliers on these topics. In 2017, L'Oréal took its commitments a step further and set science-based targets, which include reducing our whole value chain (up and downstream) emissions by 25% by 2030.

To help meet this target we have integrated CDP data into our purchasing processes, and will be looking to collaborate with suppliers and drive emissions reductions further down the supply chain.



Alexandra Palt, Chief Corporate Responsibility Officer, L'Oréal



Firmenich proactively chose to disclose to CDP 10 years ago, when a few of our customers started reporting and asking for our response. We are committed to continuous improvements in climate, water and forest management and are proud of our leadership rankings in these areas.

We value our collaboration with CDP which has given us many insights into how we can make an impact internally as well as with our key suppliers. In 2017, we set science-based targets for our scope 3 emissions, and were proud to be the first flavor and fragrance company to ask our suppliers to disclose to CDP.

Our ambition is to encourage our suppliers to further cascade action and develop initiatives within their own supply chains. Bringing more sustainability in our products, and our supply chain, is key to tackle the urgent climate crisis and preserve the planet for the generations to come. We are on a Pathway to Positive.



Neil McFarlane, Senior Vice President - Quality, Health, Safety, Security & Environment, Firmenich

SUPPLIER ENGAGEMENT LEADER BOARD

CDP's Supplier Engagement Rating is used to evaluate responding companies on their supplier engagement performance, looking across four key areas of the CDP climate change questionnaire: governance, targets, scope 3 emissions, and value chain engagement. In addition, each company's CDP climate change score was factored in to their rating, as an overall assessment of company performance on climate change.

The development of the Supplier Engagement Rating was made possible by generous support from the ClimateWorks Foundation. By establishing a system to evaluate supplier engagement

practices and recognize best practice, CDP aims to increase buyer engagement to accelerate action on emissions in global supply chains. It provides clear examples of best practice, that others can seek to emulate. And it provides independent recognition of success.

Below is a list of the leading companies that achieved an A grade when evaluated against the Supplier Engagement Rating methodology.

Company Name	Country
Biotech, Health Care & Pharmaceuticals	
AbbVie Inc	USA
AstraZeneca	UK
Bayer AG	Germany
Biogen Inc.	USA
CVS Health	USA
GlaxoSmithKline	UK
Johnson & Johnson	USA
Koninklijke Philips NV	Netherlands
Lundbeck A/S	Denmark
Pfizer Inc.	USA
Food, Beverage & Agriculture	
Ajinomoto Co.Inc.	Japan
Anheuser Busch InBev	Belgium
Barilla Holding SpA	Italy
Barry Callebaut AG	Switzerland
Coca-Cola European Partners	UK
Coca-Cola HBC AG	Switzerland
Danone	France
Diageo Plc	UK
General Mills Inc.	USA
Ingredion Incorporated	USA
Kellogg Company	USA
Kirin Holdings Co Ltd	Japan
Molson Coors Brewing Company	USA
Nestlé	Switzerland
Philip Morris International	USA
Hospitality	
Caesars Entertainment	USA
McDonald's Corporation	USA

Company Name	Country
Infrastructure	
ACCIONA S.A.	Spain
Grupo CCR	Brazil
Hewlett Packard Enterprise Company	USA
National Grid PLC	UK
Royal BAM Group nv	Netherlands
Sekisui Chemical Co., Ltd.	Japan
Suez	France
Waste Management, Inc.	USA
Manufacturing	
AkzoNobel	Netherlands
Applied Optoelectronics, Inc.	USA
AU Optronics	Taiwan
BASF SE	Germany
Bic	France
BMW AG	Germany
Braskem S/A	Brazil
Canon Inc.	Japan
Cisco Systems, Inc.	USA
Constantia Flexibles	Austria
Creative Group of Industries	India
FIRMENICH SA	Switzerland
FUJIFILM Holdings Corporation	Japan
Givaudan SA	Switzerland
Honda Motor Co., Ltd.	Japan
HP Inc	USA
ICL	Israel
Intel Corporation	USA
Juniper Networks, Inc.	USA
KAO Corporation	Japan
Kone Oyj	Finland

Company Name	Country
Konica Minolta, Inc.	Japan
Lego Group	Denmark
Lenovo Group	USA
L'Oréal	France
Lubrizol	USA
Mahindra & Mahindra	India
Metsä Board	Finland
Mitsubishi Electric Corporation	Japan
Nabtesco Corporation	Japan
Nexans	France
Nokia Group	Finland
Reckitt Benckiser	UK
Renault	France
Rolls-Royce	UK
Samsung Electronics	Republic of Korea
Schneider Electric	France
Sealed Air Corp.	USA
Signify NV	Netherlands
Sofidel S.p.A.	Italy
Sony Corporation	Japan
Stanley Black & Decker, Inc.	USA
Taiwan Semiconductor Manufacturing	Taiwan
Tennant Company	USA
Tessy Plastics	USA
TETRA PAK	Sweden
Toyota Industries Corporation	Japan
Unilever plc	UK
Xerox Corporation	USA

Materials

Continental AG	Germany
CRH Plc	Ireland
Heinz-Glas GmbH & Co. KGaA	Germany
Michelin	France

Power Generation

NRG Energy Inc	USA
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Services

Accenture	Ireland
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Company Name	Country
Adobe Systems, Inc.	USA
Advanced Semiconductor Engineering	Taiwan
Alphabet, Inc.	USA
Autodesk, Inc.	USA
Barclays	UK
BNY Mellon	USA
BT Group	UK
Cap Gemini	France
Citigroup Inc.	USA
Coway Co Ltd	Republic of Korea
Deutsche Telekom AG	Germany
Fujitsu Limited	Japan
Goldman Sachs Group Inc.	USA
ING Group	Netherlands
Interserve Plc	UK
Koninklijke KPN NV (Royal KPN)	Netherlands
KPMG UK	UK
Linklaters LLP	UK
Lockton Companies LLP	UK
Marsh & McLennan Companies, Inc.	USA
MasterCard Incorporated	USA
MetLife, Inc.	USA
Microsoft Corporation	USA
Oracle Corporation	USA
Orange	France
Proximus	Belgium
salesforce.com	USA
SGS SA	Switzerland
Sky plc	UK
Societe Generale	France
Sopra Steria Group	France
Tech Mahindra	India
Telstra Corporation	Australia
thyssenkrupp AG	Germany
Wells Fargo & Company	USA

Transportation Services

Kawasaki Kisen Kaisha, Ltd.	Japan
La Poste	France
Nippon Express Co., Ltd.	Japan

ACTING ON CLIMATE CHANGE

5,545

supplier responses to member requests for climate disclosure

Big opportunities in the supply chain

This year a record number of companies submitted disclosures on climate change. CDP supply chain members made requests to 11,692 suppliers, with 5,545 responses received from businesses headquartered across 90 different countries. This is a 14% increase on the 4,858 responses received in 2017.

These suppliers reported combined total scope 1 and 2 emissions of 7,268 MtCO₂e, an amount greater than all the annual greenhouse gas emissions from the USA and Canada combined. Even so, this amount is likely to be a serious underestimate of the true total as only 75% of respondents provided quantified scope 1 emissions, and just 58% provided scope 2 emissions data.

