TCFD | TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

TCFD WORKSHOP

Session 3 - Strategy

February 2022

TCFD Series of Workshops

Session		
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2	TCFD Recommendation: **Governance**	
3	TCFD Recommendation: **Strategy**	***This session***
4	TCFD Recommendation: **Risk Management**	
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Introduction

Introduction to the Strategy Recommendation

In this session, we will drill down on the Strategy recommendation

Core Elements of the TCFD Recommendations

Governance

Disclose the company's governance around climate-related risks and opportunities

Strategy

Disclose the actual and potential impacts of climate-related risks and opportunities on the company's businesses, strategy, and financial planning

Risk Management

Disclose the processes used by the company to identify, assess, and manage climate-related risks

Metrics and Targets

Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities

Note: The Task Force uses the term "companies" to refer to entities with public debt or equity as well as asset managers and asset owners, including public- and private-sector pension plans, endowments, and foundations.
Source: TCFD, Recommendations of the Task Force on Climate-related Financial Disclosures, 2017

Introduction to the Strategy Recommendation *(continued)*

The Task Force's Strategy recommendation is supported by three recommended disclosures

Governance	Strategy	Risk Management	Metrics and Targets
Disclose the company's governance around climate-related risks and opportunities.	Disclose the actual and potential impacts of climate-related risks and opportunities on the company's businesses, strategy, and financial planning where such information is material.	Disclose how the company 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 company has identified over the short, medium, and long term.	a) Describe the company's processes for identifying and assessing climate-related risks.	a) Disclose the metrics used by the company 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 company's businesses, strategy, and financial planning.	b) Describe the company'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 company'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 company's overall risk management.	c) Describe the targets used by the company to manage climate-related risks and opportunities and performance against targets.

Source: TCFD, Recommendations of the Task Force on Climate-related Financial Disclosures, 2017

Introduction to the Strategy Recommendation *(continued)*

Various TCFD publications offer guidance on the Strategy recommendation

Legend: Publication includes guidance on Strategy recommendation

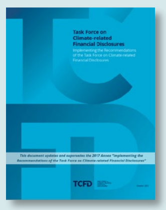
Final Recommendations and Recommended Disclosures

2017 Report

Provides details on the following:

- Context and background on the need for climate-related financial disclosures
- The Task Force's remit from the Financial Stability Board
- TCFD general framework, including recommendations and recommended disclosures

Implementation Guidance



2021 Implementation Guidance (Annex)

Provides guidance on the application of the recommendations as well as implementation guidance for the following:

- All sectors
- Four financial industries
- Four groups of non-financial companies the Task Force considers more likely to be affected financially than others given their exposure to certain transition and physical risks

Additional Supporting Materials

2017 Scenario Analysis Technical Supplement

2020 Guidance on Risk Management Integration and Disclosure

2020 Guidance on Scenario Analysis for Non-Financial Companies

2021 Guidance on Metrics, Targets, and Transition Plans

Disclosure Varies Across Recommendations

The Strategy recommendation includes both the most and least disclosed recommended disclosures with over 50% of companies assessed disclosing information on risks and opportunities, but only 13% disclosing information on their strategy's resilience

TCFD-Aligned Disclosure by Year, for Each Recommended Disclosure

Recommendation	Recommended Disclosure	% Point Change '18–'20	% of Companies Disclosing Information Aligned with TCFD Recommended Disclosures: FY 2018	FY 2019	FY 2020
Governance	a) Board Oversight	16	9%	13%	25%
	b) Management's Role	9	9%	11%	18%
Strategy	a) Climate-Related Risks and Opportunities	14	38%	42%	52%
	b) Impact on Company	13	26%	30%	39%
	c) Resilience of Strategy	8	5%	7%	13%
Risk Management	a) Risk Identification and Assessment Processes	14	16%	20%	30%
	b) Risk Management Processes	15	14%	17%	29%
	c) Integration into Overall Risk Management	17	10%	17%	27%
Metrics and Targets	a) Climate-Related Metrics	10	34%	40%	44%
	b) Scope 1, Scope 2, and Scope 3 GHG Emissions	10	27%	31%	37%
	c) Climate-Related Targets	13	21%	24%	34%

Note: Results are based on the Task Force's artificial intelligence analysis of 1,651 public companies.
Source: TCFD, 2021 Status Report, 2021

Importance of the Strategy Recommendation

Disclosing in line with the Strategy recommendation provides information to investors and other users to better assess the potential future performance of the company

Providing Decision Useful Information to Investors and Other Users

Three of the top ten most "decision useful" types of information companies can disclose fall under the Strategy recommendation.[1]

Recommended Disclosure	Disclosure Element*	Rank
Strategy b)	How climate-related issues have affected **business and strategy**	**1**
Metrics and Targets a)	Key metrics on climate-related issues for most recent period and historical periods	**2**
Strategy a)	The material climate-related issues identified **for each sector and geography**	**3**
Metrics and Targets b)	Scope 1 GHG emissions for the most recent period and historical periods	**4**
Metrics and Targets c)	Climate-related targets related to GHG emissions	**5**
Strategy a)	The **material climate-related issues** identified	**6**
Metrics and Targets b)	Scope 2 GHG emissions for the most recent period and historical periods	**7**
Metrics and Targets c)	The timeframes over which climate-related targets apply	**8**
Metrics and Targets c)	Key performance indicators used to assess progress against climate-related targets	**9**
Governance a)	Board consideration of climate-related issues for major capital expenditures, acquisitions, and divestitures	**10**

* These disclosure elements are segments of the guidance under each recommended disclosure. They do not encompass all of the information conveyed in each recommended disclosure.

