CDP
DISCLOSURE INSIGHT ACTION

HIGHER AMBITIONS, HIGHER EXPECTATIONS

CDP Europe report 2018

Written on behalf of over 650 institutional investors with US$87 trillion in assets

Written by CARBON TRUST

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FOREWORD FROM VALDIS DOMBROVSKIS

VICE-PRESIDENT FOR THE EURO AND SOCIAL DIALOGUE, EUROPEAN COMMISSION

The financial sector is the missing link in the fight against climate change.

The next decade will be decisive for the fate of this planet as we know it. Already, we are seeing the consequences of 1 degree of global warming. Unless we accelerate the transition to a low-carbon economy, we might lock ourselves into catastrophic climate change.

This is why Europe is taking the lead in the implementation of the Paris agreement. We are targeting 40 % emission reductions by 2030, along with 32% renewable energy and a 32.5% improvement in energy efficiency. And last November, the Commission proposed its strategy for how Europe can go climate-neutral by 2050.

As this report by CDP illustrates, this transition carries risks for European companies. 75% of them have identified climate-related transition risks. And as many as 12% have already suffered reduced revenues as a result of climate-related disruption. But at the same time, it is a unique economic opportunity. As the present report reveals, 50% of European companies see revenue opportunities through low-carbon products or services.

To reach our Paris climate goals, we need trillions of euros to scale up renewable energy, develop options for storing surplus energy, and decarbonise other parts of the economy. The public sector alone cannot fill this funding gap, so the private sector will have to step up its investments. This is why the financial sector is the missing link in the fight against climate change.

And retail investors are catching on: for instance, among the millennial generation, more than 80% are interested in sustainable investment products. So the financial sector needs to incorporate this demand into their operations.

It is for these reasons that in March 2018, the European Commission launched its 10-point Action Plan to help scale up Sustainable Finance in Europe and channel more investment to the low-carbon economy. And we have put forward three legal proposals:

- First, we have proposed to develop an EU-wide classification for sustainable economic activities, to determine what is green. This will help investors and companies to identify climate- and environmentally friendly sectors and projects. The proposal also sets out minimum social safeguards, and in the future, the classification itself could expand to also include social issues.

  This EU classification will also allow us to establish EU standards and labels for financial products, such as green bonds or green investment funds.

- Second, we have proposed to require investment managers to disclose how they take environmental, social and governance issues into account in their investment and advisory processes. In addition, for strategies that actively target sustainability, managers will need to disclose their sustainability impact.

- And third, we have proposed to set EU standards for low-carbon and positive-carbon impact financial benchmarks. This should give climate-conscious investors better tools to measure their performance.

In addition, our Action Plan looks at how to improve corporate disclosure of climate change risks. Because today, many investors and asset managers say they lack the high-quality information they need to adopt sustainability principles, despite the proliferation of different sustainability surveys that companies are already filling out.

This is why, this summer, the Commission will update its non-binding guidelines on corporate non-financial disclosure, to integrate the recommendations of the FSB task force on climate-related financial disclosures. And these guidelines will focus not only on how climate change affects businesses, but also on how businesses affect the climate. Overall, this revision should help companies disclose climate information in a more consistent and comparable manner. I hope that many EU companies will take this opportunity to lead by example.

To conclude, we need companies to measure, disclose, and reduce their carbon emissions. We need the right regulation to facilitate this. And most of all, we need investors and companies to seize the investment opportunities that the low-carbon transition creates. This is how we can help preserve our planet and our way of life, make Europe a leader in sustainable investment, and create millions of high-skilled jobs in the process.

CDP PERSPECTIVE: STEVEN TEBBE, MANAGING DIRECTOR, CDP EUROPE

Last year the Intergovernmental Panel on Climate Change (IPCC) delivered an unambiguous message to the world: our economy must undergo an unprecedented transformation in order to mitigate the worst impacts of climate change. Companies, investors and governments have a clear choice: drive faster progress and be on the right side of the transition to a low carbon, resource-secure economy, or continue business as usual and face major risks.

> The onus is now on policymakers to up their ambition and embolden faster action. That's done by giving companies and investors the clear signals they need; setting an enabling environment for the required transformation by raising the bar for the minimum amount of information disclosed.

As CDP releases its second stocktake of European environmental action, we see evidence of another momentous year for progress on climate change, water security and deforestation among corporates.

More this year disclosed their environmental data, with a **11%** global jump in reporting and now over 850 companies in Europe, valued at **75%** of total market capitalization, using CDP to respond to investors.

Disclosure is now firmly in the mainstream. The FSB's Task Force on Climate-related Financial Disclosure (TCFD), which built on the work of CDP, has paved the way to mandatory climate-related disclosures at EU level to improve how material risks are assessed.

By incorporating the TCFD recommendations in this year's questionnaire for 7000 companies, CDP's system is more vital than ever to guarantee standardisation in environmental data.

Transparency is always the starting point for more ambitious action. Nowhere is that action clearer than in Europe, where half of the companies on CDP's global **A List** are based.

With our new questionnaire come new insights from companies. We now know that 75% of firms in Europe face transition risks – like new regulation and legal challenges – from climate change. And that 4 in 10 companies are already conducting scenario-analysis to model their business strategies – a number that will rise to more than 7 in 10 by 2020.

But we also see that more than half of responding companies are yet to set an absolute target for their emissions.

That will improve as investors scale up their engagement. 2018 was a significant year, with 400 investors launching The Investor Agenda at California's Climate Action Summit to push for more work to achieve the Paris Agreement.

This year also saw advances in building a more liquid market for ESG investments in Europe. Euronext launched the world's first index using an average of CDP scores across climate change, water and forests – a push for corporates to align their action across environmental challenges. We also saw the first CDP-branded investment fund, showing that investors are not just requesting environmental information, but are using it on markets to decide where to put their money. With these signs of leadership in the economy the onus is on policymakers to up their ambition. That's done by giving companies and investors the clear signals they need, and setting an enabling environment for the transformation by raising the bar for the minimum amount of information disclosed.

The EU's goal to be net-zero emissions by 2050 is a good start, and five states now have decarbonisation targets matching its ambition. With the rulebook for achieving the Paris Agreement now mostly agreed at the latest COP24 in Katowice, governments must deliver on the 2050 agenda; by strengthening their Nationally Determined Contributions (NDCs) in 2020 and operationalising net-zero at EU level.

Those targets must be matched by policy to align financial flows with the Paris Agreement. This year saw critical developments, with the European Commission's Action Plan for Sustainable Finance adopting legislation to define sustainable investments and strengthen rules for investors to integrate ESG risks.

For the plan to be successful, we need to see the EU's flagship legislation on corporate reporting, the Accounting and the Non-Financial Reporting Directive, strengthened in line with the TCFD. This will help deliver decision-useful information on climate change, water security and deforestation risks to financial markets and throughout entire supply chains.

Our vision of a sustainable economy is achievable, and the main actors in our transition – companies, investors, cities, states, regions and governments – have the technical tools to get us there. But all actors must be responsible for faster progress: the next two years are critical for ensuring plans and commitments are on track.

GOVERNMENT ACTION INCREASING CORPORATE AMBITION

European businesses have often taken the lead on environmental issues. But leadership does not occur in a vacuum.

In 2015, the G20's Financial Stability Board established the Task Force on Climate-related Financial Disclosures (TCFD), with the aim of addressing the risk that climate change poses to global financial stability. Its mandate was to develop recommendations for voluntary and consistent disclosures around climate change opportunities and risks, which could be used by companies, investors and other financial stakeholders to factor into their decision-making.

In 2018, CDP aligned its questionnaires with the TCFD recommendations, alongside the introduction of a new sectoral focus recognizing that different companies will face different types of environmental challenges. This is helping disclosing companies to report the opportunities and risks they face, optimizes their reporting burden, and accelerates the provision of meaningful information for data users.

This report contains the first analysis of European companies responding to CDP's new questionnaire.

High quality environmental disclosure across the G20 is a necessary first step in the transition towards a low carbon, resilient economy. Mandatory reporting is considered the crucial next step to achieving market-wide, consistent disclosures that are key to a sustainable financial system, and level playing-field for companies.

The EU is currently implementing disclosure requirements for financial market participants under its Sustainable Finance Action Plan, which will drive coherency and transparency among corporates and investors. And France has already introduced Article 173, the world's first law requiring investors and asset managers to report on climate risks.

Beyond TCFD, there is now strong collective political, corporate, and citizen support for more ambitious action, at both a Europe-wide level, and nationally within most countries on the continent.

Europe is also already home to some of the world's strongest policy frameworks on emissions, water security, clean energy, and energy efficiency. There is a clear direction of travel suggesting that these are only getting stronger, giving businesses certainty around the need to act and persuading them that doing so could provide a long term competitive advantage.

In the past year, Sweden legislated for carbon neutrality by 2045. Spain plans to use only renewable electricity by 2050. The UK is exploring how to strengthen its world-first legally binding national target on emissions to support the higher ambition 1.5°C goal in the Paris Agreement. And as Poland hosted the latest round of international climate talks at COP24, the EU issued a joint statement with the High Ambition Coalition of countries, urging the international community to establish more ambitious actions and initiatives.

In the financial system, under the Network for Greening the Financial System, central banks and financial supervisors are working together to strengthen the global response to meeting the Paris Agreement's goals, and to enhance the role of the financial system in both managing environment and climate risks in the financial sector and mobilizing capital to support the transition toward a sustainable economy. This initiative has high potential to define, promote and implement best practices in the financial system, and CDP, supporting objectives of the NGFS, calls on other central banks and supervisors to join the network.

Europe's positive influence ripples around the world. Governments are supporting change through international development cooperation, and by sharing lessons on their own experiences navigating the transition to a sustainable economy. And this goes beyond climate change. Norway has become the first country in the world to commit to zero deforestation, working to protect forests overseas.

Businesses in the region are increasing their scrutiny of supply chains, using the power of procurement to drive positive change. And European consumers are shifting expectations by demanding more sustainable products and services.

But with higher ambitions comes higher expectations. Ambition is not uniform across the continent, and rhetoric does not always match up with the reality.

Despite ambitious commitments on climate change and clean energy, Germany has reported emission rises for the past two years, looks set to miss its 2020 goals, and is not planning to phase out coal until 2038. Poland's government led the COP24 climate talks at the same time as continuing to invest in new coal plants. And France had to roll back plans for an escalating fuel tax to act on emissions, following widespread civil unrest and protest.

Against this backdrop, it is key to understand where actual market implementation of public policy objectives stands and what gaps remain. CDP provides the evidence showing what European companies are doing in light of environmental policy objectives, and whether business models are aligned with a well below 2 degree warming limit. This year's disclosures give an important insight into the performance of many of Europe's largest corporates, showing the important role they are playing in driving forward environmental action on climate change, protecting forests, and water stewardship.

EXECUTIVE SUMMARY

859

disclosing corporates from 24 European countries

2,341 $MtCO_2e$

reported annual scope 1 & 2 greenhouse gas emissions, greater than Germany, the UK and France combined

85 $MtCO_2e$

reported emissions reductions, greater than annual emissions of Austria

Big impacts, big opportunities

Europe is seen to be leading the world on many environmental sustainability issues. The region is home to some of the world's strongest national and supranational policy frameworks on climate change, forest protection, and water stewardship. Unsurprisingly, it is also where many of the large corporates that demonstrate world-leading performance on these issues are based.

But is this higher ambition resulting in sufficient progress on urgent sustainability challenges? Or are European businesses collectively failing to live up to the high expectations they face?

This report examines disclosures made to CDP in 2018 by European corporates. These companies completed detailed questionnaires reporting their action on climate change, forests and water issues. And for the first time this year, analysis in the CDP Europe report includes companies headquartered or listed in the United Kingdom and Ireland.

This year 849 corporates from 23 European countries provided climate change disclosures. These businesses include 82 large private companies, with combined revenues in excess of €614 billion. The remainder are all listed companies responding to investor requests for disclosure, representing three-quarters of European market capitalization.

These disclosing corporates report combined scope 1 and 2 greenhouse gas emissions equivalent to 2,341 million tonnes of carbon dioxide – a total greater than the current annual emissions from Germany, the United Kingdom and France put together.

A smaller number of disclosures were provided on forest and water-related impacts, which are more recent additions than climate change to CDP requests. There were 83 companies responding on forest-related issues linked to commodities associated with deforestation risks: timber, cattle, palm oil, soy, and rubber. And 183 businesses provided information on how they are addressing water security challenges.

One thing that is clear across all areas of disclosure is that sustainability is now a boardroom issue that requires governance at the most senior levels. There was reported board-level oversight from 95% of respondents on climate change, 88% on forests, and 90% on water. However, there is still a question over whether these environmental challenges are being sufficiently factored into strategic decision-making, or acted upon swiftly enough.

Showing leadership on climate change

European corporates account for half (49%) of the entire CDP A List on climate change, recognising top performers globally. The region is home to nearly half of all companies currently signed up to the Science Based Targets initiative, delivering on the goals of the Paris Agreement by setting targets in line with keeping global warming well below 2°C above pre-industrial levels. And businesses from Europe also make up over 40% of the RE100 organizations, with commitments to go 100% renewable.

Where year-on-year comparison has been possible there has been evidence of demonstrable progress, with a majority (58%) of companies reporting a reduction in emissions.

These combined annual reductions in scope 1 and 2 emissions amount to the equivalent of 85 million tonnes of carbon dioxide, a total greater than the annual emissions of Austria. However, a full third (33%) of companies did report an absolute increase in emissions over the past year. This was mostly as a result of either increases in overall output, or corporate acquisitions.

While almost all respondents have some sort of target in place for reducing emissions, this year 10% of disclosing companies report they are working towards zero emissions, becoming carbon neutral or net positive. There is also a growing number engaging their supply chains to drive downstream emissions reductions, with 31% integrating climate issues into their supplier evaluation processes. And two-thirds (69%) of companies are developing low carbon products and services to help their customers reduce emissions.

Responding to risks and opportunities

The questionnaires completed by companies in 2018 have been updated to ask for more detail beyond looking at current performance, exploring forward-looking business impacts. This change has been introduced to better reflect the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), as well as the growing pressure on companies to better evaluate the financial opportunities and risks they face in the transition to a sustainable, low carbon economy.

Four-fifths (80%) of responding businesses already identify climate-related risks to their operations. 39% at present claim to be implementing current best practice by using a scenario-based approach to inform their strategy, while an additional 33% anticipate doing so by 2020.

80%

identify climate-related risks facing their business

88%

have a procedure in place to identify and assess deforestation risks

92%

have a water-related target or goal in place

HALF

of all corporates recognized on the CDP A list for climate change are from Europe

47%

give financial incentives to senior management for climate change topics

Of those using scenario analysis, 57% are going beyond just qualitative insights and using quantitative elements in their planning.

Increased operating costs associated with policy and legal changes is the most commonly reported risk, with over half (52%) of companies highlighting this. But most companies (86%) were also positive about the potential business opportunities from providing the solutions to climate change. Almost half (46%) of respondents report opportunities to drive revenue through demand for lower emissions products and services, with a quarter (26%) seeing these opportunities either currently or in the short term future.

Protecting resources for future generations

Looking at deforestation and forest degradation challenges, four in five (80%) of the respondents to this year's forest questionnaire recognized potential business impacts from the unsustainable use of forest commodities, with risks related to resource availability, regulation, and reputational damage. An equal number of respondents (80%) see benefits from taking action to protect forests, believing this could increase brand value, open up new markets, or increase sales of sustainable products and services.

They are also taking action, with 88% having a procedure in place to identify and assess forest-related risks, and nearly three-quarters (72%) integrating these issues into long term business objectives. A further four-fifths (80%) of companies have put in place internal policy measures to address these issues, in particular through improving transparency around sourcing, or including standards or commitments into their procurement processes.

Of the companies disclosing to CDP on water's security, 80% claim that having sufficient good quality freshwater for their own use is either important or vital for their business, with 62% identifying that they face some sort of water-related risk, either to their own operations or in the wider value chain. More immediately, a fifth of European companies reported suffering from some sort of water-related issue in the past year – mostly related to flooding or droughts – with a total estimate financial impact of €4 billion.

Of note is the fact that the total financial costs highlighted by companies as potentially arising from water-related risks – a total of €16.4 billion – is more than three times the costs the attribute to responding to these, which is around €6 billion.

Almost all (92%) of the businesses reporting this year on water have some sort of target or goals in place within their operations, with most having targets at several levels. This is a substantial increase from the 61% reporting the same last year. Seven in ten (71%) are also now integrating water-related issues into their long term business objectives. And where water is perceived to be a vital resource, 80% actively engage with their value chain, and 77% of that group also ask their suppliers to report on water use.

There are also positive opportunities identified from taking action on water issues. The total savings expected by companies adds up to €58 billion, with most commonly cited coming from cost savings through water efficiency (38%), opportunities to increase sales of products or services (29%), and an increase in resilience (15%).