7,268 MtCO₂e

reported total scope 1 and 2 emissions from suppliers, greater than the combined annual emissions of the USA and Canada

Highest impact sectors	Suppliers responding	Total scope 1 and 2 GHG emissions (MtCO ₂ e)
Manufacturing	2,539	2,123
Transportation services	285	1,649
Materials	268	1,197
Power generation	25	823
Services	1,141	455
Infrastructure	246	371
Food, beverage & agriculture	623	280
Fossil fuels	32	231



Sustainability is not an added extra. It has become a key strand of our approach for supplier relationship management. In particular we know that disclosure through CDP is a great lens for looking at energy and resource efficiency. If we can help suppliers to improve this then there is a huge amount of shared value to be gained, where we can both benefit from reduced environmental impact and cost savings.

Andrew McMullen, The LEGO Group



Across all sectors, suppliers reported a total of 633 MtCO₂e in annual emission savings, an amount greater than 1% of all global emissions and a significant increase from 2017's figure of 551 MtCO₂e. These savings were achieved through a range of activities such as improved energy efficiency, the adoption of low carbon energy, and the reduction of process emissions.

Importantly, emissions-saving activities were associated with substantial financial savings. An estimated total of US\$19.3 billion is currently being achieved in annual monetary savings, a big jump up from the US\$14 billion reported in 2017. This highlights the increasingly strong business case on offer, that can provide a powerful motivation for companies to take action on climate change.

However, despite an average 6% reduction in scope 1 and 2 emissions across all respondents, not all suppliers were moving in the right direction. In fact 23% reported absolute increases in emissions, with the most common reason for this being a overall growth in output.

21%

of suppliers report collaborating with CDP Supply Chain program members on reduction activities

8 MtCO₂e

emission reduction activities attributed to CDP Supply Chain member engagement

27%

of energy came from renewable sources, where details were reported by suppliers

633 MtCO₂e

annual emissions reductions reported by suppliers

US\$19.3 billion

in supplier annual monetary savings associated with action to reduce emissions

6%

average reduction by suppliers in scope 1 and 2 emissions

Approaches for achieving reductions

The majority of responding companies report senior engagement on climate change, with 69% having board-level oversight on these issues. And nearly half (48%) include climate change within an integrated risk management process. However, only 57% report putting emissions reductions activities in place.

There is compelling evidence that the activities of CDP Supply Chain program members are driving higher levels of action than would otherwise exist. Around 21% of respondents report collaborating with a requesting member on climate action, and around 8 million tonnes of the total reported emission reduction activities have been attributed to collaborative action between supplier respondents and program members

The past year has seen significant growth in voluntary corporate commitments on climate change. There has been strong support from leading companies for ambitious initiatives such as the RE100 campaign for purchasing 100% renewable electricity, as well as the Science Based Targets initiative for setting goals objectively in line with achieving the Paris Agreement.

But the growth in high ambition goals has come from a low base, meaning that this sort of action very much remains the exception rather than the norm. Fewer than half of suppliers responding this year (47%) report having any sort of climate target, and just 35% had structured carbon reduction targets.

Only 3% of those have either set or committed to set science-based target with the Science Based Targets initiative. Although a further

12% do anticipate setting a science-based target in the next two years. It is also encouraging that the two responding sectors with the highest percentage reporting structured climate targets are companies in two of the highest emission sectors, power generation (72%) and fossil fuels (53%).

An even smaller number of companies are setting explicit goals on renewables, despite it being one of the most effective strategies for reducing emissions in many sectors. Just 4% of suppliers report having a renewable energy target, and there are only 83 committing to RE100. It is worth noting, however, that amongst the 62% of respondents reporting details of their energy consumption, over a quarter (27%) came from renewable sources. This highlights the rapid expansion of renewables in many markets around the world, showing the increased availability of opportunity to reduce emissions through their use.



Environmental performance is a must in Signify management agenda. We continue to measure and take actions to our existing supply base, and it's mandatory in our new supplier qualification process before any new business starts.

Luc Broussaud
Head of Procurement
Signify B.V.



5.5:1

average ratio of supply chain to direct carbon emissions

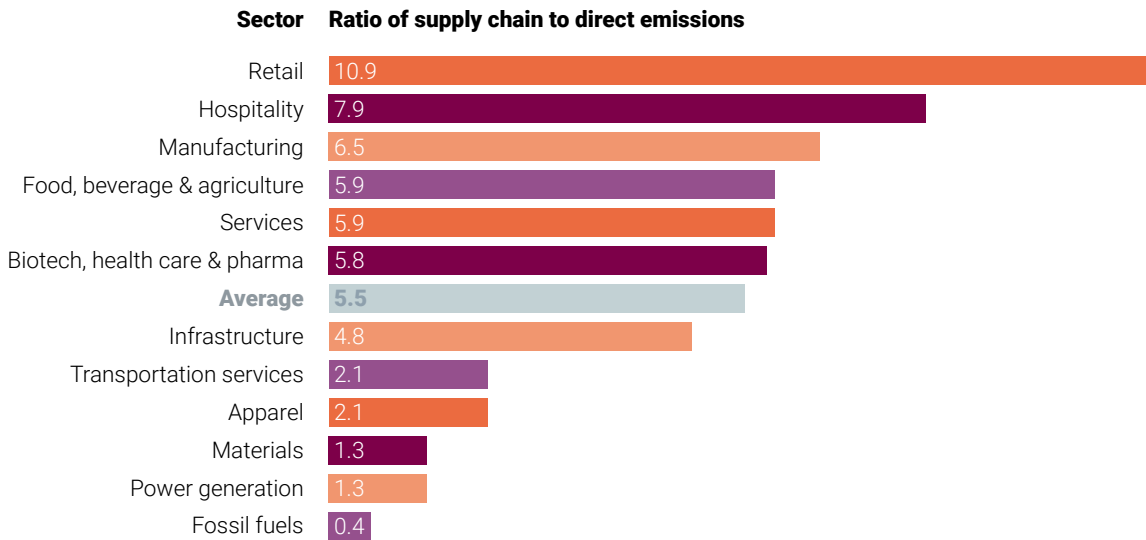
Tackling impacts further upstream

Because the upstream supply chain is typically where such a significant proportion of an organization's total end-to-end carbon emissions occur, to maximize impact it is critical that influence extends beyond tier one suppliers.

Although it varies between sectors, on average companies report having supply chain greenhouse gas emissions that are 5.5 times greater than their own direct impact from scope 1 and 2 emissions. This was determined through fresh analysis based on the 33% of suppliers disclosing their upstream scope 3 emissions this year.⁶

In the majority of cases the efforts of CDP supply chain members to influence upstream emissions are still not progressing beyond their direct relationships with first tier suppliers. This year just 35% of those suppliers report that they are in turn engaging their own suppliers on climate issues, helping to cascade change onwards.

However, this is a significant increase from the 23% reporting upstream engagement last year, suggesting that this is becoming increasingly commonplace and that efforts to strengthen engagement have been successful. Encouragingly, there also two sectors where a majority of respondents report upstream engagement with suppliers: hospitality (67%) and power generation (56%).



Climate change disclosure was requested from **11,692 suppliers**

Responses were provided by **5,545 suppliers**

3,150 suppliers reported emissions reduction activities for their own operations

⁶ Market-based scope 2 data was used for this analysis where available, with a location-based approach taken when it was not. Analysis only included companies reporting scope 1, 2 and 3 emissions with verification or limited assurance. Outliers companies with very small and very high ratios (<30 total responses) were manually excluded from the analysis.



As a business we see exciting commercial opportunities from companies taking action on climate change. For example we offer our customers a range of low carbon energy options including: small-scale renewables; batteries and electric vehicle infrastructure; demand reduction measures; and our 100% renewable energy product.