1. These findings are based on a survey in which users were asked to rate the usefulness of specific disclosure elements associated with the 11 recommended disclosures when making financial decisions.
Source: TCFD, 2020 Status Report, 2020

Overview of the Strategy recommendation

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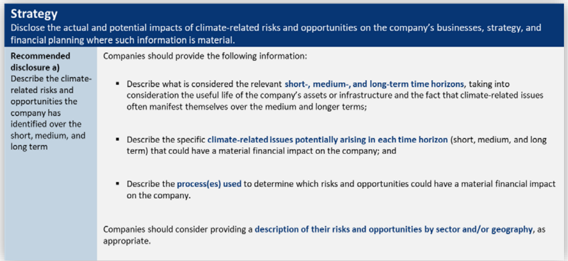
Structure of the Strategy Recommendation Overview Section

The overview of each of the three recommended disclosures under the Strategy recommendation will follow the structure provided below

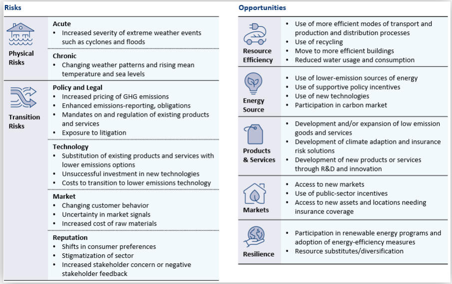
i. Describing the guidance for all sectors associated with the recommended disclosure



Strategy
Disclose the actual and potential impacts of climate-related risks and opportunities on the company's businesses, strategy, and financial planning where such information is material.

Recommended disclosure a) Describe the climate-related risks and opportunities the company has identified over the short, medium, and long term	Companies should provide the following information: ▪ Describe what is considered the relevant **short-, medium-, and long-term time horizons**, taking into consideration the useful life of the company's assets or infrastructure and the fact that climate-related issues often manifest themselves over the medium and longer terms; ▪ Describe the specific **climate-related issues potentially arising in each time horizon** (short, medium, and long term) that could have a material financial impact on the company; and ▪ Describe the **process(es) used** to determine which risks and opportunities could have a material financial impact on the company. Companies should consider providing a **description of their risks and opportunities by sector and/or geography**, as appropriate.

ii. Drilling down into specific elements of the recommended disclosure



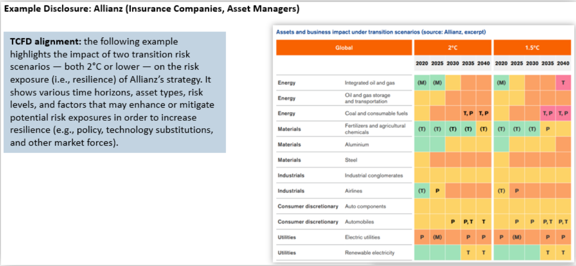
Risks

Physical Risks	**Acute** • Increased severity of extreme weather events such as cyclones and floods **Chronic** • Changing weather patterns and rising mean temperature and sea levels
Transition Risks	**Policy and Legal** • Increased pricing of GHG emissions • Enhanced emissions-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 • Costs to transition to lower emissions technology **Market** • Changing customer behavior • Uncertainty in market signals • Increased cost of raw materials **Reputation** • Shifts in consumer preferences • Stigmatization of sector • Increased stakeholder concern or negative stakeholder feedback

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

iii. Providing examples of reporting that align with the recommended disclosure



Example Disclosure: Allianz (Insurance Companies, Asset Managers)

TCFD alignment: the following example highlights the impact of two transition risk scenarios — both 2°C or lower — on the risk exposure (i.e., resilience) of Allianz's strategy. It shows various time horizons, asset types, risk levels, and factors that may enhance or mitigate potential risk exposures in order to increase resilience (e.g., policy, technology substitutions, and other market forces).

Assets and business impact under transition scenarios (source: Allianz, excerpt)

Global		2°C					1.5°C				
		2020	2025	2030	2035	2040	2020	2025	2030	2035	2040
Energy	Integrated oil and gas	(M)	(M)				(M)				T
Energy	Oil and gas storage and transportation										
Energy	Coal and consumable fuels				T, P	T, P				T, P	T, P
Materials	Fertilizers and agricultural chemicals	(T)	(T)	(T)	(T)	(T)	(T)	(T)	(T)	P	
Materials	Aluminium										
Materials	Steel										
Industrials	Industrial conglomerates										
Industrials	Airlines	(T)	P				(T)	P			
Consumer discretionary	Auto components										
Consumer discretionary	Automobiles			P	P, T	T		P	P	P, T	P, T
Utilities	Electric utilities	P	(M)		P	P	P	(M)		P	P
Utilities	Renewable electricity				T	T				T	T

Recommended Disclosure *Strategy a)*

The first recommended disclosure under the Strategy recommendation — *Strategy a)* — asks companies to describe their climate-related risks and opportunities

Strategy Disclose the actual and potential impacts of climate-related risks and opportunities on the company's businesses, strategy, and financial planning where such information is material.	
All Sectors	
Recommended Disclosure a) Describe the climate-related risks and opportunities the company has identified over the short, medium, and long term	Companies should provide the following information: ▪ Describe what is considered the relevant **short-, medium-, and long-term time horizons**, taking into consideration the useful life of the company's assets or infrastructure and the fact that climate-related issues often manifest themselves over the medium and longer terms; ▪ Describe the specific **climate-related issues potentially arising in each time horizon** (short, medium, and long term) that could have a material financial impact on the company; and ▪ Describe the **process(es) used** to determine which risks and opportunities could have a material financial impact on the company. Companies should consider providing a **description of their risks and opportunities by sector and/or geography**, as appropriate.

