

CDP Ireland climate change report 2018

Climate Change strategy is now a critically important Boardroom topic for Irish companies

Written on behalf of 650 investors with US\$96 trillion in assets



Contents

| | |
|----|---|
| 03 | Foreword by Paul Simpson, CEO, CDP |
| 04 | Foreword by Caroline Pope, CDP Ireland Network |
| 06 | Stories of Change: Kingspan |
| 07 | Commentary from SEAI by Jim Gannon |
| 08 | Commentary from EPA by Laura Burke |
| 09 | Stories of Change: AIB |
| 10 | Irish Emissions Reporting 2018 |
| 12 | CDP Ireland Network Initiative |
| 14 | CDP Ireland 2018 Infographic |
| 16 | Investor Perspective by Murray Birt, DWS |
| 17 | First time responder: Dalata Hotel Group |
| 18 | Reporting Alignment |
| 20 | CDP Scoring Methodology 2018 |
| 23 | Appendix I: Ireland Responding Companies |
| 24 | Appendix II: Ireland Non-Responding Companies |
| 25 | Appendix III: Global Responding Companies with operations in Ireland |

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We know that business is key in enabling the global economy to achieve – and exceed – its climate goals. The continued action of these entities will be vital as we go through 2019, the final year before nations update their national climate plans for the Paris Agreement and just as global emissions need to peak.

2018 was another momentous year for action on climate change. The landmark report from the Intergovernmental Panel on Climate Change (IPCC) underlined the urgent need to bend the curve on global greenhouse gas emissions. Meanwhile the UN Environment Programme offered a stark reminder of the gap between where we are now and where we need to be. The choice facing companies and investors has never been clearer: seize the opportunities of the low-carbon transition or continue business as usual and face untold risks.

Against this backdrop, it is encouraging that 2018 saw a quickening pace of climate action. We saw more companies disclose their environmental data, and more set stretching targets to reduce emissions. Eighteen years ago, when CDP started, climate disclosure was non-existent in capital markets. In 2018, over 7,000 companies, worth more than 50% of global market capitalization disclosed environmental data through our platform. That's an 11% jump on the previous year.

Environmental disclosure further entered the mainstream with the FSB's Task Force on Climate-related Financial Disclosure (TCFD), which built on the work of CDP and paves the way for mandatory climate-related disclosures across all G20 countries over time. Through our upgraded disclosure platform, which incorporates the TCFD's recommendations, the 7,000 companies disclosing this year have aligned their disclosures with those recommendations (72% of the listed companies that disclosed through CDP were able to answer between 21 and 25 of the 25 new TCFD questions).

As we have long believed, where there is greater transparency, greater action follows. As showcased by 2018's Global Climate Action Summit, leaders from across the worlds of business and finance are taking the urgent steps required to build a sustainable future for all. The summit was an important and timely reminder of the progress we are seeing across the real economy.

From the 500 companies that are now committed to set science-based emissions reductions targets; to those moving toward 100% renewable electricity; and the investors stepping up to shift their investments to low-carbon, we are seeing tremendous progress in the right direction.

But there is no time for complacency. There are still some serious hurdles in the race towards Paris Agreement implementation. In October 2018, Brazil elected a president whose policies threaten the future of the Amazon rainforest, one of the world's biggest carbon sinks. Meanwhile in the US, President Trump continues to ignore stark warnings on the damage climate change will inflict on the US economy, instead pushing through deregulation and attempting to resurrect the coal industry.

There's also no denying the reality of intensifying climate impacts. From a Europe-wide heatwave to record droughts in Cape Town, hurricanes in the Americas and wildfires in the Arctic, 2018's extreme weather events brought enormous costs to both capital markets and wider society.

To stay below the 1.5°C guardrail, the IPCC tells us the global economy needs to reach net zero-carbon by mid-century and halve emissions by 2030, compared with 2010 levels. This represents nothing short of a complete transformation of the global economy. It is going to take unprecedented co-operative action between companies, investors, cities, states and governments across all sectors.

This is the time for businesses to ramp up action and send a clearer signal to governments that they need the policy ambition to match. Business as usual is no longer an option, but a prosperous and sustainable low-carbon future is achievable, if we choose to rise to the challenge. We must, we can and I believe we will.

Paul Simpson
CEO, CDP

Caroline Pope

Chairperson of CDP Ireland Network



We want to see a thriving economy that works for people and planet in the long term.

2018 has been a year of global progress on climate action, but nationally we have some catching up to do. This was brought into sharp focus by Ireland's Climate Change Advisory Council in July 2018 when they submitted their Annual Review to Government stating that, "Ireland is completely off course in terms of achieving its 2020 and 2030 emissions reduction targets."

Compare this to the progress of some countries such as Sweden, Scotland and Germany who are already producing substantial amounts of electricity from renewables, or companies within the RE100 committing to source 100% of their global electricity consumption from renewable sources. The global pace of change and ambition in climate action is increasing exponentially and although we may all face the physical risks of climate change, as highlighted in the landmark report from the Intergovernmental Panel on Climate Change (IPCC), it is within company and government power to avoid the transitional risks and grasp the opportunities.

This is where the vision and mission of CDP becomes important:

"We want to see a thriving economy that works for people and planet in the long term. To do this we focus investors, companies and cities on taking urgent action to build a truly sustainable economy by measuring and understanding their environmental impact."

Through the CDP Ireland Network in 2018 we have continued to encourage disclosure and support companies to report their environmental impacts (carbon, water and forests) in a consistent and credible way.

I am pleased to report that the total number of local and multinational companies reporting emissions in Ireland now stands at 257 which is an increase of 11%. The Irish responding group of companies were joined by new responder Dalata Hotel Group, which brings the total number of Irish companies responding to the Climate Change program this year to 28.

Although a key objective of the CDP Ireland Network is to increase the number of companies reporting to CDP, we also include an objective to increase the quality of submissions from responders as the consistency and credibility of data is often cited as a major concern for investors. As such, we are delighted to see two Irish companies appeared in the A list for 2018, these companies are Accenture and AIB they appear alongside only 139 other companies globally.

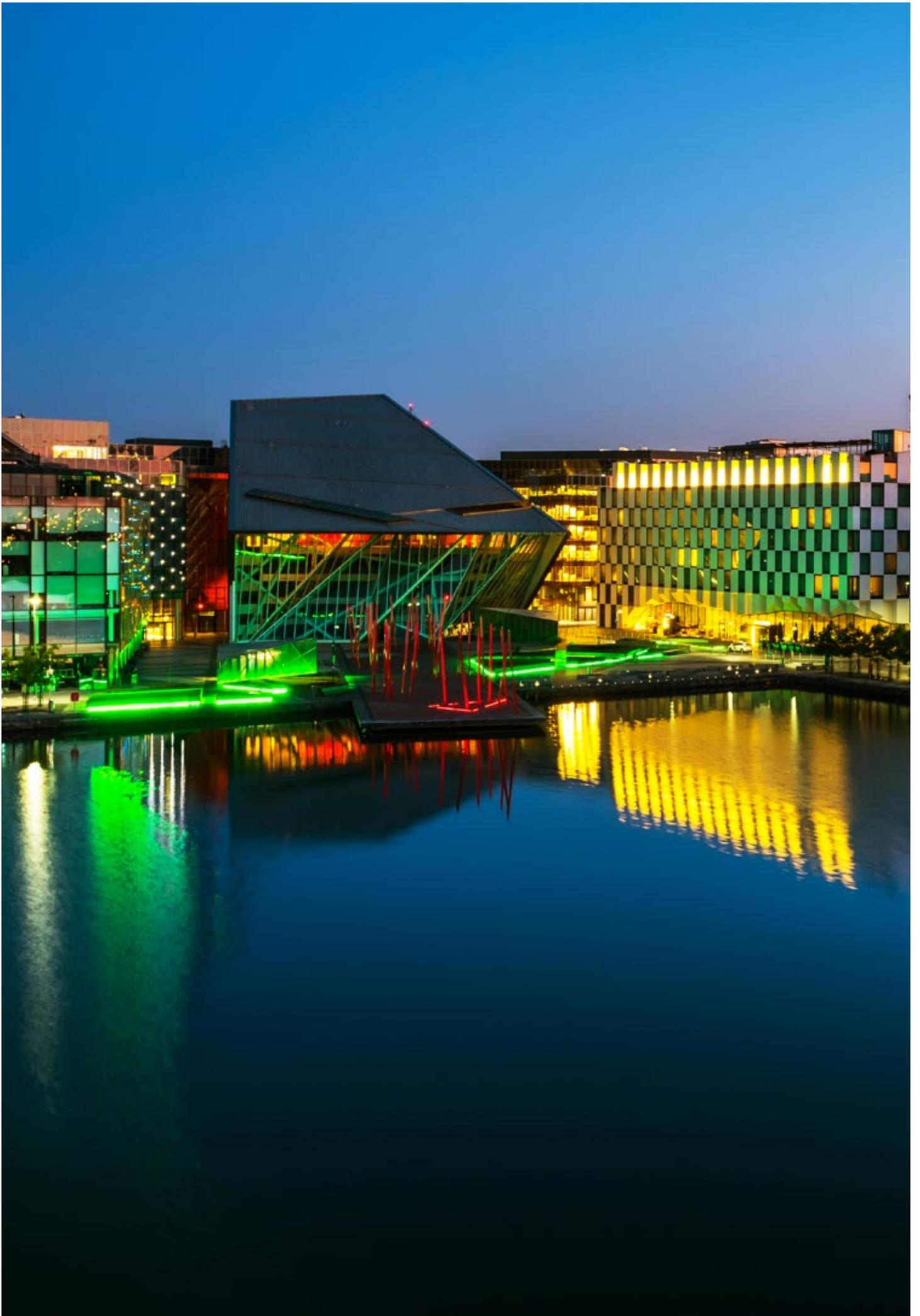
The Supply Chain section is becoming increasingly important as many Irish companies form the supply base of international operations and are seeing a heightened interest from buyers searching for further transparency. It is therefore encouraging to see four new Irish entities responding to the CDP Supply Chain Program, resulting in a total of 36 companies disclosing to this section in 2018.