Some of these customers are also potential or existing suppliers, which means we have the opportunity to create a virtuous circle of engagement on climate change action. By providing low carbon products our action helps our customers to reduce their carbon footprint, brings us new revenue opportunities, and helps to reduce our supply chain carbon footprint – it is a real win-win from collaboration.



Rachel McEwen, Chief Sustainability Officer, SSE

**1,937
suppliers**

reported engagement with their own supply chain

**1,168
suppliers**

reported collaborating with CDP Supply Chain program members

**165
suppliers**

were committed to the Science Based Targets initiative and 83 to the RE100 campaign

THE A LIST:

CLIMATE CHANGE

Company Name	Country
Biotech, Health Care & Pharmaceuticals	
Bayer AG	Germany
Johnson & Johnson	USA
Koninklijke Philips NV	Netherlands
Novo Nordisk A/S	Denmark
Food, Beverage & Agriculture	
Coca-Cola European Partners	UK
Danone	France
Diageo	UK
General Mills Inc.	USA
Nestlé	Switzerland
Infrastructure	
FERROVIAL	Spain
Grupo CCR	Brazil
Hewlett Packard Enterprise Company	USA
National Grid PLC	UK
Sekisui Chemical Co., Ltd.	Japan
Suez	France
Waste Management, Inc.	USA
Manufacturing	
Apple Inc.	USA
BASF SE	Germany
Bic	France
Borregaard ASA	Norway
Braskem S/A	Brazil
Brembo SpA	Italy
Cisco Systems, Inc.	USA
Electrolux	Sweden
FIRMENICH SA	Switzerland
Groupe PSA	France
HP Inc	USA
Hyundai Motor Co	Republic of Korea
International Flavors & Fragrances Inc.	USA
Komatsu Ltd.	Japan
Lego Group	Denmark
LG Display	Republic of Korea
Lockheed Martin Corporation	USA
L'Oréal	France
Metsä Board	Finland
Mitsubishi Electric Corporation	Japan
Nabtesco Corporation	Japan

Company Name	Country
Nexans	France
Schneider Electric	France
Siemens AG	Germany
Signify NV	Netherlands
Sony Corporation	Japan
Stanley Black & Decker, Inc.	USA
Sumitomo Chemical Co., Ltd.	Japan
Tessy Plastics	USA
Thyssenkrupp AG	Germany
Toyota Industries Corporation	Japan
Unilever plc	UK
Valeo Sa	France
Xerox Corporation	USA
Materials	
Klabın S/A	Brazil
Michelin	France
Owens Corning	USA
Pirelli	Italy
Saint-Gobain	France
Stora Enso Oyj	Finland
Power Generation	
EDF	France
ENGIE	Brazil
Retail	
The Home Depot, Inc.	USA
Services	
Accenture	Ireland
Adobe Systems, Inc.	USA
Alphabet, Inc.	USA
Bank of America	USA
BCE Inc.	Canada
BNY Mellon	USA
BT Group	UK
Deutsche Telekom AG	Germany
Fujitsu Limited	Japan
Goldman Sachs Group Inc.	USA
Grupo Logista	Spain
Infosys Limited	India
ING Group	Netherlands

Company Name	Country
Level 3 Communications, Inc.	USA
Lloyds Banking Group	UK
Microsoft Corporation	USA
Oracle Corporation	USA
RELX Group Plc	UK
salesforce.com	USA
Sopra Steria Group	France
Telefonica	Spain
Telstra Corporation	Australia

Company Name	Country
Transportation Services	
Canadian National Railway Company	Canada
Deutsche Bahn AG	Germany
Kawasaki Kisen Kaisha, Ltd.	Japan
La Poste	France
Nippon Yusen Kaisha Line	Japan
UPS	USA

Highest performing SMEs		
<p>These companies responded to the minimum version of the questionnaire as they stated that they have an annual revenue of less than EUR/US\$250million. They are not eligible for the A List as their scores are not comparable to the scores resulting from the full version of the scoring methodology, but we would like to recognize that they achieved the highest score possible for a small-to-medium-sized enterprise (SME), under the CDP definition.</p>		
RONG HUA(QING YUAN) OFFSET PRINTING	China	Manufacturing
ELIDOSE	France	Services
MarieLaurePLV	France	Manufacturing
SH ZIJIANG INT'L	China	Services
SILAB	France	Biotech, Health Care & Pharma
ILEOS	France	Manufacturing
Mario Camacho Foods, Llc	USA	Food, Beverage & Agriculture
Superior Nut	USA	Food, Beverage & Agriculture

PROTECTING FORESTS

Over
60%
of forest loss in Latin America and Southeast Asia is related to commodity production

305
suppliers responded to member requests for disclosure, an increase of 247% from 2017 levels

17%
of suppliers can trace commodities back to the forest, plantation or farm where they originated

Focusing on the commodities driving deforestation

Forests is the newest addition to the CDP Supply Chain program, beginning in 2017 with eight members. This year it has grown to 14 members, each engaging with suppliers by requesting information on the production and use of sensitive commodities linked to deforestation. At present the focus is on five of these key commodities: timber, palm oil, cattle products, soy, and rubber.⁷

Between 2001 and 2015 commodity-driven deforestation accounted for nearly 30% of deforestation globally. In Latin America and Southeast Asia this was over 60% percent.⁸ This forest loss increases the rate of climate change, contributes to habitat and biodiversity loss as well as greater levels of water pollution and scarcity in some regions.

Conversely, protecting and restoring natural forests is a tested and cost-effective means of mitigating against many of these negative effects, so is recognized to play a major role in achieving the Paris Agreement and several of the Sustainable Development Goals.

Deforestation and forest degradation pose a significant risk to businesses over the longer term. But to halt it completely, the companies that today rely on these forest commodities as critical economic inputs must rapidly find ways to decouple their production and use from unsustainable deforestation.

Members use this data to better assess the challenges and opportunities for action in their supply chains, finding ways to engage suppliers and build capacity to reduce risks and expand good practice.

Suppliers were asked to report on the forest commodities that they produce or consume. However, despite their exposure to risks, only a relatively small proportion of companies disclosed information about these commodities.

This proportion was lowest for companies producing, using, or selling cattle products, with fewer than half reporting information to their customers. And an even a smaller proportion of companies that reported collecting data were willing to disclose this information. This is important because this is a crucial first step that allows companies to get a better picture of their reliance on commodities with deforestation risks within their supply chain, as well as understanding how exposed they are to those risk.

Significant gaps in knowledge remain when it comes to the origins of these commodities. Only 17% of suppliers can trace commodities back to the forest, plantation or farm where they originated. And many showed limited ability to report on exposure to risks in the first place. Only 47% of suppliers reported undertaking a forests-related risk assessment, and internal skills and capabilities to address these risks remain limited.

	% of companies responding reporting exposure to commodity	% of exposed companies disclosing on commodity	% of exposed companies reporting consumption and/or production data
Cattle Products	23%	45%	23%
Palm Oil	33%	74%	52%
Soy	33%	53%	27%
Timber	52%	81%	65%

Members requested disclosures on forests from 519 suppliers, receiving 305 responses. This was a huge 247% increase from the pilot year in 2017, where 244 requests were made and 88 responses received. Encouragingly, many of these respondents were from high deforestation risk regions: 68 suppliers responded from Brazil, and there was increased engagement with Indonesia where 41 suppliers are sourcing palm oil.

Despite this incomplete picture, suppliers reported total potential financial impacts of US\$23 billion associated with risks linked to the production, consumption and trade of forest commodities.

