Introduction to Climate Risk Disclosure

Content

Intro to TCFD

TCFD | TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

- The TCFD framework is structured across 4 recommendations and 11 disclosures.
- Each disclosure entails a varying level of effort.
- Companies are expected to improve disclosure quality on a yearly basis.

What is TCFD?

Key Characteristics

- Voluntary
- Suitable for most companies and organizations
- Industry agnostic
- A framework for disclosure and mitigating risks

Purpose

TCFD provides guidance for organizations seeking to implement and disclose a climate strategy along standardized guidelines.

TCFD Background and Timeline

- Established in 2015 by the Financial Stability Board, comprised of G20 countries' finance ministers and central bank governors.
- TCFD's goal is to price climate risk into financial markets, **making capital allocation more efficient and avoiding the impact of climate-related externalities**.

TCFD works to manage two types of risk categories:

- **Transition**: Regulations, tax, technology, risks associated with moving the world to a low carbon economy
- **Physical**: Increased natural disasters, etc. arising from unabated climate change

TCFD Timeline

Dec 2015 Announcement of the establishment of the TCFD.

JAN 2016 Task Force members were selected and announced.

JUN 2017 When the Task Force released its disclosure recommendations in June 2017, it did so with the support of over 100 CEOs.

DEC 2017 At French President Emmanuel Macron's One Planet Summit, Bank of England Governor Mark Carney and Michael Bloomberg advanced the discussion around the TCFD and announced over 230 supporters.

MAY 2018 Launch of the TCFD Knowledge Hub.

SEP 2018 The Task Force released its first status report at the One Planet Summit in New York City and announced over 500 supporters.

JUN 2019 The Task Force released its second status report and announced almost 800 supporters.

OCT 2019 The Government of Japan holds first-ever TCFD Summit.

OCT 2020 TCFD launches its third status report, guidance on scenario analysis and risk management, and consultation.

NOV 2020 At the One Planet Sovereign Wealth Funds Summit gathering of thirty-three CEOs from among the world's largest institutional investors with over $30 trillion in assets under management, CEOs of sovereign wealth funds and asset managers made statements to help drive the support for the TCFD recommendations as a global reporting standard.

DEC 2020 In recognition of the anniversary of the Paris Agreement, the 40 largest listed companies in France in the CAC 40 index declared their support for the recommendations of the TCFD.

Source: A Guide to the Task Force on Climate Related Financial Disclosures, Bloomberg

TCFD's Recommended Disclosures

Governance	Strategy	Risk Management	Metrics and Targets
Disclose the organization's governance around climate-related risks and opportunities.	Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.	Disclose how the organization identifies, assesses, and manages climate-related risks.	Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.
Recommended Disclosures	**Recommended Disclosures**	**Recommended Disclosures**	**Recommended Disclosures**
a) Describe the board's oversight of climate-related risks and opportunities.	a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	a) Describe the organization's processes for identifying and assessing climate-related risks.	a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.
b) Describe management's role in assessing and managing climate-related risks and opportunities.	b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	b) Describe the organization's processes for managing climate-related risks.	b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.
	c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.