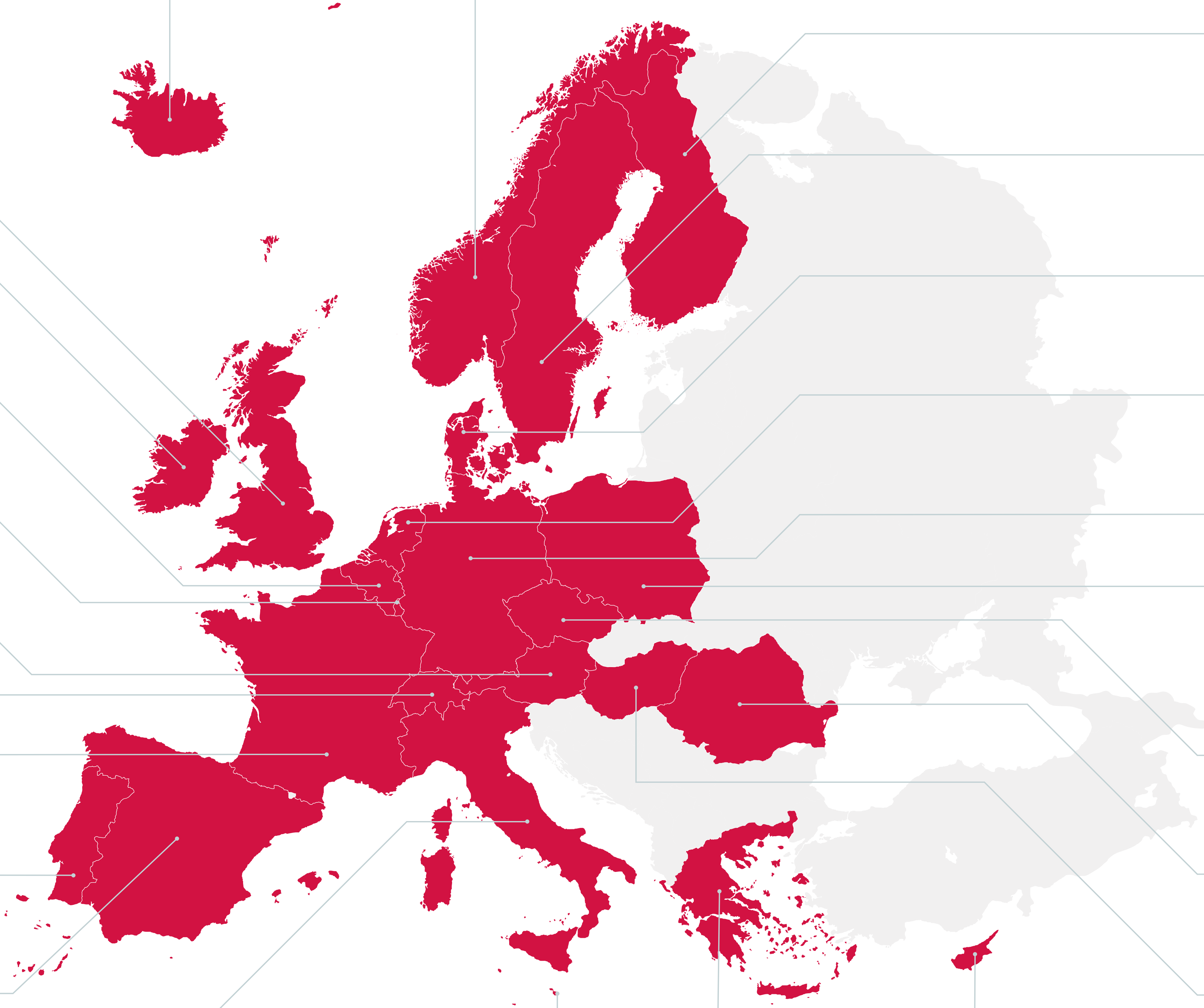
DISCLOSURE ACROSS EUROPE

Climate change respondents
Water respondents
Forest respondents

849 total climate change respondents

183 total water respondents

83 total forests respondents



ICELAND 1 0 0

NORWAY 35 4 3

UNITED KINGDOM 238 44 28

IRELAND 26 8 3

BELGIUM 14 4 1

LUXEMBOURG 3 1 0

AUSTRIA 13 3 1

SWITZERLAND 58 17 6

FRANCE 98 23 8

PORTUGAL 9 2 1

SPAIN 48 11 3

ITALY 43 9 2

MALTA 1 0 0

GREECE 5 0 0

CYPRUS 1 0 0

FINLAND 45 7 7

SWEDEN 57 8 9

DENMARK 19 4 0

NETHERLANDS 41 10 5

GERMANY 89 26 5

POLAND 3 0 1

CZECHIA 2 0 0

ROMANIA 0 1 0

HUNGARY 2 1 0

Map displays # of responses taken into consideration for this report

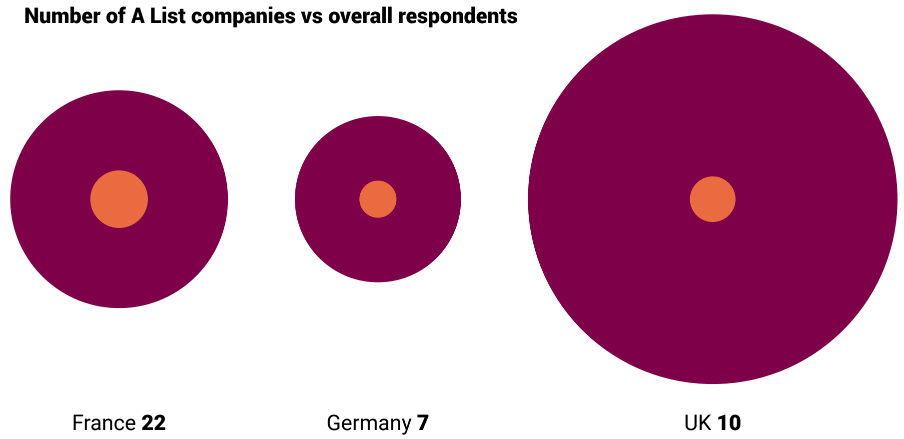
RECOGNIZING EUROPEAN LEADERSHIP

European corporates account for half of CDP's global climate change A List this year, with 68 companies included on the list of 136 top performers around the world. However, these businesses were not evenly distributed between all countries in the region.

Amongst those recognized on the A List for climate change, 22 came from France – over a third of the total across Europe – from just 98 responding companies in the country. This was followed by the United Kingdom with 10, Germany with 7, and Norway with 5. Conversely, Southern European companies made up just 12% of the total, with 4 from Spain, 3 from Italy, and 1 from Portugal. And no companies were recognized on the A List from Eastern Europe.

The progress made in France has been striking, jumping significantly from the 8 French companies making the climate A List last year. Whereas the number of companies achieving climate A List status in Germany stagnated, and the UK saw an overall decrease.

Number of A List companies vs overall respondents



35%
of companies on the global water security A List are from Europe

50%
of companies on the global climate change A List are from Europe

UK companies are in fact some of the most transparent in Europe. With 238 climate respondents, the country has the highest number of respondents to CDP in Europe. France has the second highest absolute number of respondents to this theme, but the lowest return rate of responses received to investor requests (38%). Similarly, Germany's responding companies represent just a 42% response rate. This may imply that many UK companies are disclosing at comparatively earlier stages on their journey to sustainability than counterparts elsewhere on the continent.

Over half of the climate change A List also came from just two economic sectors, with services (including financial services) and manufacturing businesses collectively accounting for 57% of the total.

It is positive to note that immediately below the comparatively small leadership group recognized on the climate A List (8% of all scored European companies), 14% of European companies were awarded an A- ("A minus") rating, and a full 28% a B rating. This means that half of businesses in the region were broadly performing well on climate change issues when compared with many of their global peers.

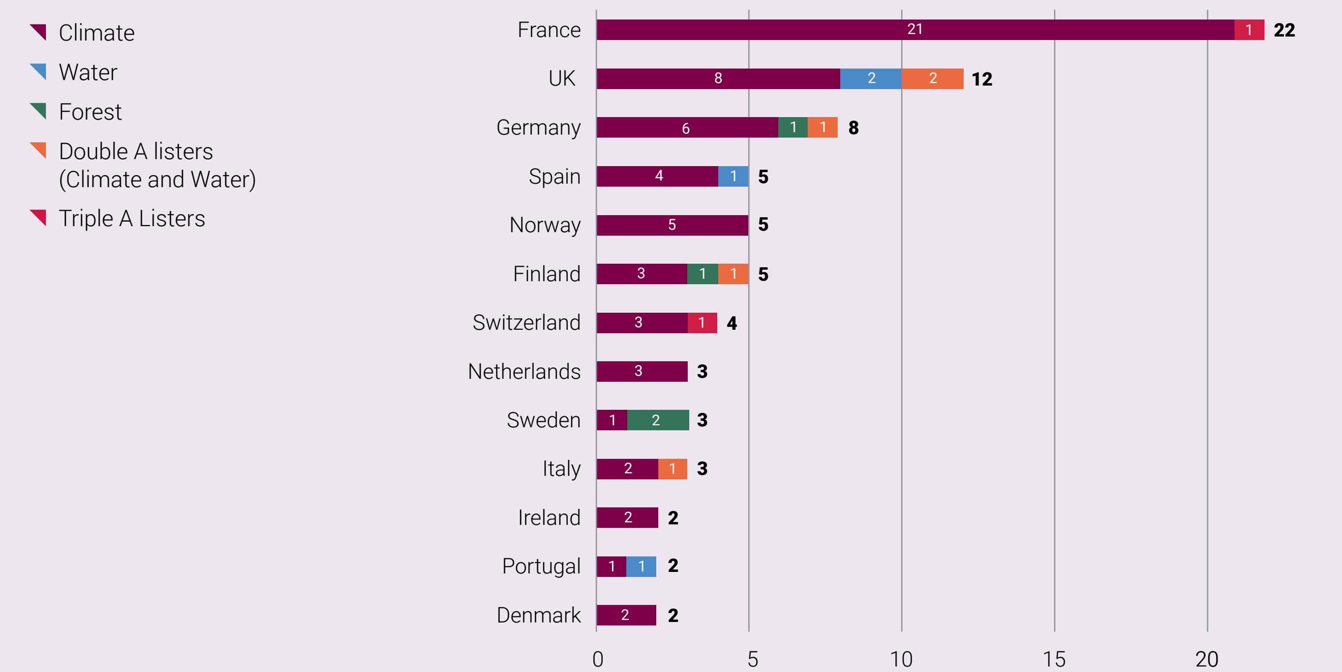
Looking across water and forests disclosures, quite a different picture emerges.

This year there were substantial updates to the CDP questionnaire and scoring criteria, reflecting the scale and urgency of the environmental challenge posed by water security. As a result, just 31 companies globally achieved an A for water, a significant drop from last year's total of 74. The 11 European companies on the water security A List represent 35% of the global total.

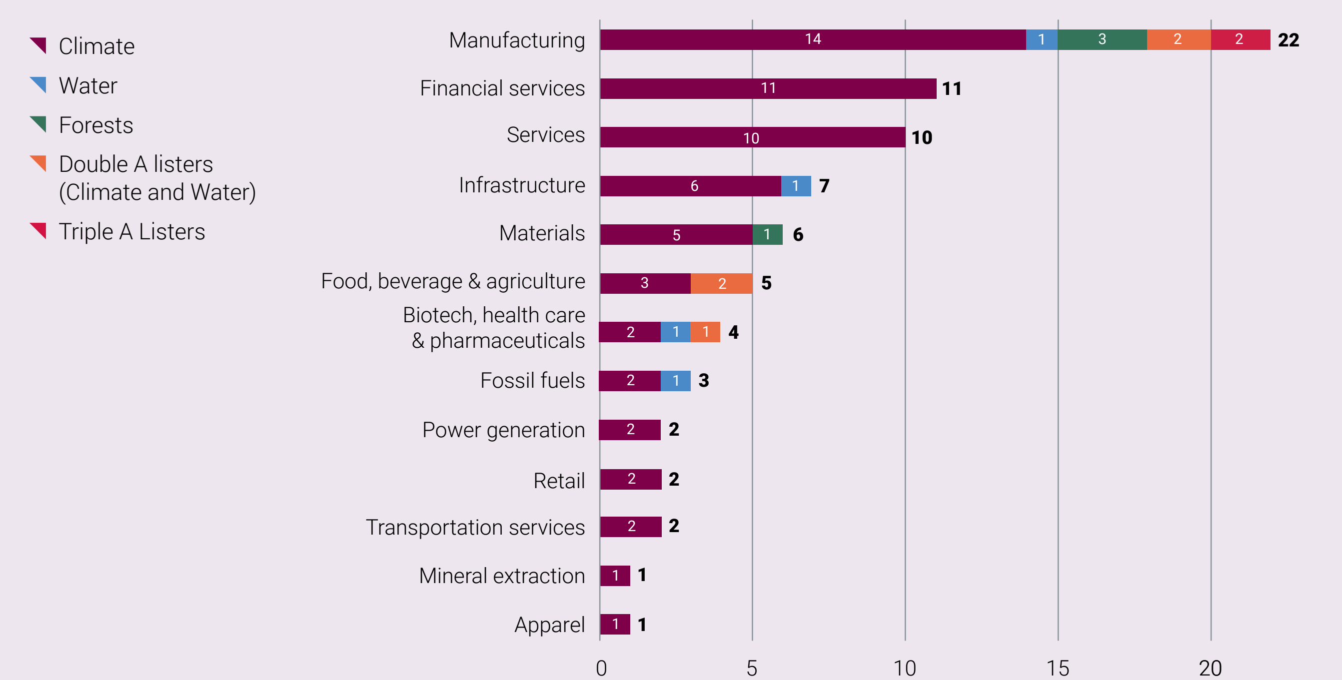
CDP's forests A List features just seven companies this year, an increase of one from 2017. Although six of these are from Europe, again showing leadership from businesses in the region. In part, the forests A List is smaller because the disclosure process for forests is much less established than for climate change, with fewer total respondents. However, this doesn't fully account for the discrepancy.

A record number of companies disclosed to CDP's forests questionnaire in 2018. While these companies have taken an important first step in their journey towards managing deforestation risks, most will need to significantly accelerate their efforts to match the progress they are making on climate change, and to a lesser extent on water security.

A-listers in Europe



A-listers per sector



THE A LIST:
EUROPE

The climate A List was established in 2011 and introduced for water and forests in 2015 and 2016 respectively. As there are proportionately more responding companies for the climate program than the newer water and forest programs, there are more companies achieving an A rating for climate.

CDP encourages companies to disclose to all relevant programs to achieve double or triple A status. And this year, two European businesses were the only companies globally to achieve triple A status: Firmenich and L'Oreal. And AstraZeneca, Bayer, Brembo, Metsä Board, Coca-Cola European Partners and Diageo each achieved double A status across both climate change and water.

Company Name	Country	Sector	Climate change	Water	Forests
Accenture	Ireland	Services	A		
ACCIONA S.A.	Spain	Infrastructure		A	
AIB Group Plc	Ireland	Financial services	A		
AstraZeneca	**United Kingdom of Great Britain and Northern Ireland**	**Biotech, Health Care & Pharma**	**A**	**A**	
BASF SE	Germany	Manufacturing	A		
Bayer AG	**Germany**	**Biotech, Health Care & Pharma**	**A**	**A**	
Beiersdorf AG	Germany	Manufacturing			A (Palm Oil)
Berner Kantonalbank AG BEKB	Switzerland	Financial services	A		
BHP	United Kingdom of Great Britain and Northern Ireland	Mineral extraction	A		
Bic	France	Manufacturing	A		
BillerudKorsnäs	Sweden	Manufacturing			A (Timber)
Borregaard ASA	Norway	Manufacturing	A		
Bouygues	France	Infrastructure	A		
Brembo SpA	**Italy**	**Manufacturing**	**A**	**A**	
BT Group	United Kingdom of Great Britain and Northern Ireland	Services	A		
Carrefour	France	Retail	A		
CNH Industrial NV	United Kingdom of Great Britain and Northern Ireland	Manufacturing		A	
Coca-Cola European Partners	United Kingdom of Great Britain and Northern Ireland	Food, beverage & agriculture	**A**	**A**	
Covivio	France	Financial services	A		
Danone	France	Food, beverage & agriculture	A		
Deutsche Bahn AG	Germany	Transportation services	A		
Deutsche Telekom AG	Germany	Services	A		
Diageo Plc	United Kingdom of Great Britain and Northern Ireland	Food, beverage & agriculture	**A**	**A**	
DNB ASA	Norway	Financial services	A		
EDF	France	Power generation	A		
Electrolux	Sweden	Manufacturing	A		
ENGIE	France	Power generation	A		
EVRY ASA	Norway	Services	A		
FERROVIAL	Spain	Infrastructure	A		
FIRMENICH SA	**Switzerland**	**Manufacturing**	**A**	**A**	**A (Palm Oil)**
Galp Energia SA	Portugal	Fossil fuels		A	
Groupe PSA	France	Manufacturing	A		
Grupo Logista	Spain	Services	A		
INDUS Holding AG	Germany	Manufacturing	A		
ING Group	Netherlands	Financial services	A		
Intesa Sanpaolo S.p.A	Italy	Financial services	A		
J Sainsbury Plc	United Kingdom of Great Britain and Northern Ireland	Retail	A		
Kering	France	Apparel	A		
Klépierre	France	Services	A		
Koninklijke Philips NV	Netherlands	Biotech, Health Care & Pharma	A		
La Poste	France	Transportation services	A		
Landsec	United Kingdom of Great Britain and Northern Ireland	Financial services	A		
LEGO Group	Denmark	Manufacturing	A		
Lloyds Banking Group	United Kingdom of Great Britain and Northern Ireland	Financial services	A		
L'Oréal	**France**	**Manufacturing**	**A**	**A**	**A (Palm Oil)**
Mercialys	France	Financial services	A		
Metsä Board	**Finland**	**Manufacturing**	**A**	**A**	
Michelin	France	Materials	A		
National Grid PLC	United Kingdom of Great Britain and Northern Ireland	Infrastructure	A		
Naturgy Energy Group SA	Spain	Fossil fuels	A		
Neste Oyj	Finland	Fossil fuels	A		
Nestlé	Switzerland	Food, beverage & agriculture	A		
Nexans	France	Manufacturing	A		
Nexity	France	Infrastructure	A		
Novo Nordisk A/S	Denmark	Biotech, Health Care & Pharma	A		
Pirelli	Italy	Materials	A		
RELX Group Plc	United Kingdom of Great Britain and Northern Ireland	Services	A		
REMA1000	Norway	Food, beverage & agriculture	A		
Rexel Developpment	France	Services	A		
Saint-Gobain	France	Materials	A		
Schneider Electric	France	Manufacturing	A		
Siemens AG	Germany	Manufacturing	A		
Signify NV	Netherlands	Manufacturing	A		
Sopra Steria Group	France	Services	A		
Stora Enso Oyj	Finland	Materials	A		
Suez	France	Infrastructure	A		
Telefonica	Spain	Services	A		
TETRA PAK	Sweden	Manufacturing			A (Timber)
The NAVIGATOR Company	Portugal	Materials	A		
thyssenkrupp AG	Germany	Services	A		
UBS	Switzerland	Financial services	A		
Unibail-Rodamco-Westfield	France	Financial services	A		
Unilever plc	United Kingdom of Great Britain and Northern Ireland	Manufacturing	A		
UPM-Kymmene Corporation	Finland	Materials			A (Timber)
Valeo Sa	France	Manufacturing	A		
Valmet	Finland	Manufacturing	A		
Veidekke ASA	Norway	Infrastructure	A		