US\$23 billion

associated with risks related to forest commodities

Highest impact risks related to forest commodities:

- ▼ Brand damage
- ▼ Increased operating costs
- ▼ Reduction or disruption in production capacity

Promoting collective action

Addressing deforestation issues will require multiple stakeholders all working in alignment. This is why a number of collaborative platforms have been developed to bring parties together, such as the 2014 New York Declaration on Forests setting a pathway for corporate deforestation goals through to 2030.

The last five years has seen an explosion of corporate commitments to reduce or remove deforestation risks from global supply chains, with more than 470 companies announcing various commitments.⁹

Investors are also increasing their engagement on deforestation. In 2018, investors representing \$6.7 trillion in assets under management and other actors successfully urged the Roundtable on Sustainable Palm Oil to raise its standards. Another investor coalition joined forces with NGOs and companies to call for zero deforestation in Brazil's Cerrado region.

However, despite good progress by a few leading companies, a number of challenges still remain. Supply chain complexity makes it difficult for corporates to have clear visibility further down the supply chain, resulting in some uncertainty around whether commitments are really being implemented by intermediaries.

In part, this complexity and challenge explains why comparatively few companies have achieved A-List ratings on Forests this year. Encouragingly, there are a number of emerging tools that can help companies deliver on their commitments. Hopefully these will result in higher levels of engagement and collaboration around forests, leading towards strengthened ambitions beyond 2020.

To support more effective collective action, the CDP forests questionnaire has this year been aligned with guidance from the Accountability Framework initiative. This guidance was developed by a coalition of leading environmental and social NGOs, working in consultation with private companies, government, and other stakeholders to bring greater consistency and uniformity in terminology and reporting. This increased alignment should allow for greater comparability and integration of information across different tools and platforms.

Strengthening supplier engagement

Forest members of the CDP Supply Chain program are provided with analysis and tools to support them in engaging suppliers more effectively. Thanks to funding from Norad and Norway's International Climate and Forest Initiative and other donors, the program also includes direct regional outreach in Latin America, China and Indonesia, covering engagement with suppliers and policy stakeholders.

The CDP Supply Chain program also generates efficiencies and cost-savings for both responding and requesting companies, thanks to having a single, shared platform for disclosure. This means that suppliers only need to submit one standardized disclosure to multiple customers.

In 2018, the 14 Supply Chain Forests members covered several different economic sectors, but still had 68 suppliers in common. Supplier companies that received disclosure requests by multiple members had a higher response rate of 82%, compared with those that only received requests from a single member at just 57%. Efficiencies and a positive influence on encouraging disclosure should continue to grow as the number of supply chain members and shared suppliers increases.

7 Rubber is currently in a pilot phase and results are not included in this year's analysis.

8 Curtis, P.G., et al. (2018) "Classifying drivers of global forest loss". *Science* 361, 1108-1111.

9 Tropical Forest Alliance 2020 (2018) *Progress on Corporate Commitments and their Implementation*.

To illustrate the impact of the program, some practical examples from member companies acting on key commodities are included below.



Timber:

Global food manufacturer, Kellogg, has zero net deforestation and forest degradation commitments by 2020, covering 100% of its supply chain. Kellogg is making use of the program to assess how their numerous paper products suppliers are managing deforestation risks. Kellogg's is also working with their direct suppliers to support and improve their capacity to supply sustainable raw materials.



Palm oil:

French personal care giant, L'Oréal, already sources 100% of its palm oil derivatives from sources certified by the Roundtable on Sustainable Palm Oil and is using CDP data to build a Sustainable Palm Index assessment of its suppliers. L'Oréal has also directly engaged suppliers on zero-net-deforestation policies through webinars with CDP tailored to suppliers at basic and advanced stages in their disclosure journey.



Cattle:

Arcos Dorados, the largest worldwide franchise of McDonald's with operations in 20 countries across Latin America and the Caribbean, use disclosure through the CDP Supply Chain program as a tool to improve the relationship with their suppliers, facilitating more effective collaboration and supplier management. With direct engagement around disclosure, and through regional workshops with the CDP Latin America office, Arcos Dorados has been working to build capacity amongst their suppliers, becoming champions for monitoring and reporting around deforestation in this high risk region.



Soy:

Brazil's JBS, the largest meat processing company in the world, has significant supply chain impacts related to soy used as animal feed. The business has time-bound commitments to transparency and has chosen to use the CDP Supply Chain program to engage its soy suppliers by inviting them to disclose through the platform. Through this process and the information disclosed, JBS can evaluate and stimulate supplier actions to remove deforestation in the production of agricultural commodities.



McDonald's is deeply committed to sourcing our food in a way that minimizes impact to the environment, limits our carbon footprint, and promotes livelihoods. We joined the CDP Supply Chain Forest program to partner with our suppliers on the path of environmental disclosure and work hand in hand with them to achieve continuous progress on eliminating deforestation from our global supply chain.

Rachael Sherman, Director Global Sustainability, McDonald's Corporation



THE A LIST:

FORESTS

Company Name	Country
Timber	
BillerudKorsnäs	Sweden
TETRA PAK	Sweden
UPM-Kymmene Corporation*	Finland
Palm Oil	
Beiersdorf AG*	Germany
FIRMENICH SA	Switzerland
FUJI OIL HOLDINGS INC.	Japan
L'Oréal	France

No companies were recognized on the A List this year for their performance on forest commodities other than timber and palm oil. However a small number of companies did achieve an A- rating on cattle and soy:

Cattle	
Burberry Group*	UK
Kering*	France
Unilever plc	UK
Soy	
Danone	France
L'Oréal	France

* Forest disclosure provided through CDP Investor program.

WATER STEWARDSHIP

6%

GDP at risk by 2050 from water security issues in some regions

Protecting an essential resource

Water is the life blood of the global economy. A secure supply is essential for many industries, ranging from agriculture and manufacturing, through to power generation and hospitality. However, without a radical improvement in water management and stewardship across the economy then the World Bank predicts that water scarcity, exacerbated by climate change, could cost some of the world's regions up to 6% of GDP by 2050.¹⁰

Even worse, a failure to protect freshwater resources can prove disastrous to communities and ecosystems. And where water sources and drainage basins are badly managed, this can exacerbate the impact of natural disasters such as flooding.

In 2018 the 43 members of the CDP Supply Chain program asked 3,804 of their suppliers to provide disclosures about their efforts to manage and

govern freshwater resources, receiving 1,709 responses. This continues the year-on-year growth of the water program from 2017, where the 37 members received 1,536 responses.

Respondents highlighted the enormous importance of addressing water security issues. A total US\$62 billion of revenues are currently associated with identified areas of water risk within direct operations, that have the potential to have a serious financial or strategic impact on businesses.

Suppliers were also asked to report separate data on water withdrawal, consumption and discharge. Each of these categories saw an increase from 2017, demonstrating ongoing progress in the collection of important monitoring and transparency metrics, allowing businesses to better manage their freshwater use.