Source: TCFD Overview, TCFD, 2020

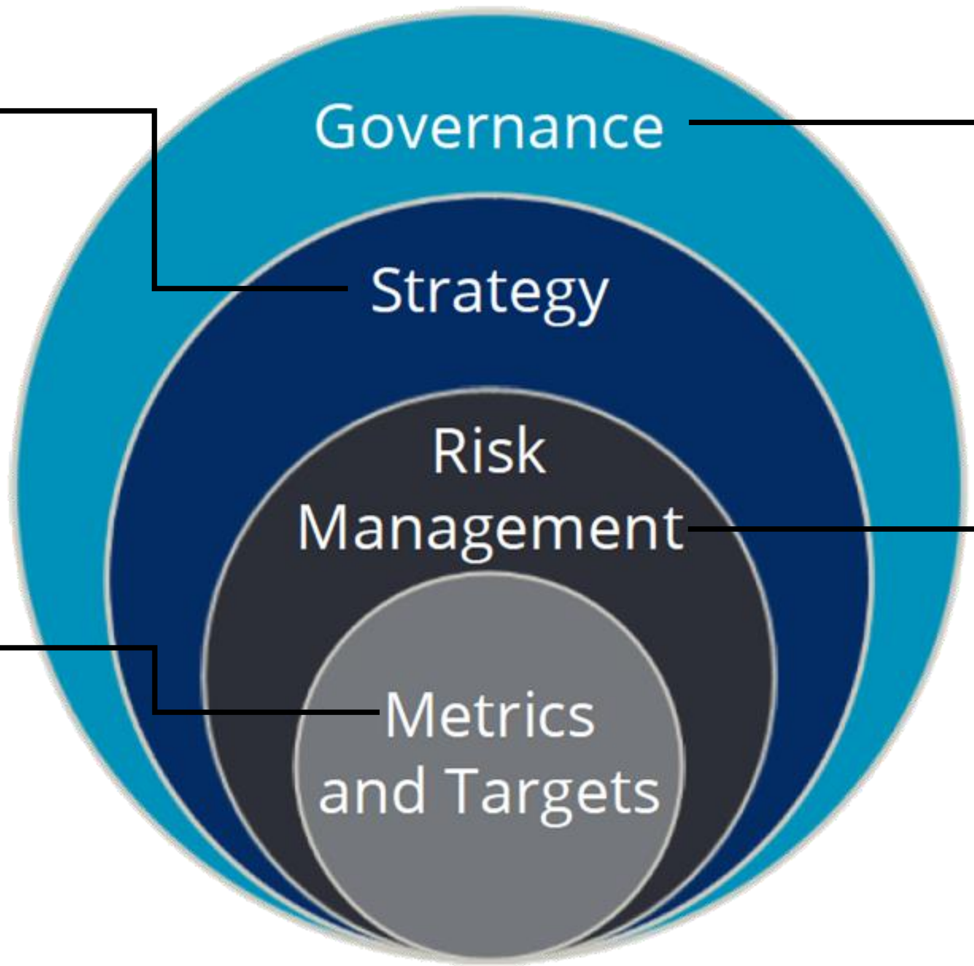
TCFD Guidance Applied to Real Estate Investment

Investor Actions:

- Define climate oversight responsibilities at board and executive level
- Define climate assessment and management responsibilities

Investor Actions:

- Develop/select a range of climate change scenarios
- Integrate scenario analysis outcomes into investment strategy and business plan
- Test resilience of investments and portfolios against selected scenarios



Investor Actions:

- Assess the materiality of climate-related risks and opportunities
- Identify assets with the highest exposure and conduct in-depth climate analysis
- Introduce climate component within pre-acquisition due diligence

Investor Actions:

- Define climate oversight responsibilities at board and executive level
- Define climate assessment and management responsibilities

Source: PRI, TCFD and Real Assets

TCFD's Approach to Climate Risk

TCFD works to manage two types of risk associated with climate change:

a) Transition: Regulations, tax, technology, risks associated with moving the world to a low carbon economy;

b) Physical: Natural resource constraints and increased natural disasters, arising from unabated climate change.

Risks	
Transition	**Policy and Legal** ▸ Carbon pricing and reporting obligations ▸ Mandates on and regulation of existing products and services ▸ Exposure to litigation **Technology** ▸ Substitution of existing products and services with lower emissions options ▸ Unsuccessful investment in new technologies **Market** ▸ Changing customer behavior ▸ Uncertainty in market signals ▸ Increase cost of raw materials **Reputation** ▸ Shift in consumer preferences ▸ Increased stakeholder concern/negative feedback ▸ Stigmatization of sector
Physicial	▸ Acute: Extreme weather events ▸ Chronic: Changing weather patterns and rising mean temperature and sea levels

Source: TCFD Overview, TCFD, 2020

TCFD's Approach to Climate Opportunities

TCFD's recommendation aligns organizations and companies around distinct business opportunities that arise due to climate-related risk.

- Managing and mitigating certain climate-related risks also represents opportunities for organizations to generate value.
- Following TCFD's recommendations can inform strategy around these opportunities.