PREPARING FOR A SUSTAINABLE FUTURE : RESPONDING TO RISKS AND OPPORTUNITIES

80% have identified that their business faces some sort of climate-related risk

39% are currently using climate-scenarios to inform their business strategy

1/4 have identified transition risks with high impact that are at least likely to occur

Disclosure driving action

In 2018 CDP's questionnaires were updated to ask European companies to assess the risks and opportunities they face from climate change, deforestation, and water security challenges in greater detail than in previous years. New sector specific questions were also added to explore material areas of impact that exist for certain types of companies.

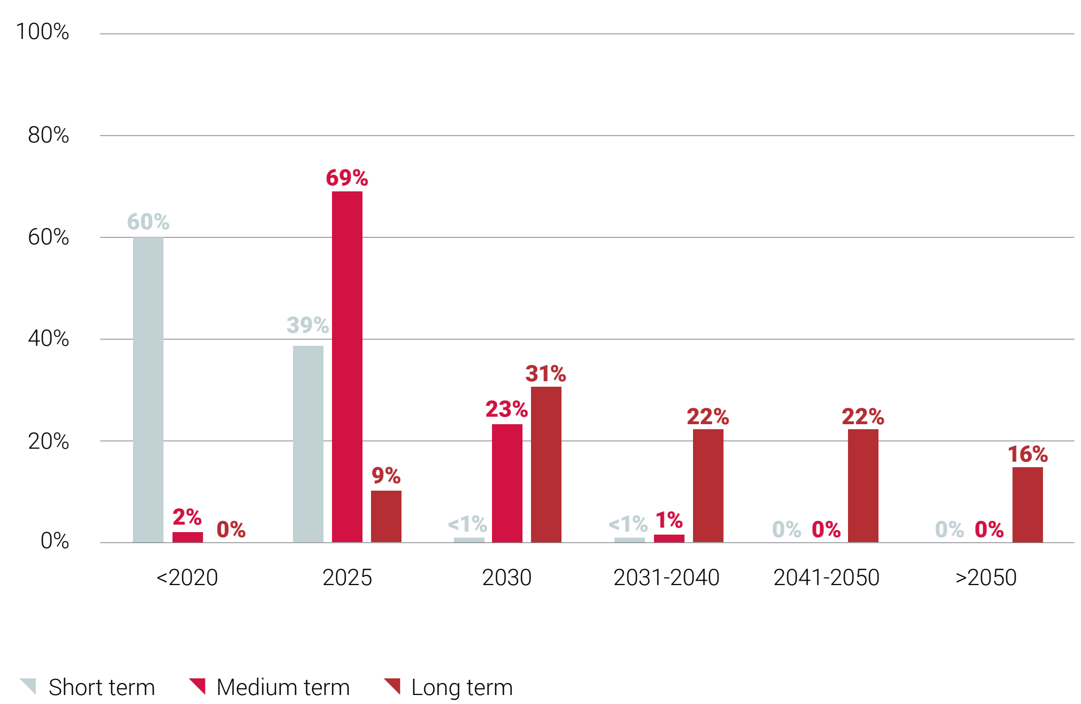
Another new addition this year was asking companies to define the time horizons over which they see risks and opportunities. Analysis of this reveals quite significant differences in the perception of what is considered to be short, medium and long term, posing challenges to comparison.

For example, a full 40% consider that their short term horizon extends beyond 2020 and could fall as far out as 2025, whereas for 9% of businesses 2025 would be considered to be the long term. Although these different perspectives are not surprising as different industries work on different capital planning and innovation cycles.

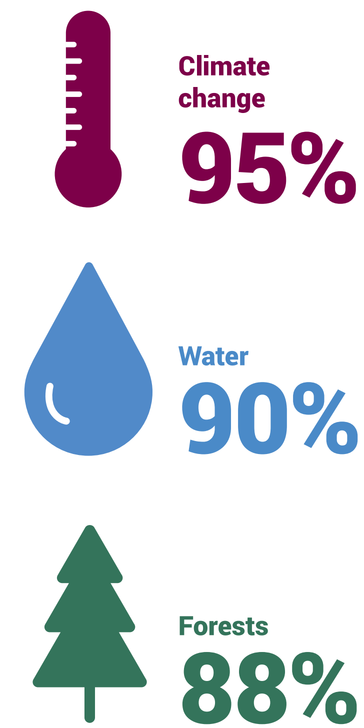
But despite some challenges with like-for-like comparison between companies, updates to the CDP questionnaires are helping to bring disclosures into greater alignment with the TCFD recommendations and hence catering to rising investor demand for climate metrics with significant financial relevance. In turn, it is expected that these will receive heightened prominence and become subject to higher levels of scrutiny.

Against this backdrop, and as suggested by the TCFD, environmental concerns have become firmly established as a board-level issue. Across the overwhelming majority of reporting companies there is governance responsibility held at board level for climate (95%), forests (88%) and water security matters (90%). On climate matters in particular, over a third (35%) of organisations have CEO oversight, and 6% of companies report having a dedicated top level executive focusing on sustainability, with a Chief Sustainability Officer or equivalent.

Companies' interpretation of short-, medium- and long-term horizons



Disclosing companies reporting board-level oversight



In exploring how well European companies are performing, this report evaluates in greater detail than ever before the perception of future opportunities and risks. In analyzing these disclosures, it has been possible to take a deeper look into how companies are building sustainability into their longer term strategy and evaluate this against the progress that is being made against climate change, deforestation, and water security issues. These are set out in turn below.

Responding to climate change

The TCFD recommendations set out guidance for how companies should communicate their material climate change risks and opportunities in their mainstream financial filings. This advises companies to take an iterative approach as their understanding increases, moving towards being able to provide robust quantification of financial impacts once a greater level of understanding is achieved.

Two-thirds (65%) of European companies are already actively disclosing details of their greenhouse gas emissions performance, as well as their broader response to climate change, through their mainstream filings. However, only a small number of companies claim to be fully following best practice recommendations, with 84 businesses claiming to be in line with the Climate Disclosure Standards Board (CDSB) Framework, and 44 that have made full use of the TCFD recommendations.

Despite not following the framework exhaustively at this point, many firms are implementing some of the best practice approaches recommended by the TCFD in other ways. In particular, 39% of responding companies already claim to be using a scenario-based approach to inform their corporate strategy around climate change. A further 33% anticipate that they will introduce this over the next two years. And amongst those companies currently undertaking scenario analysis, over half (57%) are using both quantitative and qualitative elements within their assessments. Four-fifths (80%) of companies responded they see some form of climate-related risks either happening already now or materializing in the future.

Climate risks can be further split out to look at two types of impact: the physical risks from a changing climate and extreme weather event, which can disrupt operations and supply chains; and the transition risks from society's response to climate change, such as policy and regulatory changes, the development of new technologies and business models, or changing consumer demand.

Respondents were asked to evaluate and categorize their risks, describing the time horizons over which they expect them to materialize and their potential impact on the business. Four-fifths (80%) of responding companies were able to identify some form of climate-related risks that they face.

The most commonly cited risk was increased operating costs as a result of climate-related policy and legal changes, which was highlighted by over half of responding businesses (52%). And 28% are already seeing this risk occur, or expect it to hit them in the short term.

Percentage of companies seeing at least one risk of the respective type in the respective horizon (multiple selections possible)

Risk type	Currently facing	Short term	Medium term	Long term	Any time horizon
Physical risk	11%	17%	26%	27%	64%
Transition risk	17%	37%	51%	26%	74%
Any type of risk	23%	43%	59%	41%	80%

52%
of companies see a risk of increased operating costs as a result of climate-related policy and legal changes

Percentage of companies seeing at least one risk of the respective type of the respective gravity (multiple selections possible)

Impact of magnitude	Low	Medium-low	Medium	Medium-high	High
Physical risk	14%	20%	25%	18%	11%
Transition risk	25%	33%	38%	28%	18%
Any type of risk	32%	41%	48%	38%	24%

Significantly, where risks have been identified, a quarter (24%) of companies identify that some of these are at least "likely" to materialize and would have a high impact[1] on their business. It is not surprising that these perceptions differ between industries, with certain types of business activity being naturally more exposed to costly disruption.

The highest share of companies reporting at least one high impact transition risk that is at least "likely" to occur can be found in the fossil fuels (42%), mineral extraction (41%) and transportation services (40%) sectors. This would be expected in a world that is shifting rapidly towards cleaner energy sources, radically improved resource efficiency, and advanced mobility solutions.

Conversely, the sectors most concerned with high impact physical risks from climate change that are estimated to be at least "likely" to occur are food, beverage & agriculture (27%) and hospitality (27%). This recognizes the fact that a changing climate would be likely to reduce agricultural yields and affect supply chains for perishable goods (eg. through extreme weather events), as well as potentially disrupting or depressing overall demand for leisure and tourism experiences (eg. through changes in weather patterns, degradation of landscapes and ecosystems, etc).

There have also been apparent challenges for disclosing companies in providing a detailed evaluation of value chain risks. Whereas 70% of companies highlighted risks faced by their direct operations, only 18% identified risks relating to their customer base, and just 11% to their supply chains. This may indicate that many companies are still mostly focusing their risk management efforts onto areas where they have high levels of direct control, which could prove to be a costly bias in the future.

71%
see opportunities in providing products or services to help deal with climate change

Companies reporting at least one high impact transition risk that is at least "likely" to occur, by sector

	Transition risks	Physical risks
Apparel	14%	0%
Biotech, health care & pharmaceuticals	16%	7%
Food, beverage & agriculture	20%	27%
Fossil fuels	42%	8%
Hospitality	27%	27%
Infrastructure	37%	20%
Manufacturing	19%	10%
Materials	36%	16%
Mineral extraction	41%	24%
Power generation	23%	5%
Retail	31%	14%
Services	20%	12%
Transportation services	40%	14%
All sectors	**25%**	**13%**

1 Throughout this analysis, "high impact" includes selections "High" and "Medium-High" in column "magnitude of impact"

Percentage of companies seeing at least one opportunity of the respective type occurring now or in the future

13% of companies saw an opportunity in **resilience**

22% of companies saw an opportunity in **markets**

26% of companies saw an opportunity in **energy source**

40% of companies saw an opportunity in **resource efficiency**

71% of companies saw an opportunity in **products and services**

In total, 85% of companies saw an opportunity occurring now or in the future

Of course, at the same time as needing to address climate change risks, many businesses are identifying exciting growth opportunities in providing the solutions to help tackle climate change, or better adapt to its consequences. And as many companies have already discovered through their efforts to reduce emissions, there are substantial bottom line benefits from taking action to reduce energy use and become more resource efficient. There are also well-established reputational benefits from corporate sustainability.

In fact, the proportion of companies that has identified positive opportunities resulting from climate change is larger than the share of companies that has identified risks (85% vs. 80%). Where opportunities have been identified, these most commonly relate to developing new products or services (71%), improving resource efficiency (40%), and harnessing clean energy sources (26%).

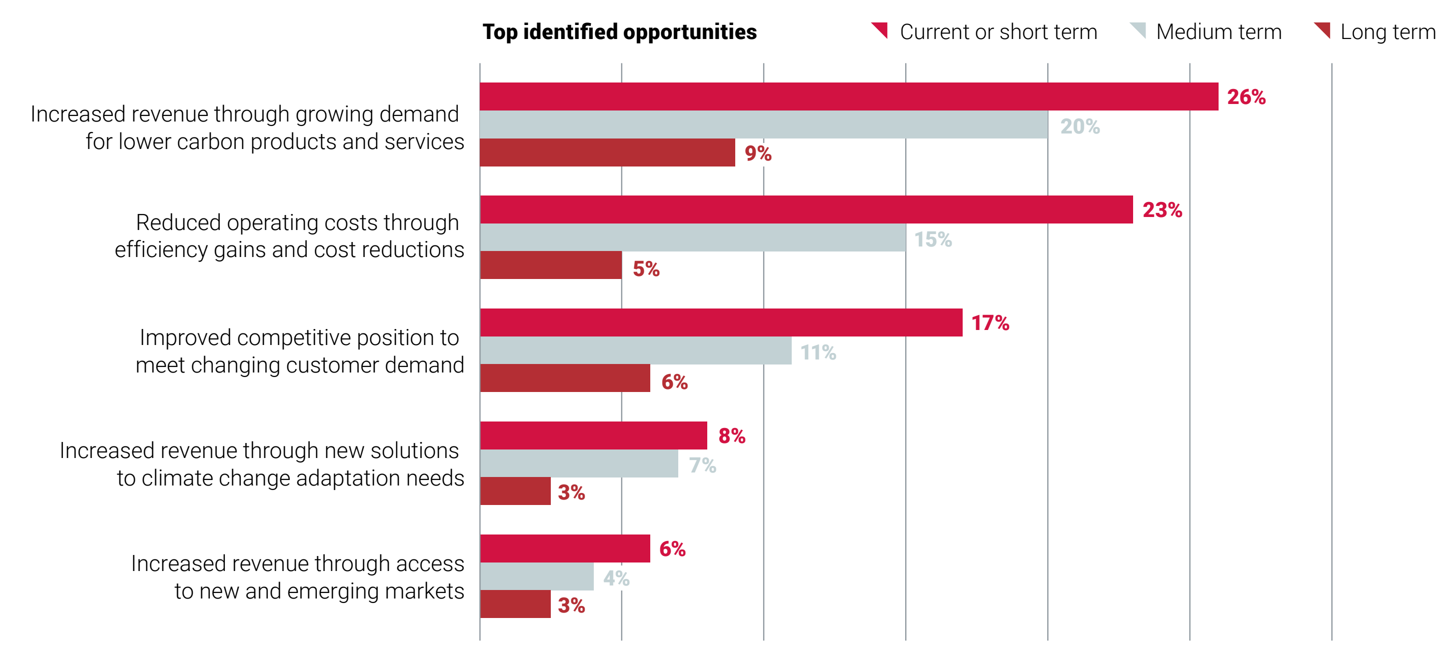
Looking across all sectors, power generation companies are most optimistic in this respect, with 82% seeing business opportunities with high potential impact that are at least "likely" to occur through helping to address climate change. Unsurprisingly clean energy sources (50%) and new products and services (50%) are seen to be the strongest opportunities within that sector. In other sectors improved resource efficiency is seen to be of greater benefit for businesses, with mineral extraction (41%) and hospitality (33%) putting this as their top most beneficial opportunity.

Other sectors are notably less positive about their potential opportunities. Just 14% of apparel sector companies see at least likely opportunities with high potential benefits. Biotech, health care & pharmaceutical businesses are also not especially optimistic, with just 28% seeing the same.

But while it is generally good news that companies are reporting elaborately on their climate-related risks and opportunities, comparatively few companies this year were either willing or able to quantify and disclose the financial value at stake from these.

In line with the TCFD recommendations, the updated CDP questionnaires required companies to provide a quantitative assessment, where in previous years it was acceptable to provide qualitative estimates. This would help meet investor and regulator needs, allowing them to quantify the embedded risks within portfolios and manage these accordingly. The limited ability or willingness of companies to provide this quantified value highlights the need for CDP to continue requesting these figures in future disclosure requests and taking it into account in scoring companies. This should help incentivize progress and methodological development in this area.