Source: TCFD, Annex : Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures , 2021

Strategy a): Climate-Related Risks and Opportunities

Examples of Climate-Related Risks

Physical Risks	**Acute**	• Increased severity of extreme weather events such as cyclones and floods
	Chronic	• Changing weather patterns and rising mean temperature and sea levels
Transition Risks	**Policy and Legal**	• Increased pricing of GHG emissions • Enhanced emissions-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 • Costs to transition to lower emissions technology
	Market	• Changing customer behavior • Uncertainty in market signals • Increased cost of raw materials
	Reputation	• Shifts in consumer preferences • Stigmatization of sector • Increased stakeholder concern or negative stakeholder feedback

Examples of Climate-Related 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, Recommendations of the Task Force on Climate-related Financial Disclosures, 2017

Example of Disclosure for *Strategy a)*

Describe the climate-related risks and opportunities the company has identified over the short, medium, and long term

Example Disclosure: British Land (Real Estate Investment Trust)

TCFD alignment: the following example provides an overview of climate-related physical and transition risks, as well as climate-related opportunities identified by British Land over the short term and medium term. This example includes definitions for each time horizon but does not describe long-term risks and opportunities. The impacts on corporate strategy and financial planning are also included for each example provided.

Strategy

Impacts of climate-related risks and opportunities on our business

We consider climate-related issues within the time horizons used in our corporate strategy:

Short term	Medium term	Long term
Less than 12 months	1 to 5 years	5 to 10 years

To date, we have focused on climate-related risks and opportunities for short and medium term horizons. We provide further disclosure on these risks in our annual CDP (CDP, formerly the Carbon Disclosure Project) response, available at britishland.com/sustainability/reporting/latest-reporting.

Examples of climate-related risks

Extreme weather events	
Short term risks	Higher flood risks could increase insurance costs. This could, in turn, increase service charge costs for customers. Inability to sell or rent property assets at book value, due to flood risk.
Impact on corporate strategy	Flood risk assessments undertaken for our current portfolio. 99% of high risk assets have flood management plans.
Impact on financial planning	Flood risk is effectively priced into our valuations. Flood risk factored into our process for acquisitions and developments.
Energy regulation	
Medium term risks	Energy Performance Certificates (EPCs): the existing Minimum Energy Efficiency Standard (MEES) could be amended to increase the minimum standard from 'E' to 'C' or 'B' by 2030.
Impact on corporate strategy	Our sustainability programme monitors the 76% of our portfolio with an EPC rating lower than 'B' (by floor area). As part of commissioning net zero carbon audits, we are piloting a sample of side-by-side NZC/EPC assessments to ensure the key recommendations of a NZC audit will deliver an improvement to the EPC rating as well.
Impact on financial planning	MEES non-compliance would prevent us from leasing non-compliant space, posing a risk of revenue loss and a potential liability from non-compliance penalties.

Source: British Land, Annual Report and Accounts 2021, 2021, p. 50.
Note: : Some content was reformatted in order to fit the page; and some content has been removed, denoted by […].
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Example of Disclosure for *Strategy a)* *(continued)*

Describe the climate-related risks and opportunities the company has identified over the short, medium, and long term

Example Disclosure: British Land (Real Estate Investment Trust)

TCFD alignment: the following example provides an overview of climate-related physical and transition risks, as well as climate-related opportunities identified by British Land over the short term and medium term. This example includes definitions for each time horizon but does not describe long-term risks and opportunities. The impacts on corporate strategy and financial planning are also included for each example provided.

Examples of climate-related opportunities

Resource efficiency	
Short term opportunity	Energy savings from the UK Energy Savings Opportunity Scheme (ESOS).
Impact on corporate strategy	As part of complying with ESOS in 2019, we have identified initiatives representing £1.4m of capex investment that would save £1.2m annually and pay back in 13 months.
Impact on financial planning	The business cases for these capex investments are considered as part of our overarching financial process.
Energy sources	
Short term opportunity	Revenue generated from solar PV installations on our assets.
Impact on corporate strategy	Installation of on-site solar PV, with 11 assets generating 1,907 MWh in 2020/21.
Impact on financial planning	The cost savings and revenue from exporting to the grid are factored into our financial planning.
Products and services	
Medium term opportunity	Achieving a rental premium from high efficiency buildings with a Design for Performance approach.
Impact on corporate strategy	Our Sustainability Brief for Developments and Operations sets out our requirement for detailed energy modelling early in the design stage to inform design and set operational performance benchmarks. To learn from industry best practice, our developments at 1 Broadgate and 2-3 Finsbury Avenue are both 'Pioneer Projects' of the Better Buildings Partnership's Design for Performance project, designed using the NABERS UK energy efficiency rating system.
Impact on financial planning	The expected rental premium achieved on high efficiency would be factored into our revenue forecasts in the medium term.

Source: British Land, Annual Report and Accounts 2021, 2021, p. 50.
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Strategy b)

Strategy b) asks companies to disclose the impact of climate-related risks and opportunities

Strategy

Disclose the actual and potential impacts of climate-related risks and opportunities on the company's businesses, strategy, and financial planning where such information is material.