Opportunities	
Resource Efficiency	▸ Use of more efficient modes of transport and production and distribution processes ▸ Use of recycling ▸ Move to more efficient buildings ▸ Reduced water usage and consumption
Energy Source	▸ Use of lower-emission sources of energy ▸ Use of supportive policy incentives ▸ Use of new technologies ▸ Participation in carbon market
Products & Services	▸ Development and/or expansion of low emission goods and services ▸ Development of climate adaption and insurance risk solutions ▸ Development of new products or services through R&D and innovation
Markets	▸ Access to new markets ▸ Use of public-sector incentives ▸ Access to new assets and locations needing insurance coverage
Resilience	▸ Participation in renewable energy programs and adoption of energy-efficiency measures ▸ Resource substitutes/diversification

Source: TCFD Overview, TCFD, 2020

Scenario Analysis

What are Scenarios?

A scenario describes a path of development leading to a particular outcome or future state. Typical climate-related scenarios are based on a targeted temperature outcome, with a corresponding set of underlying explicit or implicit emissions, energy, policy, and/or technology assumptions.

What is Scenario Analysis?

In a scenario analysis, we construct several scenarios or pathways that focus on a range of forward-looking variables rather than historic data. For a company, the ultimate purpose of scenario analysis is to understand how it might perform under different hypothetical future climate states — thus positioning itself to make better strategic decisions and improve its strategy resilience.

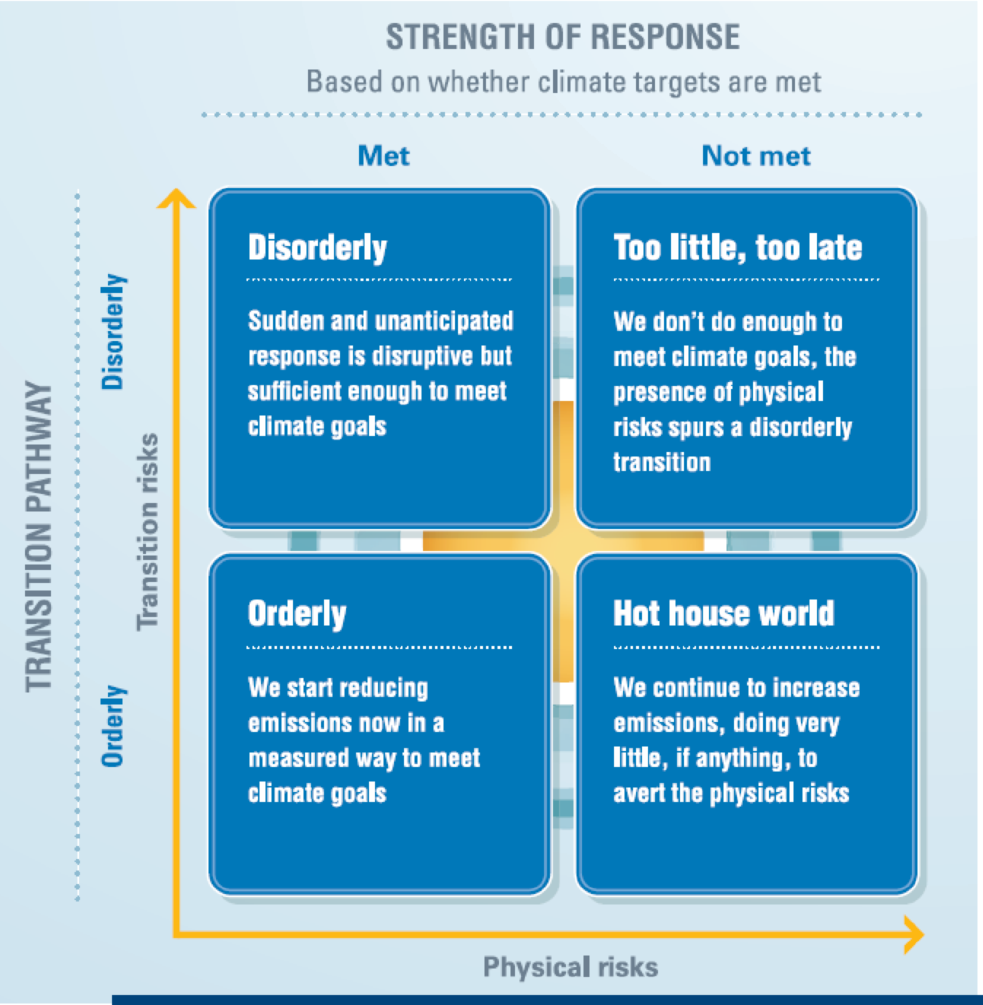


Figure 2.3: High-level Framework for the Scenario Analysis of Physical and Transition Risks