Top identified opportunities



Sector breakdown of companies identifying likely opportunities with high financial benefits

Type of opportunity	Energy source	Markets	Products and services	Resilience	Resource efficiency	Any opportunity
Apparel	14%	0%	0%	0%	0%	14%
Biotech, Health Care & Pharma	7%	9%	14%	2%	12%	28%
Food, beverage & agriculture	10%	5%	20%	2%	10%	39%
Fossil fuels	11%	18%	42%	0%	5%	55%
Hospitality	7%	13%	27%	0%	33%	60%
Infrastructure	7%	12%	40%	3%	15%	54%
Manufacturing	6%	7%	43%	4%	9%	50%
Materials	9%	11%	34%	5%	23%	61%
Mineral extraction	24%	0%	12%	6%	41%	53%
Power generation	50%	18%	50%	5%	9%	82%
Retail	14%	3%	25%	0%	8%	36%
Services	5%	8%	26%	2%	10%	36%
Transportation services	7%	10%	24%	2%	10%	43%
All sectors	8%	9%	31%	3%	12%	45%

Aviva: Building a resilient corporate strategy based on an understanding of climate-related risks and opportunities

The UK-based global insurer, Aviva, provides insurance, savings, investment, and pension services to 33 million customers around the world. With hundreds of billions in owned assets, assets under management, and insurance liabilities, the company needs to pay very close attention to risk. And this includes the substantial risks posed by a changing climate.

In 2015 Aviva set out an ambitious five-year strategy for addressing climate change through its business, which was subsequently updated in 2016. This is built around five main pillars: integrating climate risk into investment considerations; investment in lower carbon infrastructure; supporting strong policy action on climate change; active stewardship on climate risk; and finally, divesting from companies not acting on climate change.

This strategy has had a genuine impact, with Aviva playing a leading role in helping to raise awareness around the impact climate change could have on financial markets. Not only is the company investing huge sums into infrastructure that delivers emissions reductions, such as energy efficiency and renewable electricity, it is also changing the behaviour of other companies through its influence.

The insurer was one of the major investors backing a successful shareholder proposal that required ExxonMobil to finally publish details of how global climate agreements could affect its portfolio. It has also put 17 companies that derive more than 30 per cent of their revenues from thermal coal onto a "STOP LIST", where Aviva is actively divesting from them after their failure to respond to investor engagement.

Moving into the future, the company is using scenarios developed in line with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) to evolve and strengthen its corporate strategy. This is something that leverages existing expertise within the business around economic and natural catastrophe modelling, which means Aviva has a very robust basis on which to make decisions around overcoming climate risks and finding business value in a sustainable, low carbon economy.

88%

have a procedure in place to identify and assess deforestation risks

Working to prevent deforestation

Although there are very limited deforestation issues within Europe, through the consumption of imported forest-risk commodities (soy, palm oil, timber, coffee, cocoa), Europe is responsible for a large portion of deforestation abroad. Many businesses in Europe are also exposed to deforestation issues due to their reliance on key forest commodities – particularly soy, palm oil, timber, cattle, and rubber – which are often produced in regions where deforestation risk is a major concern.

Nearly 30% of all deforestation globally between 2001 and 2015 was driven by commodity production. And in Southeast Asia and Latin America the rate was in excess of 60% percent.[2] This deforestation has exacerbated the pace of climate change, as well as contributing towards loss of habitats and biodiversity, and in some regions also increasing levels of water pollution and scarcity in some regions.

Beyond this, protecting and restoring global forests is an essential element in efforts to address climate change over the longer term, as these provide some of the largest natural carbon sinks helping to remove carbon dioxide from the atmosphere.

Amongst the 83 European companies responding to the forests questionnaire this year, there appears to be a high level of awareness around the risks that deforestation poses to their businesses. This year 88% of respondents confirmed that they have a procedure in to identify and assess forest-related risks, and almost 80% highlighted at least one forest-related risk in their risk assessments.

The risks that companies are most concerned by relate to direct impacts on their business, such as the availability of forest commodities, incoming regulations that may affect sourcing or costs, and potential reputational damage from association with deforestation. But firms also cite concerns over the social and environmental impacts of their activities on habitats and ecosystems.

Almost all respondents reported that they have identified sufficient sources of sustainable materials to meet their current operational needs, and that they are actively engaging in capacity building activities in the value chain to ensure the security and continuity of this supply. However, this positive story of leadership may not reflect the realities of the wider market.

Countries where European companies are most commonly sourcing forest-risk commodities

Respondents sourcing

36 Brazil
28 Malaysia
27 Indonesia
15 Argentina

Only a quarter (25%) of companies identified as having a significant impact on forests are reporting on their impact in this area, so the true picture may be quite different. Assessing the size of the gap between market demand for forest commodities and the available sustainable supply will continue to be challenging, at least until there is a higher level of disclosure from a wider set of businesses.

On the opportunity side, four-fifths (80%) of responding European companies identified positive opportunities from taking action to tackle deforestation. This included the perception that improved sustainability could increase brand value, help meet growing demand for sustainable materials, open access to new markets, increase sales, and support growth in the range of products and services offered.

But beyond these business opportunities, few respondents highlighted that sustainable forestry could offer benefits to increase their resilience and efficiency as a business, suggesting that more work may be needed to increase awareness of some of the wider benefits from sustainable forestry.

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

62%

identify water-related risks to their direct operations or wider value chain

€4bn

estimated financial impact from water-related issues in the past year

80%

state that the availability of sufficient good quality freshwater is important or vital to their direct business operations

Tackling water security issues

A majority of European companies admit that their business models are highly dependent on water availability and quality. Four-fifths (80%) claim that having access to sufficient good quality freshwater is either important or vital for their own direct use, and two-thirds (64%) believe the same is true in indirectly in areas outside of their operational control. The scale of this dependence exposes the risks that these businesses will face in a world with greater water scarcity and degraded freshwater quality.

Indeed, a fifth of European companies (22%) reported suffering from some sort of water-related issues in the past year, with a total estimated financial impact of around €4 billion. Drought and flooding are the most prominent of these, resulting in serious disruptions to production capacity, increased operating costs, and directly impacted company assets.

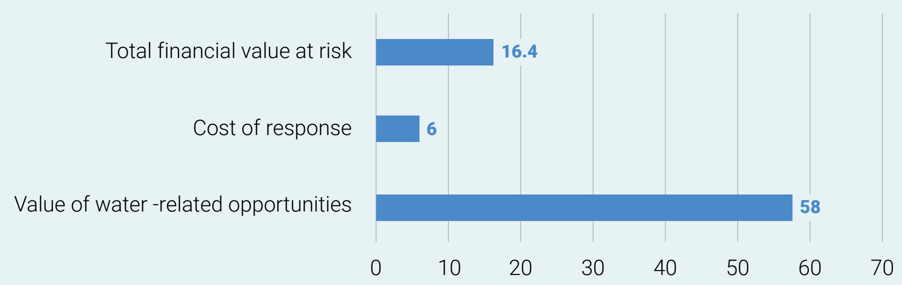
As multinational businesses, these water-related impacts have been felt around the world: from droughts in the Cape region of South Africa impacting agricultural supply chains; to heavy rainfall and flooding in India damaging infrastructure and shutting down manufacturing facilities; through to dangerously high pollution levels in the Yangtze river in China. The insurance industry is also facing the costs of remedying damage, with premiums in many industries rising to reflect more frequent incidents of extreme weather.

A majority of companies (62%) have identified that they face some sort of water-related risk, which could occur in direct operations or the wider value chain. The risks most commonly identified are physical impacts, particularly water scarcity or droughts and flooding.

A quarter of respondents also disclosed that they are subject to regulatory risks, such as tighter water discharge rules related to quality and volume. For example, in some markets such as India and Thailand, companies report that they are now required to evaporate wastewater instead of discharging it. And this results in increased operational costs, due to additional energy requirements for evaporation compared to discharge.

Across the 183 European businesses reporting on water this year, they assess a total financial value at risk of €16.4 billion from water-related risks. A number of respondents also reported difficulties in providing a standalone figure to quantify their water risk, suggesting that the true financial impact could be far higher. And significantly, these companies also assess that the cost of responding to their water-related risks is around €6 billion, highlighting that inaction could be substantially more expensive than the costs of action.

Estimated financial values of water related risks and opportunities (€bn)



Companies also point to the fact that they have a number of positive water-related business opportunities, amounting to a total estimated financial value of €58 billion. The most commonly identified this year were improvements to water efficiency (38%) including 34% resulting in cost savings, opportunities to increase sales of products and services (29%), and an increase in resilience (15%).

Addressing more complex water risks and opportunities can pose a particular challenge, as issues frequently centre around an entire river basin relied upon by multiple communities and businesses. The ability for individual actors to make a difference by themselves can be limited. Many businesses in Europe are exposed to water risks through their supply chain, or operations in regions outside of Europe. In cases such as shortages in the Rio Grande - relied on by Mexico and the USA - these challenges can become politically charged.

However, some of these difficulties are being overcome through collaborative action and engaging with global supply chains. For example, in Bangladesh the IFC leads the Partnership for Cleaner Textile (PaCT). This brings together development funding and support from some of the world's large clothing brands and retailers – including the governments of Denmark and the Netherlands, and a number of major European businesses – helping transform approaches to water and wastewater management across the country's textile industry.

Solving these challenges also offers business benefits beyond overcoming the more immediate or obvious risks. Improving freshwater availability, taking pressure off groundwater reserves, and reducing pollution can benefit the health, wellbeing and wider economic success of local communities and ecosystems. In turn this can help local industries to thrive, strengthening supply chains and supporting sustainable development.

Galp: Unlocking the financial benefits from a best practice approach to water efficiency

The Portuguese integrated energy company, Galp, is a high water user at its industrial facilities, resulting in substantial costs related to both water and wastewater. As such, the business has put a particular focus on improving approaches to water use at its two major refineries in Portugal: Sines in the south of the country and Matosinhos in the north.

As well as working hard to implement best practices approaches, the company has invested in new technologies to allow for the adoption of greater recycling and reuse of water outputs. Over the course of the five years through to 2017 the company was able to increase levels of recycling and reuse by 21%, at the same time as reducing total water consumption by 12%, and total wastewater discharge by 10%.

In 2017 Galp recycled or reused more than 1.5 million cubic metres of water, which represents around 14% of all water consumption across the company. This is resulting in real financial savings each year, amounting to in excess of €300,000 at Sines and almost €500,000 at Matosinhos. Importantly, it also helps to cut energy costs and reduce greenhouse gas emissions, due to the fact that less energy is required for the withdrawal or water or treatment of wastewater, strengthening the overall business case for action.

FEATURED CASE STUDY: L'ORÉAL

It is an honor for L'Oréal to be the first and only company in the world to be awarded a triple 'A' score by CDP for the third year in a row.

With our program 'Sharing Beauty with All', we are transforming every aspect of our value chain. Firstly we want 100% of our new or renovated products to have an improved environmental or social footprint by 2020 and have already reached 76% of our target in 2017.

In terms of sustainable production, in 2017 we achieved a 73% reduction in CO_2 emissions on 2005 levels – exceeding our target of -60% by 2020 – while our production volume increased by 33%. We have validated our science-based targets and committed to decrease our CO_2 (Scopes 1, 2, 3) emissions by 25% by 2030 with a 2016 base year, with the aim of powering all of our sites with 100% renewable energy by 2025. We are also taking action to cut water and waste impacts of our production by 60% by 2020.

Concerning our commitment to "zero deforestation", we are working at securing a traceable and sustainably certified sourcing of commodities such as paper and cardboard for packaging, soy and palm oil in close collaboration with suppliers and NGOS.

By 2017, we had helped 53,505 people from underprivileged communities find access to employment. We integrate sustainability to enhance our suppliers' environmental and social policy and we want all our brands to help raise consumers' awareness of living sustainably by 2020.

At L'Oréal, we see sustainability as the only possible way forward in the 21st century. It is what our consumers will expect more and more in the future and this is why it is fully integrated into our mission of bringing beauty to all.

Jean-Paul Agon
Chairman and Chief Executive Officer, L'Oréal

BUSINESS PERSPECTIVE: JEAN-LOUIS CHAUSSADE, CHIEF EXECUTIVE OFFICER, SUEZ

> Projects integrating extra-financial performance into their business model must be promoted through the earmarking of new investments and the creation of innovative financial tools indexed to the completion of environmental and social objectives.

The purpose of the circular economy is to adapt to climate change.

Companies must increasingly demonstrate exemplary environmental and social leadership as they face the growing consequences of climate change, increased pressure on natural resources such as water or raw materials, and the crisis in citizens' confidence towards governing institutions.

In the water and waste industries, adapting to climate change implies a transformation of the entire value chain. This new model has a name: the circular economy. It provides an answer to the waste crisis, as waste must be recovered to avoid an unprecedented environmental disaster, and to the water crisis, as conflicts regarding the use of water are expected to multiply by 2030 due to global warming. Indeed, the latest IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels highlights the higher risk of water stress if we do not deviate from the emissions trajectory that we have taken since the beginning of the industrial era.

The circular economy constitutes the change in paradigm required to face the challenges of the 21st century. More than a necessity, this transformation is a duty to future generations. We must ensure at all costs that our children will not have to endure overly dramatic climate disruptions that would lead to generalized food shortages or to the destruction of inhabited areas. It is also essential to hand to them a model of society in which the wealth we create is shared in the most equitable way to guarantee them decent living standards.

Because it prevents waste, reduces pressure on resources, and protects the environment from new damage, the circular economy can avail itself to maximize the value generated by economic growth. According to an Accenture report, the potential for wealth creation in the circular economy could reach US$4.5 billion by 2030. Governments and companies must work hand-in-hand towards the fairest possible redistribution of this value, to spare the feelings of discouragement and frustration that can breed from the environmental transition's constraints.

More than 30 French companies have gathered together in a SUEZ-led working group on the circular economy at the French Association of Private Enterprises (AFEP) to support this transformation. It has resulted in the release of more than 120 voluntary commitments taken by a wide range of companies, with the aim to evaluate their resource flows, to identify opportunities linked to waste recovery and to formulate dated and quantified targets. On an international level, the United Nations' Pathways to Low-Carbon and Resilient Development platform has identified "Ambition Loops" or positive feedback loops in which bold public policies and voluntary private commitments are mutually reinforcing to take the ambition of states to the next level and to catalyze action of the private sector.

The circular economy constitutes an untapped source of climate solutions, such as the substitution of fossil fuels with solid recovered fuels or with biogas produced from waste, the use of secondary raw materials in industrial production processes, and the consumption of alternative water produced from treated wastewater for irrigation purposes, or from seawater in areas under water stress.

SUEZ's activities are at the crossroad of material, water and energy flows. It gives the group a specific role to support the environmental transition of cities and the industry. During COP24 in Katowice, our company received the Momentum for Change award of the UNFCCC for the transformation of Santiago de Chile's wastewater treatment plants into biofactories, in which the circular economy rationale is pushed to its limits through the maximization of synergies between the different resource flows: the goal is to achieve carbon neutrality, energy self-sufficiency, and zero waste by 2022. This project will have a positive impact on residents, companies and farmers of the region, as they will benefit from alternative resources such as natural gas and green electricity for urban heating or compost for agriculture.

Projects integrating extra-financial performance into their business model must be promoted through the earmarking of new investments and the creation of innovative financial tools indexed to the completion of environmental and social objectives: the CDP questionnaires provide companies with the essential indicators to guarantee them sturdiness and credibility in their transition towards a circular and low-carbon economy.

HOW ARE FINANCIAL MARKETS USING CDP DATA AND SCORES?

> The corporate environmental data CDP collects forms the backbone of the responsible investing market – without this data, investors wouldn't have the information they require to offer ESG products and services. At CPR Asset Management, we believe that the integration of ESG data into investment processes generates value in the long term. We need to know how exposed a company is to environmental risks and their long-term strategy for the low-carbon transition, in order to identify future market leaders.
>
> **Tegwen Le Berthe**
> **Head of ESG Development at CPR Asset Management**

In 2018, CDP received the most requests from investors for data. This is in line with figures published by Eurosif where, among other indicators, ESG integration and engagement, as well as voting investment strategies, registered close to a 20% increase in 2017 compared to 2015 (4 and 5 trillion euros of assets managed).[3]

Global CDP investor signatories and members number 656 and 67 respectively, with 87 trillion USD of total assets, of which one third are in the EU. This constitutes a solid base of partners working with CDP on two levels: data analysis and education.

CDP's investor signatories and members access corporate environmental data directly from the CDP website, and actively participate in educational sessions to understand how to utilise the granular data available. Integrating ESG data into investment processes is becoming mainstream and it is set to rise further in 2019, as a result of TCFD-compliant data points now included in CDP questionnaires.

Euronext® CDP Environment France

The Euronext® CDP Environment France is an equity index created, calculated and published by Euronext for the exclusive use of Goldman Sachs. Launched in September 2018, is the first equity index to use the three CDP thematic scores of climate change, water security and forests. The main objective of this index is not only to create the incentive for companies to disclose environmental information, but also to improve overall performance across the three themes.

