# Climate Wars – Rise of the Sea Levels

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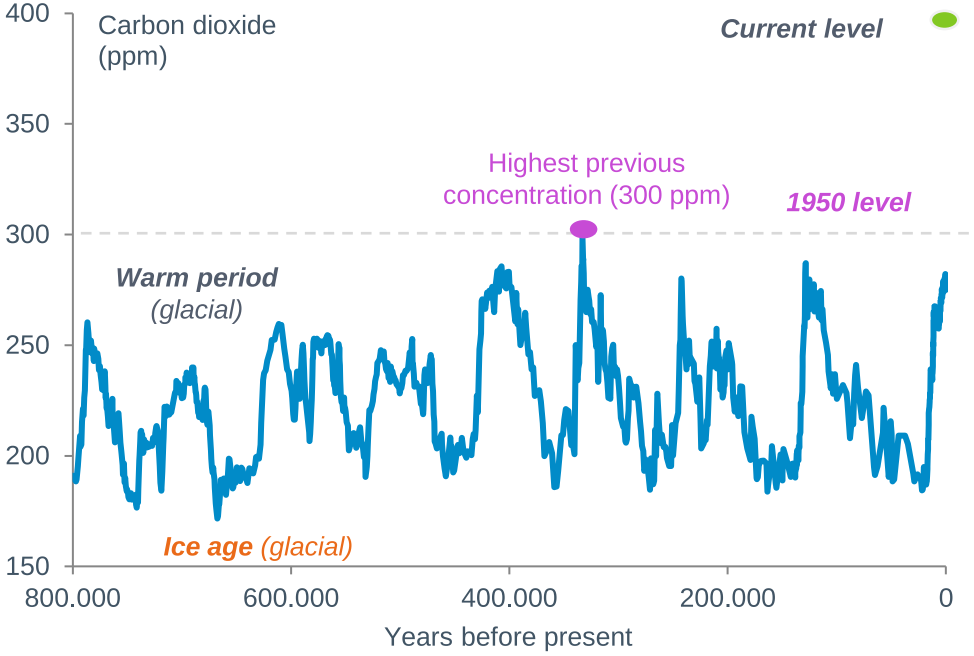
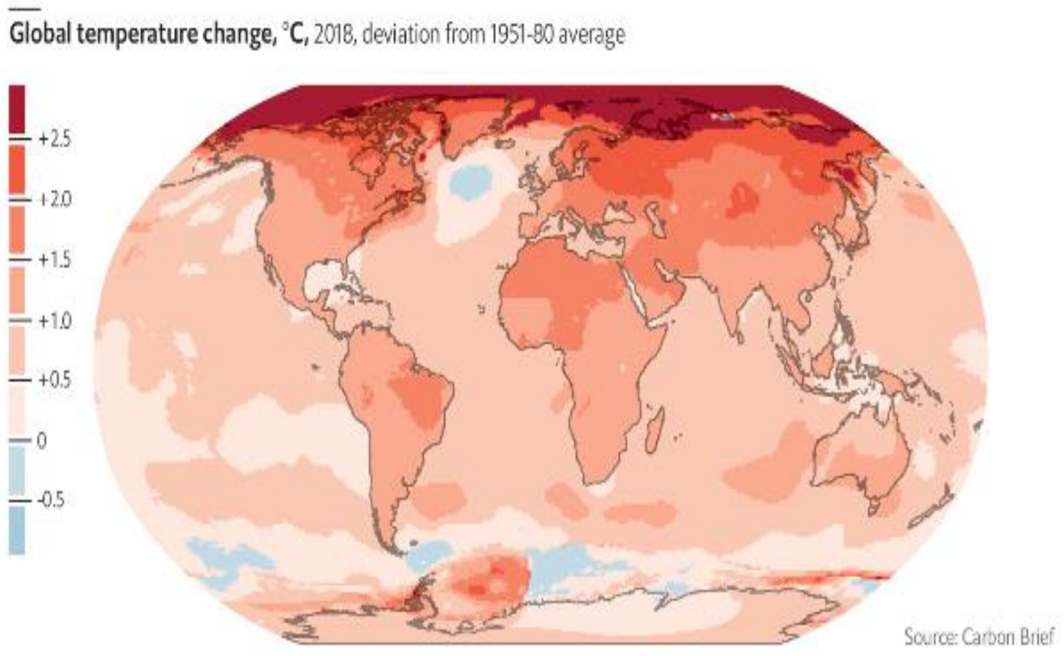
# Climate Change Overview

# The Science is Deafening

## Record breaking atmospheric $CO_2$ temperatures




- CO2 levels highest point in at least the past 800,000 years.
- In February 2020, atmospheric CO2 reached 416.08 PPM, estimated to cause over 2oC warming.
- If PPM continue to rise as predicted, exceeding 500 by 2030, the likely scenario is a minimum of 3oC.

- 19 of the 20 warmest years since 1951 have taken place since 2001.
- Most significant rise is seen in the artic circle.

Source: Climate.nasa.gov, Carbon Brief, 2020.