Source: Climate Risk, U.S. Commodity Futures Trading Commission, 2020

Climate Risk Disclosure Rules

US: Potential Climate-Related Disclosure Requirements Issued

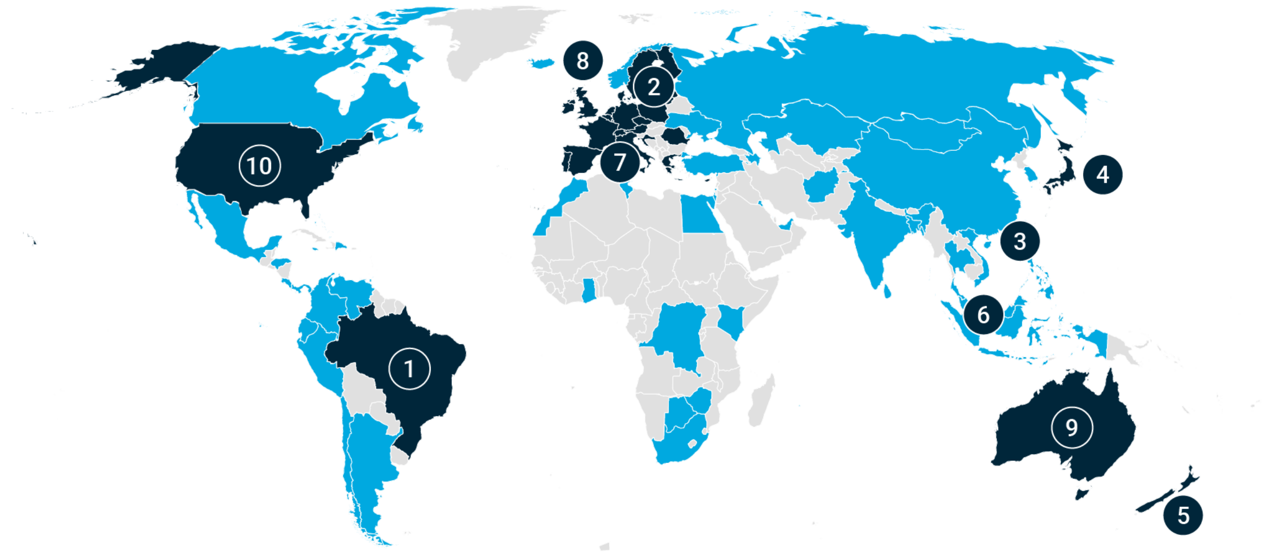
In 2022, the Securities and Exchange Commission approved a new climate disclosure rule that:

- Requires public companies to report climate-related information to shareholders and the government
- Aims to give investors a clearer picture of the risk climate change poses to companies
- Is informed by TCFD and GHG Protocol

Global Disclosure Requirements

Many other countries are or have already implemented similar disclosure requirements:

- Global markets have quickly aligned to the TCFD framework.
- Companies must fundamentally shift how they think about, manage and report on climate risk.



■ Jurisdictions with TCFD supporters ■ Jurisdictions with announcements of TCFD-aligned reporting requirements

1 Brazil
September 2021: The Central Bank of Brazil issued TCFD-aligned disclosure rules for regulated institutions

2 EU
April 2021: The European Commission issued a proposal that included the development of sustainability reporting standards based on existing frameworks, including the TCFD

3 Hong Kong
July 2021: The Hong Kong Monetary Authority issued draft guidance indicating authorized institutions should make TCFD-aligned disclosures

4 Japan
June 2021: The Tokyo Stock Exchange issued a revised Corporate Governance Code, indicating certain companies should enhance disclosure based on TCFD recommendations

5 New Zealand
April 2021: New Zealand introduced a bill that would require mandatory TCFDaligned disclosure for the financial sector