All Sectors

Recommended Disclosure b) Describe the impact of climate-related risks and opportunities on the company's businesses, strategy, and financial planning	Building on recommended disclosure (a), companies should discuss how identified **climate-related issues** have affected their businesses, strategy, and financial planning. Companies should consider including the **impact on their businesses, strategy, and financial planning** in the following: ▪ Products and services ▪ Supply chain and/or value chain ▪ Adaptation and mitigation activities ▪ Investment in research and development ▪ Operations (including types of operations and location of facilities) ▪ Acquisitions or divestments ▪ Access to capital Companies should describe how climate-related issues serve as an **input to the financial planning process**, the time period(s) used, and how these risks and opportunities are prioritized. companies' disclosures should reflect a holistic picture of the interdependencies among the factors that affect their ability to create value over time. Companies should describe the **impact of climate-related issues on their financial performance** (e.g., revenues, costs) **and financial position** (e.g., assets, liabilities). If climate-related scenarios were used to inform the company's strategy and financial planning, such scenarios should be described. Companies that have made GHG emissions reduction commitments, operate in jurisdictions that have made such commitments, or have agreed to meet investor expectations regarding GHG emissions reductions should **describe their plans for transitioning to a low-carbon economy**, which could include GHG emissions targets and specific activities intended to reduce GHG emissions in their operations and value chain or to otherwise support the transition.

Note: For readability, we removed footnote references from these excerpts. Please see the annex referenced below for more information.
Source: TCFD, Annex : Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures , 2021

Strategy b): Financial Impacts

The Task Force's guidance for *Strategy b)* encourages companies to disclose the impacts of climate-related risks and opportunities on financial performance and position, consistent with *Strategy b)*

In order to make more informed financial decisions, investors, lenders, and insurance underwriters need to understand how climate-related issues affect a company's financial performance and position as reflected in its income statement, cash flow statement, and balance sheet.

Category of Impact	Description of Impact
Impact on Financial Performance	Changes to income and cash flow statements or other financial performance measures as a result of climate-related risks and opportunities may provide insight into management priorities and strategic efforts. Impact on financial performance can include the following: • increases in revenue from new products or services from climate opportunities; • increases in cost due to carbon prices, business interruption, contingency, or repairs; • changes to operating cash flow from changes in upstream costs; • impairment charges due to assets exposed to transition risks; and • changes to total expected losses due to physical risks.
Impact on Financial Position	Changes to the balance sheet statement as a result of climate-related risks and opportunities can include the following: • changes to the carrying amount of assets due to exposure to physical and transition risks; • changes to the expected portfolio value given climate-related risks and opportunities; and • changes in liability and equity due to increases or decreases in assets (e.g., due to low-carbon capital investments or to sale or write-offs of stranded assets)

Source: TCFD, Annex : Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures , 2021

Strategy b): Transition Plans

Describing plans for transitioning to a low-carbon economy is strongly encouraged for companies that have made GHG emissions reduction commitments or operate in jurisdictions that have made such commitments, or have agreed to meet investor expectations regarding their GHG emissions

Definition and Importance of Transition Plans

A transition plan is an aspect of a company's overall business strategy that **lays out a set of targets and actions supporting its transition toward a low-carbon economy**, including actions and commitments such as reducing its GHG emissions.

Companies' transition plans are of **particular interest to users**, especially when they are seeking to verify the credibility of companies' commitments related to climate change.

Users are particularly interested in information on how companies will adjust their strategies or business models, including the **specific actions they will take to reduce risks and increase opportunities** as they transition to a low-carbon economy.

In 2021 the Task Force sought public comment on the Proposed Guidance on Climate-related Metrics, Targets, and Transition Plans. The results of the consultation indicated that **96% of users** responded that companies' disclosure of transition plans **would be useful** for decision-making.

Recommended Disclosure and Additional Guidance

As described in the guidance for *Strategy b)*, plans for transitioning to a low-carbon economy should be described by:

- companies that have made **GHG emissions reduction commitments**,
- companies that operate in **jurisdictions that have made such commitments**, and
- companies who have **agreed to meet investor expectations regarding GHG emissions reductions**

The transition plan could include GHG emissions targets and specific activities intended to reduce GHG emissions in the company's operations and value chain or to otherwise support the transition.

The Guidance on Metrics, Targets, and Transition Plans, published in 2021, provides additional guidelines on transition plans.

Sources
TCFD, Guidance on Metrics, Targets, and Transition Plans, 2021
TCFD, Proposed Guidance on Metrics, Targets, and Transition Plans Consultation: Summary of Responses, October 14, 2021.
TCFD, Annex : Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures , 2021

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Example of Disclosure for *Strategy b)*

Describe the impact of climate-related risks and opportunities on the company's businesses, strategy, and financial planning

Example Disclosure: Ford (Transportation)

TCFD alignment: the following example describes the impact of climate-related opportunities on Ford's strategy around use of alternative fuels, electrification, operations and supply chain. It quantifies relevant commitments and provides specific details related to its strategic planning and partnerships.

Sustainability Aspirations	Topic Area	Goals	Progress
Climate Change Achieve carbon neutrality by 2050	**Reducing Our Vehicle Footprint**	Improve fuel economy across our global vehicle lineup, consistent with regulatory requirements and climate stabilization	• We have committed to science-based emissions targets for our operations and vehicles: – Reduce Scope 1 and 2 greenhouse gas (GHG) emissions by 76 percent by 2035 from a 2017 baseline – Reduce Scope 3 GHG emissions from use of sold products by 50 percent per vehicle km by 2035 from a 2019 baseline • Combined U.S. car and truck fleet corporate average fuel economy improved • We have used our EcoBlue technology and award-winning EcoBoost® technology in millions of engines worldwide • CDP Climate Change questionnaire
		Offer alternative fuel vehicles	• We offer several models powered by ethanol and biodiesel • A wide range of our commercial vehicles run on compressed natural gas (CNG) and liquefied petroleum gas (LPG)
	Electrification	Pursue our electrification strategy	• We are increasing our planned investment in electrification to more than $22 billion through 2025 • We have committed that by mid-2026, 100 percent of our passenger vehicles in Europe will be zero-emissions capable, all-electric or plug-in hybrid, moving to all-electric by 2030. Similarly, our European commercial vehicles will be zero-emissions capable, all-electric or plug-in hybrid by 2024, with two-thirds of Ford's commercial vehicle sales expected to be all-electric or plug-in hybrid by 2030 • Our new electrified models include the all-electric Mustang Mach-E and F-150 PowerBoost Hybrid on sale today, plus the all-electric E-Transit coming late this year and the all-electric F-150 arriving by mid-2022
	Sustainable Operations	Reduce global facility CO_2 emissions by 18 percent (2019–2023)	• We achieved a 40 percent absolute reduction in our global manufacturing carbon footprint since 2011