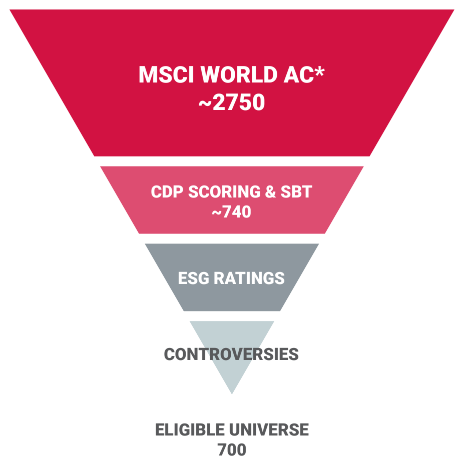
Euronext calculates an environmental score based on a company's average score across the three themes. If a company has not been asked to participate in one or more of the themes, the average will be calculated on the remaining themes. The index is composed of the 40 best environment grades amongst the 100 largest companies in France, measured in market capitalization. The composition of the index is reviewed annually, and the weighting of the constituents reviewed quarterly. The index is available for institutional and retail investors through structured products called Autocall created by Goldman Sachs.

CPR INVEST: Climate Action Fund

In December 2018, CPR AM, subsidiary of the largest European asset manager Amundi, launched CPR Invest – Climate Action in collaboration with CDP. The fund invests in global equities with a core strategy based entirely on climate action. The investment philosophy sees that companies have a pivotal role in ensuring that global temperature goals are met. All companies in all sectors and in all countries are considered in the starting universe of investable companies, the MSCI World Index (2750 stocks).

Three cumulative levels of exclusion filters are applied: CDP scores and Science Based Targets initiative data, ESG ratings at different levels of granularity based on Amundi ratings and high ESG controversies through a RepRisk indicator. This methodology leads to a final eligible universe of investable companies and to an advanced solution to manage climate-related risks of investments and possibly support the transition towards a low carbon economy.

STARTING UNIVERSE



Source: CPR AM, as of December 2018
**Constraint of market cap (>500m$) & volume (>1m$)*

3 http://www.eurosif.org/wp-content/uploads/2018/11/European-SRI-2018-Study.pdf

New Derivatives on STOXX Low Carbon and Climate Indices

Eurex, the largest derivatives exchange for European Futures and Options, launched futures on a low carbon version of the EURO STOXX 50® and climate impact version of the STOXX Europe® 600, providing asset owners with a new liquid tool to manage climate risks in their investment portfolio. The **EURO STOXX 50® Low Carbon** has a similar risk-return profile as the EURO STOXX 50® while lowering the carbon footprint by approximately 50%.

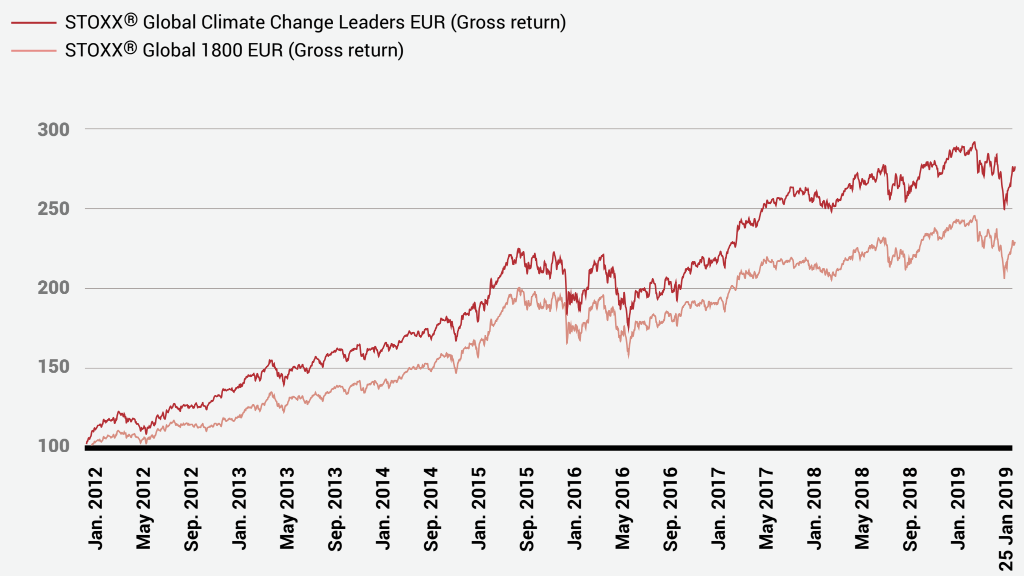
The **STOXX® Europe Climate Impact** is based on CDP climate scoring methodology, including forward-looking metrics such as carbon pricing and science-based targets. Companies from the STOXX® Europe 600 are selected according to CDP A scores ("Leadership score") and CDP B scores ("Management score"), and their progress towards transitioning to a low carbon economy is evaluated on a yearly basis.

CDP's 2018 disclosure request in Europe was backed by **301 investors** with assets of **US$41 trillion**

5.5% per annum outperformance over past 7 years

Stoxx® Global Climate Change Leaders index.

From 19/12/2011 to 25/01/2019, the Stoxx® Global Climate Change Leaders index outperformed the Stoxx® Global 1800 index by 5.5% per annum



Data from Dec. 19, 2011 to Jan. 25, 2019

*1. The index is price weighted with a weight factor based on the free-float market cap multiplied by the corresponding Z-score carbon intensity factor of each constituent. Components with lower carbon intensities are overweighted, while those with higher carbon emission are underweighted. * Compared to the STOXX Global 1800 Index in the period from 19/12/2011 to 25/01/2019.*

For more information about the CDP Investor Program, including the benefits of becoming a signatory or member please visit: *http://bit.ly/2vvsrhp*.

To view the full list of investor signatories please visit: *http://bit.ly/2uW3336*.

Climetrics' simple 1-5 rating lets any investor find funds that are well-positioned in the transition to a low carbon economy.

Nico Fettes
Head of Climetrics at CDP

CLIMETRICS: THE CLIMATE RATING FOR FUNDS

Climetrics
The Climate Rating for Funds

Climetrics is the world's first climate rating for investment funds, with public rating results and a fully transparent methodology. It enables fund investors to integrate climate change into their investment decisions.

The rating is powered by data from CDP, the leading global platform for environmental disclosure, and ISS-climate, a pioneer in developing and applying new methodologies for the measurement of climate aspects across all asset classes.

With free-to-search ratings, Climetrics enables any investor to compare and understand their climate risks and opportunities and take meaningful action on climate change.

Ratings are freely available on several fund platforms across Europe including yourSRI.com and OPCVM360.com.

Over **4,500** European funds rated every month representing about **€3 trillion** in fund investments

Climetrics Fund Awards 2018
For the first time since its launch in 2017, Climetrics awarded European equity funds for outstanding climate performance. From hundreds of funds in the European equity category, the top 10 actively managed funds were chosen based on their underlying Climetrics score. The awarded funds stand out as investing in European companies which are much better aligned with the transition to a low-carbon economy.

Fund Award 2018
Top 10 European equity funds

	Fund Name	Asset Manager Name
	BNP Paribas Developpement Humain	BNP Paribas Asset Management
	Parworld Quant Equity Europe Guru	BNP Paribas Asset Management
	Echiquier Major	La Financiere de l'Echiquier
	LBPAM ISR Actions Europe	La Banque Postale Asset Management
	Mirova Europe Sustainable Equity	Mirova
	OFI RS European Growth Climate Change	OFI Asset Management
	Mirova Europe Environmental Equity	Mirova
	Candriam SRI Equity Europe	Candriam Investors Group
	Candriam Sustainable Europe	Candriam Investors Group
	NN (L) European Sustainable Equity	NN Investment Partners

To view all ratings for free online please visit: *www.climetrics-rating.org*

How it can be used
Climetrics measures climate risks and opportunities based on a fund's portfolio holdings, its asset manager's public action on climate, and the fund's investment policy.

Corporate pensions funds can use Climetrics to align their investments with their company's environmental leadership objectives.

Climetrics allows all institutional investors to:

- integrate climate-related risks into fund selection and monitoring;
- engage with asset managers on climate change;
- benchmark portfolios on climate-related risks; and
- improve climate change disclosure to beneficiaries.

MAKING A DIFFERENCE: BUSINESS ACTION TO REDUCE ENVIRONMENTAL IMPACTS

163 companies setting **science-based targets (SBTs)**

62 companies committed to source **100% renewable electricity** through RE100

Public commitments for bold action

The transition towards a sustainable, low carbon economy will require action across every part of the economy. But in the face of environmental challenges, while the need for change is often apparent to corporates, finding the means to change can be more difficult.

This has been one area where high profile campaign commitments and collective pledges for action have played an important role. Initiatives, such as the Science Based Targets initiative, RE100, EV100 and EP100, have helped popularize the adoption of stretching goals and effective strategies for taking action on environmental impacts. They have also increased the certainty that change is coming, with each additional supporter strengthening the collective case for more ambitious action.

Major corporates continue to play a leading role in tackling many environmental issues, demonstrating that there is a compelling business case for change and that it is possible to create sustainable value. As part of the We Mean Business coalition, CDP advances corporate action and environmental leadership across a range of high profile initiatives.[4]

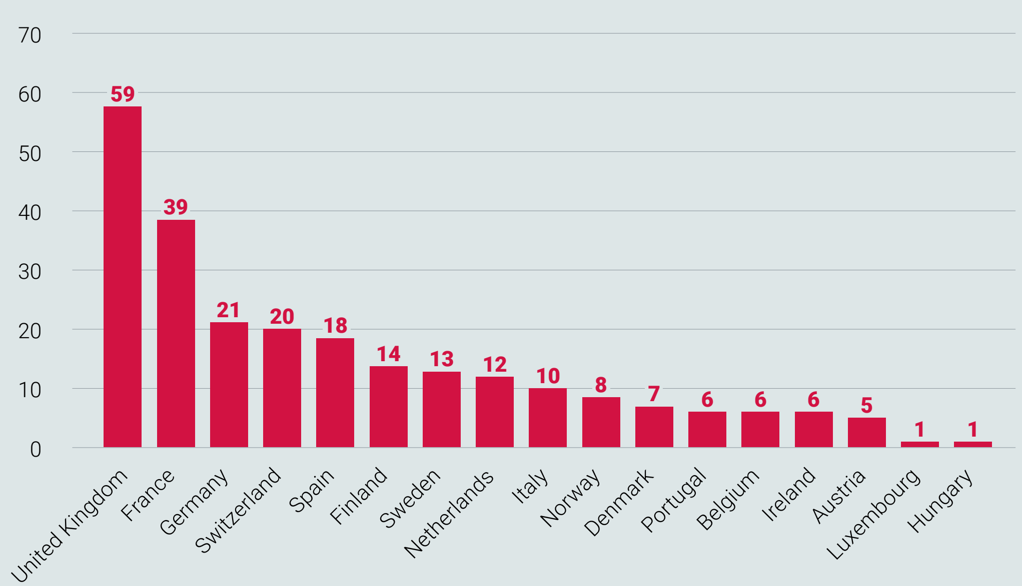
Hundreds of companies across Europe are currently engaging with these environmental leadership initiatives, helping to mitigate the risks that climate change, deforestation and water security issues pose to their customers and their own bottom lines. There are 246 European businesses currently recognized for their commitment to action, making a total of 576 individual public commitments to act boldly on various sustainability issues. And it is notable that the largest leadership groups are emerging within the business communities of the United Kingdom (59) and France (39).

Progress in reducing greenhouse gas emissions

This year the 849 European corporates disclosing reported combined scope 1 and 2 greenhouse gas emissions around the world equivalent to 2,341 million tonnes of carbon dioxide. This is a vast total, greater than the annual national emissions of Germany, France, and the United Kingdom together, an amount in excess of 4% of all global greenhouse emissions in 2017.

246 European corporates committing to ambitious sustainability initiatives

Companies committing to We Mean Business Take Action initiatives (such as SBTs, RE100, EP100, EV100)



4 For more information on the full platform of initiatives and companies taking action, visit: *www.cdp.net/commit* or *www.wemeanbusinesscoalition.org*

85 $MtCO_2e$

in emissions reductions, greater than the annual emissions of Austria

There are positive signs of progress. The majority of respondents (58%) were able to report a decrease in absolute scope 1 and 2 emissions over the past year. And these reductions amounted to the equivalent of 85 million tonnes of carbon dioxide, which in itself is a larger total than the annual emissions from Austria.

Where reductions were achieved, these were supported in 78% of companies by the implementation of proactive emissions reduction activities, such as energy efficiency projects. A further 42% contributed to reductions through renewable energy use. Although in some cases reductions were attributed to divestments (21%), changes in measurement methodology (18%), or changes in overall output (14%).

However, 33% reported that they made absolute increases in emissions over the past year. Increased emissions are not necessarily a sign of poor progress on climate change. Of those businesses that did report emissions growth, for 49% this was related to an overall increase in output, and in a third (30%) of cases this was linked to acquisitions.

This year, 81% of responding companies report having active targets for achieving emissions reductions. 24% have only absolute reduction target, 34% only intensity reduction target, and another 23% both intensity and reduction targets

These targets vary considerably in their scope and ambition. Focusing on the absolute targets, which are crucial to drive companies' emissions reductions no matter their changes in output or in size, 37% of companies report in detail about an absolute targets underway (563 targets).

65% of absolute targets underway are short term. 25% have targets expiring between 2020-2025. And 33% have in place long-term targets beyond 2025 and out towards the middle of the century.

44% of the 79 companies with new absolute targets this year stretch beyond 2025.

There were also 30 companies with absolute emissions targets in place that expired during the disclosure year. Of these, 57% reported achieving their goals and the remainder failed to do so, with 13% having made no progress towards that target at all.

With the highest ambition levels, 10% with targets now work towards a 100% reduction to achieve carbon neutrality. Most of these (95%) are just across scope 1 or 2 emissions, or a combination of both. However, four companies include a scope 3 element within their neutrality target, holding themselves responsible for driving significant changes outside areas of direct operational control.

H&M group's, for instance, has set a carbon neutrality target by 2040 in both their own operations and those across their value chain, by progressing on energy efficiency, reaching 100% of renewable energy and investing in carbon sinks to address unavoidable.

80% of companies provide some kind of incentives for the management of climate-related issues, with 47% offering monetary incentives to their C-suite, CEO and board members.

Looking at targets (efficiency, energy and emission reduction targets), 195 companies (23%) have a monetary reward as an incentive for their C-level employees, CEO or board members and directors.

28% of carbon targets are now set for between 2025 and 2050

Deutsche Post DHL Group: Creating a competitive advantage through pioneering low-carbon solutions

Sustainability has become a priority at the world's largest postal and logistics company, Deutsche Post DHL Group. This is a view that has been consistently reinforced by the expert-led industry insights contained within its annual Logistics Trend Radar, which recognizes the competitive advantage that this can offer with a global customer base increasingly looking to reduce their own supply chain carbon impacts.

But whilst cutting carbon through increased operational efficiency and fuel savings can deliver immediate cost savings and marginal improvements, the challenges to completely decarbonise logistics are substantial. And with 59 million letters and 4.6 million packages delivered every working day in Germany alone, alongside an increasing demand from e-commerce, the company is having to pioneer innovative approaches at scale to deliver on its commitment to achieve net zero emissions in its logistics service by 2050.

The company is playing an active role in the development of electric vehicles, having brought production and distribution of its StreetScooter electric delivery van in-house in 2015. And the business currently has more than 8,000 electric StreetScooter vehicles and some 12,000 e-bikes and e-trikes in service, operating the largest electric fleet in Germany. This has meant that Deutsche Post DHL Group is now well on its way to achieving its target of operating 70% of its own first and last mile operations with clean solutions.

Over the longer term the business is also looking at how to embrace smart technology and greater industry standardization, enabled by the Internet of Things. Finding ways to adopt more modular, flexible and connected packages could be key to unlocking the circular economy for other sectors, through enabling effective reverse logistics that can integrate returns and recycling into existing delivery infrastructure. In turn, this could create valuable new revenue streams and growth opportunities.

The rise of renewables

The cost of renewable energy continues to fall and demand is increasing, accelerating deployment around Europe. This year's disclosures reveal that respondents were collectively meeting over 10% of their needs from certified renewable sources, amounting to around 800 gigawatt hours. And some sectors showed particularly high levels of renewable energy purchasing, with apparel, retail, and services businesses on average all sourcing in excess of 30% of their needs from renewables.

There are also 62 respondents from Europe this year that have made a public commitment to source 100% of their electricity from renewables. These commitments have been made through signing up to the RE100 campaign, a collaborative, global initiative from the Climate Group in partnership with CDP. These European corporates represent over 40% of the global RE100 membership.

www.re100.org

62

European companies are committing to source 100% of electricity from renewables

450+

European companies are either already committed to the Science Based Targets initiative or intend to commit in the next two years

Setting ambitious targets aligned with a well below 2°C or 1.5°C trajectory (SBTs) helps companies to future-proof their businesses and ahead of regulatory pressure. 37% of companies are subject to compliance schemes based on carbon pricing. In the highest emissions sectors this is even higher, with the power generation (82%), materials (73%) and fossil fuel sectors (55%) the most impacted.