# The consequences of our changing climate...

## Broad ESG risks and the difference between 1.5ºC and 2ºC

**Food Systems**

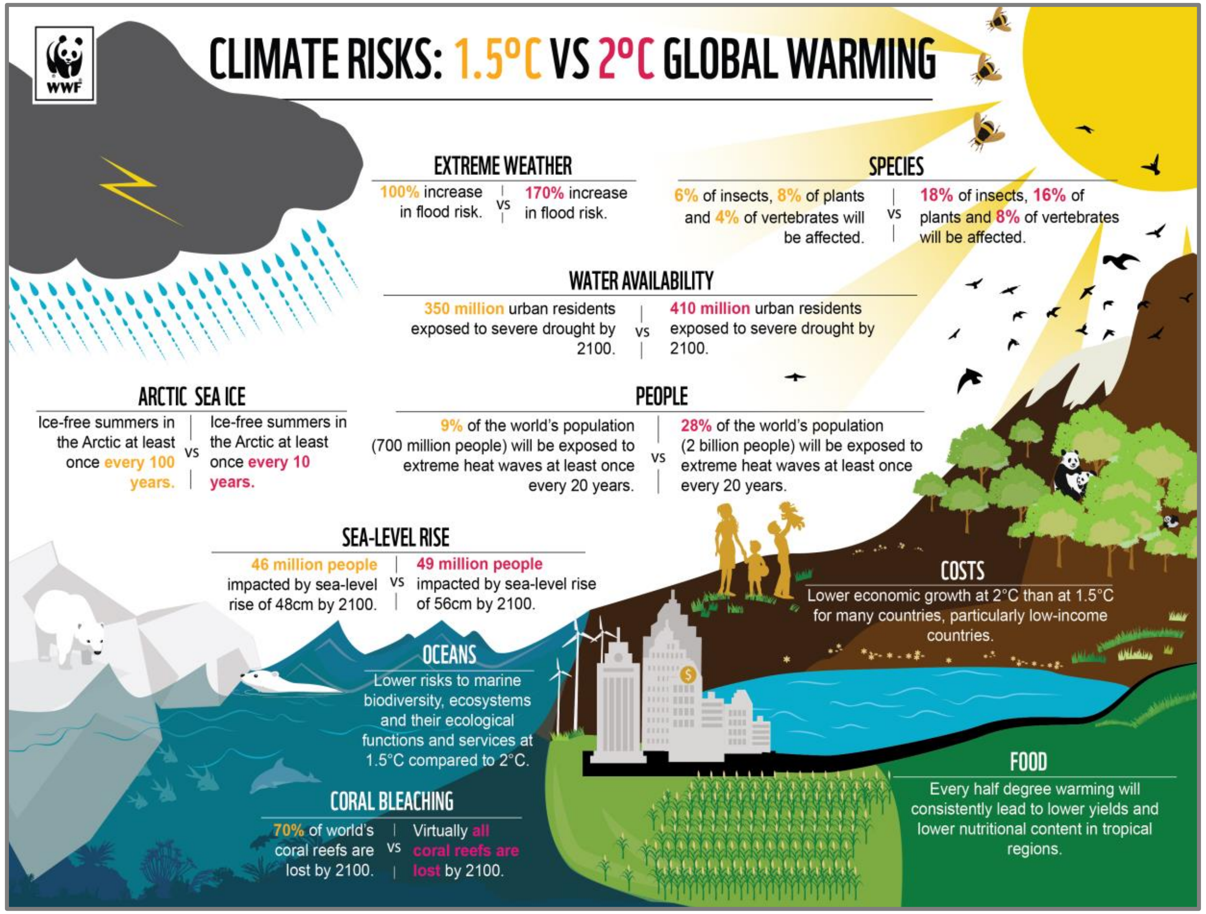
**Water Stress**

**Heatwaves**

**Changing disease patterns**

**Climate Refugees**

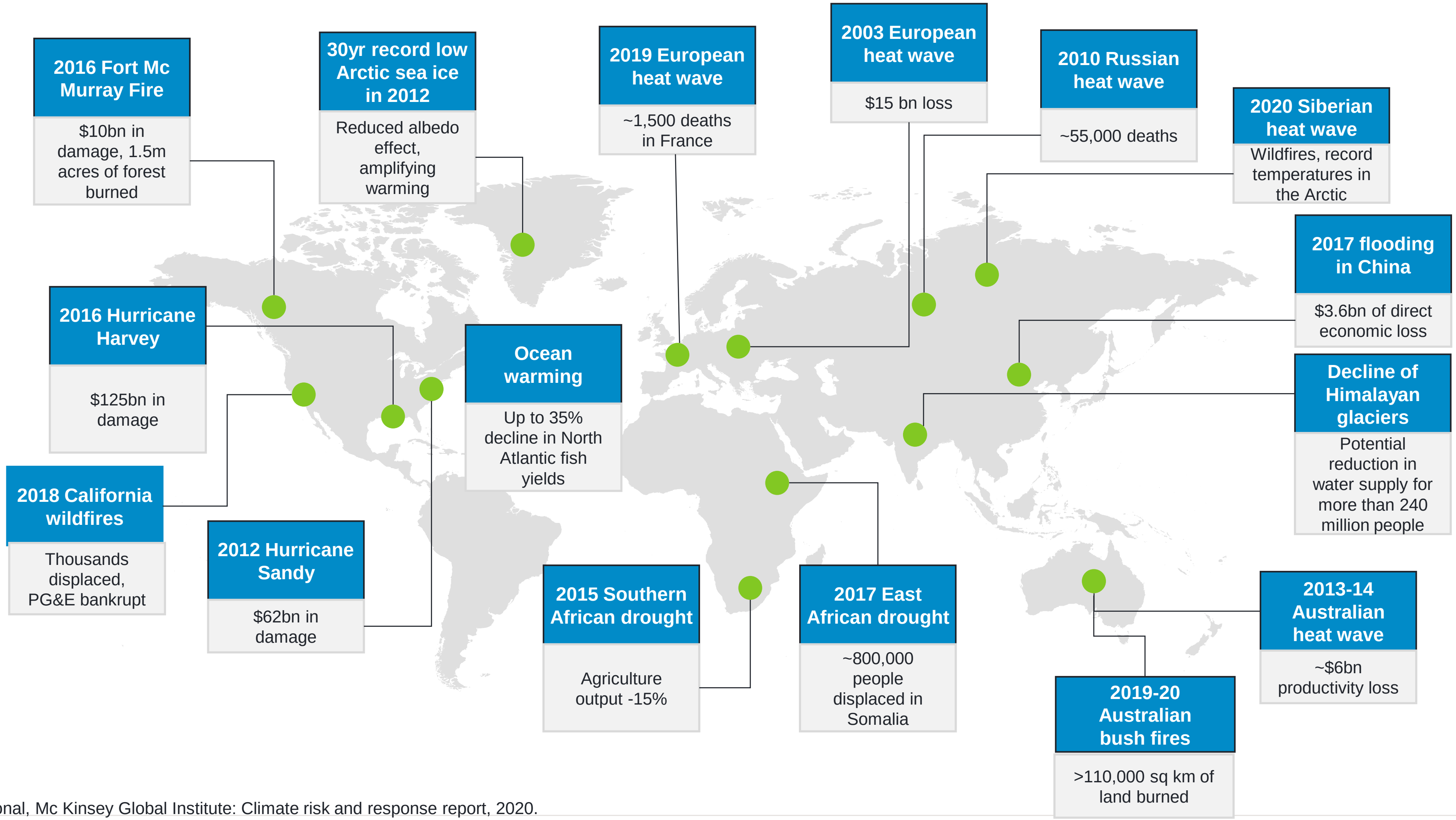
**Destructive Weather Events**




Source: Business Insider, Goldman Sachs Global Markets Institute, FIL

# Climate change is not a future problem

## Socioeconomic impact of climate change events




Source: Fidelity International, Mc Kinsey Global Institute: Climate risk and response report, 2020.





Fidelity INTERNATIONAL

# Climate Change Landscape

# Regulatory and Political Initiatives

## What is being done?

| Location | Initiative | Description | Owner | Requirement | Status |
|---|---|---|---|---|---|
| Global | Task Force on Climate-related Financial Disclosure (TCFD) | The TCFD have developed voluntary, consistent climate-related financial risk disclosures for use by companies in providing information to investors and other stakeholders. | Self governance | Voluntary | In place |
| | Portfolio Decarbonization Coalition (PDC) | Coalition of investors committing to decarbonizing their investment portfolios | Self governance | Voluntary | In place |
| | Montréal Pledge | Allows investors to formalize commitment to the PDC, mobilizing investors to measure, disclose and reduce their carbon footprints. | Self governance | Voluntary | In place |
| | ISO 14097 | Framework and principles for assessing and reporting investments and financing activities linked to climate change. | Self governance | Voluntary | Expected |
| | The Paris Agreement | Global commitment to achieve “well-below” 2 degrees of warming, established at COP 21. | Self governance | Voluntary | In place |
| | Asset Owners Disclosure Project (AODP) | Ranking of climate-related financial disclosures of world’s largest pension funds, insurers, sovereign wealth funds and endowments. | Civil Society | Voluntary | In place |
| | Climate Action 100+ | A five-year initiative led by investors to engage with the world’s largest corporate GHG emitters to improve governance on climate change, curb emissions and strengthen climate-related financial disclosures | Self governance | Voluntary | In place |
| | The Investor Agenda | The Investor Agenda has been developed for the global investor community to accelerate and scale up the actions that are critical to tackling climate change and achieving the goals of the Paris Agreement. | Self governance | Voluntary | In place |
| | UN Principles of Responsible Investing (UN PRI) | Set of six principles for investors to follow regarding approach to Responsible Investing. Almost 2,500 signatories with over $80tn AUM. | UN | Voluntary | In place |
| Europe (EU) | Institutions for Occupational Retirement Provision (IORP) II | EU pensions directive with specific content on climate change requirements. | Regulator | Mandatory | In place |
| | European Commission Action Plan:<br>Green Deal and Taxonomy | A body of experts from civil society, the finance sector and academia advising the European Commission on how to better integrate sustainability considerations in the EU's financial policy framework | Regulator | Mandatory | Expected |
| France | Article 173 of the Energy Transition Law | Legislation on mandatory carbon disclosure requirements for listed companies and carbon reporting for institutional investors, defined as asset owners and investment managers. | Regulator | Mandatory | In place |
| California | Climate Risk Carbon Initiative | Initiative to evaluate the degree to which California investors are impacted by effects of climate change on the economy. | Regulator | Mandatory | In place |
| Sweden | National Pension (AP) funds | Co-ordination of carbon footprint reporting for investment portfolios within the AP funds. | Self governance | Voluntary | In place |
| Switzerland | Ministry of the Environment (FOEN) | Invitation from the FOEN to Swiss pension funds and insurers to test the climate compatibility of portfolios. | Regulator | Voluntary | Expected |
| Netherlands | Platform Carbon Accounting Financials (PCAF) | Collaboration of 12 Dutch financial institutions to develop a carbon accounting methodology for financed emissions. | Self governance | Voluntary | Expected |
| UK | Green Finance Taskforce (GFT) | This Taskforce will work with industry to accelerate the growth of green finance, and help the UK government to deliver the investment required to meet the UK’s carbon reduction targets. | Regulator | TBD | In place |
| Canada | CSA Staff Notice 51-354 Report on Climate change-related Disclosure Project | The CSA has developed new guidance and initiatives to educate issuers about the disclosure of climate change-related risks, opportunities and financial impacts. It also intends to consider new disclosure requirements regarding non-venture issuers’ corporate governance practices in relation to material business risks. | Regulator | Voluntary | In place |
| China | Carbon emissions data mandated by 2020 for listed companies in China | Seven government agencies have collectively issued guidelines stating China’s intention to develop a ‘green financial system’. The roadmap will have three stages, finishing in 2020 whereby all listed companies will be required to disclose . | Regulator | Mandatory | Expected |
| Germany | Bundesbank: The Role of Central Banks | Conference and call for papers on the role of central banks in scaling up green finance | Regulator | TBD | Expected |
| Australia | Australian Prudential Regulatory Authority (APRA) climate disclosure action | Australia’s financial regulator has stepped-up its warning to banks, lenders and insurers, saying climate change is already impacting the global economy, and flagged the possibility of “regulatory action”. | Regulator | TBC | Expected |

Source: Fidelity International, 2020

# EU Sustainable Finance Legislation

Tools for investors, companies and issuers to transition to an economy consistent with the EU's sustainability commitments

**Sustainable Finance Disclosure Regulation**

*Entity and product level disclosure regime*

Fund classification system
Benchmark changes
Remuneration policies
Data availability
March 2021 implementation

**The EU Taxonomy on Sustainable Activities**

*Regulatory definition of "environmentally sustainable" activities*

Enhanced disclosure for sustainable funds
Data availability
Client-directed thresholds
December 2021 implementation