6 Singapore
August 2021: The Singapore Exchange Regulation proposed a road map for mandatory TCFD-aligned disclosure

7 Switzerland
June 2021: Switzerland's Financial Market Supervisory Authority amended disclosure rules for banks and insurers to include climate-related financial risks, based on TCFD

8 United Kingdom
2020–2021: Several UK regulators issued rules and proposals for TCFD-aligned disclosure

9 Australia
April 2021: The Australian Prudential Regulatory Authority published TCFD-aligned draft guidance on managing climate risks

10 USA
March 2022: SEC publishes TCFD-aligned proposal for publicly-listed companies to disclose climate risks

Source: Verisk Maplecroft

Source: TCFD, Verisk Maplecroft

How to Get Started

Developing a TCFD Implementation Roadmap

This illustrates how a company might fully address TCFD disclosure recommendations progressively.

Companies that do not face reporting requirements may still benefit from strategic alignment with the recommendations.

DISCLOSURE

TCFD data in Sustainability Report.

Prioritize alignment of current initiatives to TCFD. Initiate tactical actions.

Invest early to build internal capacity.

AWARENESS

TCFD data in Sustainability Report.

Communicate results of tactical actions such as GHG emission data and qualitative scenario analysis.

Respond to investor ESG requirements.

MANAGEMENT

First stand-alone TCFD Report

Expand on tactical actions such as target setting and quantitative scenario analysis.

Prepare for rollout of climate-risk disclosure regulation.

LEADERSHIP

Second stand-alone TCFD Report

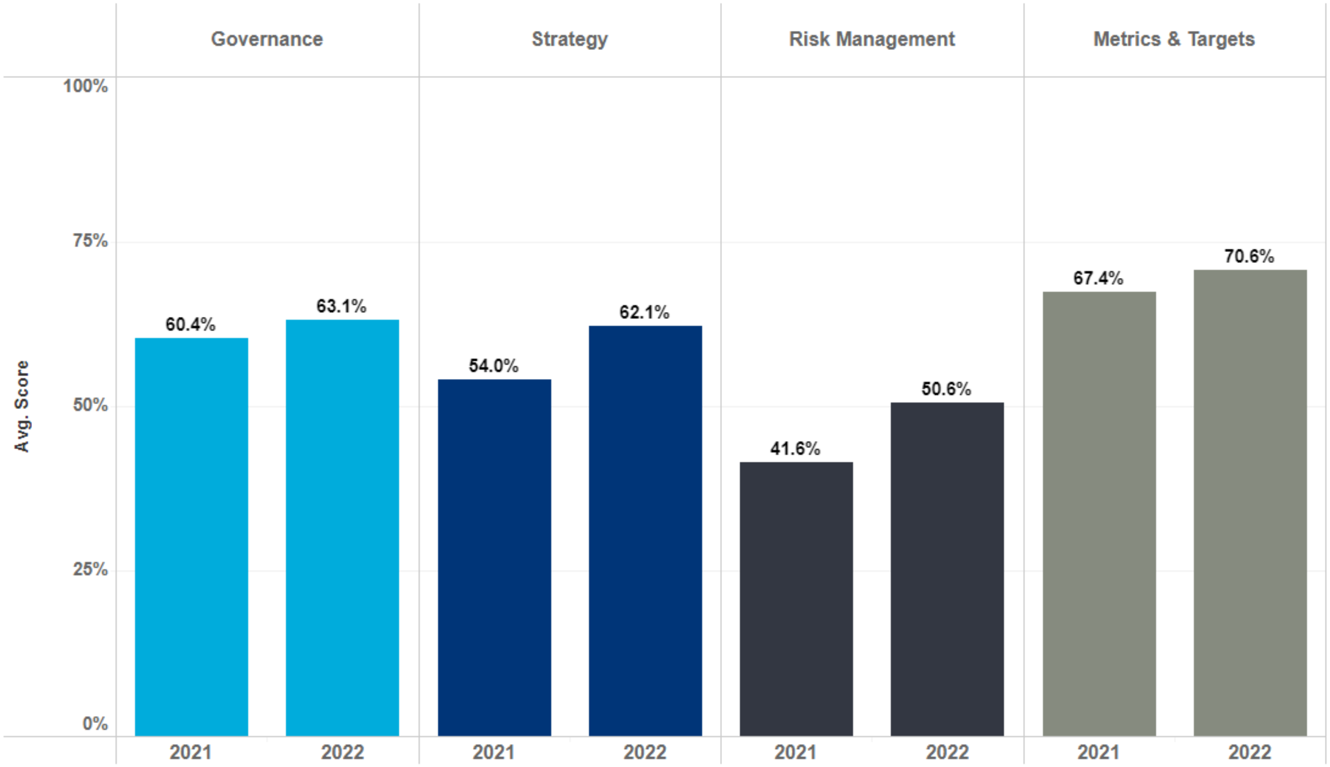
Integrate tactical actions into business operations through abatement cost planning, internal carbon pricing, and key performance indicators.