Source: Ford, Integrated Sustainability and Financial Report 2021, March 2021, p. 12.
Note: : Some content was reformatted in order to fit the page; and some content has been removed, denoted by […].
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Example of Disclosure for *Strategy b) (continued)*

Describe the impact of climate-related risks and opportunities on the company's businesses, strategy, and financial planning

Example Disclosure: Ford (Transportation)

TCFD alignment: the following example describes the impact of climate-related opportunities on Ford's strategy around use of alternative fuels, electrification, operations and supply chain. It quantifies relevant commitments and provides specific details related to its strategic planning and partnerships.

	Minimizing our Supply Chain Impact	Engage with our supply chain to understand its carbon footprint	• We have surveyed 233 production suppliers (85 percent) using CDP Supply Chain program's Climate Change questionnaire
		Work with selected suppliers to reduce our collective environmental footprint through PACE	• We have shared best practice examples with more than 50 key Tier 1 suppliers through PACE • We have introduced a streamlined version of our supply chain sustainability program, *Fast*PACE, to reach select suppliers in China, India, Thailand and South Africa
Air Attain zero emissions from our vehicles and facilities	Sustainable Operations	Air emissions reductions other than CO2	• We are working to reduce emissions of non-CO2 pollutants, in accordance with increasingly stringent standards around the world • We are working to reduce volatile organic compound (VOC) emissions during the vehicle painting process, using a combination of approaches including abatement, color blocking and improved purge recovery
Energy Use 100 percent local, renewable electricity in all manufacturing by 2035	Sustainable Operations	Achieve 32 percent renewable electricity by 2023 and 100 percent locally sourced renewable electricity by 2035	• Over the past decade, we have achieved a 40 percent reduction in our carbon footprint through improved energy efficiency and conservation at our facilities and in our manufacturing processes • Our Dearborn Truck Plant, Michigan Assembly Plant and several new buildings on our Research and Engineering and Corktown campuses will be powered by 100 percent locally sourced renewable electricity by January 2022 • Our global amount of renewable electricity for 2020 was 29%

Source: Ford, Integrated Sustainability and Financial Report 2021, March 2021, p. 12.
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Example of Disclosure for *Strategy b)*: Financial Impacts

Describe the impact of climate-related issues on their financial performance (e.g., revenues, costs) and financial position (e.g., assets, liabilities)

Example Disclosure:
Meridian Energy (Energy)

TCFD alignment: the following example describes the top risks and potential impact on the company's financial performance, from the long-term impact of extreme rainfall. The type of climate-related risk, the timeframe, the financial implications and the quantification of the financial impact are all mentioned.

Top Risks		
Risk drivers	**Extreme rainfall in hydro catchments**	**Negative demand disruption - emissions intensive industries**
Type	**Physical**	**Transition**
Scale	**Medium**	**Medium**
Likelihood	**About as likely as not**	**About as likely as not**
Timeframe	**Long-term (30 years)**	**Long-term (30 years)**
Impacts	Increasing intensity of extreme rainfall events in hydro catchments.	Sudden drop in electricity demand as emissions-intensive industries are disrupted by ambitious climate change legislation or shifting consumer preferences for sustainable goods and services.
Financial implications	Increase in intensity of extreme rainfall events may require the lowering of dam water levels (reducing assets' generating capacity) and/or the strengthening of dam structures.	Reduced electricity demand may negatively impact on Meridian's revenue, for example if the dairy industry was curtailed due to climate action policy.
Quantification	**-$11 million**	**-$12 to -$17 million**
Methodology	Estimated potential financial impact is an annualised figure over a 30 year time horizon of estimated civil construction costs and negative revenue impacts.	Estimated potential financial impact is an annualized figure over a 30 year time horizon, calculated by modelling the impact of a step-change reduction in demand and comparing it to our Evolution scenario. There is significant uncertainty to this calculation.
Management response	Probable Maximum Flood values are reviewed once every ten years to incorporate climate change.	Meridian supports of climate action policy that would increase electricity demand in other sectors, in particular the use of electricity in the transport and industrial heat sectors of the economy.

Source: Meridian Energy, Climate Change Disclosures Meridian Energy Limited FY20, August 2020, p. 11.

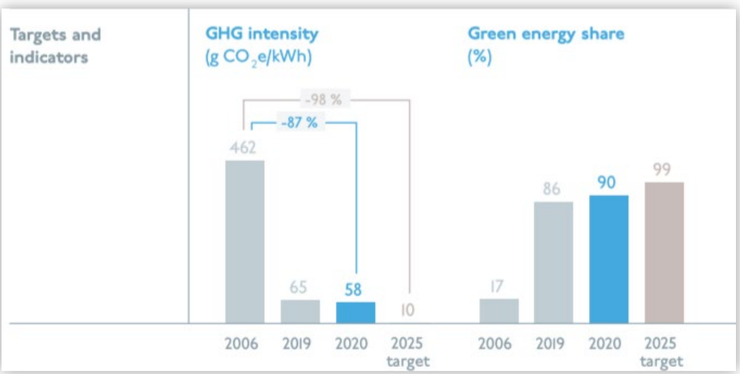
Note: : Some content was reformatted in order to fit the page; and some content has been removed, denoted by […]. The examples included are not intended to represent "best practice" nor demonstrate disclosures that fully meet the associated recommended disclosure. They may not be applicable to all sectors and should be considered within the framework of the sector in which the company operates. The mention of specific companies does not imply that they are endorsed by the TCFD or its members in preference to others of a similar nature that are not mentioned.