Prioritized as COVID recovery legislation

Source: Fidelity International, 2020

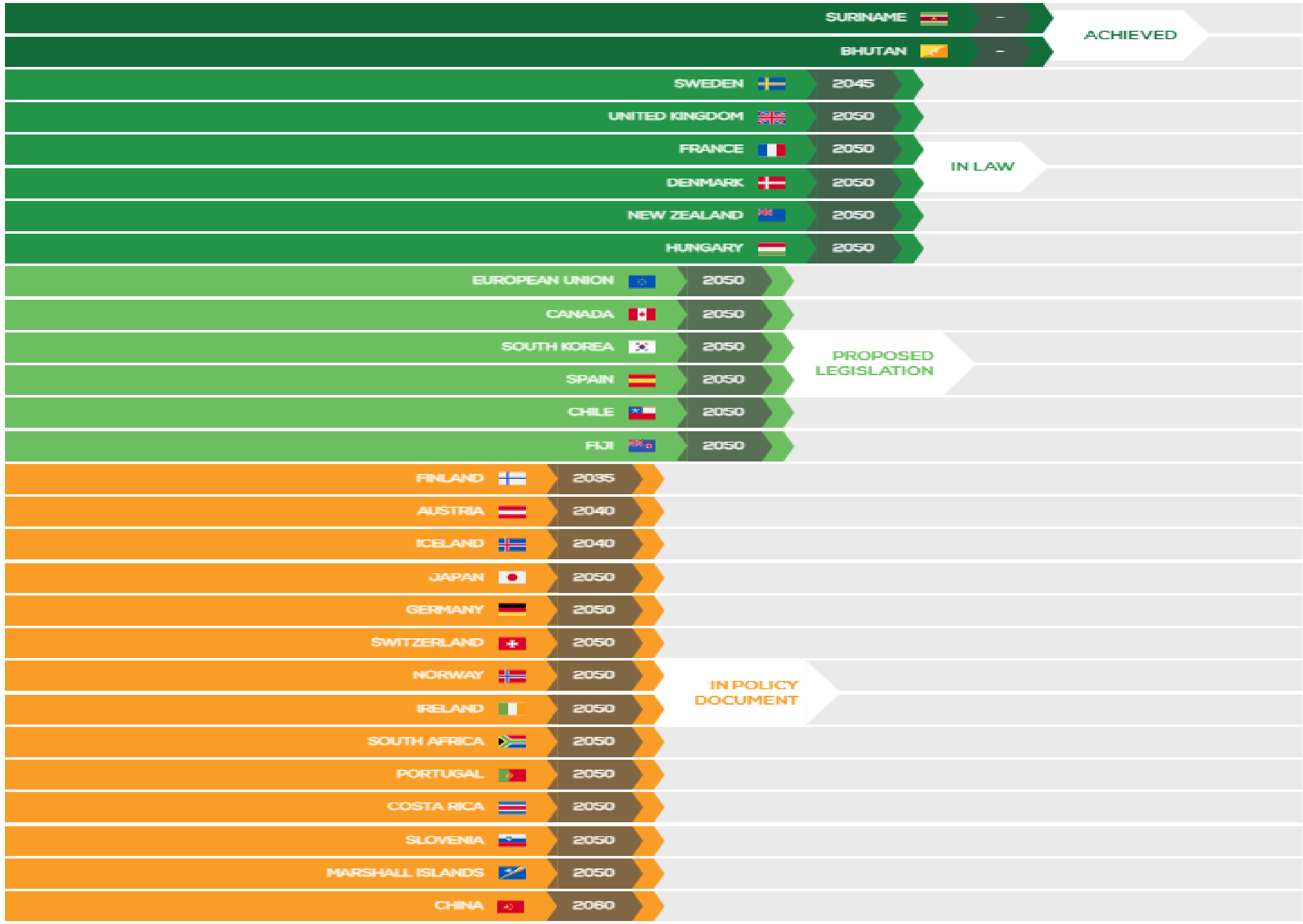
# Emerging Net-zero commitments around the world

## Why are Politicians taking action now, over 5 years from the Paris Conference?

- Imminence of COP26
- Increased Societal concerns – Student protests, Extinction Rebellion, etc
- The IPCC report in October 2018 - Its key finding is that meeting a 1.5ºC target is possible but would require "deep emissions reductions" and "rapid, far-reaching and unprecedented changes in all aspects of society.“
- Rise of ‘Green’ parties in some parts of the world is forcing mainstream politicians to take notice

Source: Fidelity International, 2020

### Individual country commitments




Source: Energy & Climate Intelligence Unit, 2021

# Regulatory and Political Initiatives

## Task Force on Climate-Related Financial Disclosures

TCFD TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

### Background

- Established by the Financial Stability Board (FSB) in 2017, consists of 32 members dedicated to develop a voluntary disclosure framework that improves the ease of both producing and using climate-related financial disclosures.
- Why should investors care?
  - Better informed investment decision
  - Regulation and best practices commitment
  - Client commitment

### Limitations & Challenges

- Some countries will lean towards regulations and others towards softer approaches
- Availability of data and consistent methodology
- Scenario analysis is challenging to report and quantify
- Definition of timeframe (short, medium & long term) is down to organisations

### TCFD Categories – 11 Recommendations in total


Governance: The organisation's governance around climate-related risks and opportunities (*2 recommendations*)

Strategy: The actual and potential impacts of climate-related risks and opportunities on the organisation's businesses, strategy and financial planning (*3 recommendations*)

Risk Management: The processes used by the organisation to identify, assess, and manage climate- related risks (*3 recommendations*)

Metrics and Targets: The metrics and targets used to assess and manage relevant climate-related risks and opportunities (*3 recommendations*)

### Global uptake *(selected examples)*

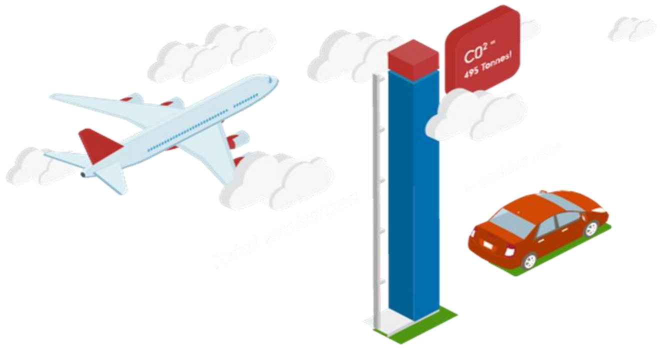
- In February 2020, the UK Government moved to require large pension schemes to report in line with the TCFD
- TCFD-based reporting mandatory for UN PRI signatories from 2020
- California legislation led CalPERS to aligning its reporting with the TCFD
- As of June 2019, 785 companies committed to supporting the TCFD (including Fidelity)
- 36 central banks encourage TCFD reporting
- 5 governments support TCFD (UK, Belgium, Canada, France, Sweden)

Source: TCFD. https://www.fsb-tcfd.org/publications/final-recommendations-report/

# Fidelity's Approach

# Net Zero Commitment

## Operations and investment management



## Targeting carbon neutrality

**Organisational Goal**:

- It is Fidelity International's aim to conduct our current and future business operations in a sustainable manner which helps create a better future for the environment.
- GHG Emissions is our most significant impact from our business operations and we are aware of the wider societal need to support the goals set out by the Paris Agreement capping global emissions to "well-below" 2°C.

**We are committed to achieve net zero emissions on FIL's operational emissions by 2040***

In order to achieve this our focus will be on reduction of emissions through operational changes and investment in operational efficiencies, on-site renewals and purchasing of renewable energy whilst offsetting those we are unable to eradicate.

**The scope for the emission target includes all scope 1, 2 and 3 we have direct control over.*

**Net Zero Asset Manager**

In December 2020, Fidelity International became one of the founding members of the Net Zero Asset Managers Initiative, coordinated by the Institutional Investors Group on Climate Change (IIGCC).

This commitment puts Fidelity on a path towards Net Zero by 2050 and will be working on establishing a comprehensive plan to achieve this which will be launched in advance of COP26 in November 2021.

# Four approaches to ESG integration

## Fidelity Proprietary Rating


### Why our own ratings?

Does not solely rely on public disclosures

More forward looking

Fundamental analysis

Allows fuller coverage

### How we make them

Collaborative input across 180 equity and fixed income analysts

Rated relative to peer group on a standardized scale

Forward looking assessment of a company's ESG trajectory

Quantify impact on valuation

| Ranked A – E | 99 Sub-sectors | 5 – 8 KPIs each |
|---|---|---|

### Climate change

- Climate risks are a core part of the rating for all sub-sectors
- These are the most material climate risks to the respective sector
- For example, for utilities it is setting GHG reduction targets whilst for banks it is their fossil-lending policy
- The KPIs are tagged and therefore a climate assessment can be conducted across all holdings

Source: Fidelity International, 2020

# Four approaches to ESG integration

## Sustainable Family investment framework


### Integration

- ≥70% fund assets invested in sustainable issuers (based on MSCI Sustainability ratings adjusted for regional focus[1])
- Remaining ≥30% must be in issuers demonstrating improving characteristics[2]
- Stock selection decisions leveraging Fidelity's proprietary integrated ESG & fundamental research

### Engagement

- Engagement with all holdings falling into 'improving' category
- Long-term investment horizon, detailed fundamental analysis and established company relationships create opportunities for meaningful engagement with portfolio holdings

### Exclusion

- Exclusion categories; Violators of UN Global Compact, Tobacco, Weapons, and Thermal Coal
- Strategy specific exclusions may apply[3]

### Focused

Actively managed diversified strategies with full integration of sustainability factors

### Thematic

Investing in powerful economic growth themes within a sustainable framework

### Enhanced Research (ETF)

Index-like risk characteristics with an enhanced level of sustainability

Source: Fidelity International, December 2020. [1]≥BBB for DM, ≥BB for EM [2]Determined by Fidelity research. Does not apply to ETF strategies [3]See strategy specific slides