Alongside these strong results, 2018 has also presented a number of challenges with the adoption of the new CDP online reporting system. I would like to thank our reporting companies for their adoption of the system and for the feedback they have provided to CDP on this first edition of the framework. As a Network we continue to work closely with the CDP global team to ensure responders receive the necessary support and level of service required to make submissions efficient.

I am delighted to have served as Chairperson of the CDP Ireland Network over the past year. This initiative would not be possible without the ongoing support of the EPA and SEAI. I would also like to recognise the work done by Clearstream Solutions who act as a secretariat to the CDP project in Ireland and continue to drive the Climate Change agenda locally.

Finally, my thanks to the CDP Ireland Network steering committee members. At the start of the year we welcomed Cormac Madden from ESB and Pdraig Mallon from Kerry Group to the committee and I want to thank you all for your time and effort this year.

Caroline Pope
Chairperson of CDP Ireland Network



Best Practice Actions

- ✓ **Net Zero Energy Initiative**
- ✓ **Verified Science Based Targets**
- ✓ **RE100 Member**
- ✓ **Climate Change A-Lister 2017**

Tips for success

- ▼ Define Goals: Net Zero Energy (NZE) by 2020 and 10% absolute reduction in GHG emissions by 2025.
- ▼ Define Scope: Net Zero Energy as defined for our purposes, is that our sites, over a year, are energy neutral on an aggregated basis across the estate. Kingspan has also committed to:
 - ▼ Reduce absolute Scopes 1 and 2 GHG emissions by 10% by 2025 from a 2017 base –year, and to reduce absolute Scope 3 GHG emissions from purchased goods and services, business travel, transport and distribution, and end of life treatment of sold products by 10% by 2025.
- ▼ Team & Process: Our global NZE team is responsible for delivering our environmental goals, working together across Kingspan sites in 60 countries to develop processes to capture monthly data at every site, implement new initiatives and engage with our value chain.
- ▼ Flexibility: The six-year journey has been a great learning experience for us. Continuous business growth and acquisitions mean that our strategy must be flexible. The renewable energy landscape is evolving rapidly and we look forward to the development of innovative options that will help us to achieve our goal.

Stories of Change: Kingspan

Our vision is to be a global leader in sustainable business, delivering solutions that help to tackle some of the environmental challenges facing our planet. Since 2011, Kingspan has demonstrated our commitment to a low carbon future through our ambitious Net Zero Energy 2020 Initiative. The six-year journey to date has been a great learning experience for us. Since setting our targets we have increased our renewable energy usage to 75%, reduced our overall lighting and heat costs by over 36% and reduced our carbon intensity by over 83%.

In 2017 we built on our existing commitments to include verified science based targets. We wanted to ensure that they were science-based and in line with the level of decarbonisation required to keep global temperature increase below 1.5 degrees Celsius. This approach adds a new dimension that will help us to drive meaningful change across our value chain and to achieve our ambition for sustainability leadership in the construction sector.

Kingspan's progress in moving towards our goals has helped to protect us from the anticipated rise in energy costs over the next decade and support the achievement of the Sustainable Development Goals. It has enabled us to demonstrate the business case for investment in energy efficiency and renewable electricity generation to stakeholders across the building sector. Without more action from the corporate sector, greenhouse gas emissions will continue to rise and the impact of global warming will become a bigger threat for future generations.

Gene Murtagh
CEO Kingspan

Our vision is to be
a global leader in
sustainable business



Commentary from SEAI

Jim Gannon



In the last year, climate change and climate action awareness has risen dramatically in the national and international consciousness. The subject features in traditional and social media like never before. Most notably, the dialogue is now extending well beyond the news cycle that typically follows some extreme weather event, the publication of a report, or the announcement of a new policy. It is highlighting the gaps between those who traditionally might have led on such matters and the emerging inspirational leadership, from those who will be most impacted by the decisions we make over the coming years.

In business, climate response has now moved far beyond being just a progressive environmental fad. It is no longer the preserve of investors who have to label their funds as ‘impact’, or ‘green’, or label a particular business activity as corporate social responsibility. Instead, climate responsible investment at a portfolio level, and use of internal capital at a business level, is in the majority of cases simply a good use of finance. Many in business previously experienced a premium being attached to the environmentally responsible choice. However, the tide is now turning, and not making the responsible choice often now results in the loss of competitive advantage to a peer who has made that choice.

Organisations involved in climate leadership, such as those who participate in the Carbon Disclosure Project, are sending a very clear message across a number of industries. They are declaring that they are committed to more sustainable methods of executing their business, and that they see this as being a core part of their strategy. Importantly, this message is not buried in the depths of an annual report. Rather it is proudly communicated to current and prospective employees, to existing and potential investors, and to the consumers of their products and services.

The power of this communication should not be underestimated. It should be applauded by all those involved in climate action, whether in government, NGOs or the private sector. Business, through the means by which they engage the consumer in selling their products and services, are uniquely able to communicate a social movement and a message that is positive around climate choices. Without this, much of what we are left with is the negative dialogue which has characterised the climate debate over the past number of years.

I welcome the public declarations of those participating in the Carbon Disclosure Project. Now more than ever, we need business leaders to make climate action core to their offering and operations.

Jim Gannon
CEO

Sustainable Energy Authority of Ireland

Many in business previously experienced a premium being attached to the environmentally responsible choice. However, the tide is now turning, and not making the responsible choice often now results in the loss of competitive advantage to a peer who has made that choice.

Commentary from EPA

Laura Burke



In years to come, we may come to regard 2018 as a pivotal year in terms of acceptance by the business community and the wider public of the impacts of climate change and the urgent responses required.

By any measure, we have experienced an extraordinary year where our environment, our climate, reminded us of the fragile nature of our infrastructure, our economy, and by extension our wellbeing. There is no doubt but that the resilience of our nation was severely tested as drinking-water and waste-water treatment systems failed, homes and businesses were inundated, primary food production activities compromised, health-care services put under severe pressure, and so on.

The recent landmark report released by the IPCC warned that in only twelve years, the planet would have warmed by 1.5°C above pre-industrial levels, ushering in an era where the extreme weather events we witnessed during 2018 would become the norm. More pronounced effects are expected in other parts of the world, and could lead to severe geopolitical instability bringing further risks to our society and economy.

We did, however, also see some welcome initiatives at government level in Ireland to address the climate challenge - such as the establishment of the €500m Climate Action Fund to support projects that contribute to the achievement of Ireland's climate and energy targets. In addition, Ireland's divestment of public monies from fossil fuel assets was a world-first, and sent a clear signal to the financial system in terms of our future sovereign investment direction.

Alongside government action on climate, there is undoubtedly also a need for business to respond to this global challenge through adopting best

practices around clean energy and resource efficiency. Likewise, there is a clear role for the financial system to facilitate, and indeed, drive the structural and behavioural changes needed to shift to these sustainable business models. Speaking at the 2018 European Climate Innovation Summit at Dublin Castle, Dr Kirsten Dunlop said the IPCC report "should leave us in no doubt that the financial sector has a make or break role in averting catastrophic climate change". In this context, the reporting and leadership functions provided through the Carbon Disclosure Project has never had more relevance, and EPA is pleased to be a supporter of the CDP network in Ireland.

In conclusion, I believe that the systemic nature of the climate challenge emphasises the need to deliver integrated responses with clear reporting and accountability. Effective and urgent implementation will be key to meeting our climate commitments and, more importantly, to ensuring the wellbeing of our society, the stability of our economy, and the safeguarding of our environment.

Laura Burke
Director General,
Environmental Protection Agency

Effective and urgent implementation will be key to meeting our climate commitments and, more importantly, to ensuring the wellbeing of our society, the stability of our economy, and the safeguarding of our environment.