A quarter of companies (25%) report already using an internal carbon pricing system, allowing them to be ready for future costs imposed by either emissions trading schemes or carbon taxes, with a further 20% expecting to do so within the next two years. Over half (63%) of responding companies see the use of an internal carbon pricing system as a way to drive low carbon investment and drive energy efficiency (59%). A further quarter (28%) see it as a useful tool for stress testing investments and prepare for greenhouse gas regulations (34%).

Looking beyond a company's own operations, over three quarter of respondents (84%) report some sort of value chain engagement on emissions, working upstream with the supply chain (70%), or downstream with customers (61%).

Among the 444 companies which provide details of your climate-related customer engagement strategy, 74% of them run an education and information sharing strategy, and 21% a collaboration and innovation strategy.

Over two-thirds of companies (69%) are also working to reduce downstream emissions through the development of low carbon products that can help their customers to reduce emissions.

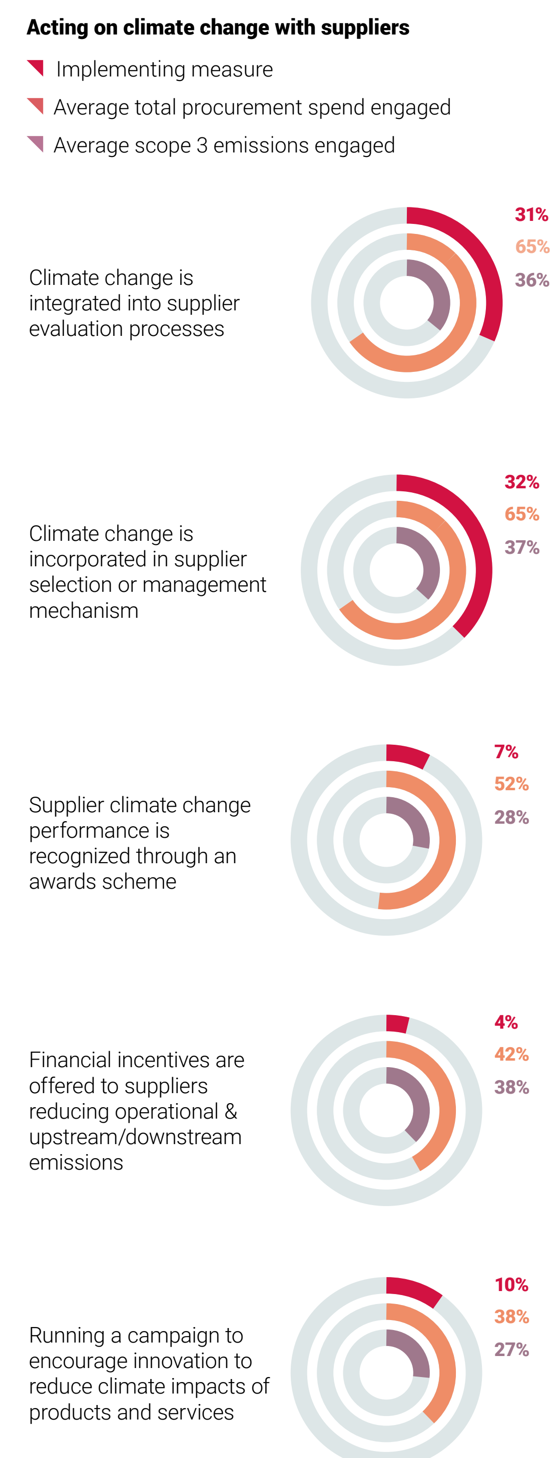
25%

of companies are using an internal carbon price

The highest levels of engagement with this come, unsurprisingly, in some of the most carbon intensive industries.

The main type of actions are running engagement campaigns to educate the customers about the climate change impacts of (using) of their products, goods, and/or services (32%), or about their climate change performance and strategy (18%), to share information about the products and relevant certification schemes (32%), or to run a campaign to encourage innovation to reduce climate change impacts (21%).

More than 80% of responding companies in the power generation, infrastructure, and materials sectors classify some of their products and services as low-carbon products or products that enable a third party to avoid GHG emissions, with much of the reported research and development investment focusing on clean energy and digital technologies.



Aligning climate action with climate science

A growing number of companies are aligning their emissions reduction goals with the Paris Agreement, by using the best available climate science to set greenhouse gas reduction trajectories in line with what would be required to hold global warming well below 2°C above pre-industrial levels, and pursuing efforts to limit it to 1.5°C.

There are now more than 500 companies signed up to the Science Based Target initiative (SBTi) – a partnership between CDP, UN Global Compact, the Word Resources Institute, and WWF – with almost half of the committed businesses to date based in Europe. Science-based targets (SBTs) provide a clear framework for best practice target-setting by specifying how much and how quickly a company needs to reduce its greenhouse gas emissions across scopes.

63 companies have set a SBT (intensity or absolute target, approved)

163 overall SBT companies (committed or approved)

288 intend to commit within the next two years

www.sciencebasedtargets.org

thyssenkrupp: Insight into value chain emissions inspires sustainable innovation

For the diversified German industrial conglomerate thyssenkrupp, undertaking a detailed analysis of the company's full scope 3 emissions has helped the business to identify how it can actively contribute to a carbon neutral economy with its technological solutions. Despite having significant direct emissions from operational activities that include steel production and heavy industry, thyssenkrupp realized that over 90% of the company's total end-to-end carbon footprint was from the use of its products by customers.

Based on this insight, thyssenkrupp launched its Climate Action Program for Sustainable Solutions, to help accelerate the technological innovations that can help key customer groups to reduce emissions in their own industries. The company has also started implementing this type of innovation within its own operations. This includes the carbon capture and utilization project, Carbon2Chem, where waste gases from steel mills can be turned into base chemicals through a process powered by renewable energy.

The long term success of this sort of low carbon technology depends also on having the right market and regulatory conditions. This means that the company aims to put a greater focus on collaboration, working closely with customers, suppliers, and other institutions to create sustainable change across its value chain.

70%
have made public commitments on deforestation and forest degradation

80%
have put in place an internal policy to address forest-related sustainability issues

90%
of companies with targets rely on third party schemes to track or achieve them

92%
have a water-related target or goal in place

Working to reduce deforestation

The vast majority of the 83 corporates disclosing on forest-related issues this year are already taking some form of action to tackle them. Four-fifths (80%) have put in place some sort of internal policy measure to address forest sustainability issues, such as transparency on sourcing or the inclusion of forest-related standards into procurement processes. And of the remaining companies that do not yet have a policy in place, a majority (61%) indicate that they are planning to implement one over the next two years.

Where policies are in place, 89% specifically address a commodity associated with deforestation – most commonly timber and palm oil. It is also clear that most companies are taking a holistic rather than a tactical approach to issues, with 90% of policies set at a company-wide level, rather than just applying to selected geographies, facilities, business units, or product lines.

Over three-quarters (78%) of the policies that are in place go beyond mere regulatory compliance, with two-thirds (67%) referring to voluntary international standards and widely-recognized forests initiatives. Most are centred around avoiding deforestation and forest degradation, but a large number also seek to achieve wider goals, such as the protection of local communities and important habitats for species.

Looking beyond broader policies, 70% of companies have made public commitments to reduce or remove deforestation and forest degradation from their direct operations or supply chain. These focus mostly on ending sourcing of illegally-produced or traded commodities, protecting high value conservation areas, and zero net deforestation pledges. The most frequently cited are the We Mean Business pledge to remove commodity-driven deforestation from all supply chains by 2020 (12 companies), and supporting the New York Declaration on Forests (9 companies)

Four-fifths (80%) of respondents also have quantitative targets related to increasing the sustainable production or consumption of specific forest commodities. The most frequently cited goals relate to increasing the use of commodities that meet the criteria of third-party certification schemes, traceability and sustainable procurement standards. The importance of these third-party schemes is highlighted by the fact that where targets are in place, 90% of companies indicate that they rely on them.

However, once set, targets are not necessary always achieved. Only 70% of companies have come close to meeting their third party certification targets, 56% on traceability targets, and 38% on sustainable procurement standards.

This indicates that most companies will need to step up their efforts to fully address the deforestation and forest degradation challenges posed by high risk commodities. Fortunately – at least amongst European respondents to CDP – there appears to be a step change in how these commodities are being looked at. Nearly three-quarters (72%) of respondents indicate that they are integrating forest-related issues into their long term business objectives, alongside having a strategy in place to achieve these goals. And 58% of disclosing companies are now integrating forest issues in their financial planning.

Vodafone: Driving business growth through products and services that reduce customer emissions

As one of the world's largest telecommunications companies, Vodafone aims to stay at the forefront of innovation in a fast-moving industry. One of the most substantial opportunities the business has been pursuing is the rapid expansion in machine-to-machine communications, which underpin the development of smart technologies and Internet of Things (IoT) solutions.

The growth in IoT is resulting in a spike in the number of connected devices and an increase in transfer of data over Vodafone's network. In simple terms, this leads to a greater absolute energy demand, along with the associated carbon emissions that potentially come with this.

However, Vodafone can also enable its customers to reduce their emissions by a substantially greater amount than the end-to-end impact of its business. This is achieved through a growing range of IoT products and services that help to drive cost and carbon reduction, typically through improving efficiency. These include applications such as: smart energy meters; a variety of smart cities services related to transport networks and street lighting; and smart logistics to optimise routes, vehicle maintenance and driver behaviour.

A recent project in the city of Guadalajara, Spain, is an example of the value that connected lighting can bring to a municipality. The city installed 13,500 connected LED light points which it flexibly and remotely monitors and manages with a Vodafone IoT solution. As a result, energy consumption was reduced by 68%, and operational costs were lowered considerably.

Last year, the company estimated that over 27% of the more than 68 million IoT connections Vodafone operated directly helped to enable customers to save the equivalent of 5.3 million tonnes of carbon emissions. This equates to saving over twice the amount of carbon that Vodafone generated from its own operations.

At the same time, Vodafone is also working to minimise its own emissions through initiatives such as network efficiency, improved cooling and power efficiencies, and procuring renewable electricity in line with its RE100 commitment.

30%
of companies with targets are looking at water quality issues

13%
have implemented an internal water pricing mechanism

Acting on water security issues

The environmental and financial impact resulting from water management issues is being increasingly recognized as a crucial topic for companies to address, across their own operations and supply chain. And of the 183 companies responding this year to the CDP water questionnaire, 65% demonstrate that they have taken this into account in their business through having a publicly available water policy setting out a clear position on water management.

Almost all respondents (92%) have some sort of water-related target and goal in place, most with targets at several levels. This represents a substantial increase from the 61% of companies doing the same last year. Although it should be noted that the comparison relates to an expanded set of disclosures, particularly with this year's CDP Europe report including for the first time business in the UK and Ireland. And while the majority of targets (81%) are fixed at a company-wide level, 17% are only at a site level.

The increase in companies disclosing that they now have water-related targets and goals this year suggests the profile of these issues are continuing to increase. The most frequently cited motivations behind taking action appears to be some combination of a desire to reduce the environmental impact of a business, demonstrate good water stewardship, mitigate risks, and deliver cost savings. It is also of note that where companies have used a scenario analysis approach to understand their climate-related risks and opportunities, over half (56%) identify some sort of water-related outcomes that could affect their business.

Companies have largely aligned their water targets and goals with the achievement of some of the specific targets sitting under the UN's Sustainable Development Goal (SDG) 6 on Clean Water and Sanitation. Most companies with targets focus on improving water efficiency (88%), along with a sizeable number (30%) looking at water quality issues. However, very few are setting out specific goals that would directly contribute to some of the more systems-level SDG 6 ambitions such as the protection and restoration of water ecosystems, or access to water and sanitation.

There is an increasing adoption of market-based approaches to drive action in companies, reflecting a growing recognition that the business costs related to water and wastewater could increase steeply as regions face water scarcity and quality issues, which could be exacerbated by climate change. There are now 13% of responding companies implementing an internal water pricing mechanism, with a further 30% are currently exploring water valuation practices.

Looking at the longer term, water-related issues are being integrated into the planning and strategy of a majority of disclosing companies: 63% of companies integrate water-related issues in their financial planning, 71% into their long-term business objectives, and 74% in their strategy for achieving long-term objectives. Although of those companies including water in their long-term strategies, the time horizon considered is most commonly between 5 and 10 years, still not fully factoring in the SDG timeframe out to 2030.

Barilla: Overcoming climate change risks through supply chain engagement

As a manufacturer of products including pasta, bread and biscuits, having a secure supply of high-quality wheat is essential for the Italian food company, Barilla. But it is also a major source of greenhouse gas emissions, and future production is threatened by climate change.

A decade ago, when Barilla first assessed the life cycle carbon footprint of its pasta products, it found that durum wheat cultivation accounted for around 40% of the total. But it also recognized that there were multiple opportunities to effectively reduce this.

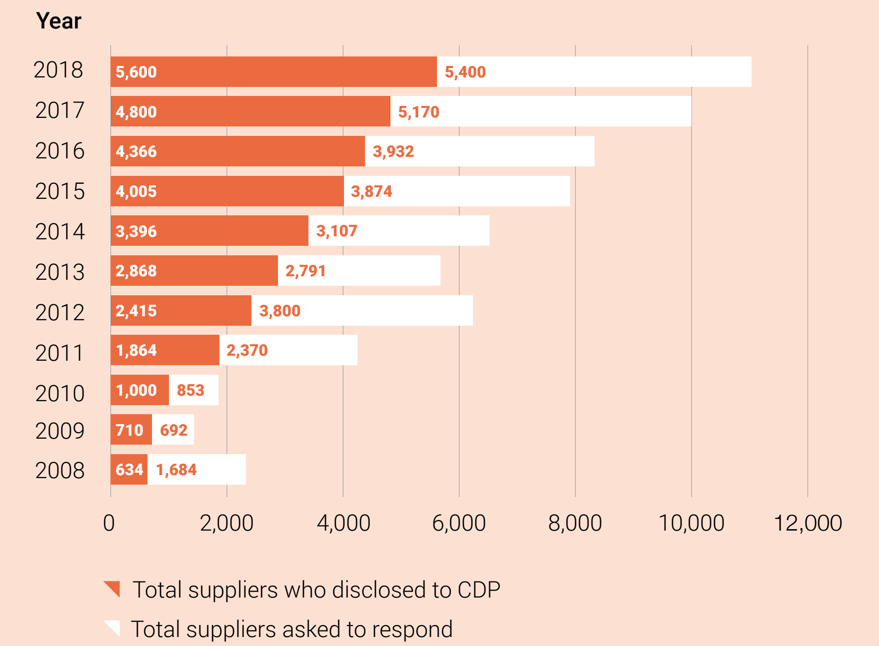
As a result, the company established the Barilla Sustainable Farming program to engage its key suppliers. Support offered through the program has helped these farmers to increase yields and quality, at the same time as reducing cost and environmental impact through implementing smart agriculture solutions.

Engagement with the program is specified within procurement contracts, and suppliers are financially incentivised to produce higher quality durum wheat by following Barilla's advice. Data collected through the program has also helped Barilla to better understand and mitigate one of its most pressing climate change risks - extreme or unpredictable weather affecting crop production.

Today Barilla engages more than 2,000 farmers in Italy through the program, which includes over 35% of its contracted procurement of durum wheat. Strategic suppliers taking action can be awarded three-year contracts, and crop rotation is encouraged by structuring agreements to purchase multiple ingredients from suppliers and cooperatives.

CASCADING ACTION:
10 YEARS OF THE CDP SUPPLY CHAIN PROGRAM

Growth in CDP Supply Chain disclosures, 2008 - 2018



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.[5]

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 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.

500+
disclosing suppliers headquartered in China

1,300+
disclosing suppliers in Europe

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

CITIES IN THE SPOTLIGHT: TAKING ACTIONS THAT MATTER

In 2018, a record-breaking 628 cities globally demonstrated through disclosure via CDP's platform that they are stepping up to tackle dangerous climate changes and limit global warming. Out of these 628 cities, over 160 are located in Europe.

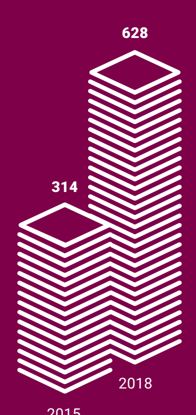
Globally, cities are the source of 70% of the world's energy-related carbon emissions. This is why it's imperative that they play a central role in mitigating dangerous climate change.

This year, 90% more cities disclosed emissions reduction targets and twice as many cities said they have climate action plans in place, compared to 2015 ahead of the Paris Agreement. CDP is committed to making disclosure a simple, quick process, so that cities, states and regions can focus on the next step. We are delighted to announce that going forward we are working with ICLEI to unite our reporting systems, so that local & regional governments can report once on a single platform.

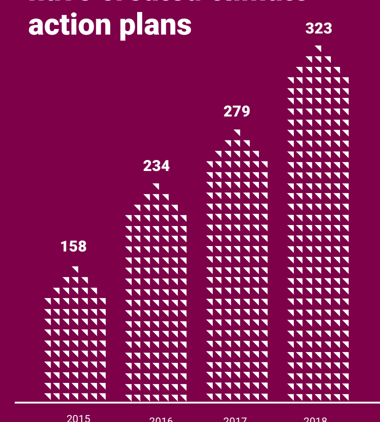
Since the signing of the Paris Agreement in 2015...