Compliance with climate-risk regulation and lower cost of capital from ESG investors.

Industry Spotlight – GRESB TCFD Alignment Results

GRESB is an independent organization providing validated ESG performance data and peer benchmarks for real estate investors and managers to improve business intelligence, industry engagement and decision-making.

In 2022, it had 1820 participants, including significant representation from retail and commercial operators and investors.



Source: GRESB, [2022 Real Estate Results]

Appendix

Governance

How is climate risk governed and managed at the company level?

- The first circle of TCFD's recommended disclosures involves how a company oversees climate-related risks and opportunities and an overview of a company's governance of those risks and opportunities
  - Some key inclusions: defining roles and responsibilities related to climate, describing and how and how often climate-related committees meet, and monitoring strategy
- TCFD recommends that climate governance begin at the board-level and be a collaborative process across an organization
- **PRI Guidance for Real Estate Investors:** "In order to support the implementation of the TCFD recommendations in the investment process, real assets investors should assess whether they have the relevant governance and strategic measures in place at the firm level. As part of this, it is essential to ensure formal commitment from senior executives to guarantee sustained institutional dedication and resources."

Strategy

How might climate-related risks impact the organization's strategy?

- The "Strategy" pillar of TCFD disclosures involves reporting what an organization sees as key/material climate-related risks and opportunities, and what impact these might have on that company's operations and activities
- Key to this process is conducting climate scenario analysis (information on scenario analysis can be found in the appendices)
- **PRI Guidance for Real Estate Investors:** "Different types of investors will use scenario analysis for different purposes. For direct investors in real assets, it is likely to inform strategy and decision-making around the types of investment products to be offered; the resilience of investment strategies; asset selection; and the ongoing management of assets."

Source: [PRI, TCFD and Real Assets]

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Risk Management

With a climate-related strategy in mind, how are risks being managed and mitigated?

The 3rd pillar of TCFD's recommendations focuses on the practices and systems used to identify, assess, and manage climate-related risks across an organization. Key inclusions are:

- The processes to identify, assess, and manage climate-related risks for the overall strategy
- Where relevant, how investors or other stakeholders engage with their managers or with assets directly in relation to climate-related risks
- How and where climate-risk assessment and management fits into the organization's overall enterprise risk management system.

Risk management in practice

- Materiality Assessment
- Due Diligence
- Assessing physical and transition risks

Source: PRI, TCFD and Real Assets

Metrics and Targets

For more detailed information regarding metrics and targets, please see the GHG Accounting Education Module [link deck]

