CARBON TRUST

Our mission is to accelerate the move to a sustainable, low carbon economy

We work with governments, multilateral organisations, businesses and the public sector, helping them contribute to and benefit from a more sustainable future

17

seventeen years of global experience

30+

over 30 nationalities on our expert team

5

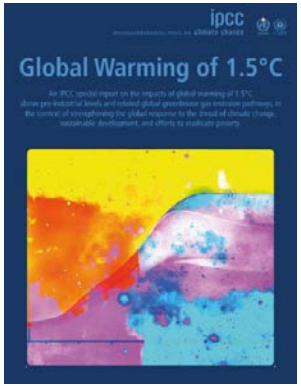
working across five continents

1

Why and how must businesses act now?
(selected slides follow)

Final Call: Scientists' stark warning of missing a 1.5° target

Impacts and risks increase for people, economies and ecosystems between 1.5 – 2°C warming



Holding warming to 1.5°C rather than 2°C is likely to result in:

- 420 million fewer people exposed to extreme heat
- 10.4 million fewer people exposed to impacts of sea level globally
- Global per capita GDP in 2100 decreases by 8% under 1.5°C and 13% under 2°C scenarios
- Average maize yield in 2100 decreases by 6% under 1.5°C and 9% under 2°C scenarios

2

Risks, Opportunities, and the Taskforce for Climate Related Financial Disclosures (selected slides follow)

Introduction to TCFD (climate-related financial disclosures)

Aim of TCFD:

To develop more efficient, and effective, **climate-related disclosures** that promote **more informed investment, credit, and insurance underwriting decisions**

- The recommendations can **apply to any company** in the world and is rapidly being integrated into mandatory disclosure frameworks such as Article 173 in France
- Disclosure should form a part of **mainstream financial filings** and give clear information about a company's approach to dealing with climate-related risks and opportunities
- These disclosures are designed to solve the challenges faced by Issuers, Investors, Insurers and Regulators in **understanding the material risks** that companies face, as these bodies look to manage the risks themselves and push disclosure down the financial chain
- As of September 2018 over **500 organisations** have expressed their support for TCFD and are part of an emerging body of best practice supported by the integration of the recommendations into existing frameworks such as **CDP, GRI, SASB and CDSB**

Key features of the recommendations

Impact of TCFD:

By having a level playing field **TCFD will unlock the value of taking proactive action** to identify and respond to climate change risks and opportunities

TCFD | TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

The recommendations set out a framework to allow businesses to report the impact of climate change on their model and communicate these impacts using the language of business by:

Setting out the respective **roles of the board** and management team in managing risks and opportunities.

Identifying risks and opportunities over different time horizons and explaining how these **impact strategic and financial planning**.

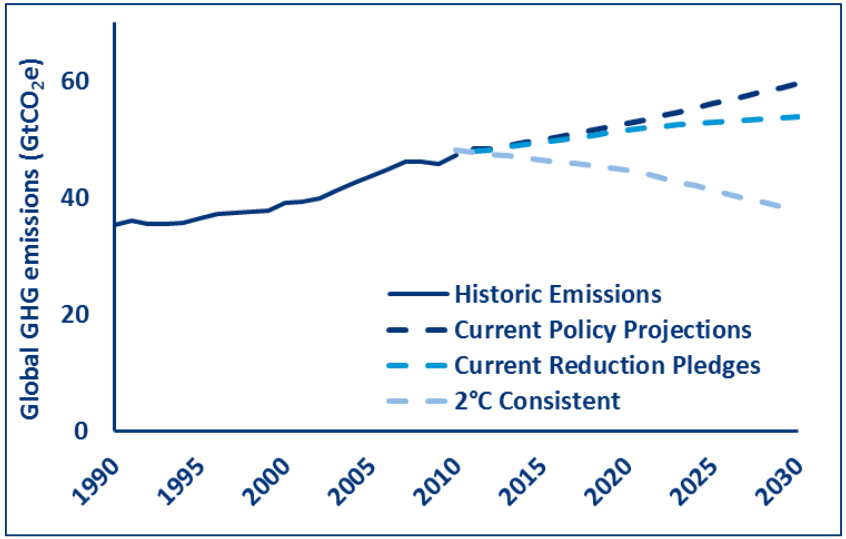
Having a processes in place for managing identified risks and including this within the overall **risk management framework**.

Explaining how both climate change impact and exposure to risks are measured, **targets** are set and **progress** is tracked

3

Science-based Targets (selected slides follow)

What are science-based carbon targets?