Best Practice Actions

- ✓ **Implementation of an organisation-wide EnMS and EMS certified to ISO50001 and ISO140001**
- ✓ **Climate Change Score: A**
- ✓ **Procurement of 100% Renewable Electricity**
- ✓ **Having received certification from LEED accredited bodies. Molesworth St. is the first Irish Building to receive LEED Platinum accreditation**

Tips for success

- ▶ Continual Improvement Approach: AIB continuously develops and rolls out initiatives to reduce its carbon footprint and improve its energy efficiency. By the end of 2017 our overall carbon emissions were 29,525 tCO₂ eq, a decrease of 35% against our 2009 baseline.
- ▶ Develop Strategies: Our efforts to reuse, recover and recycle valuable materials have received a national award in excellence in waste management, a Pakman Award, in 4 different occasions since 2015.
- ▶ Define a goal: AIB aims to deliver more sustainable operations and to be a leader in sustainability.
 - ▶ AIB has established a centre of excellence that supports the development of low-carbon initiatives across our portfolio including investment in wind, solar and biomass.
 - ▶ Striving for LEED certification ensures that AIB buildings are being fitted out with a design philosophy which focuses on increasing the efficiency of resource use — energy, water, and materials — while reducing building impacts on human health and the environment during the building's lifecycle, through better siting, design, construction, operation and maintenance.

Stories of Change: AIB

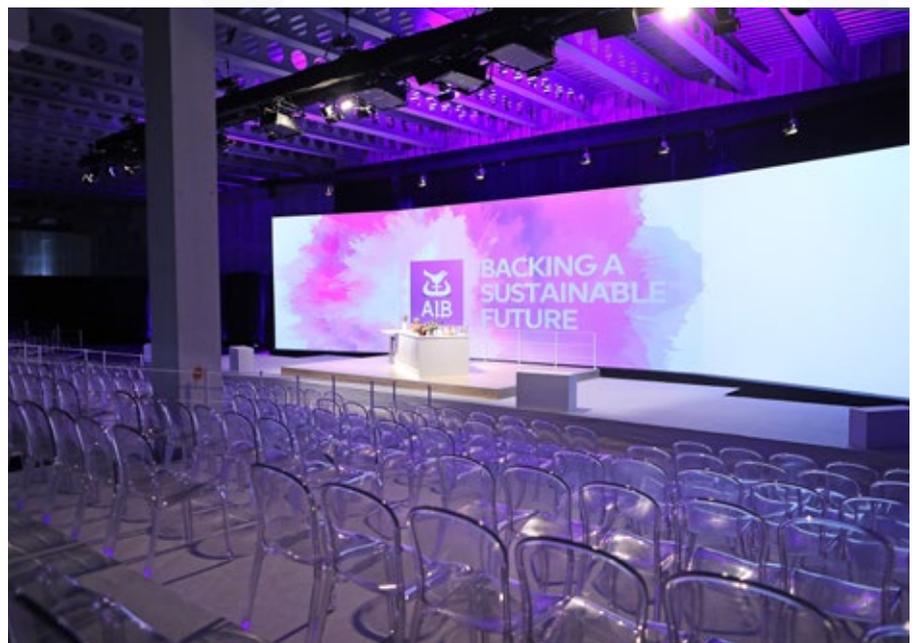
In AIB we recognise that having a sustainable and responsible approach to how we do business – now and in the future – is integral to everything we do. We want to create long-term, sustainable value for our customers, staff and other stakeholders in the economy and communities where we work.

For the second year running, AIB is delighted to be highlighted as a global leader on corporate climate action, achieving a place on the CDP Climate Change A List. We have been recognised for our actions in the last reporting year to cut emissions, mitigate climate risk and play our part in the development of the low-carbon economy, based on our 2018 disclosure to CDP in addition to our broader Sustainability reporting.

Inclusion on the list is testament to the actions AIB has taken to achieve energy efficiency within our Office Network and Building Estate, reduce waste, the move to sourcing 100% renewable electricity and the continuous investment in digital technologies in our buildings which reduce the need for staff travel, thus reducing our carbon footprint. We continue to evaluate the risks to our business and identify business opportunities which will arise for our business and our many stakeholders as we support the transition to a low-carbon and more sustainable economy.

In 2018 we also became signatories to the Low Carbon Pledge, an initiative from Business In The Community Ireland (BITC). The pledge is a commitment for Irish business to invest time and resources into creating a more sustainable operation – through energy efficiency and reduction in carbon emissions.

We are positioning ourselves to support our customers and other stakeholders to provide solutions, seize new market opportunities and thrive as we all continue the transition to a sustainable economy. The role of finance as a key enabler in this transition will be critical and we are poised to make a substantial contribution to this activity. AIB has identified the operational risks from climate change and developed responses to mitigate against them.



Top 10 Irish Companies by score

Accenture*

AIB Group Plc*

Kingspan Group Plc

Mainstream Renewable Power

Seagate Technology LLC

Shire

CRH Plc

M50 Concession Ltd

Ingersoll-Rand Co. Ltd

Kerry Group Plc

* Listed on the CDP 2018 A list

The analysis presented in this report is a brief summary of a subset of the data available through CDP. We encourage all readers of this report to view the full corporate responses individually from our website. Enhanced and unlimited access to the data is available through the CDP analytics tool which makes benchmarking and trend analysis simple via a series of interactive dashboards and export functions. Different versions of the tool are available for investors and companies. Visit www.cdp.net to find out more.

A total of 257 companies reported to CDP in 2018 that are either headquartered or operating in Ireland. This represents an 11% increase on 2017. There was 28 Irish companies who reported as part of this group. This slight decrease in the number of Irish companies reporting, is offset by an increase in the level of reporting transparency and achievement. Companies are disclosing more information about their operations and increasing their emissions reduction activities. Performance scores in Ireland for 2018 have increased in key areas. Ireland maintained two Climate A List companies, Accenture and AIB, while recognition should also go to Mainstream Renewable Power, Shire, Seagate and Kingspan Group Plc who received an A-. The last eight years of CDP reporting in Ireland has shown a trend of Irish reporting companies improving their individual CDP scores and this is supported in the 2018 results. While 100% of Irish companies who were scored achieved a D- or above, there was a significant improvement in Management scores.

In 2018 63% of Irish companies achieved a B- or higher, up from only 35% in 2017. Ireland is continuing to build its reputation as a country with strong CDP performing companies. There is clear evidence that Irish scores are improving year on year and that Irish companies are now scoring well above the global average.

The CDP Supply Chain program continues to be the fastest area of growth in terms of numbers of companies reporting with a significant increase of 12.5% in the numbers of Irish companies reporting their Climate Change performance via the CDP Supply Chain program. There are now more Irish companies reporting to their customers under the Supply Chain program than those disclosing to investors under the Climate Change program. 36 Irish entities responded to the supply chain program in 2018, up from 32 in 2017, and 29 in 2016. We will continue to actively support this group in an increasingly competitive issue for Irish companies as we compete internationally. The focus for 2019 will be to build on this momentum across all our reporting programmes.



Over 14 Million tonnes of scope 1 + Scope 2 emissions reported in Ireland



The top 10 Scope 1 + Scope 2 emitters account for 92% of reported emissions



Reporting to the CDP Supply Chain Program increased 12.5%



11% increase in the total number of companies reporting to CDP in Ireland

Irish Emissions Reporting 2018

Chart 1:

Average Scope 1 and 2 Emissions by reporting companies with operations in Ireland

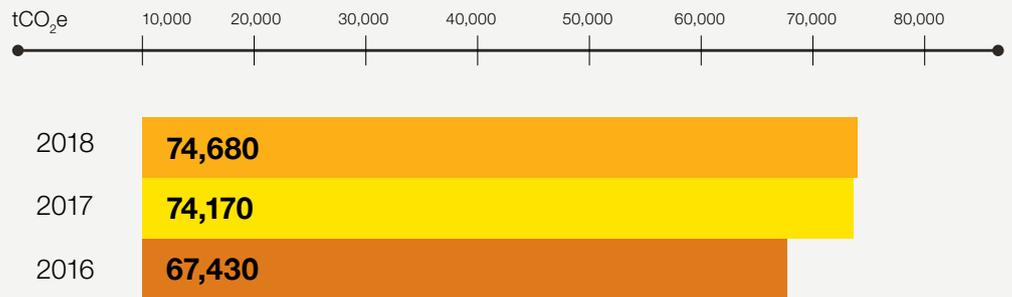


Chart 2:

The total number of companies, with operations in Ireland, reporting to CDP

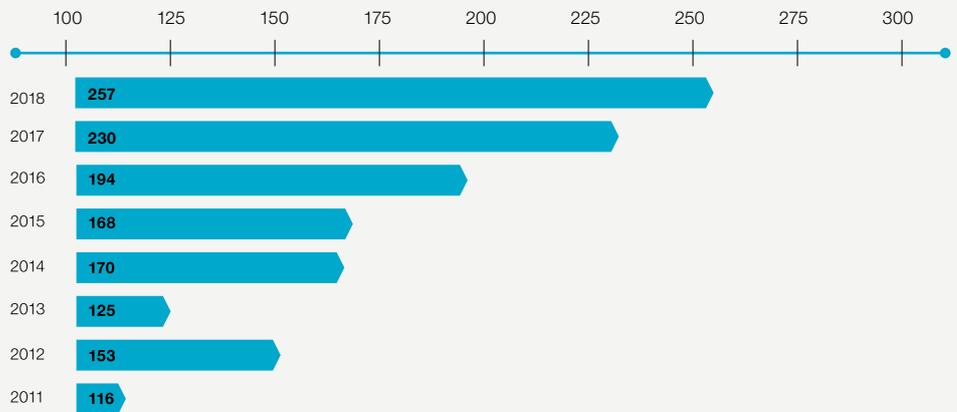
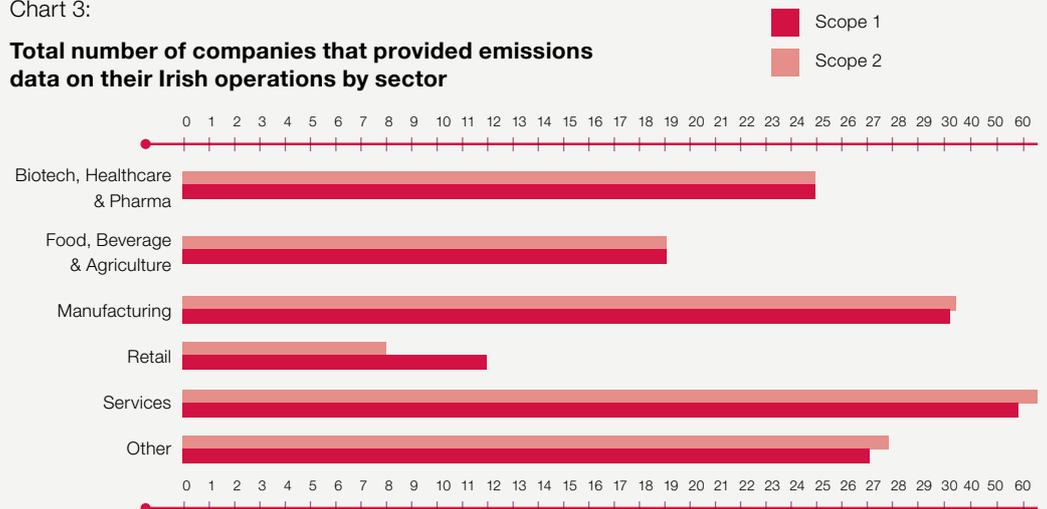


Chart 3:

Total number of companies that provided emissions data on their Irish operations by sector



CDP Ireland Network Initiative

Corporate Climate Change disclosure is now firmly a Boardroom issue



CDP Ireland Network Responsible Sourcing – In conversation with Mike Simms CPO Microsoft Corp



Gavin Whitaker and Ji Yeon Kim, CDP Ireland Network Training Event, DCU, 2018.

Many Irish companies continue to work hard to tackle climate change; moving from disclosure to target setting and onto action. Encouraged by investor focus and pushed by EU regulation, the topic of climate change has moved from the sustainability office onto the boardroom table and is now an integral part of the annual reporting cycle of many Irish companies.

The CDP Climate Change program is the most recognised and trusted global framework for corporate reporting and measurement of climate change issues. And here in Ireland, the CDP Ireland Network continues to make good progress in our mission to develop an economic system that operates within sustainable environmental boundaries, working to promote the development of Ireland as a leader in the low carbon economy. While Ireland as a whole has been criticised for its overall performance in tackling its emissions, it is clear that many Irish companies are taking real action on climate change; including setting emission reduction targets and committing to renewable investments, rather than waiting for legislation.

We will continue to encourage Irish non-responding PLCs and companies in general to engage with the program. To assist first time responders with the challenge of their first response, CDP launched a new Minimum Version questionnaire for new responders and companies with less than 250 employees or a turnover of €250m.



CDP Ireland Network Supply Chain Briefing

Some highlights from 2018

- ▼ **257 global companies now report** their Irish emissions to CDP under the Climate Change program and **28 Irish owned or registered** companies are now also reporting.
- ▼ **36 Irish companies** are now reporting their Climate Change performance to their customers via the **Supply Chain program**.
- ▼ Two Irish companies, **AIB** and **Accenture Plc** achieved the highest level of recognition under the programme, an 'A' score. Some 100 companies worldwide achieved this score.
- ▼ We continue to cooperate with other like-minded organisations and we have continued our close cooperation with **Sustainable Nation and SIF Ireland** supporting their Sustainable Leadership Dinner event in November. We also supported **BITCI** in their **Low Carbon Pledge** initiative launch.
- ▼ **Supply Chain Events**. We hosted a number of CDP Supply Chain network events, including hosting Mike Simms the global CPO of Microsoft Corp, and Sam Hummel, the CEO of The Sustainable Procurement Leadership Council, SPLC.
- ▼ This year saw the launch of a new enhanced **CDP global reporting platform** which will deliver a more efficient and streamlined reporting solution.
- ▼ In terms of **Training**, we hosted our annual CDP Reporter training in May 2018. Ji Yeon from CDP London and Gavin Whitaker delivered a very informative session for both experienced, as well as new responders.
- ▼ We now have 94 members on our LinkedIn group '**CDP Ireland Network**' and a growing Twitter following **@CDPIrelandnet**
- ▼ We continue to update our Website **www.CDPIrelandNetwork.net** where you will find this report. Your input is always welcome via **gavin@cdpireland.net**

Steering Committee 2018

Aims and Objectives

- ▶ To drive action by companies and cities to reduce greenhouse gas emissions, safeguard water resources and prevent the destruction of forests.
- ▶ To promote, encourage and support Irish stakeholders to engage with the CDP and other organisations seeking to minimise climate change impacts.
- ▶ To increase Irish organisations' transparency on environmental performance in order to enhance resilience and comparability.
- ▶ To make environmental performance central to investment and business decisions.
- ▶ To share best practice in GHG management and policy from both Irish and international organisations.
- ▶ To provide a common and consistent framework for Irish companies to measure and report their GHG emissions.
- ▶ Assist in promoting the image of Ireland as a sustainable place to do business and to help our companies to achieve a competitive advantage from their initiatives by sharing global best practice.

We would like to express our appreciation to the EPA and SEAI for their continued financial support and participation in the Network. We would also like to thank Kingspan and AIB for their support in publishing and hosting this report launch. Our Chairperson for 2018 was Caroline Pope from KPMG and we would especially like to thank Caroline for all her guidance and hard work. Our Vice Chairperson, and incoming Chair for 2019 is Shane O'Reilly from CRH Plc. Last year we welcomed two new CDP Ireland Steering Committee members; Cormac Madden from ESB and Pdraig Mallon from Kerry Group. Thanks again to all our committee for their dedication and input.



Caroline Pope
KPMG



Shane O'Reilly
CRH PLC



Shane Colgan
EPA



Pdraig Mallon
Kerry Group



Bianca Wong
Kingspan Group
Plc



Eoin Fahy
KBIGI



Gillian Carson-Callan
Smurfit Kappa Plc



Cormac Madden
ESB



John O'Sullivan
SEAI



Conor Linehan
William Fry



Stephen Nolan
Sustainable Nation



Emma Jane Joyce
NTMA



Sandra Rockett
Irish Life Investment
Managers



John Barcroft
DCC Plc

Executive Support



Brian O'Kennedy
Clearstream
Solutions



Gavin Whitaker
Clearstream
Solutions

The launch of our 2017 report was a huge success and attracted significant media attention.

Top Irish firms named and shamed for failing to tackle climate change

Ryanair, PaddyPower Betfair, Permanent TSB and Independent News & Media are among a list of top Irish firms named and shamed for failing to report their greenhouse gas emissions. The PLCs were included in a list of 27 well-known Irish brands compiled by the influential CDP group, a non-profit organisation that measures the environmental impact of thousands of companies around the world. Total Produce, Dalata, Applegreen and Kenmare Resources also received an "F mark" for non-disclosure in the CDP's report, which collects data for global investors with more than \$100 trillion (€92 trillion) of assets under management, including BlackRock, Goldman Sachs and Aviva Investors.

Eoin Burke-Kennedy
The Irish Times,
November 2017

Well known Irish companies ranked for efforts in tackling climate change

Kingspan and AIB have ranked highly on a list of Irish firms leading the way in terms of climate change mitigation.

According to the CDP Ireland Climate Change Report 2017 published today, these companies made the 'A List' and were placed on a list of only 114 companies, a measure of both firms' disclosure and performance.

ODP, formerly the Carbon Disclosure Project, is the international investor led not-for-profit that measures environmental impact of thousands of companies around the world.

Other companies that received a mention for their A-rating include Accenture, Ingersoll-Rand, Shire and Seagate.

Louise Kelly
Irish Independent
November 2017

27 Irish-based firms receive 'F' grade for not disclosing carbon emissions

The number of Irish-headquartered companies have failed to report on their carbon emissions, a new report from a not-for-profit measuring the environmental impact of thousands of companies globally.

Ryanair, and Permanent TSB, Paddy Power Betfair, and Dalata Hotel Group are among 27 firms here to be given an 'F' grade for failing to disclose emissions details for the CDP Ireland Climate Change Report 2017.

However, overall the number of Irish-based firms reporting on their carbon emissions rose by a fifth to 30 last year, with Kingspan and AIB receiving the top grade, placing them on a list of only 114 companies globally on CDP's 'A List'.