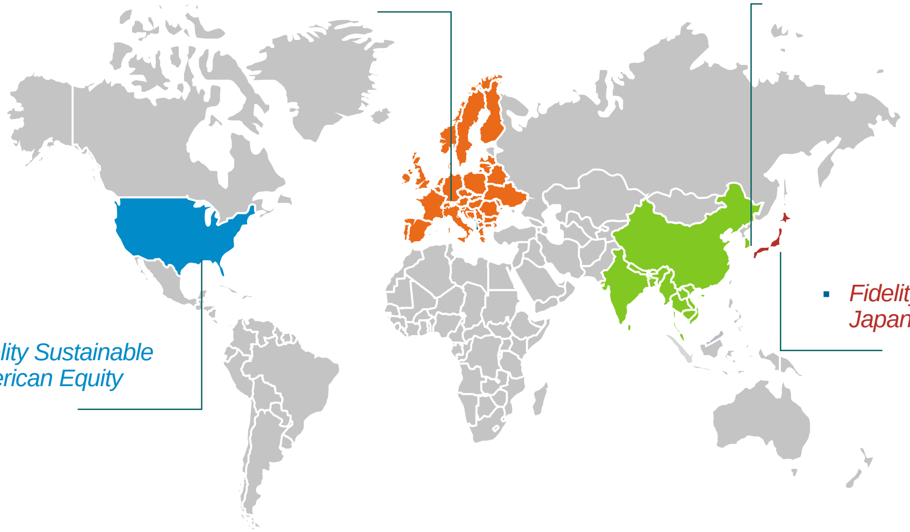
# Four approaches to ESG integration

## Sustainable Family strategies – focused, thematic & enhanced research


### Focused

- Fidelity Sustainable Eurozone Equity
- Fidelity Sustainable Europe ex-UK Equity
- *Fidelity Sustainable European Equity*
- Fidelity Sustainable European Smaller Companies

- Fidelity Sustainable Asia Equity Fund



- *Fidelity Sustainable Japan Equity Fund*

- *Fidelity Sustainable American Equity*

- Fidelity Sustainable Global Equity
- Fidelity Sustainable Global Emerging Markets Equity
- Fidelity Sustainable Strategic Bond

### Thematic

- Fidelity Sustainable Water & Waste
- Fidelity Sustainable Reduced Carbon Bond
- Fidelity Sustainable Climate Solutions
- Fidelity Sustainable Future Connectivity
- Fidelity Sustainable Consumer Brands

### Enhanced Research (ETF)

- Fidelity Sustainable Research Enhanced US Equity
- Fidelity Sustainable Research Enhanced Global Equity
- Fidelity Sustainable Research Enhanced Europe Equity
- Fidelity Sustainable Research Enhanced EM Equity
- Fidelity Sustainable Research Enhanced Japan Equity
- Fidelity Sustainable Research Enhanced Pacific ex-Japan Equity
- Fidelity Sustainable Global Corporate Bond Multifactor
- Fidelity Sustainable USD EM Bond

Source: Fidelity International, 2020.

# Four approaches to ESG integration

## Engagement and Voting


680+
Companies actively engaged

4,200+
Shareholder meetings voted at

16,000
Meetings conducted with clients

### Active ownership approach

- **Company Meetings and Formal Correspondence**
- **Shareholder Resolutions**
- **Collaborative Engagement**
- **Proxy Voting**
- **Public Policy**

### Live engagement themes

- **Financing climate change**
- **Animal protein**
- Supply chain sustainability
- **Responsible palm oil**
- **Corporate sustainability reporting**

Source: Fidelity International, 2020

# Four approaches to ESG integration

## Collaboration

SECURITIES AND FUTURES COMMISSION 證券及期貨事務監察委員會

asifma Growing Asia's Markets

THE INVESTMENT ASSOCIATION

Climate Action 100+

FAIRR FARM ANIMAL INVESTMENT RISK & RETURN A COLLER INITIATIVE

ICGN International Corporate Governance Network

ESG LUXFLAG Label

GRESB

CDP

ABI

IIGCC Institutional Investors Group on Climate Change

WORLD ECONOMIC FORUM

Climate Bonds Initiative

riaa Responsible Investment Association Australasia

World Benchmarking Alliance

HKIFA 香港投資基金公會

PRI Principles for Responsible Investment

Global Corporate Governance Forum

SASB SUSTAINABILITY ACCOUNTING STANDARDS BOARD

SUSTAINABLE INVESTMENT FORUM

UKSIF UK Sustainable Investment and Finance Association

HKGFA 香港綠色金融協會 Hong Kong Green Finance Association

ACGA

ASIA INVESTOR GROUP ON CLIMATE CHANGE

TCFD TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

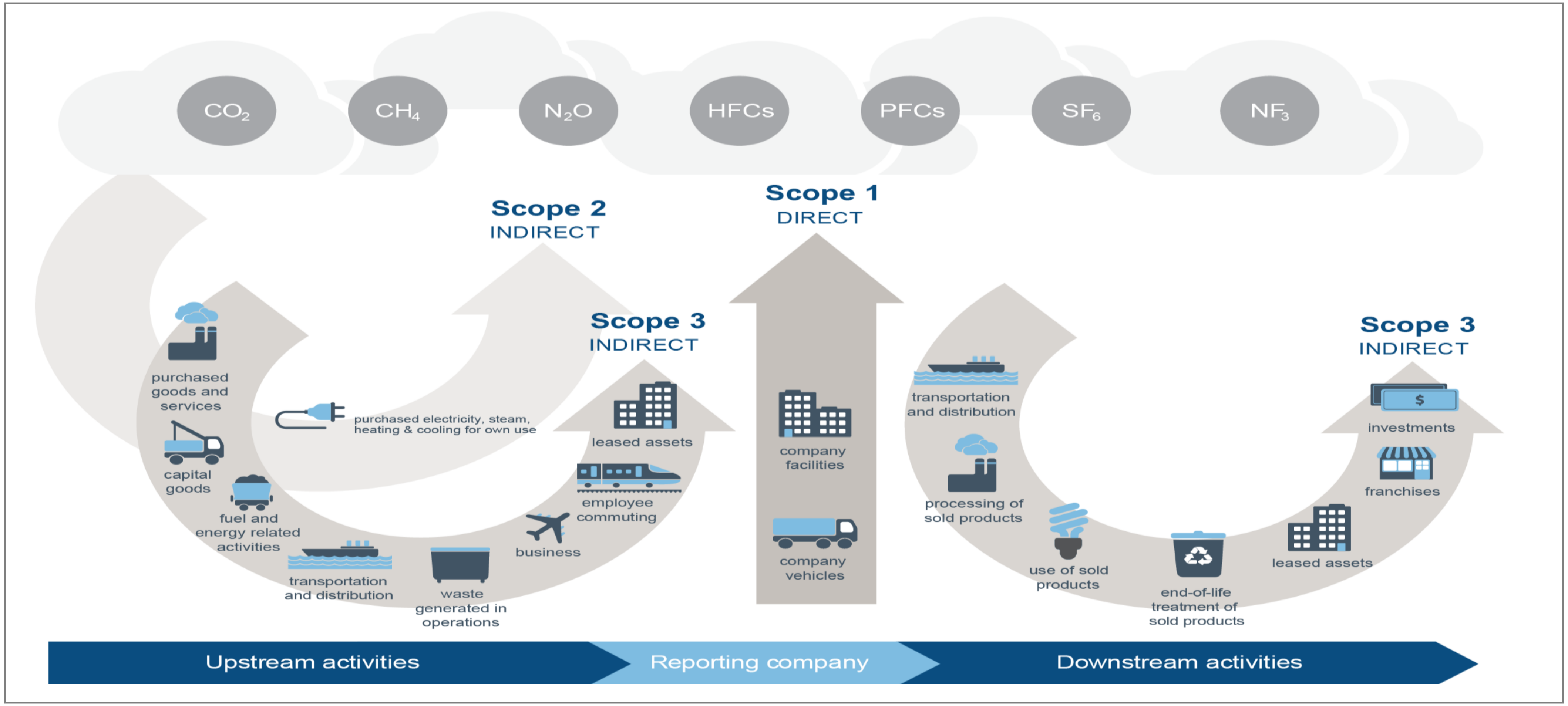
Thinking Ahead Institute

Source: Fidelity International, 2020

# Understanding Portfolio Climate Change Exposure

# Measuring Climate Change

## Understanding Scope 1, 2 and 3 emissions




Source: Fidelity International, The Greenhouse Gas Protocol, 2019

# Measuring Climate Change

## Portfolio carbon footprinting

| Basic carbon footprinting | Emission intensity (revenue) | Emission intensity (invested) | Emission intensity (revenue) |
|---|---|---|---|
| Investor owns 1% of Company X and is indirectly accountable for 1% of Company X's Scope 1 & 2 carbon emissions.<br><br>If Company X emissions are 100 $tCO_2e$, investor is accountable for 1 $tCO_2e$. | Sum (Apportioned Emissions) / Sum (Apportioned Revenue)<br>———<br>Sum (Company Carbon-to-Revenue Intensity x Apportioned Revenue Weight)<br>———<br>$tCO_2e$ per million revenue<br>———<br>Reflects the portfolio's carbon efficiency in relation to generating revenue | Sum (Apportioned Emissions) / Sum (Value of Holdings)<br>———<br>Sum (Company Carbon-to-Value Intensity x VOH Weight)<br>———<br>$tCO_2e$ per million invested<br>———<br>Reflects the portfolio's carbon efficiency in relation to generating shareholder value | Sum (Company Carbon-to-Revenue Intensity x VOH Weight)<br>———<br>$tCO_2e$ per million revenue<br>———<br>Reflects the average carbon-to-revenue efficiency of the companies held in the portfolio |

This metric is recommended by the TCFD and adopted by the Swedish Investment Fund Association.