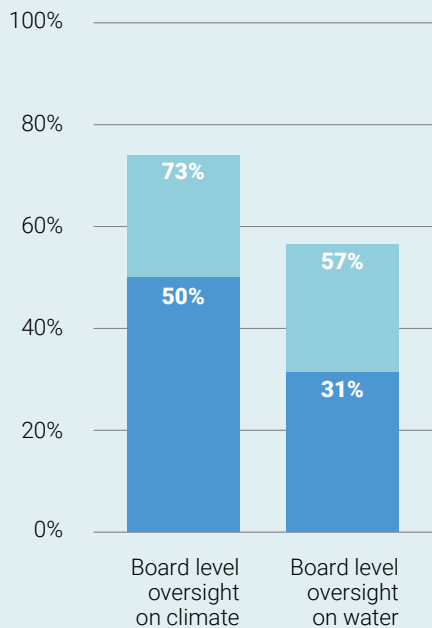
1,709

suppliers responded to member requests for water disclosure

	2017 suppliers reporting data	2018 suppliers reporting data	% responding suppliers reporting data 2018
Withdrawal	949	1,152	67%
Consumption	886	1,116	65%
Discharge	879	1,058	62%

For companies reporting both climate change and water information the level of governance is notably lower for water than climate

2018 2017



However, the progress is slow. At the heart of this is governance – some of the most significant internal stakeholders in responding companies are paying less attention. Under half of suppliers reported direct involvement of the C-suite in oversight of water issues.

This is in stark contrast to levels in climate change. When only analyzing companies who reported both climate and water information the comparison is stark, of those companies 73% reported board level oversight on climate, whereas for water only 57% reported the same level of governance for water. Although positively, there has been an increase in reported water targets, rising from 51% in 2017 to 69% this year, showing a good level of improvement in efforts to measure and manage the resource.

¹⁰ World Bank (2016) *High and Dry: Climate Change, Water, and the Economy*.



Water is crucial to our business. From our experience of reporting on our own water information publicly for more than two decades, we know that transparency and disclosure are critical to the success of comprehensive water strategies. That is why we are working with CDP to encourage our suppliers to publicly disclose their water information. This expectation is integrated into our supplier management processes and supplier report cards, and is now also a requirement for suppliers to be eligible for Intel’s prestigious supplier quality awards.

Intel Corporation



US\$62 billion

revenues associated with identified areas of water risk originated

Influencing supply behavior

Water members of the CDP Supply Chain program are increasingly pushing for greater levels of action amongst their suppliers. However, to drive increased rates of change, even more action is needed to set expectations for higher standards of water management and stewardship.

The focus this year for members has been to promote two complementary areas of good practice, that together should lead to better supplier performance.

Firstly, there has been clear direction given on governance of water security matters, raising the pressure on companies to take this seriously at the highest levels. This may have contributed to the significant growth in reported board-level oversight seen this year.

Secondly, there has been a focus on speeding up progress by making it easier to address water issues, particularly for smaller companies where water security is still a comparatively new topic. This is being done through promoting available tools that help companies to assess water risk, such as the World Resources Institute’s online Aqueduct water risk mapping tool. It is also being achieved by sharing the lessons learned from companies that have already successfully implemented water management strategies.

This combined approach of increasing the importance of water issues within a company hierarchy, and providing practical advice and support on how to take action, will hopefully result in continued positive progress over the next disclosure period.

57%

companies reporting board-level oversight of water issues



Our supply chain accounts for about one quarter of HP’s total water footprint. Suppliers are requested to disclose information on water accounting, governance, risk assessment, goals, and risks, and general sustainability management, through CDP Supply Chain. We use this information to build and refine a supply chain water footprint, as well as to prioritize supplier engagements to maximize positive impacts.

The first step to managing impacts is awareness, so collecting data from suppliers is beneficial and drives improved stewardship, reduced consumption, and greater resilience over time. From our own experience, we know that to fully implement a water security strategy it needs to be managed at the highest levels and reported on publicly. This is why we value our work with CDP to integrate data about our suppliers’ public water stewardship policy and governance into our supplier assessment processes.

James Riddle, Supply Chain Sustainability Program Manager, HP Inc.







At Braskem we have seen financial benefits from implementing a water security strategy over the last six years. At the heart of this strategy has been our ability to value freshwater resources, and build that value into the way we make decisions on our operations and capital investments. This has made us more resilient to water risks.

However, to be more fully prepared to operate in the water scarce regions, which are expanding by the day, it is important we ensure that resilience cascades down the supply chain. Working with CDP allows us to understand where our suppliers are on their water security journey, assess the risks that they may present to us, and – crucially – collaborate with them to reduce that risk.

In 2018, having assessed our suppliers' disclosures to CDP, we were able to tailor an approach to engage and help them improve. Part of this work consisted of holding multiple training workshops and sharing the tools and calculations we developed ourselves to not only value water internally, but also estimate potential financial losses. From the combination of this information, it is possible to calculate how much should be paid for developing a safe, alternative water source.

The workshop was built in a way that allowed suppliers to adapt and use the tools themselves, as well as training them to use free tools such as the Water Risk Monetizer. In the coming year we are going to focus on helping suppliers to create a stronger business case for acting on water security.

Jorge Soto, Sustainable Development Director, Braskem



THE A LIST:

WATER

Company Name	Country
Biotech, Health Care & Pharmaceuticals	
AstraZeneca	UK
Bayer AG	Germany
Food, Beverage & Agriculture	
Coca-Cola European Partners	UK
Diageo	UK
General Mills Inc.	USA
Kirin Holdings Co Ltd	Japan
Infrastructure	
ACCIONA S.A.	Spain
Manufacturing	
Braskem S/A	Brazil
Brembo SpA	Italy
FIRMENICH SA	Switzerland
Ford Motor Company	USA
International Flavors & Fragrances Inc.	USA
KAO Corporation	Japan
LG Display	Republic of Korea
LG Innotek	Republic of Korea
L'Oréal	France
Metsä Board	Finland
Mitsubishi Electric Corporation	Japan
Nabtesco Corporation	Japan
Stanley Black & Decker, Inc.	USA
Toyota Industries Corporation	Japan
Materials	
Klabin S/A	Brazil
Services	
Microsoft Corporation	USA

HOW DISCLOSURE DRIVES BUSINESS WATER ACTION

The international adoption of the Sustainable Development Goals (SDGs) in 2015 helped to raise the profile of a number of serious environmental sustainability challenges faced by the world today. Equivalent to the Paris Agreement for climate change, SDG 6 sets out a global goal to ensure the availability and sustainable management of water and sanitation for all.

SDG 6 highlights the critical importance of water and the essential role that a secure and sustainable supply plays in the economy and across society. The below infographic describes how disclosure through CDP is driving business action on water and contributing to the achievement of this important global goal.

Why business action on water matters:

Industry accounts for over **19%** of global water withdrawal and global agricultural supply chains account for **70%** more.¹³

In developing countries, up to **70%** of industrial wastewater is discharged untreated.¹²

WATER USE EFFICIENCY

What gets measured gets managed: An increasing number of companies are tracking, managing and implementing water efficiency solutions.

104% more companies now monitor and report water withdrawals, discharge and consumption.



329 In 2018, 329 companies reported that water efficiency presents a strategic, operational or market opportunities



Paper products company, **Metsä Board** has saved an estimated US\$4.5 million and cut energy use by 28.9 GWh per year by reducing water consumption.

WATER QUALITY

Corporate ambition to combat worsening water quality is fostering innovation.

50% more companies are integrating water quality into their risk assessments since 2015.



65% more companies are setting water pollution reduction targets.



Chemicals company **Symrise** has set a global target to reduce effluent concentrations of its waste-waters in order to ensure water security and quality of water bodies in which it operates.

ECOSYSTEMS

River basin restoration and nature based solutions are increasingly recognized as vital to reducing water risks.

59% more companies are setting targets and goals around Watershed remediation, habitat restoration and ecosystem preservation.