RTE,
November 2017

Increase in Irish companies who scored a B- or greater

2880%

28 IRISH COMPANIES WHO RESPONDED IN 2018

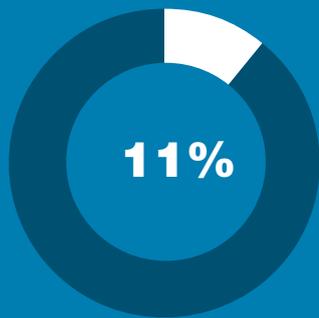
DALATA HOTEL GROUP M50 CONCESSION LTD
 JAMES HARDIE INDUSTRIES
 ESB GROUP **SHIRE** **GLANBIA PLC** AN POST DCC PLC
BANK OF IRELAND ORIGIN ENTERPRISES PLC ECOCEM
TULLOW OIL SMURFIT KAPPA PLC **AIB**
 GREENCORE GROUP PLC UDG HEALTHCARE PLC
 INGERSOLL-RAND CO.LTD MAINSTREAM RENEWABLE POWER
KERRY GROUP PLC CRH PLC
ACCENTURE ALLEGION PLC EXPERIAN GROUP
KINGSPAN GROUP PLC MEDTRONIC PLC
 SEAGATE TECHNOLOGY LLC

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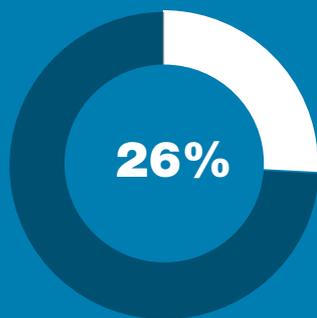
Companies reporting to CDP with operations in Ireland - Increase of 11%

and 2018

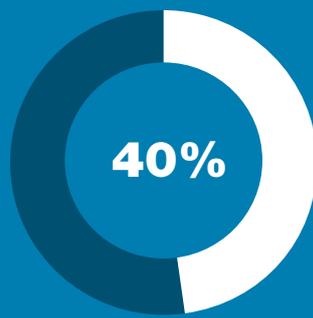
Ireland results by CDP scoring levels



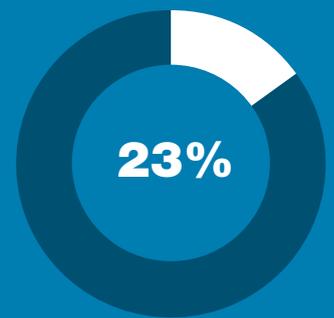
Disclosure



Awareness



Management



Leadership

A

**IRELAND'S
A LIST
COMPANIES**

**ACCENTURE
AIB**

12.5%

Increase in CDP Supply Chain responders in Ireland

Investor perspective

Murray Birt, DWS



I suggest that we now need Physical Climate Risk and Opportunity Protocols across all major sectors combined with a club for companies to share experiences and take cooperative action on improving resilience to climate impacts across company operations, supply chains and the local communities in which they operate.

Since CDP's founding more than 15 years ago, significant progress has been made combining investor requests for more and better data with cities, companies and their supply chains improving their disclosure and setting targets to cut their environmental footprint. This progress, including in Ireland, is to be commended.

In 2005, DWS (formerly known as Deutsche Asset Management) was one of the first investors to recognise that climate change would be a mega-trend for society. This led to our establishing a research team which in 2007 published one of the first reports giving an asset manager perspective on climate change. We continue educate our clients today with thought leadership reports, establish new investment solutions across all asset classes and geographies and use our investor influence with companies (including through CDP) and our voice with governments to encourage stronger action.

Now, more than 400 institutional investors with more than USD32 trillion in assets is part of the Investor Agenda on Climate Change: taking action through their investments, engaging with companies and governments as well as disclosing their own risks and opportunities. However, all readers of this report know this is not enough. I therefore offer some thoughts on the 'next horizons' for corporate and investor action on climate change.

First, social justice considerations. We are seeing societal backlash as communities feel abandoned and left behind. The concept of a 'just transition' aims to address such concerns and is in fact written into the Paris Agreement. In September 2018, a guide and Investor Statement on a Just Transition was published with the support of 100 investors, including DWS, with USD5 trillion in assets. Greater dialogue between investors, companies, workers and governments is needed to accelerate the low-carbon transition and improve climate resilience that also integrates social justice goals. Secondly, physical climate risks. We now know that even one degree of warming is causing more intense and frequent extreme weather events today. However, the Taskforce on Climate related Financial Disclosure (TCFD) was relatively silent on how physical climate risks and opportunities should be disclosed.

Through the leaderships of the European Bank for Reconstruction and Development (EBRD) and the Global Center on Adaptation (GCA), a group of banks, investors, rating agencies, financial regulators and even some companies, came together to extend the TCFD framework into how companies should make disclosures on physical climate risks and opportunities. The report published in May 2018 (available at www.physicalclimaterisk.com), sets an ambition that companies learn from and apply methodologies from the

insurance sector. For instance, companies should aim to disclose their annual, one in twenty, and one in 100 year value at risk from physical climate impacts. As a starting point companies could disclose the financial impact of recent extreme weather events.

It is encouraging that a group of sixteen major banks has already started to examine what physical climate risks means for them. For most Irish companies, many of these risks are likely to be more acute in their supply chains, illustrating the need to deepen engagement with suppliers around the world, including through the CDP Supply Chain program.

As well, companies should give more clarity of how important any given factory or warehouse is to an overall company's profitability. We need to be able answer questions such as 'how exposed is this facility to sea level rise?'. Companies will also need to disclose their efforts and likely costs to become more resilient. How easy is it to shift production, support the construction of sea-walls or mangrove restoration, improve their insurance cover or help protect outdoor workers from extreme heat?

Some of these ideas are starting to make their way into the European Union's plans to enhance non-financial disclosure as part of the EU Sustainable Finance Action Plan. I also hope that CDP also enhances its questions on physical risks and opportunities. Even in the absence of much physical climate disclosure, innovative data companies are finding ways to assess companies' physical climate risks for investors. Companies may be very surprised to learn that investors can acquire data on a company's physical climate risks!

Twenty years ago, leading companies worked with experts to establish the global rule book for how carbon emissions should be measured in different sectors – the GHG Protocol. I suggest that we now need Physical Climate Risk and Opportunity Protocols across all major sectors combined with a club for companies to share experiences and take cooperative action on improving resilience to climate impacts across company operations, supply chains and the local communities in which they operate.

**Murray Birt,
Senior ESG Strategist, DWS**

¹ www.dws.com/solutions/ESG/research

² <http://www.lse.ac.uk/GranthamInstitute/news/new-report-shows-it-is-vital-for-investors-to-support-a-just-transition-for-workers-institutions-with-us5-trillion-in-assets-back-efforts-to-link-climate-action-to-social-inclusion/>

³ <https://www.unepfi.org/news/industries/banking/physical-risk-second-part-of-guidance-for-banking-industry-to-implement-tcfd-recommendations-now-available/>

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Managing our environmental impact is as matter of business common sense that is integrated within the overall business plan.

Seán McKeon
Company Secretary & Head of Risk and Compliance

Tips for success

- ▼ Engage with your stakeholders to help identify priorities and provide the impetus for action.
- ▼ Seek advice on the CDP reporting process, it won't break the bank.
- ▼ Leverage existing reporting systems and supplier information resources.
- ▼ Jump in, take action, get started!

First time responder: Dalata Hotel Group

Dalata Hotel Group is owner and operator of Maldron and Clayton Hotels, Ireland's largest hotel brands and amongst the fastest growing in the UK. We recognise the significance of global climate change and are committed to minimising our impact on the environment.

The company was publicly listed in 2014 and has grown rapidly in the five years since, mainly through acquisition. Revenue has grown five-fold, from €79m in 2014 to €394m in 2018, and today the group's operations span over forty locations with eight hotels under development.

Our environmental impact is generated primarily through energy consumption, water consumption and waste and packaging disposal. The sound integration and development of a multi-site business employing close to five thousand people over a relatively short period of time brings a variety of challenges. The company has a decentralised approach to running its operations which means that local hotel management has a significant degree of autonomy over running the business, including environmental management. Local management is supported by central office specialists in the key functional areas of the business including procurement and the company has strong reporting systems that keep central office closely connected to what is happening in the hotels.

At group level leadership in environmental management is provided by Group Procurement. In 2018 two significant things happened, the appointment of a Group Facilities Manager and the decision to submit a response to CDP, recording and reporting our greenhouse gas emissions as a group for the first time.

Preparing the CDP response is intimidating for a first-time responder so we reached out for help and found it through the CDP Ireland network and Clearstream Solutions who guided us through the process. Through our group procurement team and our existing reporting systems we found that gathering the data was not as difficult as we thought it would be. The results were very interesting, providing a baseline measurement that gives a focal point for the development of a groupwide strategy to reduction of our carbon emissions. We also discovered that a number of initiatives undertaken by the company in 2016 and 2017 translated into measurable reductions in our carbon emissions.

Managing our environmental impact is as matter of business common sense that is integrated within the overall business plan. In 2019 we will develop a number of longer-term targets and are actively working on strategies to improve on the initial 'C' score received for our first CDP response.



Reporting Alignment

Tony Rooke, Director of Technical Reporting



Our 2017-2020 Tipping Point strategy¹ is to build on the momentum of the Paris Agreement and fulfil our mission to mainstream environmental stewardship and action into the economic system. We have been the catalyst for global disclosure over the past 15 years. We want to continue to drive the future of meaningful disclosure to help companies and investors better understand environmental risk and opportunities. This will accelerate the transition to a more sustainable economy and future.