By using the sum of portfolio weights, it can be applied across asset classes and is a straightforward calculation.

Source: Trucost – S&P Down Jones Indices, 2020

# Measuring Climate Change

## Climate risk

### Physical Risk

Rising temperature levels, even if limited to 2ºC, will result in changes of the climate system resulting in significant physical risks.

Physical risks can be classified into long term weather changes and extreme weather events such as storms, floods, or droughts.

Companies' exposure to these two types of physical risk depends on two factors: Sector and Geography.

### Transition Risk

A decarbonized world needs to address the demand (e.g. utilities burning fossil fuels) and supply sides (e.g. fossil reserves) of future emissions.

For utilities, it matters whether the future power generated and power generation stem from renewable (green) or fossil (brown) sources.

For fossil reserve owning companies, potential future GHG emissions might indicate stranded asset risk.

### Scenario Analysis

Scenario analysis is an assessment of an investment portfolio's alignment with a chosen future scenario.

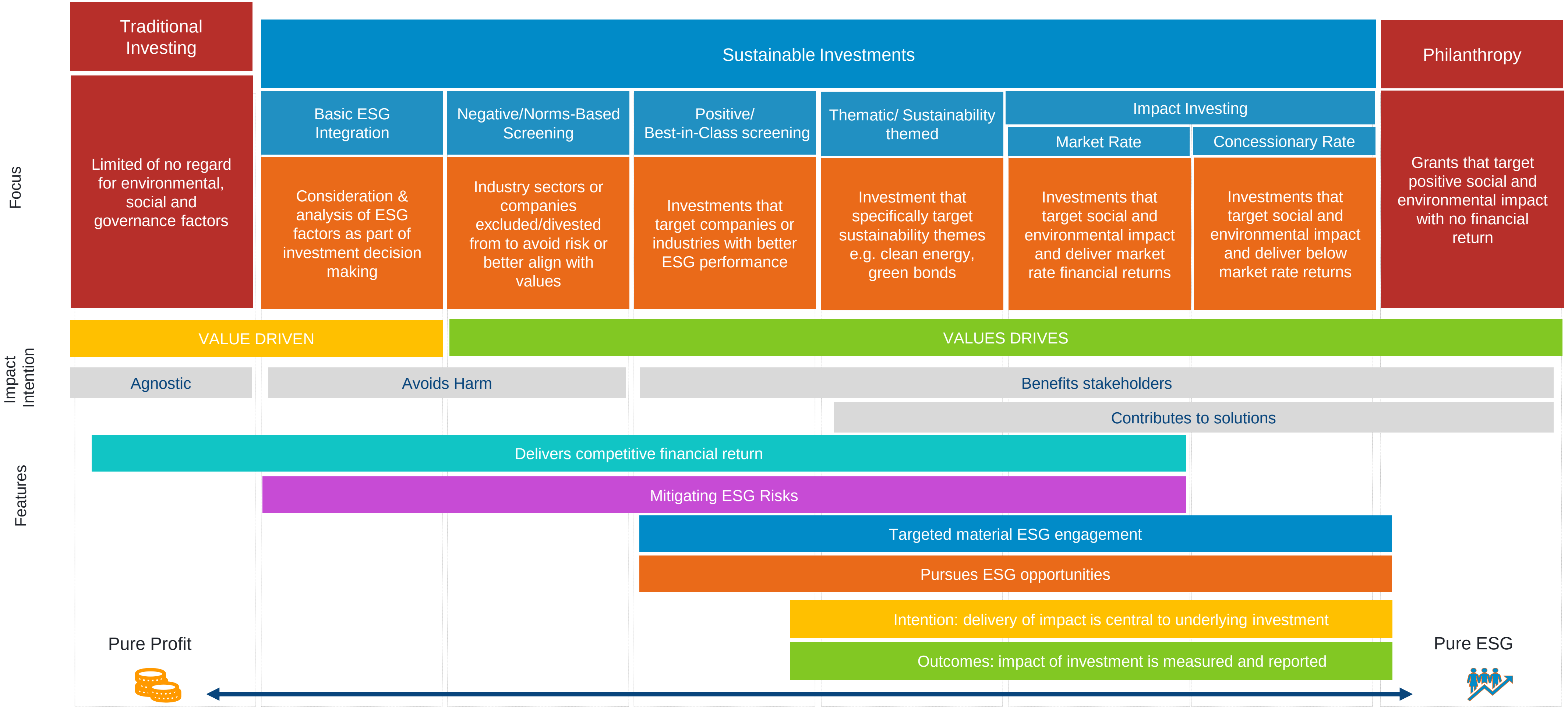
The climate scenario environment alignment compares current (measured) and future (approximated) portfolio GHG emissions with carbon budgets for multiple scenarios, often including 1.5ºC, 2ºC and 4ºC 2050.

Source: Fidelity International, 2020

# Climate change in investing strategies

# The sustainable investment spectrum

https://responsibleinvestment.org/

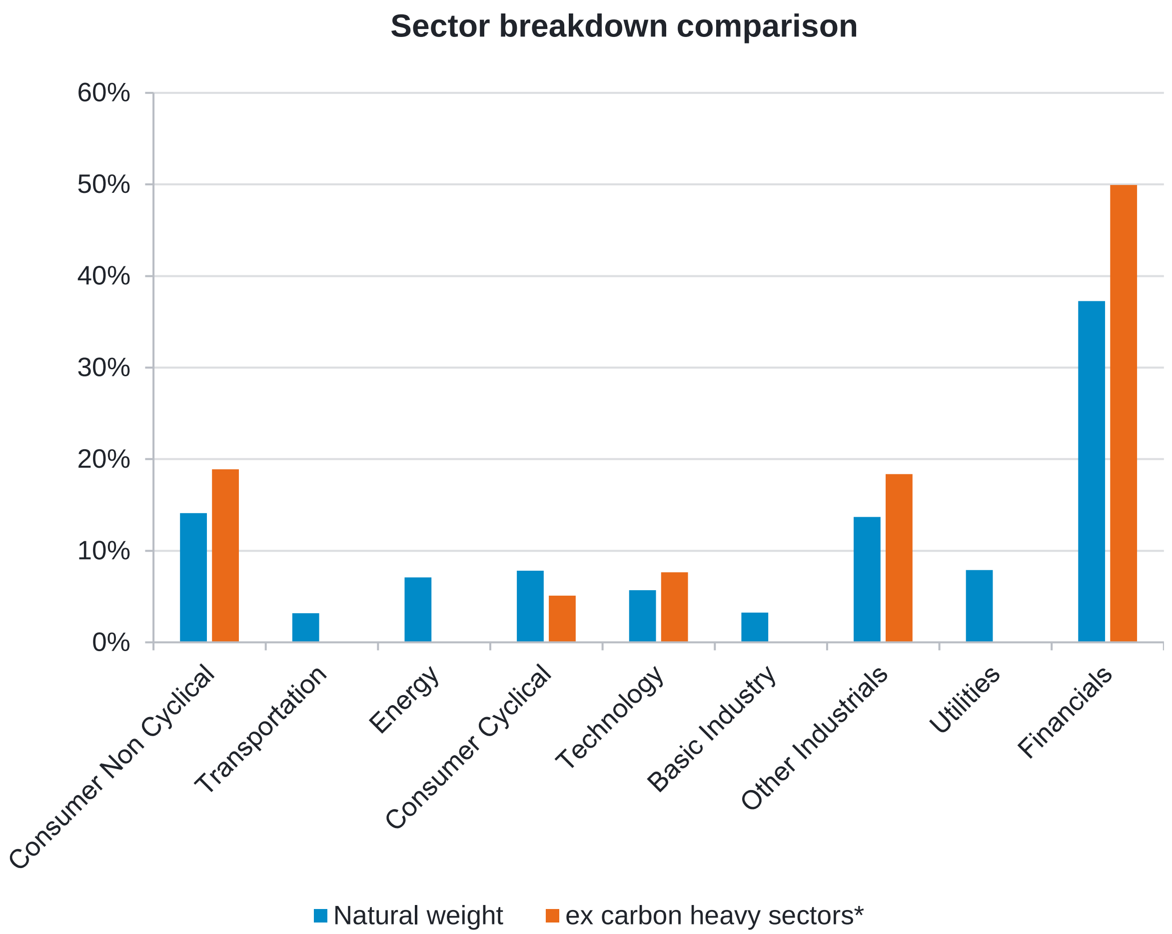



Source: Fidelity International, responsibleinvestment.org, 2020

# Is divestment the solution?

## The Climate Crisis is a complex problem that cannot be solved with simplistic solutions

- Overly simplistic divestment strategies have significant drawbacks:
- Exclusion has a doubtful impact on carbon emissions:
    - Focus on scope 1&2 and ignores scope 3
    - Hands the keys to investors without a climate change mandate.
- Reduced diversification: Carbon intensive sectors at c1/3 of global credit benchmarks. Exclusion leads to concentrations in sectors with indirect emissions
- Reduced alpha opportunities: Smaller opportunity set and there is evidence that reformers and transition stories drive alpha
- Fossil fuel companies can be drivers of change (Ørsted, Shell) with suitable scrutiny.
- **Engagement is superior to divestment**