Example for *Strategy b)*: Plans for Transitioning

Companies that have made GHG emissions reduction commitments should describe their plans for transitioning to a low-carbon economy

Example: Ørsted (Energy)

Key takeaways: the following example outlines the company's description of its plans for transitioning to a low-carbon economy, including decarbonizing its energy generation and operations. It defines the sustainability challenge they are trying to address, their approach, actions to become future-fit and progress to date, as well as targets and indicators to quantify their results.



Programme overview	1 Decarbonisation of energy generation and operations
Sustainability challenge	**Climate action and energy efficiency:** As 73% of global carbon emissions come from the use of fossil fuel-based energy, decarbonising energy generation and improving energy efficiency are essential to limit climate change.
Our approach	We increase our total share of green energy and work to reduce emissions to achieve carbon neutrality in our energy generation and operations by 2025. This covers the emissions from the generation of heat and power and from our operations and maintenance, including the vessels servicing our wind farms, our vehicles, and our sites (scopes 1 and 2).
Our progress	• We have reduced the carbon intensity of our energy generation and operations by 87% since 2006, to 58 g CO_2e/kWh in 2020. We are on track to deliver a 98% reduction by 2025. • The build-out of green energy is a key driver, and we have reached a 90% share of green energy generation. • We continue to push for optimised vessel designs and the use of biofuels in our vessel portfolio, including hybrid and battery technology, fuel cells, and offshore charging possibilities. • As of 2021, we will no longer buy or lease fossil-fuelled cars, and, by 2025, our entire fleet of vehicles, including site and operational vehicles, will be fully electric. Currently, we have a 38% share of electric vehicles, including plug-in hybrids) in our fleet. • We cover 100% of our own power consumption with green certificates, mainly from our offshore wind farms. • We have initiated a project to identify options for offsetting any residual emissions we may still have by 2025 (scopes 1 and 2). These solutions must be certified and able to document carbon removal.
Actions to become future-fit	Achieve carbon neutrality in our energy generation and operations (scopes 1 and 2) by 2025.

Source: Ørsted, 2020 Sustainability Report, 2021, p. 32.
Note: : Some content was reformatted in order to fit the page; and some content has been removed, denoted by […].
The examples included are not intended to represent "best practice" nor demonstrate disclosures that fully meet the associated recommended disclosure. They may not be applicable to all sectors and should be considered within the framework of the sector in which the company operates. The mention of specific companies does not imply that they are endorsed by the TCFD or its members in preference to others of a similar nature that are not mentioned.

Strategy c)

Strategy c) asks companies to disclose the resilience of their strategy, taking into consideration different climate-related scenarios

Strategy Disclose the actual and potential impacts of climate-related risks and opportunities on the company's businesses, strategy, and financial planning where such information is material.	
All Sectors	
Recommended Disclosure c) Describe the resilience of the company's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	Companies should describe **how resilient their strategies are to climate-related risks and opportunities**, taking into consideration a transition to a low-carbon economy consistent with a 2°C or lower scenario and, where relevant to the company, scenarios consistent with increased physical climate-related risks. Companies should consider discussing: ▪ where they believe their strategies may be **affected by climate-related risks and opportunities**; ▪ how their **strategies might change** to address such potential risks and opportunities; ▪ the potential **impact of climate-related issues** on financial performance (e.g., revenues, costs) and financial position (e.g., assets, liabilities); and ▪ the **climate-related scenarios** and associated time horizon(s) considered. Companies should refer to Section D in the Task Force's report for information on applying scenarios to forward-looking analysis.

Note: For readability, we removed footnote references from these excerpts. Please see the annex referenced below for more information.
Source: TCFD, Annex : Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures , 2021

Strategy c): Scenario Analysis

Scenario analysis is a process for identifying and assessing a potential range of outcomes of future events under conditions of uncertainty

What Is Scenario Analysis?

A useful **tool** for strategic and risk management **decision-making** under **complex and uncertain conditions**

Scenarios are not exact predictions of the future, but **descriptions of plausible events**

They allow for a **better understanding of the risks** and uncertainties a company may face under different **hypothetical futures**, and how **its performance might be affected**