13 European cities, among 27 of the world's largest, declared that their emissions have already peaked. These cities are Barcelona, Basel, Berlin, Copenhagen, Heidelberg, London, Madrid, Milan, Oslo, Paris, Rome, Stockholm, Warsaw.

Twice as many cities report to CDP



Twice as many cities have created climate action plans



London, Copenhagen, Paris and Stockholm have also pledged to reduce emissions to zero by 2050.

90% more cities have set emissions reduction targets

With nearly 68% of the world's population projected to live in cities by 2050, cities are at the forefront in tackling the impacts of climate changes and securing healthy and prosperous environments to their citizens.

As they will be increasingly exposed to the impact of extreme weather events, resulting in threats and insecurity to health, access to resources, prosperity and economic growth, cities reporting to CDP this year are also taking vital steps to build resilience and strengthen their communities and economies.

HEALTH AND WELL-BEING BENEFITS

More cycle lanes and green spaces lead to better air quality.

INCREASED RESILIENCE TO CLIMATE HAZARDS

Urban forests help protect against flooding.

REDUCED FUEL POVERTY

Better building standards increase efficiency and save citizens money on energy costs.

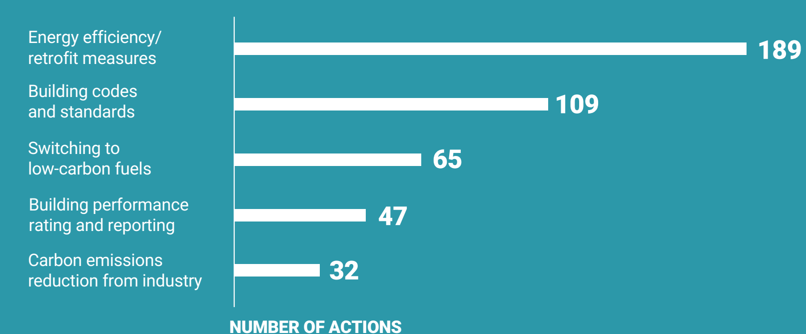
INVESTMENT AND ECONOMIC OPPORTUNITIES

Public private partnerships provide jobs and help drive the local economy.

Cities are taking actions that matter in the following sectors:

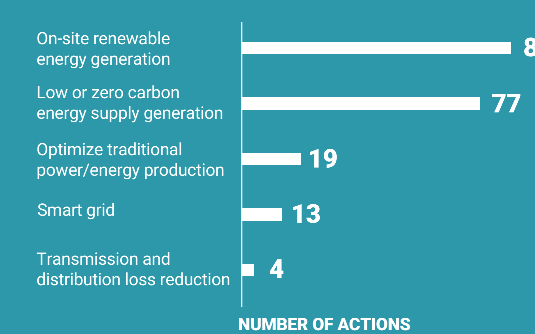
BUILDINGS

Energy intensity within the global buildings sector needs to improve by 30% by 2030 to meet the goals of the Paris Agreement.[6] Buildings is the most popular area for cities taking action to reduce emissions;



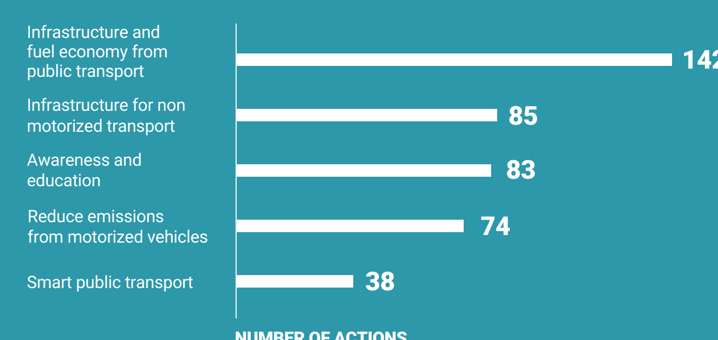
ENERGY SUPPLY

On-site renewable and low or zero carbon energy generation are cities' top actions on energy supply. Decarbonizing the electric grid could potentially lead cities to achieve a mix of 50-70% renewables by 2030;[8]



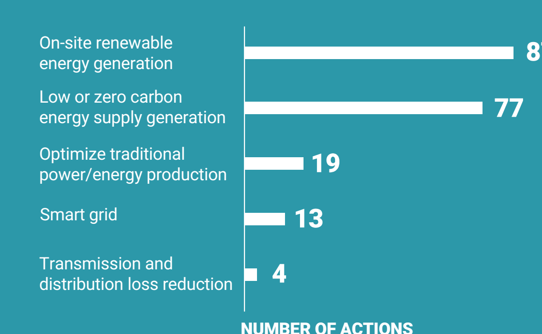
MOBILITY

Better infrastructures and fuel economy from public transport are crucial targets for cities seeking to significantly cut urban transport emissions. Moreover, thanks also to awareness and education campaigns and incentives, electric vehicles have the potential to achieve up to nearly 30% of new vehicles sales by 2030 globally;[7]



WASTE MANAGEMENT

Cities' action on waste include better waste collection and recycling processes as well as waste prevention: shifting the balance from recycling to prevention will help cities further reduce overall emissions from waste.

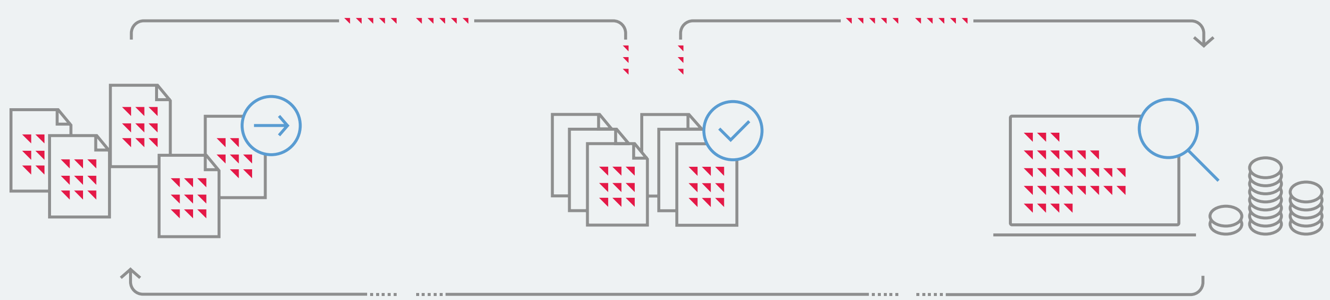


6 UN Environment and International Energy Agency (2017): Towards a zero-emission, efficient, and resilient buildings and construction sector. Global Status Report 2017.
7 Shannon Bouton et al. An Integrated Perspective on the Future of Mobility, a joint report from McKinsey & Company and Bloomberg New Energy Finance, October 2016, McKinsey.com
8 Focused Acceleration: A strategic approach to climate action in cities to 2030, C40 Cities and McKinsey Centre for Business and Environment, November 2017, c40.org

DRIVING GREATER TRANSPARENCY

How CDP collaborates with governments on the Paris Agreement and SDGs
Over the past 18 years, CDP has built the most comprehensive collection of self-reported environmental data in the world, with more than 7,000 companies and more than 750 sub-national and local governments disclosing to CDP.

This unparalleled set of environmental data is a vital source of information for policymakers, helping them to make better, more informed decisions.



Disclosers
We ask companies, cities, states and regions for data on their environmental performance.

CDP
We transform that data into detailed analysis on critical environmental risks, opportunities and impacts.

Decision-makers
Investors, businesses and policy makers use our data and insights to make better decisions, manage risk and capitalize on opportunities.

Government action is crucial to fighting environmental impacts. CDP helps policymakers to achieve their goals and protect the climate.

A unique source of information
CDP's data and insights can inform both the design and evaluation of policies.

Mobilizing action on the ground
CDP is creating a virtuous circle of action between market actors and governments through Commit to Action, the UNFCCC NAZCA portal, and more.

How are governments managing impacts?
Government bodies are managing their environmental impacts through CDP's Supply Chain program and by engaging with companies in their jurisdiction.

CDP AND THE ITALIAN GOVERNMENT: A LONG-LASTING COLLABORATION

2013: CDP and the Ministry for the Environment of Italy sign their **first collaboration agreement**

2015: COP21
Paris Agreement

2016: COP22
Marrakech partnership

2017: CDP and the Ministry for the Environment of Italy sign the **Memorandum of Understanding** and the first annual **Programme of Work**

2018: CDP and the Ministry for the Environment of Italy sign the **second Programme of Work**

Main goals and pillars of the agreement:

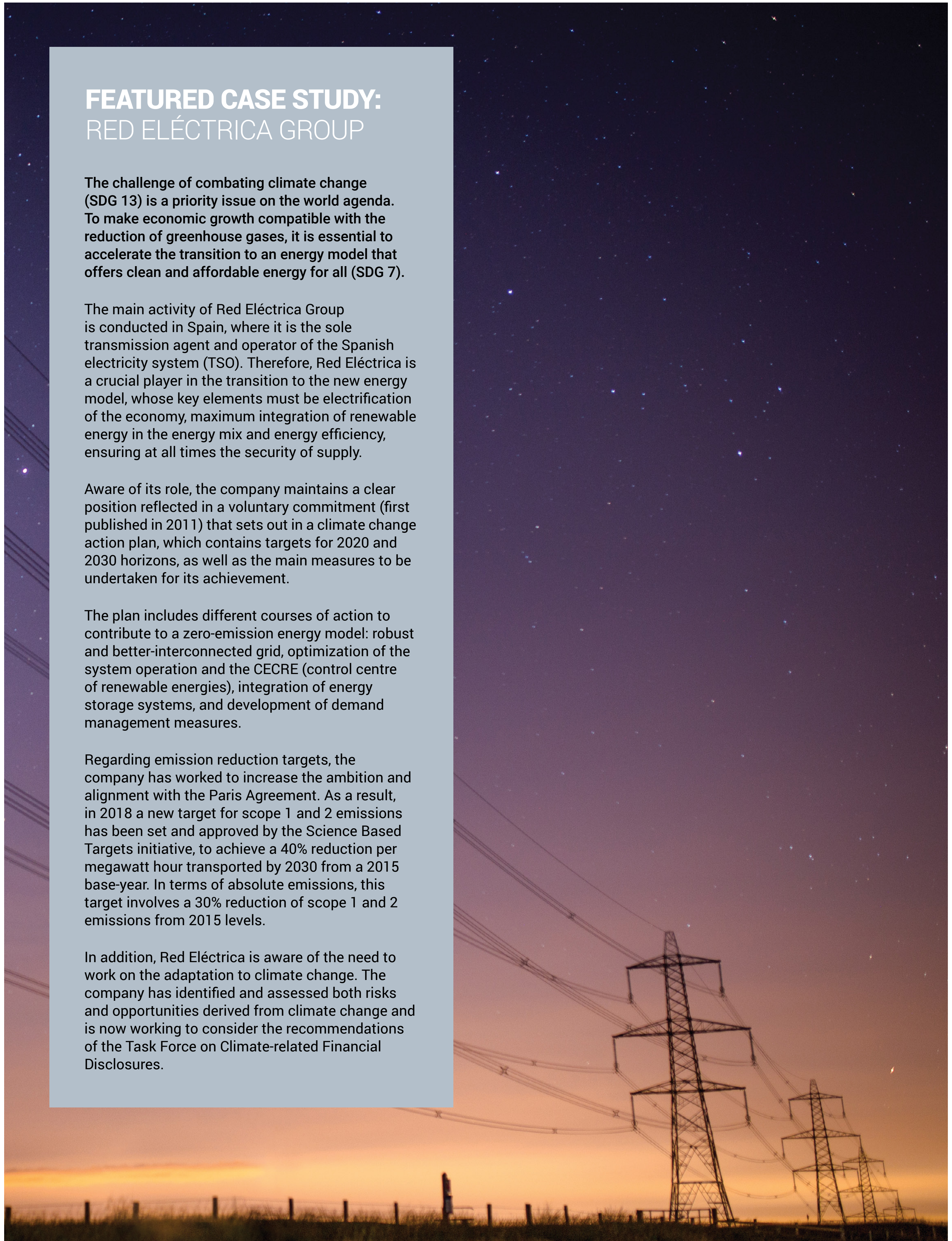
1.
Engage companies and local governments on their carbon footprint and forward-looking environmental targets, through analysis and disclosure, to contribute to achieving the Paris Agreement's goals.

2.
Improve the quantity and quality of forward-looking disclosure by Italian companies, cities, states and regions on climate change, water security and deforestation.

3.
Catalyze action by Italian non-state actors to reduce their emissions and protect natural resources, within the framework of the Marrakech partnership of Global Climate Action and beyond.

Key results achieved
Year 1

- **25 Italian cities** are understanding their impact and taking action through disclosure.
- **+ 125% Italian regions** are measuring and managing their impact on the environment.
- **90 actors** (major companies, investors and local authorities) reiterated their commitment to act together to mitigate and tackle climate change at the **CDP Italy workshop 2018 and the first CDP multi-stakeholder national dialogue** supported by the Ministry for the Environment.
- **> 100 Italian cities and regions** got access to disclosure platform and capacity-building opportunities.
- **1 multi-stakeholder country-report** showcased climate action by non-state actors in Italy.



FEATURED CASE STUDY: RED ELÉCTRICA GROUP

The challenge of combating climate change (SDG 13) is a priority issue on the world agenda. To make economic growth compatible with the reduction of greenhouse gases, it is essential to accelerate the transition to an energy model that offers clean and affordable energy for all (SDG 7).

The main activity of Red Eléctrica Group is conducted in Spain, where it is the sole transmission agent and operator of the Spanish electricity system (TSO). Therefore, Red Eléctrica is a crucial player in the transition to the new energy model, whose key elements must be electrification of the economy, maximum integration of renewable energy in the energy mix and energy efficiency, ensuring at all times the security of supply.

Aware of its role, the company maintains a clear position reflected in a voluntary commitment (first published in 2011) that sets out in a climate change action plan, which contains targets for 2020 and 2030 horizons, as well as the main measures to be undertaken for its achievement.

The plan includes different courses of action to contribute to a zero-emission energy model: robust and better-interconnected grid, optimization of the system operation and the CECRE (control centre of renewable energies), integration of energy storage systems, and development of demand management measures.

Regarding emission reduction targets, the company has worked to increase the ambition and alignment with the Paris Agreement. As a result, in 2018 a new target for scope 1 and 2 emissions has been set and approved by the Science Based Targets initiative, to achieve a 40% reduction per megawatt hour transported by 2030 from a 2015 base-year. In terms of absolute emissions, this target involves a 30% reduction of scope 1 and 2 emissions from 2015 levels.

In addition, Red Eléctrica is aware of the need to work on the adaptation to climate change. The company has identified and assessed both risks and opportunities derived from climate change and is now working to consider the recommendations of the Task Force on Climate-related Financial Disclosures.

ABOUT THIS REPORT

This report has been written by CDP and the Carbon Trust based on climate change, forests, and water security disclosures by European companies in response to CDP's 2018 investor request. Responding companies this year were listed or headquartered in: Austria, Belgium, Cyprus, Czechia, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Italy, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland, and the United Kingdom.

Climate change data was analyzed from a total of 849 companies responding to CDP's climate change questionnaire. This includes the 767 listed companies that provided unique responses, representing around three-quarters of European market capitalization, and 82 large private companies with combined revenues in excess of €614 billion.

Most greenhouse gas data within these disclosures was verified or assured by third parties. 68% of all respondents had verified data related to their direct operations and fuel consumption, and 51% of companies had verification of electricity emissions using a location-based approach.

Analysis on forests and water security is based on a smaller number of disclosures. 83 companies responded to CDP's forests questionnaire, looking at risks associated with key forest commodities. This included 67 responses on timber, 23 on cattle, 31 on palm oil, 21 on soy, and 4 on rubber. These companies were scored on their performance on each of these commodities, with the exception of rubber, which is still in a pilot phase and was not scored this year. A total of 183 businesses responded to CDP's water security questionnaire.

The industry classification used throughout the report follows CDP's newly developed Activity Classification System, which categorises companies' activities and revenue sources by their environmental impact.