We set up our Reimagining Disclosure initiative to work in consultation with you and our other key stakeholders to evolve our corporate questionnaires. Our goals of this initiative are to:

- ▼ Provide investors and stakeholders with increased relevant information now and into the future; and
- ▼ Optimise the reporting burden for companies.

To deliver this, we have focused development of our questionnaires on the high impact areas through the following three pillars.

1. Introduction of sector-specific questionnaires. We have listened to the feedback from both companies and investors that we need to focus on sector-specific disclosures.

2. Integration of the recommendations of the Task-Force on Climate-Related Financial Disclosures (TCFD). These recommendations align closely with existing CDP disclosures and will be incorporated principally into our climate change questionnaire, with water- and forest-specific TCFD recommendations also included in these respective questionnaires.

3. Continued evolution into more forward-looking metrics and reporting harmonisation. We are building upon forward-looking metrics in carbon pricing and science based targets to include reporting on scenario analyses, carbon price corridors, and transition pathway planning as key indicators of where companies are and the progress they are making.

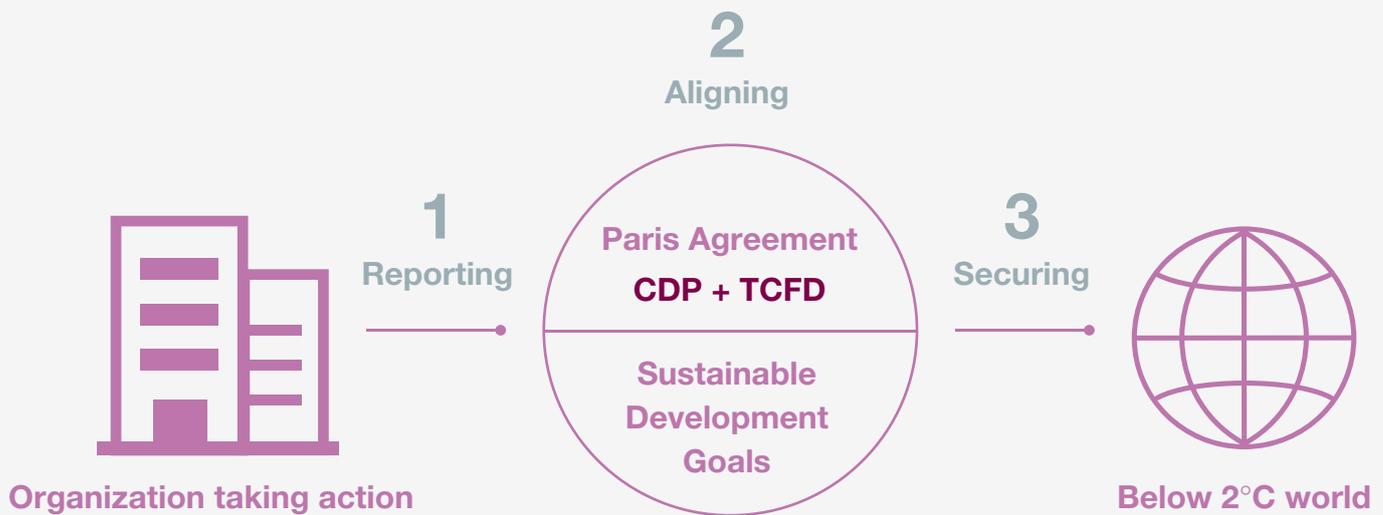
Sector-Specific Questionnaires

We launched 18 new sector-specific questionnaires across our three themes in 2018, with all other sectors answering the “general” questionnaire for the relevant theme(s):

| Cluster | Climate change | Forests | Water |
|--------------------|--|--|--|
| General | All other companies without sector specific questionnaires | All other companies without sector specific questionnaires | All other companies without sector specific questionnaires |
| Energy | Oil & gas Coal Electric utilities | | Oil & gas Electric utilities |
| Transport | Vehicle manufacturers Service providers | | |
| Materials | Cement Steel Metals & mining Chemicals | | Metals & mining Chemicals |
| Agriculture | Food, beverage & tobacco Agricultural commodities Paper & forestry | Paper & forestry | Food, beverage & tobacco |

¹ <https://b8f65cb373b1b7b15feb-c70d8ead6ced550b4d987d7c03fcd1d.ssl.cf3.rackcdn.com/cms/reports/documents/000/002/292/original/CDP-Strategic-Plan.pdf?1501603727>

How it all fits together:



For climate change, in addition to the inclusion of sector-specific metrics, the majority of changes introduced align both structure and flow with the recommendations of the TCFD. This means an increased focus on financial impacts, and the inclusion of scenario analysis and transition planning. This is designed to help companies in preparing to include TCFD recommended disclosures in their mainstream reporting and accounts, and to provide a place for companies to reference from their reports in providing more detail.

For water, the structure and flow has been retained to maintain alignment with the CEO water mandate. Some questions have had wording and options

changed following consultation (e.g. move from supply chain to value chain), and to align with TCFD recommendations.

For forests, the main changes have been to include disclosures from our 2016-17 supply chain pilot, consolidation of questions, and better alignment with climate change and water questionnaires. We have also introduced differentiation between sustainable forestry management for paper & forestry companies, land use change, and differentiation between afforestation, reforestation and restoration projects.

CDP Scoring Methodology 2018

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 focussed 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)¹, 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.



Each of the questionnaires have a unique 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.

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

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.

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

| | Climate Change | Water |
|-------------------|----------------|--------|
| A | >65% | >55% |
| Leadership | 1-64% | 1-54% |
| B | 45-74% | 45-69% |
| Management | <45% | |
| C | 45-79% | |
| Awareness | <45% | |
| D | 45-79% | |
| Disclosure | <45% | |

¹ For further information, visit <https://bit.ly/2FipQdY>

² 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.

F = Failure to provide sufficient information to CDP to be evaluated for this purpose.²

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.**³

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 Boerse's website. CDP operates a strict conflict of interest policy with regards to scoring and this can be viewed at <https://www.cdp.net/scoring-conflict-ofinterest>

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

³ 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 - http://b8f65cb373b1b7b15feb-c70d8ead6ced550b4d987d7c03fcd1d.r81.cf3.rackcdn.com/cms/guidance_docs/pdfs/000/000/413/original/CDP-climate-change-score-category-weightings.pdf?1524221034



Appendix I

Ireland responding companies

NR : No Response
 AQ : Answered Questionnaire
 DP : Decline to Participate
 QF : Questionnaire Forthcoming
 ▲ : Information not requested
 F : Failure to respond

| Company | 2018 Response Status | 2017 Response Status | 2016 Response Status | 2015 Response Status | 2014 Response Status | 2013 Response Status | 2012 Response Status |
|----------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Accenture | AQ* |
| AIB Group Plc | AQ* |
| Allegion Plc | AQ* | AQ* | AQ* | DP | DP | ▲ | ▲ |
| An Post | AQ* | AQ* | ▲ | ▲ | ▲ | ▲ | ▲ |
| Bank of Ireland | AQ* | AQ* | AQ* | AQ* | AQ* | NR | NR |
| C&C Group Plc | AQ* |
| CRH Plc | AQ* |
| Dalata Hotel Group | AQ* | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| DCC PLC | AQ* |
| Ecocem | AQ* | AQ* | AQ* | AQ* | ▲ | ▲ | AQ* |
| ESB Group | AQ* |
| Experian Group | AQ* |
| FBD Holdings Plc | AQ* |
| Glanbia PLC | AQ* | AQ* | NR | NR | NR | NR | DP |
| Greencore Group PLC | AQ* |
| Ingersoll-Rand Co. Ltd. | AQ* |
| James Hardie Industries | AQ* | AQ* | QF* | ▲ | ▲ | ▲ | ▲ |
| Kerry Group PLC | AQ* |
| Kingspan Group PLC | AQ* |
| M50 Concession Ltd. | AQ* | AQ* | AQ* | AQ* | AQ* | ▲ | ▲ |
| Mainstream Renewable Power | AQ* | AQ* | AQ* | ▲ | ▲ | ▲ | ▲ |
| Medtronic PLC | AQ* |
| Origin Enterprises PLC | AQ* | AQ* | NR | NR | NR | NR | NR |
| Seagate Technology LLC | AQ* | AQ* | AQ* | AQ* | AQ* | AQ* | ▲ |
| Shire | AQ* |
| Smurfit Kappa Group PLC | AQ* |
| Tullow Oil | AQ* |
| UDG Healthcare PLC | AQ* |