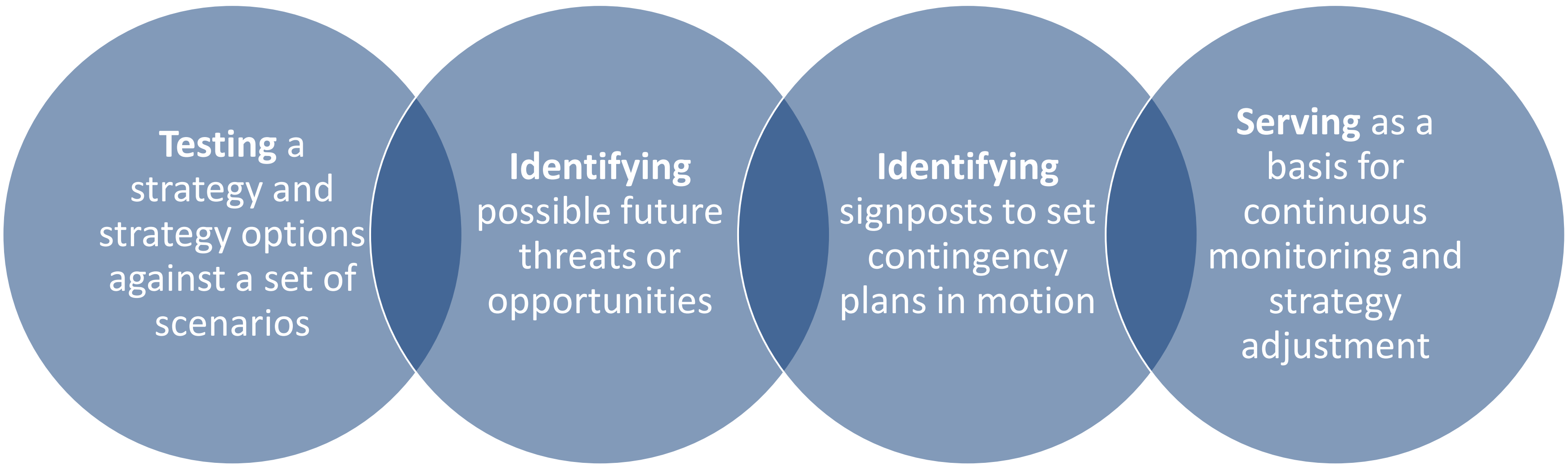
Climate-related scenario analysis allows a company to develop an understanding of how the **physical and transition climate-related risks and opportunities might plausibly impact the business over time**, and how such vulnerabilities are or should be addressed

Sources
TCFD, Recommendations of the Task Force on Climate-related Financial Disclosures, 2017
TCFD, Technical Supplement: The Use of Scenario Analysis in Disclosure of Climate-related Risks and Opportunities, 2017
TCFD, Guidance on Scenario Analysis for Non-Financial Companies , 2020

***Strategy c)*: Using Scenario Analysis to Assess Resilience**

Scenario analysis is useful for assessing the business implications of climate change

Scenario Analysis Contributes to Greater Strategy Resilience and Flexibility by:



Sources
TCFD, Recommendations of the Task Force on Climate-related Financial Disclosures, 2017
TCFD, Technical Supplement: The Use of Scenario Analysis in Disclosure of Climate-related Risks and Opportunities, 2017
TCFD, Guidance on Scenario Analysis for Non-Financial Companies , 2020

Strategy c): Disclosing Resilience Using Scenario Analysis

Using climate-related scenarios is subject to a few considerations

Disclosing Qualitative Versus Quantitative Climate-Related Scenario-Analysis

The Task Force believes that all organizations exposed to climate-related risks should consider:

1. **using scenario analysis** to help inform their strategic and financial planning processes and
2. **disclosing how resilient** their strategies are to a range of plausible climate-related scenarios.

The Task Force recognizes that, for many companies, scenario analysis is or would be a largely **qualitative** exercise. Scenario quantification should be used if applicable and performed following the qualitative narrative, which should serve as a robust framework and communication tool.

Companies with more significant exposure to transition risk (e.g., fossil fuel-based industries, energy-intensive manufacturers, and transportation activities) **and/or physical risk** (e.g., agriculture, transportation and building infrastructure, insurance, and tourism) could undertake **more rigorous qualitative and, if relevant, quantitative scenario analysis** with respect to key drivers and trends that affect their operations. They could also consider disclosing key assumptions and pathways related to the scenarios they use to allow users to understand the analytical process and its limitations.

Sources
TCFD, Recommendations of the Task Force on Climate-related Financial Disclosures, 2017
TCFD, Guidance on Scenario Analysis for Non-Financial Companies , 2020

Strategy c): Disclosing Resilience Using Scenario Analysis *(cont.)*

Using climate-related scenarios is subject to a few considerations

Materiality and Location of Disclosure

In the case of disclosures around strategy and forward-looking scenarios, companies should **disclose material information** in **financial filings**.

To the extent that additional detail and discussion of scenarios and strategy is warranted, which may not rise to the level of the financial filings, companies should consider **disclosing additional detail in other public reports**, such as **sustainability and non-financial reports**, with appropriate cross-references to alert investors to such information.

The Task Force also encourages certain companies—those in the four non-financial groups that have more than one billion U.S. dollar equivalent (USDE) in annual revenue—to **disclose the resiliency of their strategies regardless of materiality** in other reports[1], if not included in their financial fillings.

1. Other reports include official company reports that are issued at least annually, widely distributed and available to investors and others, and subject to internal governance processes that are the same or substantially similar to those used for financial reporting

Sources

TCFD, Guidance on Scenario Analysis for Non-Financial Companies , 2020

TCFD, Annex : Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures , 2021

Strategy c): Using Scenario Analysis

Companies generally undertake certain steps and consider certain factors when performing scenario analysis

Illustrative Scenario Development Process

1. Engage stakeholders
2. Define the problem
3. Assess the context and identify the driving forces and uncertainties
4. Understand and describe the scenario outcome and pathways
5. Write qualitative scenario narratives and quantify (if applicable)
6. Check quality

Key Success Factors

Effective organizational approach

- **Obtain** board and senior management **support**
- **Engage** internal stakeholders to promote company-wide ownership and involvement
- **Develop** well-defined governance roles and clear reporting relationships to senior levels

Allocating the adequate resources (e.g., devoting enough time to scenario analysis)

Using the relevant data (e.g., at the right scale and level of granularity, backed by scientific research)

Ensuring credibility and relevancy (e.g., quality assurance process, process to periodically update scenarios)