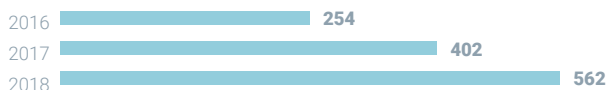
Brewing company, **AB InBev** has successfully reforested 100 hectares of degraded areas, and preserved 120 hectares of forests in Brazil and Bogota to reduce sedimentation.

Disclosure unlocks the power of corporate action to address our shared water challenges

WASH

Acting to improve WASH¹³ offers ways to turn business risk into opportunity, increase efficiency and reduce growth barriers.

121% more companies now integrate provision of WASH into water risk assessments.



118% more companies are setting targets and or goals on the provision of WASH compared to 2016.



Beverage company, **Diageo** has joined 47 other companies, in signing the WASH at the workplace Pledge and set a target to provide 100% of its employees with access to appropriate standards of water, sanitation and hygiene.

¹¹ http://www.fao.org/nr/water/aquastat/water_use/index.stm#tables

¹² <http://unesdoc.unesco.org/images/0024/002475/247552e.pdf>

¹³ Water, sanitation and hygiene

STRATEGIES FOR DRIVING SUPPLY CHAIN SUSTAINABILITY

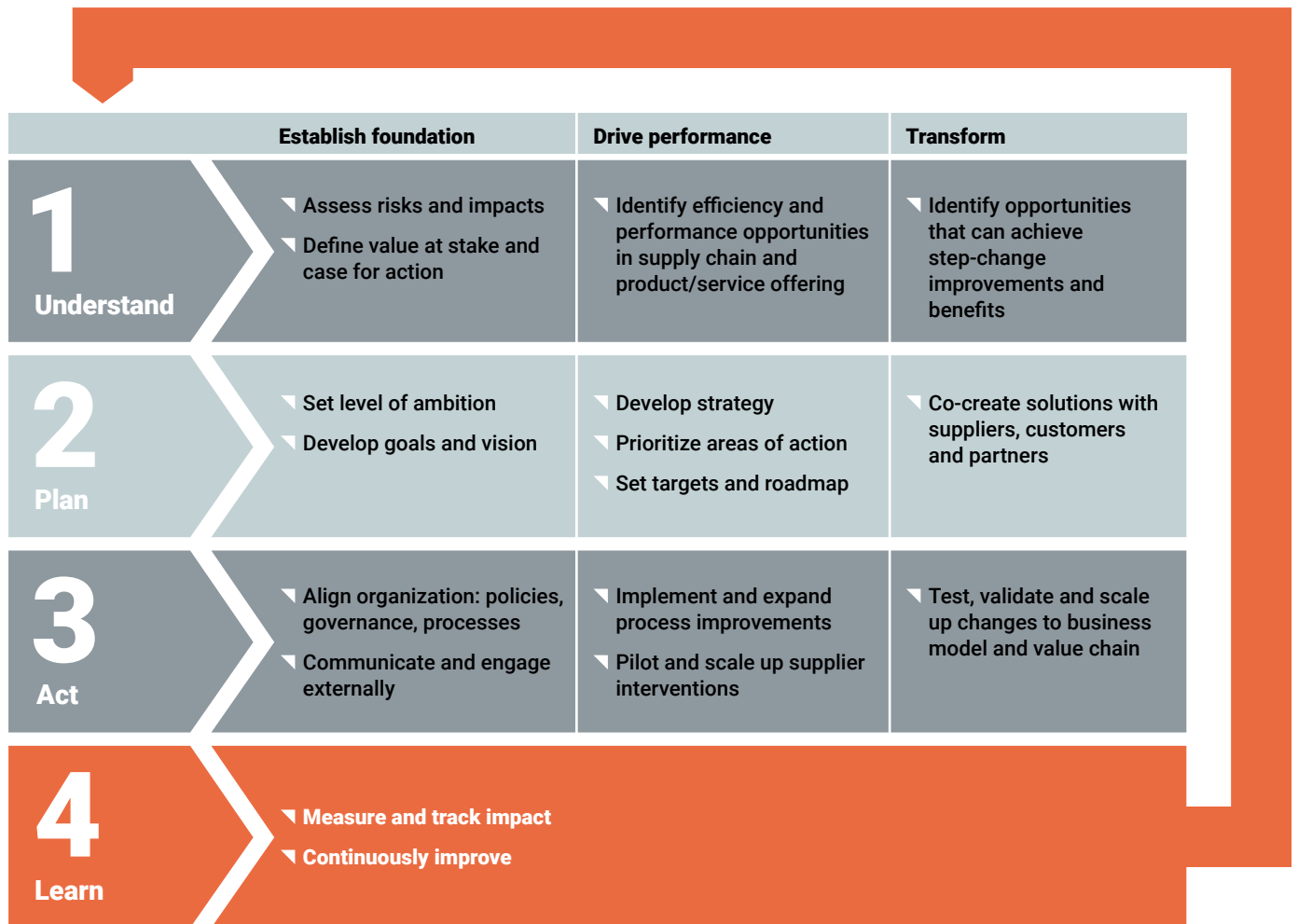
Managing supply chain risks, impacts, and capturing opportunities for sustainable value creation is complex. However, the fundamental steps are common across all organizations: understanding, planning and implementing. Learning from outcomes is essential in order to deepen and broaden the value of a Supply Chain strategy.

The Science Based Targets initiative (SBTi) places a strong emphasis on organizations establishing ambitious targets for value chain (scope 3) carbon emissions reduction. Companies that fall under

this requirement have an opportunity to establish a robust approach to supply chain sustainability. Furthermore, this should provide a basis for assessing key risks and opportunities relevant to meeting TCFD requirements.

The below four steps form the basis of the Carbon Trust's framework process for developing a supply chain sustainability program outlined below.

Carbon Trust framework process for developing a sustainable supply chain program



Source: The Carbon Trust

Understand

Understanding and quantifying climate and resource impacts, risks, and opportunities is fundamental to developing a coherent and effective Supply Chain program. It is also important for protecting the resilience of operations, as disruptions can prove costly.

Equally, understanding supplier challenges and capabilities can reveal opportunities for value creation and growth by unlocking innovation. This will vary depending on: the nature of the supply chain (e.g. agricultural, industrial, services); the relative capabilities of suppliers (e.g. size, technical abilities, access to capital); and the shape and complexity of the full supply chain, particularly where the most material impacts and opportunities exist beyond the first tier.

Water challenges are considerably more complex to evaluate when compared with carbon emissions. While climate change has a global effect, water is very much a local issue. Risks can vary substantially between different regions, depending on scarcity and competing use – a purely volumetric and quantitative approach is insufficient to measure and understand impact.

Although every organization ought to minimize water use wherever possible and avoid pollution or contamination, users in high risk areas bear additional responsibility. This includes engaging with governments, communities and other stakeholders to play a role in promoting basin-level sustainability and better approaches to water management.