Appendix II

Ireland non-responding companies

NR : No Response
 AQ : Answered Questionnaire
 DP : Decline to Participate
 QF : Questionnaire Forthcoming
 ▲ : Information not requested
 F : Failure to respond

| Company | 2018 Response Status | 2017 Response Status | 2016 Response Status | 2015 Response Status | 2014 Response Status | 2013 Response Status | 2012 Response Status |
|------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Abbey Plc | F | F | NR | NR | NR | NR | DP |
| Alkermes Plc | F | F | QF | ▲ | ▲ | ▲ | ▲ |
| Applegreen Plc | F | F | NR | ▲ | ▲ | ▲ | ▲ |
| Aryzta Ag | F | AQ* | AQ* | DP | NR | NR | NR |
| Cairn Homes Plc | F | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| Datalex Plc | F | F | NR | NR | ▲ | ▲ | ▲ |
| Draper Esprit Plc | F | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| Endo International Plc | F | F | NR | NR | ▲ | ▲ | ▲ |
| Falcon Oil & Gas Ltd | F | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| First Derivatives Plc | F | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| Glenveagh Properties Plc | F | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| Hostelworld Group Plc | F | F | ▲ | ▲ | ▲ | ▲ | ▲ |
| Irish Continental Group Plc | F | F | NR | NR | NR | NR | NR |
| Irish Residential Properties | F | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| Jazz Pharmaceutical Plc | F | F | NR | NR | NR | ▲ | ▲ |
| Kenmare Resources Plc | F | F | NR | NR | NR | NR | NR |
| Malin Corp Plc | F | F | NR | ▲ | ▲ | ▲ | ▲ |
| Paddy Power Betfair Plc | F | F | QF | AQ* | AQ* | NR | AQ* |
| Permanent Tsb Group Holdings | F | F | NR | NR | NR | NR | DP |
| Perrigo Co. | F | F | NR | NR | DP | NR | DP |
| Petroneft Resources Plc | F | F | NR | ▲ | ▲ | ▲ | ▲ |
| Ryanair Holdings Plc | F | F | NR | NR | NR | NR | NR |
| Total Produce Plc | F | F | NR | NR | NR | NR | NR |

Appendix III

Global responding companies with operations in Ireland

| Company | Country | Sector |
|----------------------------------|-------------|-------------------------------|
| A.P. Moller - Maersk | Denmark | Transportation services |
| ABB | Switzerland | Manufacturing |
| Abbott Laboratories | USA | Biotech, Health Care & Pharma |
| AbbVie Inc | USA | Biotech, Health Care & Pharma |
| Abercrombie & Fitch Co. | USA | Retail |
| Allergan Plc | USA | Biotech, Health Care & Pharma |
| Alliance Data Systems | USA | Services |
| Allstate Insurance Company | USA | Services |
| Alps Electric Co., Ltd. | Japan | Manufacturing |
| Amdocs Ltd | Guernsey | Services |
| Amgen, Inc. | USA | Biotech, Health Care & Pharma |
| Analog Devices, Inc. | USA | Manufacturing |
| AptarGroup | USA | Manufacturing |
| Arista Networks | USA | Manufacturing |
| ARM Holdings | UK | Manufacturing |
| Aryzta AG | Switzerland | Food, beverage & agriculture |
| Asics Corporation | Japan | Apparel |
| Assa Abloy | Sweden | Manufacturing |
| Astellas Pharma Inc. | Japan | Biotech, Health Care & Pharma |
| Atos SE | France | Services |
| Aviva Plc | UK | Services |
| AXA Group | France | Services |
| Axel Springer SE | Germany | Services |
| Balfour Beatty | UK | Infrastructure |
| Ball Corporation | USA | Manufacturing |
| Bank of America | USA | Services |
| Bank of Nova Scotia (Scotiabank) | Canada | Services |
| Baxter International Inc. | USA | Biotech, Health Care & Pharma |
| BBA Aviation | UK | Transportation services |
| Bemis Company | USA | Manufacturing |
| Biogen Inc. | USA | Biotech, Health Care & Pharma |
| BlackBerry Limited | Canada | Manufacturing |
| BlackRock | USA | Services |
| Boliden Group | Sweden | Materials |
| BorgWarner | USA | Manufacturing |
| Boston Scientific Corporation | USA | Biotech, Health Care & Pharma |
| Brammer PLC | UK | Manufacturing |
| Brenntag AG | Germany | Services |
| Bristol-Myers Squibb | USA | Biotech, Health Care & Pharma |
| Britvic | UK | Food, beverage & agriculture |
| BT Group | UK | Services |
| Bunzl Plc | UK | Services |
| CA Technologies | USA | Services |

Appendix III

Global responding companies with operations in Ireland

| Company | Country | Sector |
|--|--------------|-------------------------------|
| CAE Inc. | Canada | Manufacturing |
| Cap Gemini | France | Services |
| Cargill | USA | Food, beverage & agriculture |
| Cargotec Corporation | Finland | Manufacturing |
| Celestica Inc. | Canada | Manufacturing |
| Centrica | UK | Power generation |
| Cloetta AB | Sweden | Food, beverage & agriculture |
| Close Brothers Group | UK | Services |
| Cobham | UK | Manufacturing |
| Coca-Cola HBC AG | Switzerland | Food, beverage & agriculture |
| ComfortDelGro Corporation Limited | Singapore | Manufacturing |
| CommScope, Inc. | USA | Manufacturing |
| Computer Sciences Corporation (CSC) | USA | Services |
| Covanta Energy Corporation | USA | Infrastructure |
| Crown Holdings | USA | Manufacturing |
| Daiichi Sankyo Co., Ltd. | Japan | Biotech, Health Care & Pharma |
| Daikin Industries, Ltd. | Japan | Manufacturing |
| Danone | France | Food, beverage & agriculture |
| Danske Bank A/S | Denmark | Services |
| Datatec | South Africa | Services |
| Debenhams | UK | Retail |
| Deere & Company | USA | Manufacturing |
| Dentsu Aegis Network | UK | Services |
| Dentsu Inc. | Japan | Services |
| Deutsche Bank AG | Germany | Services |
| Deutsche Börse AG | Germany | Services |
| Diageo Plc | UK | Food, beverage & agriculture |
| Diasorin SpA | Italy | Biotech, Health Care & Pharma |
| Digital Realty Trust Inc | USA | Services |
| Dixons Carphone | UK | Retail |
| Domino's Pizza Group Plc | UK | Hospitality |
| eBay Inc. | USA | Retail |
| Eli Lilly & Co. | USA | Biotech, Health Care & Pharma |
| Emerson Electric Co. | USA | Manufacturing |
| Enterprise Holdings | USA | Manufacturing |
| Ericsson | Sweden | Manufacturing |
| Expeditors International of Washington | USA | Transportation services |
| FERROVIAL | Spain | Manufacturing |
| Flextronics International | USA | Services |
| Fresenius Medical Care AG & Co. KGaA | Germany | Biotech, Health Care & Pharma |
| FUJIFILM Holdings Corporation | Japan | Manufacturing |
| G4S Plc | UK | Services |
| Gap Inc. | USA | Retail |

| Company | Country | Sector |
|---|----------------|-------------------------------|
| Gas Natural SDG SA | Spain | Power generation |
| General Electric Company | USA | Manufacturing |
| General Mills Inc. | USA | Food, beverage & agriculture |
| GlaxoSmithKline | UK | Biotech, Health Care & Pharma |
| Graphic Packaging | USA | Retail |
| Great-West Lifeco Inc. | Canada | Services |
| GRIFOLS | Spain | Biotech, Health Care & Pharma |
| Hammerson | UK | Services |
| Hays | UK | Services |
| Heineken NV | Netherlands | Food, beverage & agriculture |
| Hertz Global Holdings | USA | Services |
| Hilton Food Group | UK | Services |
| Hiscox | UK | Services |
| HUGO BOSS AG | Germany | Retail |
| Humanscale Corporation | USA | Manufacturing |
| IHS Markit Ltd. | UK | Services |
| IKEA | Sweden | Retail |
| Illinois Tool Works Inc. | USA | Manufacturing |
| Imperial Brands | UK | Food, beverage & agriculture |
| Indorama Ventures Plc | Thailand | Manufacturing |
| Intel Corporation | USA | Manufacturing |
| Inter Pipeline Ltd. | Canada | Fossil fuels |
| International Consolidated Airlines Group, S.A. | Spain | Transportation services |
| Interserve Plc | UK | Services |
| Intesa Sanpaolo S.p.A | Italy | Services |
| Inwido Ab | Sweden | Materials |
| Ipsen | France | Biotech, Health Care & Pharma |
| ISS | Denmark | Services |
| J Sainsbury Plc | UK | Retail |
| Jabil Inc. | USA | Manufacturing |
| Jardine Lloyd Thompson Group Plc (JLT) | UK | Services |
| JBS S/A | Brazil | Food, beverage & agriculture |
| JCDecaux SA. | France | Services |
| JD Sports Fashion | UK | Retail |
| Johnson & Johnson | USA | Biotech, Health Care & Pharma |
| JPMorgan Chase & Co. | USA | Services |
| Just Eat | UK | Services |
| KBC Group | Belgium | Services |
| Kellogg Company | USA | Food, beverage & agriculture |
| Kering | France | Apparel |
| Kubota Corporation | Japan | Manufacturing |
| L Brands, Inc. | USA | Retail |
| La Poste | France | Transportation services |