- Targets adopted by companies to reduce carbon emissions are considered "science-based" if they are in line with the level of decarbonisation required to keep global temperature increase below 2°C

Source: Climate Action Tracker, 2015

Case Study

Setting science-based reduction targets

Landsec

The Carbon Trust supported FTSE100 commercial property company Land Securities to develop pioneering science-based carbon reduction targets

"Carbon Trust's expertise and collaborative approach enabled us to cut through the complexities of science-based targets and develop reduction targets tailored to our operations. This analysis will form an essential part of Land Securities' sustainability strategy going forward."

Caroline Hill , Head of Sustainability, Landsec

- On the back of the Paris Agreement at COP21, Land Securities wanted to become the first commercial property company to develop robust science-based targets aligned to a scenario in which global temperature rise is limited to no more than 2 degrees.
- The Carbon Trust translated sector-based data into insights that provided the basis for practical action:
  - A bespoke reduction target model was built based on the Sectoral Decarbonisation Approach (SDA);
  - An easy-to-understand methodology report was created, making targets accessible to stakeholders and verifying the robustness of the approach.
- Meaningful carbon emissions targets were set for 2020, 2030, 2040, and 2050, enabling Land Securities to drive ambitious reductions that support global ambitions to tackle climate change.

4

Value Chain Sustainability (selected slides follow)

Value Chain data helps inform better decision making

Product design

How do decisions impact the supply chain or the customer use phase?

Business Growth

What impact will different growth strategies have for different regions?

Supply Chain Configuration

Which suppliers are at most risk from fluctuating energy prices or climate change impacts?

Risk Assessment

Modelling the risk of erosion of market share to competitors with more environmentally sustainable alternatives

Companies using Value Chain data to inform decisions

5

Carbon Trust experience with green finance (selected slides follow)

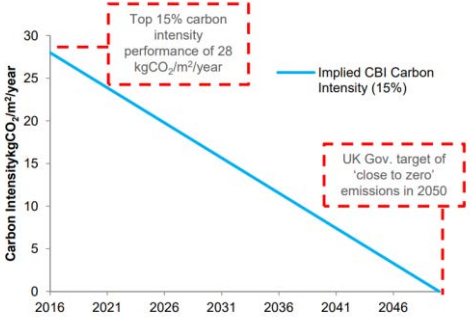
We supported Barclays in issuing the UK's first green bond to fund domestic property assets

We helped Barclays to explore the feasibility of creating a green bond backed by UK mortgages for properties with a high **Energy Performance Certificate (EPC)** rating. The study focused on understanding how EPC ratings in the UK compare to criteria for **mortgage-backed green bonds** in other European countries, specifically Sweden, Germany and the Netherlands.

We worked with Barclays to develop a unique **framework and methodology,** going far beyond simple EPC ratings and designed to be **sensitive to changes in the underlying energy performance** of the UK housing stock. This work was followed by **assurance services** where we provided Barclays with a second opinion against the **ICMA Green Bond Principles** and assurance against the requirements of the **Climate Bond Standard**.

Barclays issued **a € 500 million bond in November 2017** using the framework, which was the first of its kind in the UK market. In March 2018 this was recognised by Environmental Finance with the award of *Green Bond of the Year – bank.*

> *"This issuance is an exciting step and complements Barclays' existing involvement in the well-established green bond market. It will help us diversify our investor base, attracting interest from the growing group of environmental, social and governance investors."*
>
> — **Tushar Morzaria,** Group Finance Director, Barclays



6

Assurance services for sustainability (selected slides follow)

Approaches to resource efficiency

Certification pinpoints resource consumption and enables operational efficiency improvement at both organisational and product levels

MEASURE | MANAGE | REDUCE | CERTIFY

Organisation

- Organisation resource footprint
- Energy, water and waste efficiency
- Management system effectiveness
- Staff engagement

CARBON TRUST STANDARD
REDUCING YEAR ON YEAR

Products

- Product resource footprint
- Value chain efficiency
- Lifecycle costs
- Recycling

CARBON TRUST
REDUCING CO2

Supply Chain

- Supply chain efficiency
- Lowering carbon inputs
- Reduced carbon & costs
- Improved supplier engagement

CARBON TRUST STANDARD
REDUCING CO2 IN THE SUPPLY CHAIN

Climate Finance

- Assessment of the environmental impact of green investments
- Certify bonds to international standards

The Green Bond Principles

Carbon Trust Standard

The Carbon Trust Standard covers carbon, water and waste to provide a sound framework to validate your organisation's resource utilisation & recognise actual reductions

MEASURE
Measure resource use, inputs & outputs.
Identify reduction opportunity

MANAGE
Improve management frameworks and staff engagement

REDUCE
Deliver reductions and improvements in hierarchy, and reduce costs

CERTIFY
Impartially & independently quantify results

Carbon Trust Footprint Certification & Label

A framework to validate product resource impacts & recognise actual reductions in full lifecycle carbon and/or water

MEASURE
Measure resource use, inputs & outputs
Identify reduction opportunity

MANAGE
Improve management frameworks & staff engagement

REDUCE
Deliver reductions and improvements in hierarchy and reduce costs

CERTIFY
Impartially & independently quantify results

Carbon Trust Certification is the world's leading independent certification body for product footprints and is accredited by UKAS to certify footprints to PAS 2050.