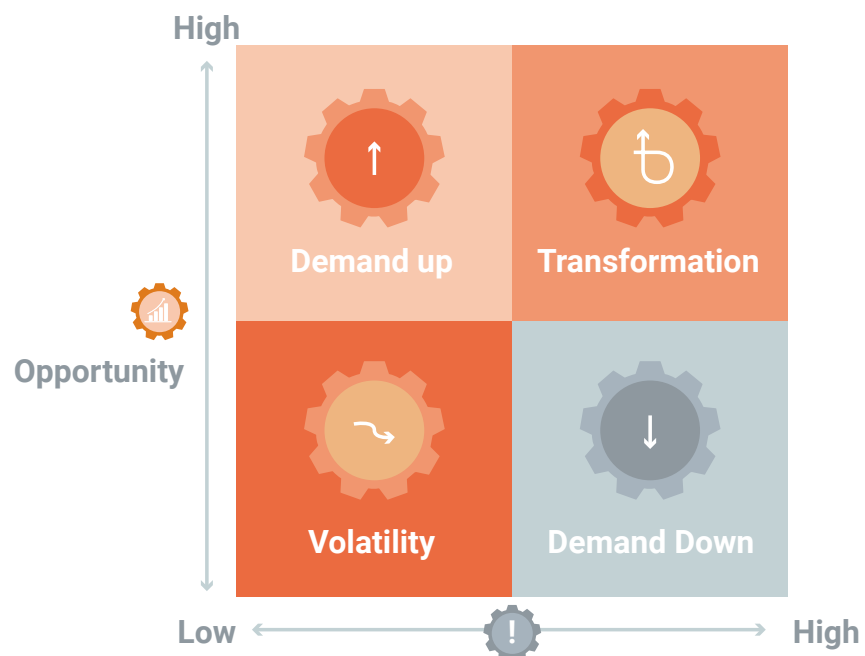
HOW TO ASSESS SUPPLY CHAIN RISKS AND OPPORTUNITIES

1. Consider the drivers of risk and opportunity: Is new legislation likely in your industry? Would carbon pricing materially increase supply chain costs? What potentially disruptive technologies and business models are emerging? Are your customers' expectations changing? How would physical impacts of climate change affect your supply chain and operations?
2. Build coherent scenarios: How are risk and opportunity drivers likely to play out over relevant time horizons? How do these combine into believable scenarios that you can plan against?
3. Assess value-at-stake: How will your company's future revenues and costs be affected under each scenario? By comparing to business-as-usual forecasts, value-at-stake can be calculated.
4. Define the case for action: What actions should be taken to capture opportunities and mitigate risks? Should the overall stance be proactive or reactive?

Key trends impacting the supply chain...

- ▶ Legislation and regulation
- ▶ Physical impacts
- ▶ Customer preferences
- ▶ Security of supply
- ▶ Commodity prices
- ▶ Innovation

...with resulting risks and opportunities scenarios



Plan

With increasing understanding of supply chain risks, impacts, and opportunities, organizations can prioritize and plan approaches to address these. This begins with setting a vision and level of ambition, and then translating insights into a strategy, roadmap, and detailed plan of action, in line with the wider organizational objectives. As a result, creating a positive business case for action is often simplified by targeting areas where cost savings can be achieved, such as through reducing energy and resource use. Companies have to use their efforts and resources wisely. It is therefore important that they take a prioritized and pragmatic approach to engaging suppliers and establishing areas of action. An example of such a segmented supplier engagement strategy an approach is shown below.

This year the greatest areas of identified opportunity – both in terms of monetary savings and carbon emissions reduction – are found in various types of energy efficiency. However, such obvious financial rewards are not always available, or it may be difficult to access or quantify the expected benefits, for example through reducing reputational risk as a result of better water stewardship.

An outcome of planning is the development of medium and long-term targets which organizations use to provide concrete signals of their intentions externally to the market and suppliers, as well as internally to business units. Where required, this will be a basis for developing ambitious objectives for scope 3 emissions, as required by the SBTi.

	Strategic suppliers	Majority suppliers	The rest
Who	Small number of highest priority suppliers, each with significant individual footprints	Less significant individually than strategic suppliers, but collectively account for majority of supply chain footprint	'Long tail' of suppliers contributing to a minority of the supply chain footprint
Typical numbers	Typically <50 suppliers	50-100s suppliers	100s-1000s suppliers
Example engagement approach	Highly collaborative engagements, tailored to individual suppliers	One-to-many interactions Basic technical support Online tools and publications	Access to free resources Not a major focus

Act

Once targets are set, implementation begins by establishing appropriate internal structures and processes, so that organizations are able to effectively execute and follow through with specific interventions. This includes policies, governance, processes and capability-building across relevant functions. This is especially relevant to procurement and supply chain teams, but also to product development and design.

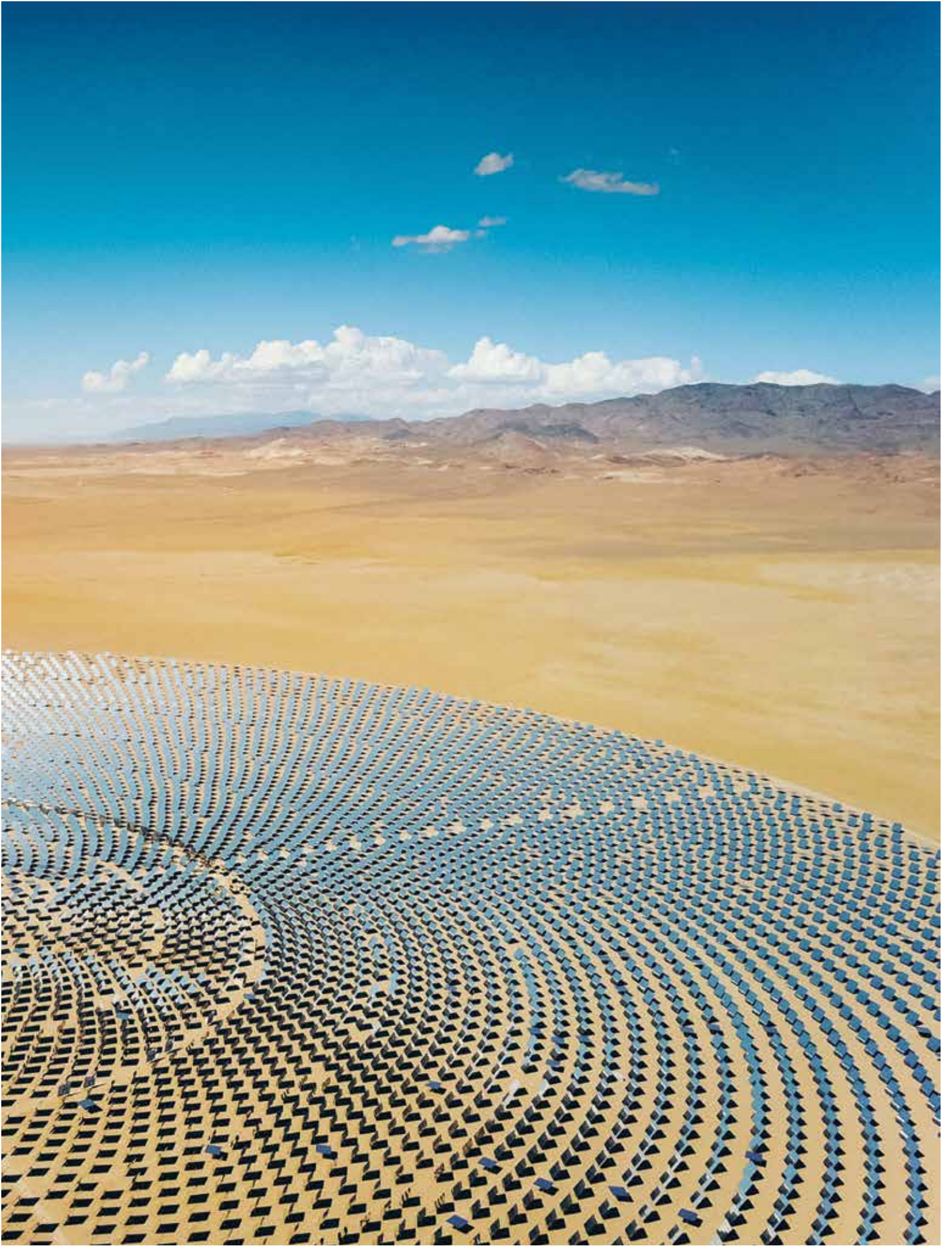
together are mutually reinforcing. Organizations can put in place a range of interventions to address areas of priority, as illustrated in the framework below.