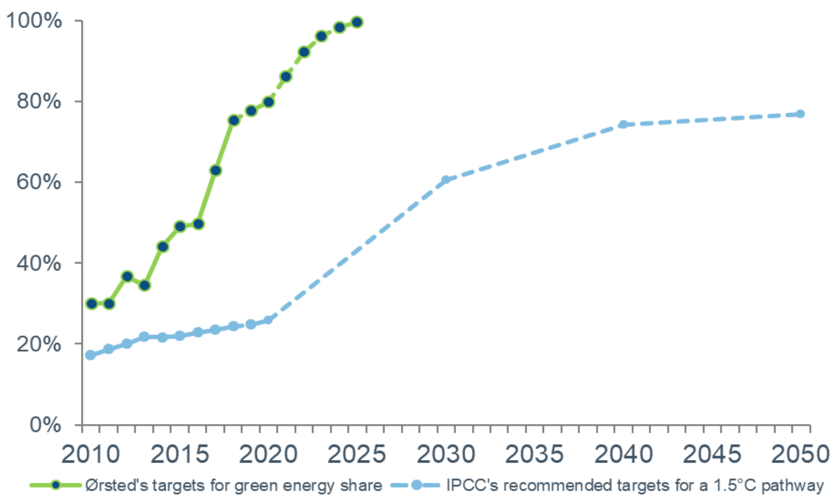

Source: Fidelity International, Bloomberg Barclays Global Credit indices, December 2019. * Excluding automotive, basic industry, energy, transportation and utility sectors.

# Can "Transitions stories" be credible?

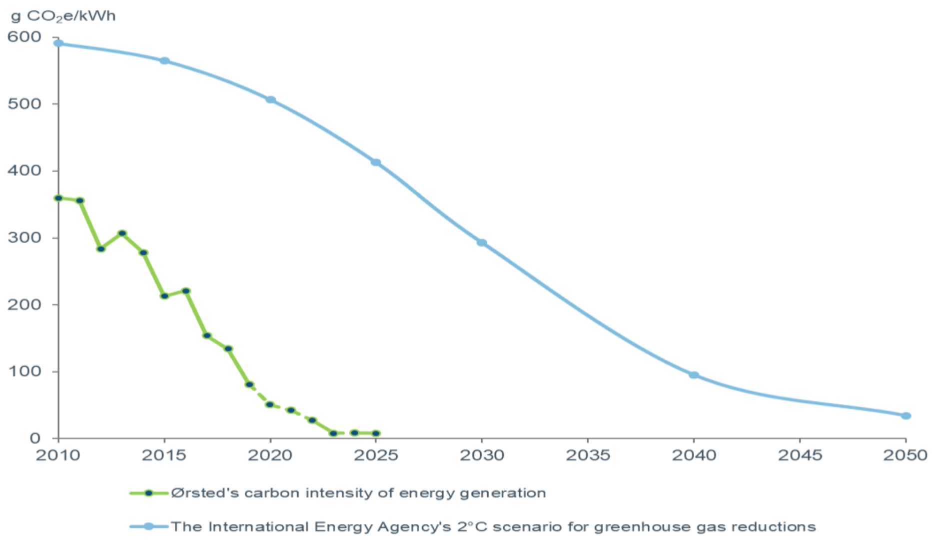
## Transition Case Study: *Ørsted*

- Ørsted (formerly Danish Oil Natural Gas [DONG] Energy) is a Danish renewable focused energy company
- In the last decade, Ørsted has reduced its use of coal by 73% and more than halved its $CO_2$ emissions
- Ørsted plans to be completely coal-free and will have reduced its $CO_2$ emissions by 96% by 2023 through conversion of coal fired power stations in Denmark to sustainable biomass

**Green share of generation (%)**




**Carbon emissions (g $CO_2$e / kWh)**




Reference to specific securities should not be construed as a recommendation to buy or sell these securities and is included for the purposes of illustration only.

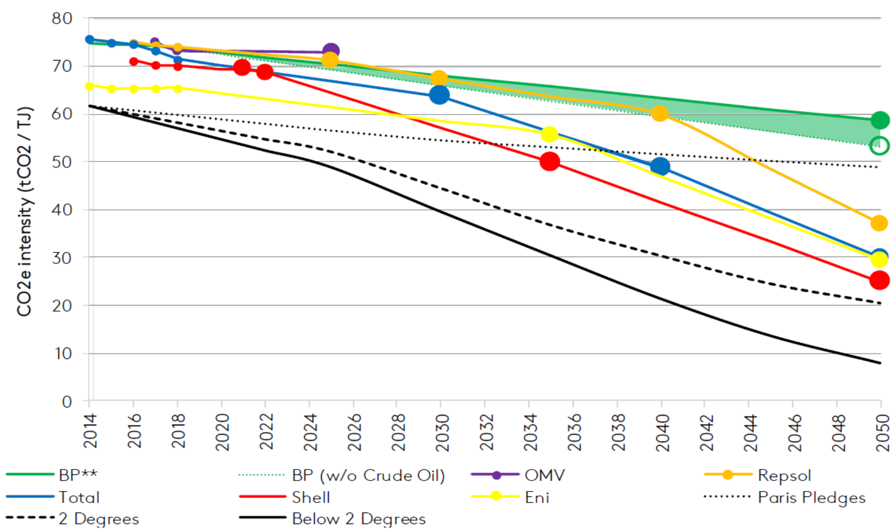
Source: Fidelity International, Orsted, 2019

# Can you own an oil company in climate-focused portfolios?

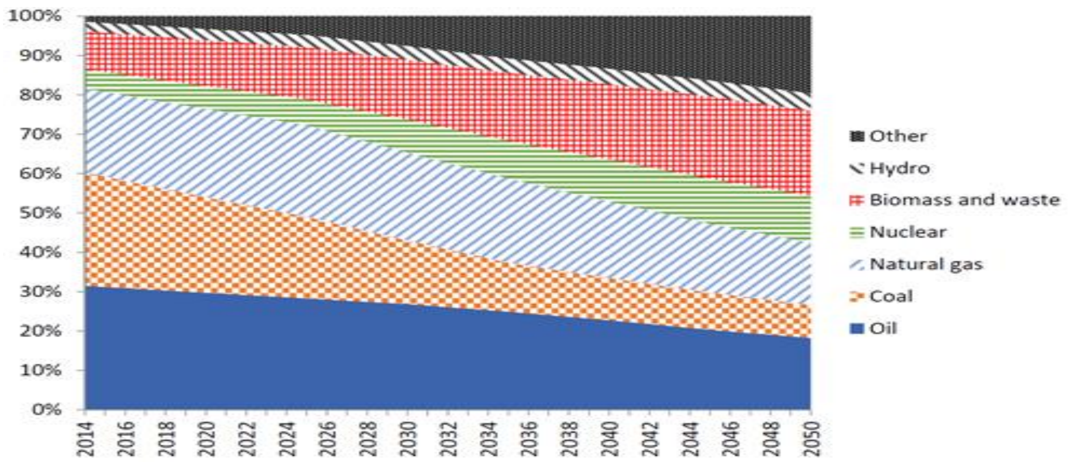
## Transition Case Study: *Oil & Gas Majors*

- O&G to remain part of the energy mix but transition to "New Energy" is critical
- European O&G company decarbonisation ambitions have risen significantly
  - BP and ENI now include scope 3, Repsol and Total aligned with Paris, Shell close to 2DS
- Non-Europeans lagging far behind, only Petrobras has an emissions target that includes scope 3

### Carbon Performance in European Integrated oil and gas




### Global primary energy mix 2014-2050 under 2DS

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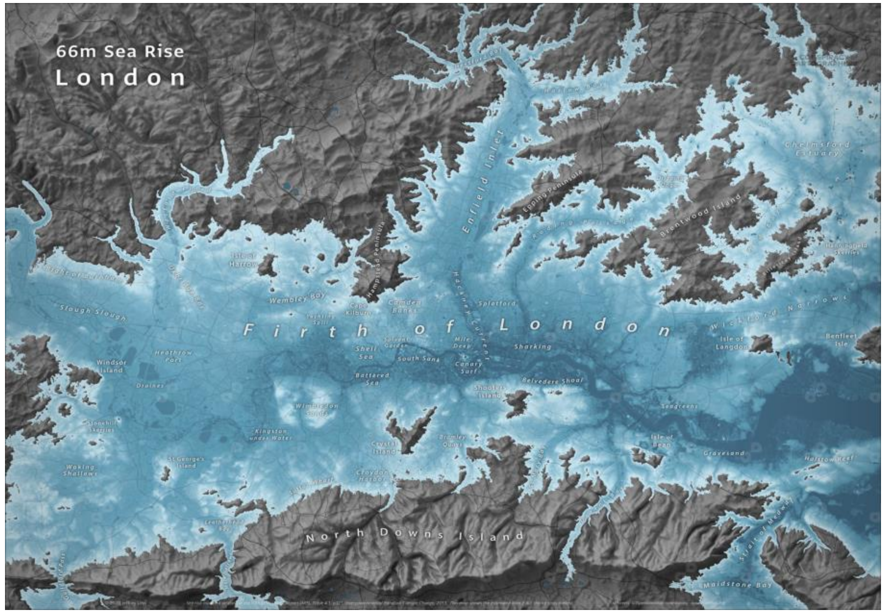
Source: Transition Pathway Initiative, 2020.