UKAS VERIFICATION 4381

7

How to become and remain a corporate Climate Leader (selected slides follow)

Introducing the Carbon Trust Climate Leadership Framework

CARBON TRUST

CLIMATE
LEADERSHIP
FRAMEWORK

‘The Carbon Trust Climate Leadership Framework is designed to help companies take comprehensive action to align their business with an economy compatible with the ambitions of the Paris Agreement’

The Climate Leadership Framework enables a business to develop its climate strategy along five key streams of activity

Optimise

Transform

- Target setting
- Implementation
- Contextual analysis
- Innovation
- Influencing

… and across three dimensions

1. Own operations

2. Value chain

3. Enabling avoided emissions

The framework covers three dimensions: #1 and #2 for reducing emissions, and #3 for enabling emissions to be avoided (through the use of products, services and business models)

	Level 1	Level 2	Level 3	Level 4
Target setting	Scope 1&2 science-based target (5-15 year), ambitious target for renewables and zero-carbon vehicles	On track and achieving targets. Targets updated as necessary	Scope 1&2 science-based target to 2050 or beyond	On track and achieving targets. Targets updated as necessary
Implementation	Implementation plan for scope 1&2, renewables and zero-carbon vehicles	Implementation plans updated and de	Implementation plans updated esults	Implementation plans updated and delivering results
Contextual analysis	Detailed risk and opportunities assessment	Mature, l analysi	igh quality quantitative years	Regularly updated high quality scenario analysis with quantitative elements to 2050 or beyond
Innovation	Identify needs for innovation / aware of innovation happening in sector	Develop hig innovation pro	mme of operations ges beyond 5-15 year targets	Ambitious programme of innovation in own operations aligned to two degrees to 2050 or beyond
Influencing	Mapping key stakeholders in sector. No membership of lobbying bodies opposed to the Paris Agreement	Initial engagement of key stakeholders sharing own ambitions for transition to a low C future.	Develop high level options for establishing a programme for influencing and collaboration.	Programme of influencing and collaboration with governments, industry peers etc. to unlock long-term reductions for own ops.

1. Own operations

	Level 1	Level 2	Level 3	Level 4
Target setting	Ambitious topline scope 3 targets, strategy for addressing uncertainty and tracking issues in scope 3 emissions	On track and achieving targets. Ambitious target for renewables for value chain	Targets to 2050 or beyond.	On track and achieving targets. Targets updated as necessary
Implementation	Key actions identified for scope 3 emissions reduction.	Implementation plan for scope 3 emissions and	plans updated nts	Implementation plans updated and delivering results
Contextual analysis	Detailed risk and opportunities assessment	Mature, h analysis	quality antitative rs	Regularly updated high quality scenario analysis with quantitative elements to 2050 or beyond
Innovation	Identify needs for innovation / aware of innovation happening in value chain	Develop high innovation prog	e of n aligned d 5-15 year targets	Ambitious programme of innovation in own operations aligned to two degrees to 2050 or beyond
Influencing	Mapping key stakeholders in sector along the value chain	Initial engagement of key stakeholders sharing own ambitions for transition to a low C future.	Develop high level options for establishing a programme for influencing and collaboration.	Programme of influencing and collaboration with governments, industry peers etc. to unlock long-term value chain reductions

2. Value chain

	Level 1	Level 2	Level 3	Level 4
Target setting	Initial assessment of current impact and future potential to reduce	Strategy for addressing uncertainty and tracking issues in enablement	Meaningful and ambitious enablement targets	Meaningful and ambitious enablement targets to 2050 or beyond
Implementation	Key actions identified for emissions reduction through products and services.	Key actions identified for emission prod	Key actions identified for through ices.	Implementation plan for enablement
Contextual analysis	Detailed risk and opportunities assessment	Mature, analysi	ludes ns	Scenario analysis includes enablement options
Innovation	Identify needs for innovation / aware of innovation happening in similar products/services	Identify nee aware of inn similar products/services	ns for	Ambitious programme of innovation to drive enablement beyond 5-15 year targets
Influencing	Mapping key stakeholders in sector.	Initial engagement of key stakeholders sharing own ambitions for transition to a low C future.	Develop high level options for establishing a programme for influencing and collaboration.	Programme of influencing and collaboration with governments, industry peers etc. to unlock long-term enablement

3. Enabling avoided emissions

CARBON TRUST | 2050 READINESS SCORECARD

Thank you!

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