Learn

Effective supply chain sustainability programs develop and adapt as organizations learn from the outcomes of their interventions. Introducing a continuous learning loop is therefore important so that actions remain relevant and have the desired impact.

Organizations can also improve sustainability performance across their value chain through innovations in product and service offering: designing out negative impacts (for example by selecting sustainable materials, ingredients, and service providers) and designing in features that both improve sustainability and add value to customers. Engaging suppliers and addressing product offering often go hand-in-hand, and done

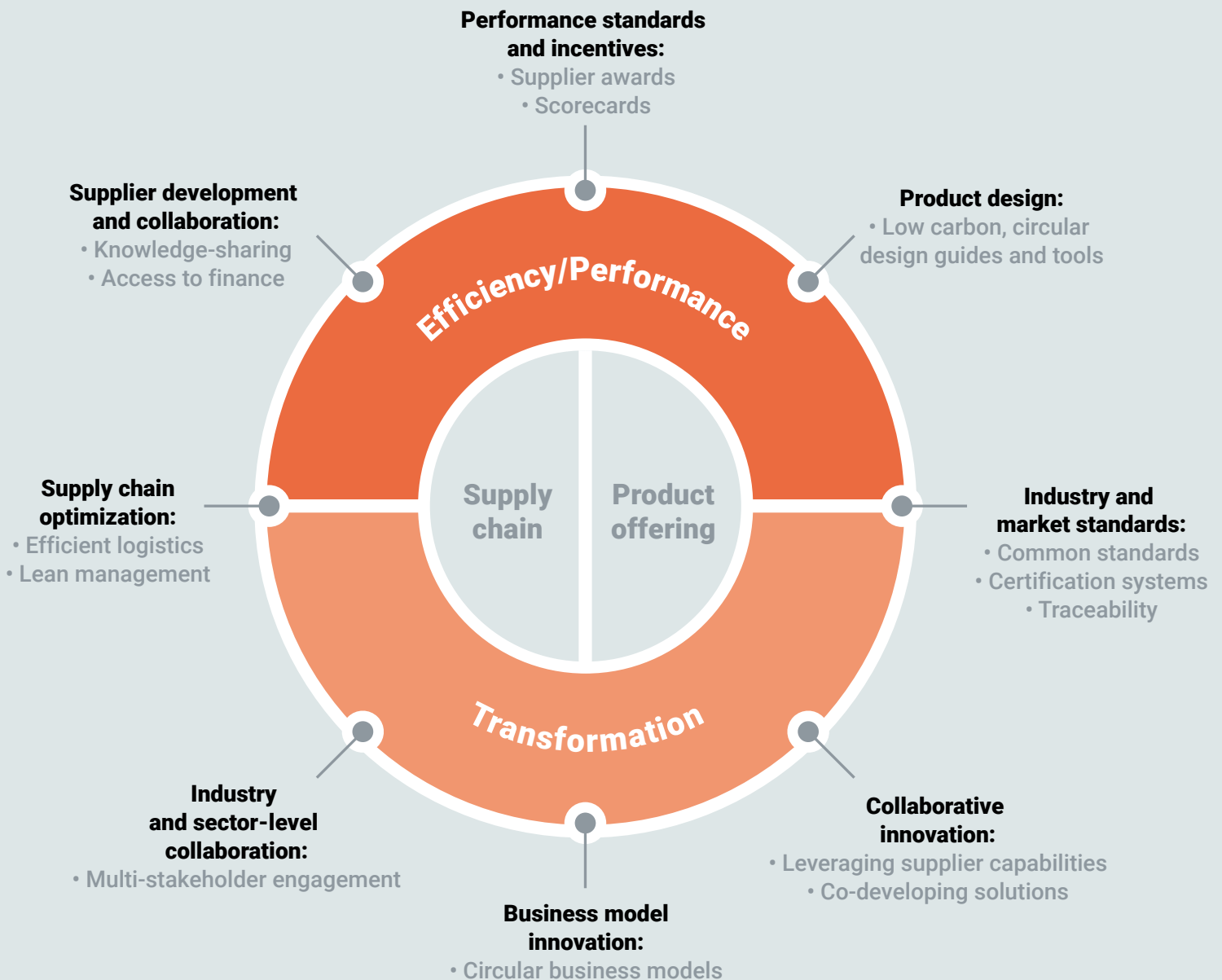
This learning loop is particularly important when organizations and their partners and suppliers engage in new areas that have high-impact consequences such as changes to business models. Learning is enhanced through rapid iteration, piloting, and validation of new models prior to scaling up.



IMPROVING SUPPLY CHAIN SUSTAINABILITY: FROM EFFICIENCY TO TRANSFORMATION

Organizations that take a strategic approach to supply chain sustainability consider the nature and scale of the impact they are trying to achieve, designing interventions and initiatives that will move them towards their objectives and targets.

On the spectrum of change lie interventions that achieve incremental efficiency and performance improvements (such as driving energy and resource efficiency practices with suppliers), alongside transformational initiatives that fundamentally shift part or all of an organization's business model.



REGIONAL OVERVIEW

	Global	North America	Latin America	China	Japan	Rest of Asia	Europe	Africa
Climate								
# of respondents	5,545	1,721	869	519	538	448	1,312	45
% reporting scope 1	75%	72%	65%	74%	92%	74%	80%	58%
Total scope 1 emissions (tCO ₂ e)	5,556,239,578	1,390,625,075	1,496,649,887	104,661,632	432,388,304	332,040,273	1,390,625,075	71,872,839
% reporting scope 2	58%	54%	37%	56%	80%	63%	67%	36%
Total scope 2 (market-based; tCO ₂ e)	1,712,243,246	323,291,134	506,899,688	264,665,760	117,400,979	137,491,568	328,062,578	13,869,036
% reporting upstream scope 3	33%	28%	34%	33%	42%	32%	37%	36%
Total upstream scope 3 (tCO ₂ e)	3,210,954,073	995,205,162	506,381,090	12,767,263	286,110,710	307,341,925	1,048,043,642	2,404,101
% with emission targets	47%	36%	19%	61%	84%	57%	56%	24%
# with reduced emissions	1,582	495	134	160	165	131	456	6
# with science-based targets	94	28	1	0	21	3	39	0
% engaging upstream suppliers	35%	31%	25%	25%	38%	30%	50%	24%
Water								
# of respondents	1,709	408	364	121	287	130	368	18
reported water withdrawal volume	1,116	269	234	66	189	82	256	12
# with water risk assessment	962	212	175	85	158	77	237	12
# with water targets	1,182	262	241	99	188	100	274	9
# with public policy on water	545	118	59	55	124	58	128	2
% engaging upstream suppliers	17%	23%	8%	7%	19%	16%	21%	6%
Forests								
# of respondents	305	80	129	5	24	19	41	1
# with forests risk assessment	142	45	34	0	15	10	33	1
# with traceability	94	31	22	0	13	2	22	1
# with targets	62	19	8	0	11	1	20	1
# with deforestation policy	69	24	9	0	14	2	17	1

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CDP Scoring Partner



CDP supply chain lead members 2018



*The LEGO Group is also a CDP Supply Chain lead member.

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