# Decarbonisation creates new investment risks

## Unprepared companies/countries face existential threats

- Pacific Gas & Electricity – first climate bankruptcy
- Stranded assets: hydrocarbon reserves and infrastructure, related sectors
- Physical impact of extreme weather events : $100bn of extreme weather event damage in 2019 is expected to total $8trn by 2050.  Est of 2-10% of GDP pa
- Litigation: 1,444 cases across 33 countries
- Disruption to business models:
    - Regulation (emissions standards, financials e.g. stress testing),
    - Disruptive technologies (e.g. electric vehicles, renewables)
- Geopolitical impacts - climate change impacts the poorest nations disproportionately.
    - Estimates of 200m Climate Refugees by 2050 = 6.7m per annum, this is more than the total number of Syrian refugees over the last 8yrs.  Implies that 1 in every 45 people in 2050 will be displaced.
    - How do fossil fuel exporting economies respond?
    - Disease transmission: malaria, dengue fever, yellow fever, Zika virus, West Nile virus and Lyme disease




Source: https://conspiracyofcartographers.com

*"The last time $CO_2$ levels exceeded 750ppm, with surface temperatures well beyond 4 degrees above pre-industrial figure, was likely 35m years ago during the Eocene epoch, when the planet was entirely ice-free. Today that would drive a sea level rise of 70 metres"* – Nicholas Stern

Source: Fidelity International, 2020.

# Decarbonisation creates new investment opportunities

## This will be a multi-decade mega trend

**New investment opportunities emerging**

- New disruptive technologies are emerging in response to the need to decarbonise.
- In some cases, public and private resources have already been channelled into low $CO_2$ solutions supporting their pathway to economic viability.
- For newer technologies, government support is accelerating via subsidies and regulation.
- This is a very long duration of mega trend; the changes required will affect every corner of the economy.

**Why now?**

- Low carbon no longer a risky investment: Many new technologies are on path to becoming economic on a free market basis, and are therefore sustainable.
- Diversification possible: The range of investment options is now much wider following years of investment into low carbon technologies; no longer a nascent area.
- The risk to portfolios exposed to industries or technologies threatened by disintermediation is increasing.

Source: Fidelity International, 2020.

# Climate Change in Fixed Income

# Case Study: *Sustainable Reduced Carbon Bond Fund*

## Climate and ESG security selection

**The investable universe is a combination of the following:**

First step to building a portfolio with genuine impact on emissions

**Low Carbon Issuers**

Prioritise companies with lowest current emissions within their sector

**Issuers on improving path**

Companies with aggressive Science Based Targets to decarbonise in line with a 2 degree (or better) pathway

**Labelled Bonds**

Green Bonds from select issuers with either best or improving decarbonisation strategies. Selection subject to strict criteria

Continual engagement to monitor decarbonisation path

ESG exclusions: tobacco, controversial weapons, semi-automatic weapons, UN Global Compact violators

Source: Fidelity International, 2020.

# Green Bonds: part of the Fixed Income investor toolkit

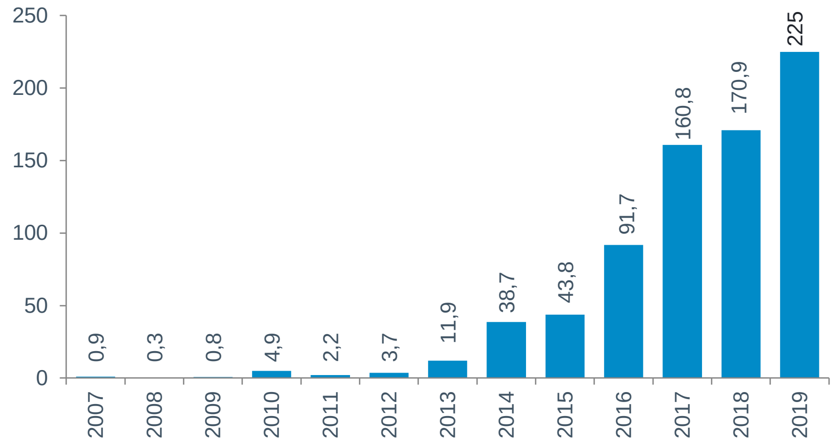
## Work well in complement to a Global Corporate allocation, not *instead of*

**Green bonds are part of the solution as they by design finance specific projects or activities that promote green investment**

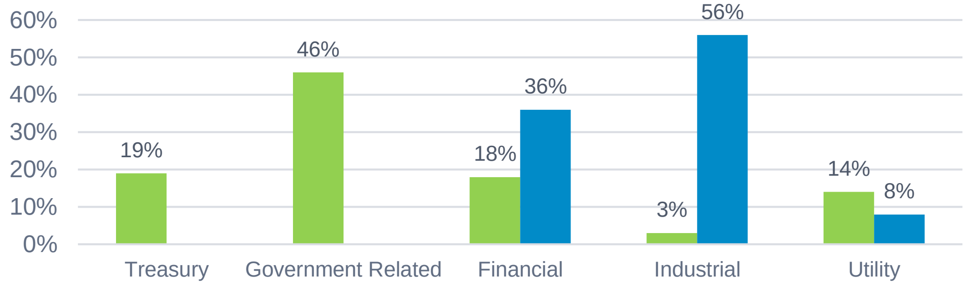
However, there are investment limitations to consider:

- Small universe, with lower level of yield compared to a standard global corporate universe
- Lack of standardisation in terms of definitions and impact measurement
- Secondary green bonds trade at a premium and liquidity is relatively low

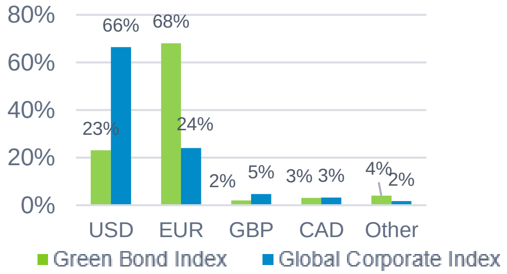
### Green bond issuance



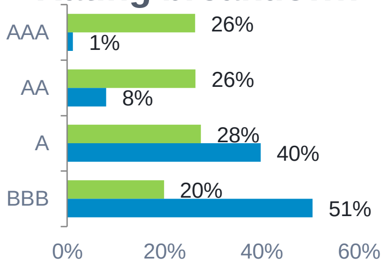

### Sector breakdown




### Currency breakdown




### Rating breakdown




| | Green Bond Index | Global Corporate Index | Global Aggregate Index |
|---|---|---|---|
| Yield to Worst | 0.5% | 1.6% | 0.9% |
| Spread | 70 | 136 | 50 |
| Average rating | AA- | BBB+ | A |
| Duration (years) | 8.2 | 7.4 | 7.4 |
| # bonds | 558 | 13,758 | 26,379 |

Source: Fidelity International, Climate Bonds Initiative. Data as of 30 September 2020. Using Bloomberg Barclays indices.

# Active management and ownership is key

## Low carbon indices: data does not give the full picture

- Most indices use tonnes of emissions per unit of revenue (carbon intensity).
- However, this measure can be distorted by different factors:

| Business activity mix | Local price regulation | Accounting Rules |
|---|---|---|

- Following Carbon indices does not work, you need to know your companies:
  - Narrow peer groups of comparable companies
  - Industry specific metrics e.g. emissions per unit of production
  - Normalising for accounting differences
  - Understanding business models and the outsourcing off emissions

### European utility example

| | Spanish Utility | Scandinavian Utility |
|---|---|---|
| Direct + First Tier Supply Chain Emissions (tonnes CO2) | 29,641,582 | 19,428,151 |
| Revenue (EUR mn) | 29,215 | 3,632 |
| Carbon intensity (tonnes CO2 / € million revenues) | 1,014.60 | 5,169.73 |
| Business activity mix | 60% generation / 40% distribution | 100% generation |
| Electricity prices (EUR/Mhw) | 59 | 45 |
| Power Generation (GWh) | 137,348 | 100,900 |
| Tonnes CO2 / GWh produced | 216 | 193 |

Source: Fidelity International, Bloomberg, S&P Trucost © Trucost 2018, data 2018. For illustration purposes only. All rights in the Trucost data and reports vest in Trucost and/or its licensors. Neither Trucost, nor its affiliates, not its licensors accept any liability for any errors, omissions or interruptions in the Trucost data and/or reports. No further distribution of the Data and/or Reports is permitted without Trucost's express written consent.