Appendix III

Global responding companies with operations in Ireland

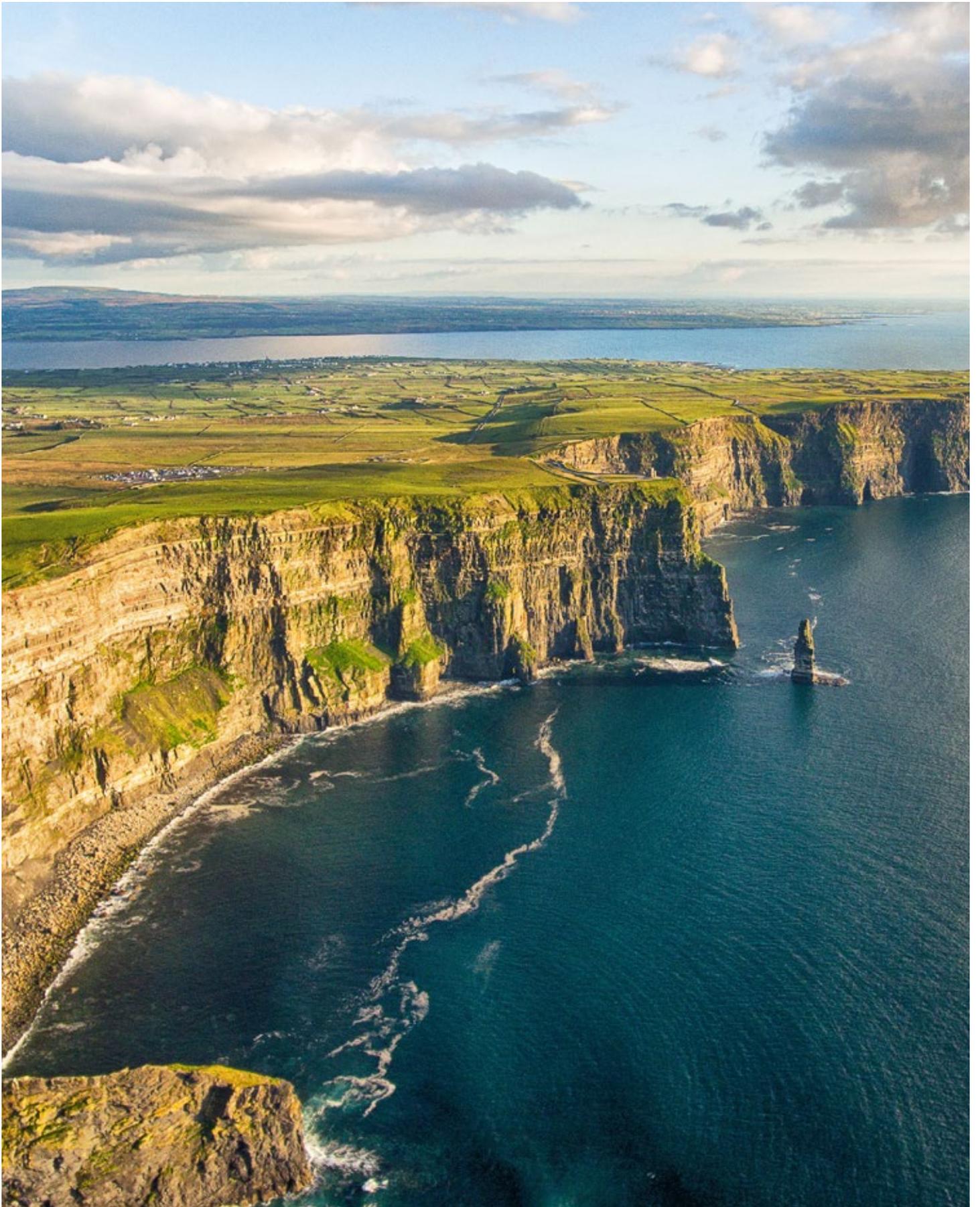
| Company | Country | Sector |
|--------------------------------------|-------------|-------------------------------|
| Lexmark International, Inc. | USA | Services |
| Liberty Global plc | UK | Services |
| Macquarie Group | Australia | Services |
| Marine Harvest Group | Norway | Food, beverage & agriculture |
| Marks and Spencer Group plc | UK | Retail |
| Marsh & McLennan Companies, Inc. | USA | Services |
| MasterCard Incorporated | USA | Services |
| McKesson Corporation | USA | Biotech, Health Care & Pharma |
| Merck & Co., Inc. | USA | Biotech, Health Care & Pharma |
| Merck KGaA | Germany | Manufacturing |
| Mexichem SAB de CV | Mexico | Materials |
| Micro Focus International | UK | Services |
| Mitsubishi Corporation | Japan | Food, beverage & agriculture |
| Mitsui O.S.K. Lines Ltd | Japan | Manufacturing |
| Molex Incorporated | USA | Services |
| Molson Coors Brewing Company | USA | Food, beverage & agriculture |
| N Brown Group Plc | UK | Retail |
| National Bank of Canada | Canada | Services |
| Neopost | France | Services |
| News Corp | USA | Services |
| Nippon Express Co., Ltd. | Japan | Transportation services |
| Novartis | Switzerland | Biotech, Health Care & Pharma |
| Old Mutual Group | UK | Services |
| Panalpina Welttransport Holding AG | Switzerland | Transportation services |
| PAREXEL | USA | Biotech, Health Care & Pharma |
| PepsiCo, Inc. | USA | Food, beverage & agriculture |
| Pernod Ricard | France | Food, beverage & agriculture |
| Pfizer Inc. | USA | Biotech, Health Care & Pharma |
| Power Corporation of Canada | Canada | Services |
| Power Financial Corporation | Canada | Services |
| Procter & Gamble Company | USA | Manufacturing |
| Provident Financial plc | UK | Services |
| Prudential Plc | UK | Services |
| PVH Corp | USA | Apparel |
| Qualcomm Inc. | USA | Manufacturing |
| Quintiles Transnational Holdings Inc | USA | Biotech, Health Care & Pharma |
| Rabobank Group | Netherlands | Services |
| Regeneron Pharmaceuticals, Inc. | USA | Biotech, Health Care & Pharma |
| Robert Walters | UK | Services |
| Roche Holding AG | Switzerland | Biotech, Health Care & Pharma |
| Royal BAM Group nv | Netherlands | Infrastructure |
| Royal Bank of Scotland Group | UK | Services |
| RPS Group Plc | UK | Services |

| Company | Country | Sector |
|---|--------------------|-------------------------------|
| RSA Insurance Group | UK | Services |
| S&P Global | USA | Services |
| Sage Group | UK | Services |
| Saint-Gobain | France | Materials |
| salesforce.com | USA | Services |
| Schibsted ASA | Norway | Retail |
| SDL Plc | UK | Services |
| Securitas AB | Sweden | Services |
| Sherwin-Williams Company | USA | Manufacturing |
| SIG | UK | Manufacturing |
| Skandinaviska Enskilda Banken AB (SEB AB) | Sweden | Services |
| Smiths Group | UK | Manufacturing |
| SNC-Lavalin Group Inc. | Canada | Infrastructure |
| Societe Generale | France | Services |
| Spirax-Sarco Engineering | UK | Manufacturing |
| SSE | UK | Power generation |
| Standard Life Aberdeen | UK | Services |
| Sthree Plc | UK | Services |
| Stryker Corporation | USA | Biotech, Health Care & Pharma |
| Sumitomo Mitsui Financial Group | Japan | Services |
| Sun Life Financial Inc. | Canada | Services |
| Superdry | UK | Retail |
| SuperGroup | UK | Retail |
| Symantec Corporation | USA | Services |
| Takeda Pharmaceutical Company Limited | Japan | Biotech, Health Care & Pharma |
| Ted Baker Plc | UK | Retail |
| Tesco | UK | Retail |
| Teva Pharmaceutical Industries Ltd | Israel | Biotech, Health Care & Pharma |
| The Coca-Cola Company | USA | Food, beverage & agriculture |
| THK Co., Ltd. | Japan | Manufacturing |
| TJX Companies, Inc. | USA | Retail |
| Twenty-First Century Fox | USA | Retail |
| UCB SA | Belgium | Biotech, Health Care & Pharma |
| Unilever plc | UK | Manufacturing |
| United Co RUSAL Plc | Russian Federation | Materials |
| Vedanta Resources Plc | UK | Materials |
| Verisk Analytics Inc | USA | Services |
| Veritas Technologies LLC | USA | Services |
| Verizon Communications Inc. | USA | Services |
| Vestas Wind Systems A/S | Denmark | Manufacturing |
| VF Corporation | USA | Apparel |
| Village Roadshow | Australia | Retail |

Appendix III

Global responding companies with operations in Ireland

| Company | Country | Sector |
|-------------------------------|-------------|-------------------------------|
| Visa | USA | Services |
| VMware, Inc | USA | Services |
| Vodafone Group | UK | Services |
| Waters Corporation | USA | Biotech, Health Care & Pharma |
| WestRock Company | USA | Manufacturing |
| Whitbread | UK | Hospitality |
| Wincanton Plc | UK | Manufacturing |
| Wood Plc | UK | Fossil fuels |
| WPP Group | UK | Services |
| Wyndham Worldwide Corporation | USA | Hospitality |
| Xilinx Inc | USA | Manufacturing |
| Xylem Inc | USA | Manufacturing |
| Zalando SE | Germany | Retail |
| Zimmer Biomet Holdings, Inc. | USA | Biotech, Health Care & Pharma |
| Zurich Insurance Group | Switzerland | Services |



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