HIGHLIGHTS FROM GHG ACCOUNTING DECK

Bullets

Source: PRI, TCFD and Real Assets

Physical Risk Scenarios

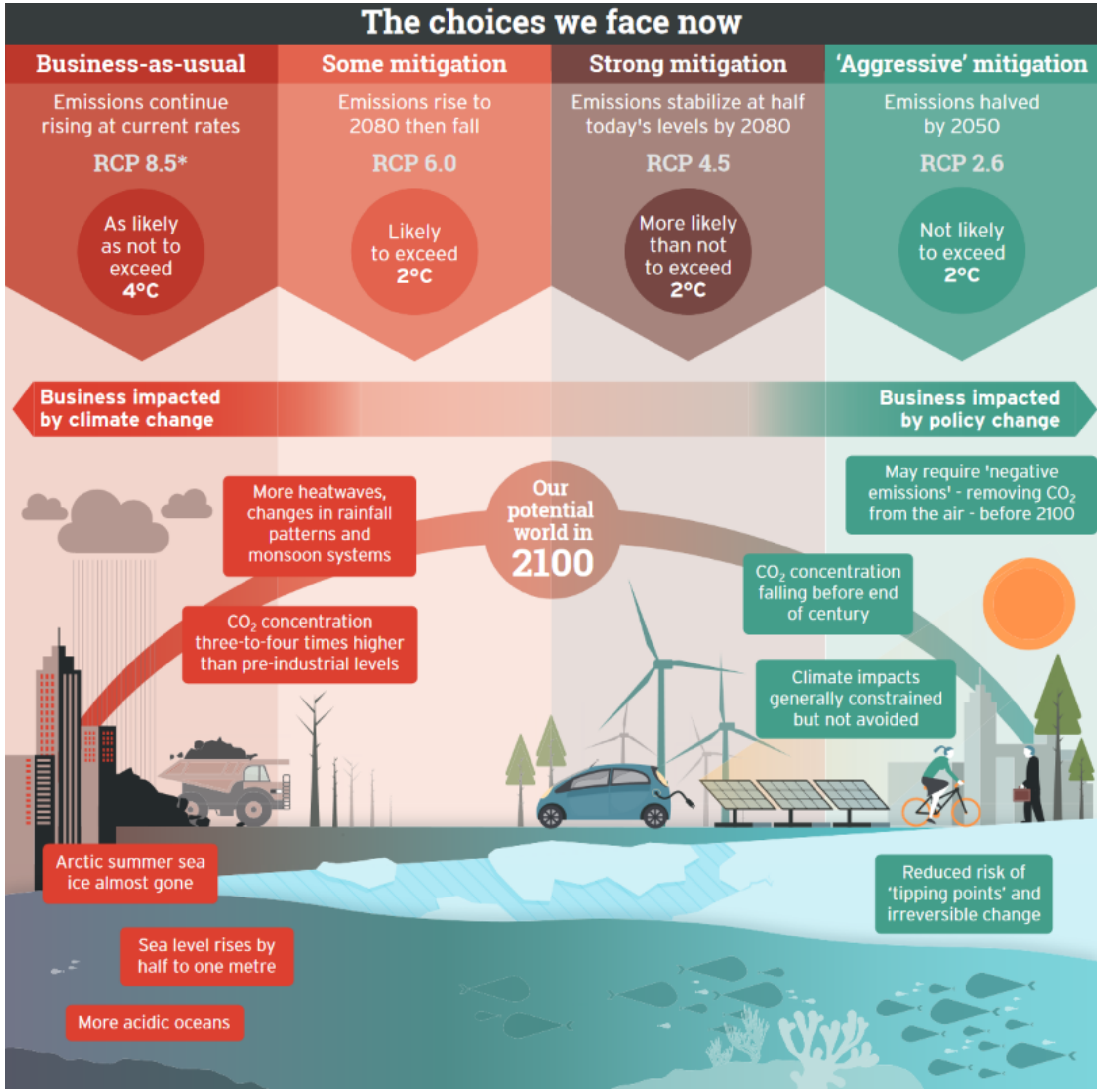
RCP Scenarios

The IPCC Fifth Assessment report (AR5) outlines scenarios of human influence underlying climate change known as **Representative Concentration Pathways (RCPs).** The number associated with the RCP indicates the strength of human-driven climate change by 2100 relative to the pre-industrial period.

Physical Risk Scenarios

RCP 2.6 assumes aggressive mitigation where emissions are halved by 2050 and global mean temperatures are likely not to exceed 2°C by 2100.

RCP 6.0 assumes some action to control emissions, yet emissions continue to rise until 2080, likely exceeding the 2°C increase in global mean temperature by 2100.



Source: Climate Change: Implications for Business, IPCC, 2013

Transition Risk Scenarios

IPR Scenarios

The UN Principles on Responsible Investing (UN PRI) publishes **Inevitable Policy Response (IPR)** scenarios that aim to prepare investors and corporates for the risks and opportunities associated with a forecasted acceleration of policy responses to climate change.

Transition Risk Scenarios

IPR Forecast Policy Scenario (FPS) anticipates that over the coming years policymakers will be pushed to make the changes necessary to reach a below 2°C pathway by 2025.