# Climate Change in Equity

# Global Sustainable Climate Solutions strategy

## The solutions to the crisis exist, but need to be widely adopted

- Global emissions have never fallen outside of recessions, yet they need to fall by >45% by 2030
- Evolution of existing business practices is not sufficient, we need a revolution. Achieving this scale of emissions reduction will require radical and far-reaching action, affecting every area of economic activity and human life.
- A very fast deployment of all low carbon solutions, available today and driving a step change in society's emission, is needed

The Global Sustainable Climate Solutions invests in the solutions to the climate crisis - companies along the full value chain of technologies with lower than incumbent technologies $CO_2$e footprint

Source: Fidelity International, 2020.

# Our Investment Opportunity Set

## Technologies that help lower greenhouse gas emissions

| Sector | Technology | Estimated % CO2-eq emissions reduction |
|---|---|---|
| TRANSPORTATION | Electric vehicles, Fuel cell vehicles | -51% |
| | Autonomous vehicles, Ride pooling | -28% |
| POWER | Renewables, Green hydrogen | -93% |
| | Smart technologies | -25% |
| INDUSTRY | Industrial efficiency | -20% |
| | Agriculture efficiency | -36% |
| | Infrastructure: cloud, 5G | -85% |
| BUILDINGS | Building efficiency | -55% |
| CONSUMER | Recycling, Reuse | -47% |
| | Alternative meat/ milk | -90% |
| | E-health/ work/ learning | -79% |
| | New opportunities will be included as they emerge | |

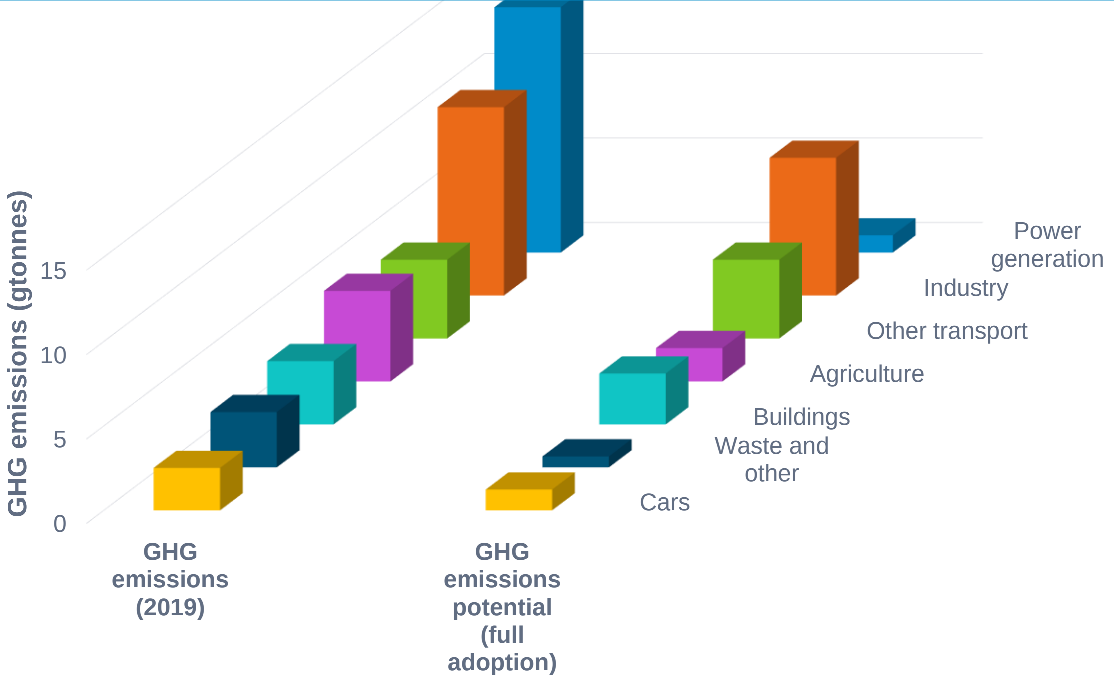
Source: Fidelity International. Multiple sources.

# How do we measure impact?

**We monitor the impact of the strategy in two ways:**

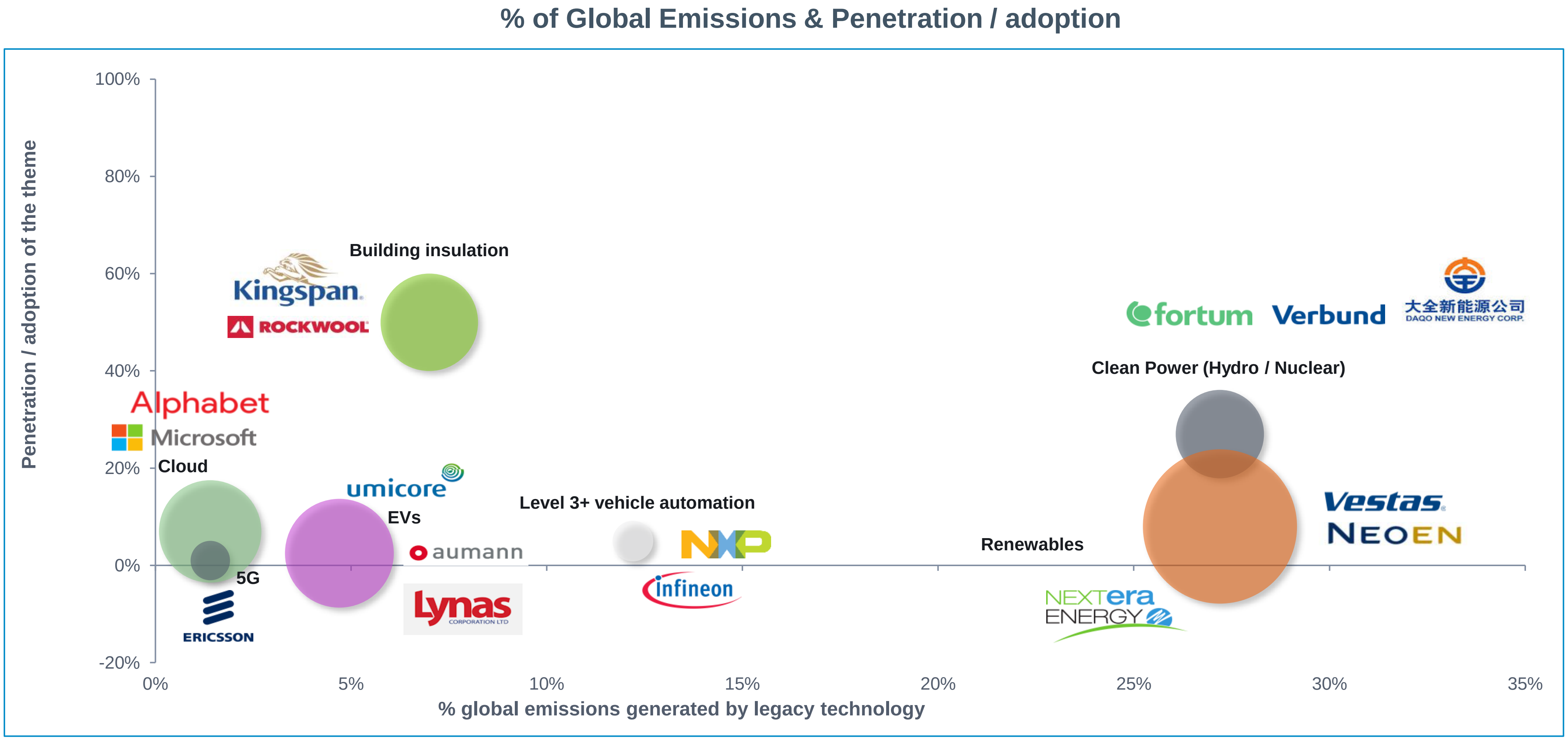
1. Global % $CO_2$e reduction if the world fully transitions to these technologies
2. Kt $CO_2$e p.a. avoided by the technologies we have invested in

**Global decarbonisation potential from the technologies we are invested in: >80%**




Source: Fidelity International, 2020.

# Where we stand today




Source: Fidelity International. Bubble size refers to % TNA invested in these themes at 31st January 2020. The % of global emissions is representative of emissions from legacy technologies. Investment Themes have been classified as per portfolio managers' investment philosophy. This is for illustration purposes only and should not be taken as a recommendation to buy or sell. Third party logos, trademark, copyright and other intellectual property rights are and remain the property of their respective owners.

# A differentiated approach

**How we do it**

We have identified a universe of >600 stocks across more than 20 decarbonisation themes

Identify subsectors that will capture the most value from the growth ahead. Favour **high BTE, favourable competitive dynamics, attractive returns**.

At a portfolio level, >60% of the revenues will typically be derived from these themes; with the majority of companies deriving >20%

Climate Solutions is not looking to minimise the $CO_2e$ footprint of the strategy. Our assessment of impact is based on the $CO_2$ reduction capability of the technologies we are invested in

We monitor the impact of the strategy:
1) % $CO_2e$ reduction if the world fully transitions to these technologies
2) Kt $CO_2e$ p.a. offset by the technologies we invest in

Our approach provides diversification; the fund invests across all decarbonisation solutions as every part of our economy will be affected by this transition to a low carbon world.

We help investors reduce risks from exposure to stranded assets

Source: Fidelity International, 2020.

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