KEY TRENDS

Statistic	Austria	Belgium	Denmark	Finland	France	Germany	Ireland	Italy	Luxembourg	Netherlands	Norway	Portugal	Spain	Sweden	Switzerland	United Kingdom	Total/ Average
General [9 10]																	
Number of companies in the investor sample	34	77	43	47	238	188	30	97	7	63	44	39	84	114	128	506	1739
Number of companies in the investor sample answering CDP[2]	13	14	17	42	90	79	26	40	3	36	23	8	45	53	54	245	788
% sample answering CDP	38%	18%	40%	89%	38%	42%	87%	41%	43%	57%	52%	21%	54%	46%	42%	48%	45%
% of sample market capitalization answering CDP 2018	56%	69%	71%	71%	69%	84%	72%	65%	68%	69%	84%	69%	85%	71%	81%	85%	73%
% of companies responding publicly	85%	79%	94%	74%	74%	76%	73%	77%	33%	68%	100%	100%	82%	85%	79%	76%	78%
Number of companies covered by parent response	0	4	0	0	2	6	0	2	0	0	0	0	1	0	0	7	22
Number of companies in this report's analysis	13	14	19	45	98	89	26	43	3	41	35	9	48	57	58	238	836
% of companies responding publicly	85%	79%	95%	76%	73%	75%	73%	77%	33%	68%	97%	100%	80%	84%	81%	76%	78%
% of sample market capitalization answering CDP 2018	56%	69%	68%	68%	69%	80%	72%	64%	68%	69%	86%	69%	82%	68%	85%	85%	76%
Governance																	
% of responders reporting Board or other senior management responsibility for climate change	92%	85%	84%	95%	90%	98%	96%	93%	67%	98%	97%	100%	98%	96%	91%	98%	92%
% of responders with incentives for the management of climate change issues	92%	86%	63%	73%	85%	79%	88%	84%	67%	83%	77%	89%	94%	65%	79%	79%	80%
Risks and opportunities																	
% identifying risks with potential to have substantive financial or business impact	100%	86%	68%	69%	79%	63%	88%	88%	67%	88%	89%	100%	92%	74%	74%	82%	82%
% of responders seeing transition risks	100%	86%	58%	69%	71%	60%	81%	84%	67%	76%	83%	100%	92%	74%	71%	76%	78%
Of which % policy and legal	92%	50%	53%	56%	62%	56%	77%	67%	67%	61%	74%	89%	81%	63%	64%	70%	68%
Of which % technology	15%	43%	11%	16%	27%	11%	8%	28%	67%	24%	26%	22%	13%	9%	12%	18%	22%
Of which % market	62%	50%	16%	47%	37%	29%	35%	37%	0%	34%	29%	44%	40%	49%	41%	32%	36%
Of which % reputation	31%	14%	21%	36%	30%	19%	27%	30%	0%	39%	40%	67%	40%	35%	34%	37%	31%
% of responders seeing physical risks	85%	57%	53%	58%	67%	46%	77%	72%	33%	71%	77%	100%	75%	60%	57%	73%	66%
Of which % acute	54%	57%	32%	31%	54%	29%	46%	51%	0%	41%	46%	67%	42%	33%	33%	46%	41%
Of which % chronic	69%	14%	42%	42%	37%	29%	46%	35%	33%	56%	57%	78%	58%	40%	41%	51%	46%
% Reduced revenue from decreased production capacity	23%	21%	32%	31%	35%	25%	42%	35%	33%	39%	34%	33%	25%	30%	31%	34%	32%
% Increased insurance premiums	69%	36%	47%	38%	52%	39%	62%	60%	67%	49%	63%	78%	67%	44%	50%	62%	55%
% Increased operating costs	85%	43%	58%	42%	56%	40%	62%	63%	67%	54%	69%	78%	75%	51%	52%	65%	60%
% Reduced revenue from lower sales/output	31%	21%	21%	38%	23%	24%	15%	26%	0%	29%	29%	33%	46%	32%	29%	31%	27%
% of responders seeing climate related opportunities	100%	79%	84%	93%	86%	80%	96%	95%	67%	90%	94%	100%	94%	89%	78%	90%	88%
Of which % energy source	46%	14%	42%	33%	21%	19%	27%	30%	0%	24%	20%	44%	29%	19%	29%	28%	27%
Of which % markets	15%	29%	21%	18%	30%	20%	19%	26%	0%	29%	23%	0%	44%	16%	21%	18%	21%
Of which % products and services	100%	71%	47%	89%	74%	66%	69%	81%	67%	83%	80%	100%	83%	75%	59%	65%	76%
Of which % resilience	23%	21%	16%	11%	9%	9%	12%	16%	0%	7%	14%	11%	4%	7%	22%	16%	13%
Of which % resource efficiency	23%	21%	47%	38%	39%	30%	50%	51%	0%	27%	29%	44%	46%	28%	33%	51%	35%
Business strategy																	
% of responders reporting climate change as being integrated into their business strategy	92%	93%	95%	96%	96%	92%	92%	98%	100%	95%	91%	100%	98%	96%	81%	94%	94%
% using scenario analysis to inform busines strategy	54%	43%	47%	31%	42%	45%	35%	53%	33%	51%	46%	78%	40%	37%	33%	31%	44%
Targets																	
% of responders with emissions reduction targets	77%	79%	84%	73%	81%	74%	81%	86%	100%	85%	77%	100%	92%	77%	79%	81%	83%
% of responders reporting absolute emission reduction targets	62%	50%	42%	51%	45%	44%	50%	60%	0%	59%	51%	89%	77%	32%	41%	39%	49%

9 This statistic includes only companies who were officially requested to respond by CDP's investor signatories and listed or headquartered in these countries.

10 This statistic includes those companies that respond by referencing a parent or holding company's response. However the remaining statistics presented do not include these responses.

Statistic	Austria	Belgium	Denmark	Finland	France	Germany	Ireland	Italy	Luxembourg	Netherlands	Norway	Portugal	Spain	Sweden	Switzerland	United Kingdom	Total/ Average
% of responders reporting intensity emission reduction targets	38%	50%	58%	51%	63%	49%	46%	56%	100%	56%	66%	56%	60%	58%	59%	58%	58%
% of responders that adopted a SBT	15%	14%	21%	9%	10%	7%	15%	5%	0%	7%	9%	22%	17%	7%	12%	5%	11%
Taking action on emissions																	
% of responders reporting active emissions reduction initiatives in the reporting year	92%	93%	95%	89%	94%	89%	85%	95%	100%	100%	86%	100%	100%	89%	91%	91%	93%
% of responders indicating that some of their products and services are low carbon	77%	79%	63%	76%	76%	80%	42%	86%	100%	76%	69%	89%	77%	70%	53%	59%	73%
% of responders whose gross global emissions (Scope 1 and 2) have decreased compared to last year due to emmission reduction activities	38%	57%	53%	49%	49%	46%	73%	49%	33%	56%	46%	67%	40%	61%	57%	72%	53%
Disclosure and verification																	
% of responders independently verifying any portion of Scope 1 emissions data	62%	71%	63%	64%	90%	80%	81%	100%	67%	63%	66%	100%	88%	54%	60%	68%	74%
% of responders independtly verifying at least 70% of scope 1 emissions data	54%	71%	58%	60%	73%	71%	77%	91%	67%	51%	63%	100%	79%	47%	55%	61%	67%
% of responders reporting scope 2 location-based emissions data	31%	36%	53%	31%	66%	40%	77%	56%	100%	59%	86%	11%	44%	35%	38%	80%	53%
% of responders reporting scope 2 location-based emissions data	62%	64%	37%	60%	23%	44%	19%	37%	0%	37%	6%	89%	54%	51%	53%	17%	41%
% of responders independently verifying any portion of Scope 2 emissions data	54%	71%	58%	64%	89%	75%	77%	98%	67%	61%	66%	100%	88%	53%	60%	66%	72%
% of responders independtly verifying at least 70% of scope 2 emissions data	54%	71%	47%	60%	66%	66%	73%	86%	67%	49%	54%	89%	71%	46%	55%	50%	63%
% of responders reporting Scope 3 emissions data	77%	86%	95%	84%	93%	83%	92%	88%	100%	85%	94%	89%	94%	81%	83%	87%	88%
% of responders independtly verifyingany portion of their Scope 3 emissions data	54%	29%	32%	53%	73%	57%	69%	79%	33%	54%	54%	100%	79%	46%	52%	46%	57%
Carbon pricing																	
% using an internal price on carbon	31%	7%	16%	16%	34%	26%	23%	35%	67%	34%	17%	78%	40%	9%	26%	20%	30%
% of responder indicating that their operations or activities is regulated by a carbon pricing system	31%	7%	16%	16%	34%	26%	42%	40%	67%	32%	23%	56%	31%	30%	50%	39%	39%
Engagement																	
% engaged in activities that could either directly or indirectly influence public policy on climate-related issues	85%	93%	84%	93%	79%	85%	81%	95%	100%	83%	83%	100%	96%	72%	78%	81%	87%
% direct engagement with policymakers	62%	50%	47%	51%	57%	54%	35%	65%	33%	51%	66%	67%	69%	39%	38%	49%	52%
% of responders using CDSB framework to report climate change data in mainstream financial report	15%	14%	5%	9%	15%	3%	8%	7%	0%	7%	17%	0%	23%	12%	9%	13%	10%
% engaging value chain on climate issues	77%	93%	95%	98%	89%	89%	81%	88%	67%	93%	80%	100%	98%	96%	78%	87%	88%
% of procurement spend	72%	72%	47%	57%	44%	54%	64%	63%	9%	53%	57%	32%	65%	56%	49%	50%	53%

CDP SCORING METHODOLOGY 2018

CDP Scoring Partners

ADEC INNOVATIONS
ESG SOLUTIONS

DEKRA

RepRisk
Due diligence on ESG and business conduct

Further guidance on the 2018 general questions and sector questions can be downloaded from: *www.cdp.net/guidance/guidance-for-companies*

<table>
<tr><th>Climate Change</th><th>Water</th><th>Forests</th></tr>
<tr><td>>64%</td><td>>54%</td><td>>60%</td></tr>
<tr><td>0-64%</td><td>0-54%</td><td>1-59%</td></tr>
<tr><td>45-75%</td><td>45-75%</td><td>45-65%</td></tr>
<tr><td colspan="2"><45%</td><td><45%</td></tr>
<tr><td colspan="2">45-79%</td><td>45-79%</td></tr>
<tr><td colspan="2"><45%</td><td><45%</td></tr>
<tr><td colspan="2">45-79%</td><td>45-79%</td></tr>
<tr><td colspan="2">45%</td><td><45%</td></tr>
</table>

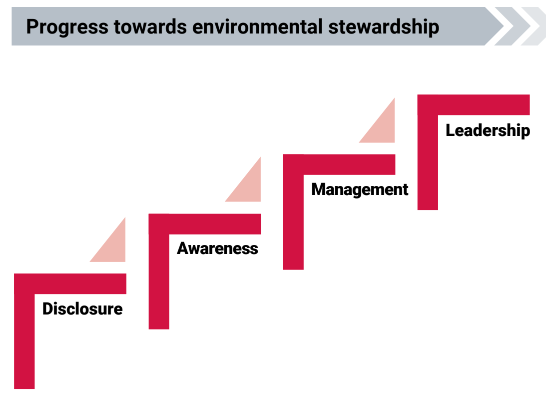
CDP scoring lays down milestones marking the progress of a company's sustainable journey. It provides a roadmap to companies to compare themselves to the best in class. The scoring methodology has evolved over time to influence company behaviour in order to improve their environmental performance. Scoring at CDP is mission-driven, focusing on principles and values for a sustainable economy, and highlighting the business case for change.

CDP's 2018 questionnaires are focused on the high-impact sample companies in each of the three themes – Climate Change, Water, and Forests. To operationalise this approach, CDP developed a new Activity Classification System (CDP-ACS),[11] a three-tiered system starting from the lower rung of Activity, going up to Activity Group and, finally, Industry. This framework categorizes companies by the most relevant sectors. It focuses on the diverse activities from which companies derive revenue and associates these with the impacts on their business from climate change, water security and deforestation. This helps ensure a better understanding of company actions according to their environmental risk, opportunity and impact and is essential for better comparability of data.

While the bulk of the scoring logic applies to all sectors and questionnaires alike, each of the questionnaires comes with a somewhat tailored scoring methodology. The sector-based approach allows CDP to make more meaningful assessments of companies' responses, incorporating each sector's characteristics and nuances, resulting in a score that reflects the company's progress in environmental stewardship and enabling better benchmarking against other companies.

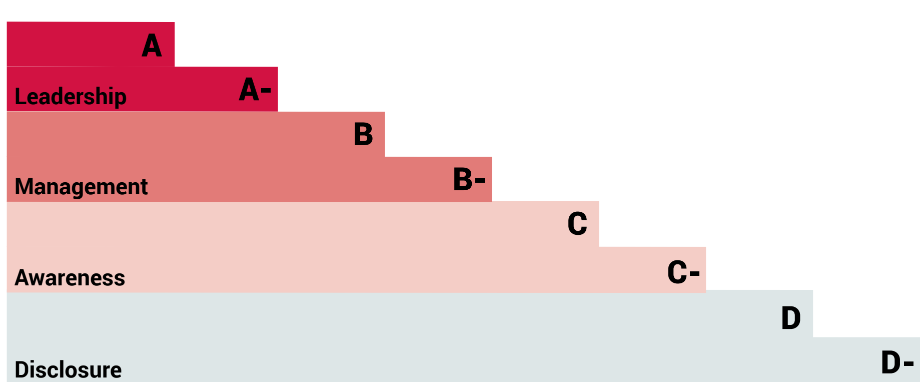
The scoring of CDP's questionnaires is conducted by accredited scoring partners trained by CDP. CDP's internal scoring team coordinates and collates all scores and run data quality checks and quality assurance processes to ensure that scoring standards are aligned between samples and scoring partners.

Illustration of scoring levels



Responding companies are assessed across four consecutive levels which represent the steps a company moves through as it progresses towards environmental stewardship: Disclosure which measures the completeness of the company's response; Awareness which intends to measure the extent to which the company has assessed environmental issues, risks and impacts in relation to its business; Management which is a measure of the extent to which the company has implemented actions, policies and strategies to address environmental issues; and Leadership which looks for particular steps a company has taken which represent best practice in the field of environmental management.

Questions may include criteria for scoring across more than one level. The criteria for scoring the levels are distributed throughout the questionnaire. All of the questions are scored for the disclosure level. Some of the questions have no awareness, management or leadership level scoring associated with them.



F = Failure to provide sufficient information to CDP to be evaluated for this purpose.[12]

Scoring categories and weightings

This year, the number of categories per theme has increased from 2017, in order to better focus on key data points and provide a more detailed breakdown of a company's score. Scoring categories in 2018 are sub-groups of the 2018 questionnaire modules and are unique to each theme, but within each theme they are consistent across all sectors. Each sector within each theme is affected by and manages environmental issues in a specific way. **To capture these specificities, different weightings will be applied amongst sector scoring categories in each theme.[13]**

Weightings are applied by calculating the Management and Leadership score per scoring category in the same way as previous years: Numerator/Denominator * 100. These % scores are then translated into a category score per level by calculating the proportion of points achieved relative to the category weighting: Category weighting (%) / 100 * Management/Leadership score (%). The category scores for each level are then summed together to calculate the overall final score.

Scoring weightings will only be applied to each of the scoring categories at Management and Leadership level. Where a scoring category consists of new questions, low weightings will reflect this. Weightings will be applied differently across sector categories for each theme to reflect this.

Public scores are available in CDP reports, through Bloomberg terminals, Google Finance and Deutsche Börse's website. CDP operates a strict conflict of interest policy with regards to scoring and this can be viewed at *https://bit.ly/2Sx3hLd*

<table>
<tr><th>Category</th><th>Management weighting</th><th>Leadership weighting</th></tr>
<tr><td>Governance</td><td>12.0%</td><td>12.5%</td></tr>
<tr><td>Risk management processes</td><td colspan="2">10.0%</td></tr>
<tr><td>Risk Disclosure</td><td colspan="2">8.0%</td></tr>
<tr><td>Opportunity Disclosure</td><td colspan="2">8.0%</td></tr>
<tr><td>Business Impact Assessment & Financial Planning Assessment</td><td colspan="2">5</td></tr>
<tr><td>Business Strategy</td><td colspan="2">5</td></tr>
<tr><td>Scenario Analysis</td><td colspan="2">1</td></tr>
<tr><td>Targets</td><td colspan="2">12</td></tr>
<tr><td>Emissions reductions initiatives and low carbon products</td><td colspan="2">5</td></tr>
<tr><td>Scope 1 & 2 emissions (incl. verification)</td><td colspan="2">12</td></tr>
<tr><td>Scope 3 emissions (incl. verification)</td><td colspan="2">5</td></tr>
<tr><td>Emissions breakdowns</td><td colspan="2">0</td></tr>
<tr><td>Energy</td><td>6.0</td><td>7.0</td></tr>
<tr><td>Additional climate-related metrics (incl. verification)</td><td colspan="2">0.0</td></tr>
<tr><td>Carbon pricing</td><td>2.0</td><td>0.0</td></tr>
<tr><td>Value chain engagement</td><td colspan="2">5.0</td></tr>
<tr><td>Public policy engagement</td><td>1.0</td><td>0.0</td></tr>
<tr><td>Communications</td><td>1.0</td><td>0.5</td></tr>
<tr><td>Sign off</td><td colspan="2">2.0</td></tr>
<tr><td>100% Disclosure points</td><td>0.0</td><td>2.0</td></tr>
<tr><td>Overall Total</td><td>100%</td><td>100%</td></tr>
</table>

11 For further information, visit https://bit.ly/2FlpQdY.

12 Not all companies requested to respond to CDP do so. Companies who are requested to disclose their data and fail to do so, or fail to provide sufficient information to CDP to be evaluated will receive an F. An F does not indicate a failure in environmental stewardship.

13 The table is an example of the General Scoring methodology category weightings. Sector-wise scoring and the respective categories and weightings can be found here - https://bit.ly/2L70rFT.

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