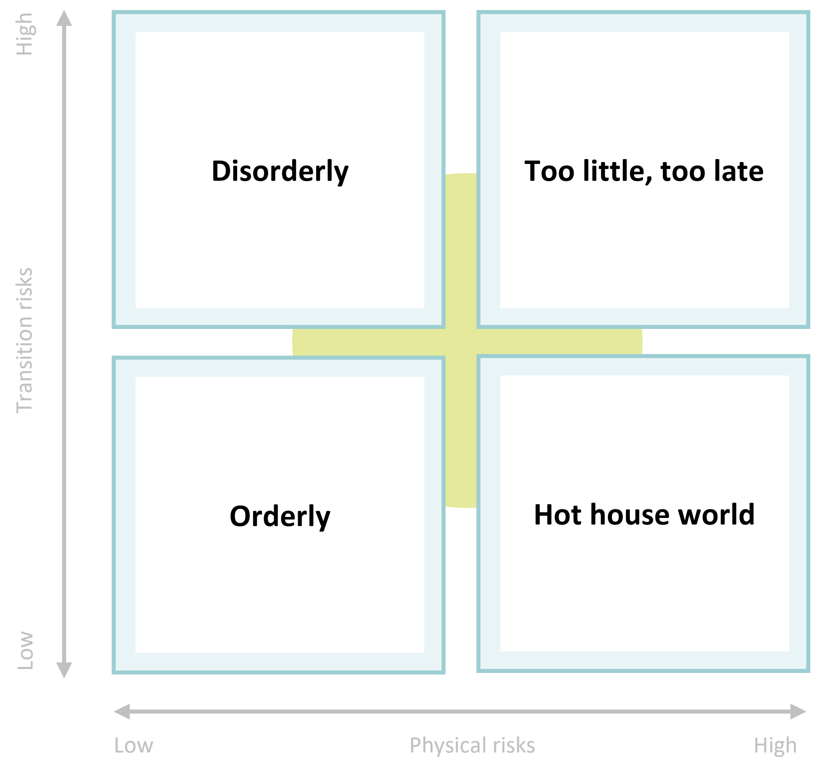
Sources
TCFD, Technical Supplement: The Use of Scenario Analysis in Disclosure of Climate-related Risks and Opportunities, 2017
TCFD, Guidance on Scenario Analysis for Non-Financial Companies , 2020

Strategy c): Example of Climate-Related Scenarios

The Network for Greening the Financial System (NGFS) provides useful climate-related scenarios examples to get started on scenario analysis

NGFS Scenarios

- **Orderly scenarios** assume climate policies are introduced early and become gradually more stringent. Both physical and transition risks are relatively subdued.
- **Disorderly scenarios** explore higher transition risk due to policies being delayed or divergent across countries and sectors. Carbon prices are typically higher for a given temperature outcome.
- **Hot house world scenarios** assume that some climate policies are implemented in some jurisdictions, but global efforts are insufficient to halt significant global warming. Critical temperature thresholds are exceeded leading to severe physical risks and irreversible impacts like sea-level rise.
- **Too little, too late** it is possible that a late transition would fail to contain physical risks. While no scenarios have been specifically designed for this purpose, this space can be explored by assuming higher physical risk outcomes for the disorderly scenarios.



Source: NGFS, NGFS Scenarios Portal

Strategy c): Concerns about Disclosing Confidential Information

The Task Force has heard from preparers over the years that one of the top concerns related to the Strategy recommendation is disclosing scenario analysis assumptions, as such assumptions may include confidential business information

Companies' concern about disclosing certain confidential information related to their scenario analysis assumptions or resilience of their strategies was addressed in the 2020 status report.[1]

When evaluating whether particular aspects of a company's intended disclosure around scenario analysis assumptions or the resilience of its strategy contain confidential business information, the company should consider the following:

- whether the information **provides the company with an economic benefit** that translates into a **competitive advantage** because the information is unknown to its competitors

- whether making such information public may **cause a considerable economic loss for the company**.

In situations where a company is not certain information related to its scenario analysis assumptions or the resilience of its strategy contains confidential business information, the **Task Force encourages the company to consider a stepwise approach to disclosure** — rather than decide not to disclose. For example, a company might start by disclosing broader, qualitative information and move to more specific, quantitative data and information over time.

1. This topic was also covered in the Guidance on Scenario Analysis for Non-Financial Companies

Sources
TCFD, 2019 Status Report, 2019, p.49.
TCFD, 2020 Status Report, 2020
TCFD, Guidance on Scenario Analysis for Non-Financial Companies, 2020

Example of Disclosure for *Strategy c)*: Scenario Analysis

Describe the resilience of the company's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario

Example Disclosure: Hitachi (Technology)

TCFD alignment: the following example highlights the selected businesses that have a relatively high likelihood of being affected by climate change and qualitatively examines the business impact of, and responses to 1.5°C and 4°C scenarios, in terms of climate-related risks and opportunities.

The Business Environment, Major Risks and Opportunities, and Strategies under the 1.5°C and 4°C Scenarios
Note: This table is divided into the following three pages.

Target businesses	Railway systems	Power generation and power grids	IT systems	Industrial equipment
The business environment and major risks and opportunities under the 1.5°C scenario	**Business environment** Global demand for transport systems that emit less CO_2 per distance covered will grow with tighter CO_2 emission regulations in each country and region.	**Business environment** Global demand for electricity generated from renewable energy, nuclear power, and other non-fossil sources will grow with tighter CO_2 emission regulations in each country and region. Power networks will increasingly accommodate natural energy produced through distributed generation.	**Business environment** Demand for energy-saving, high-efficiency IT solutions will grow with tighter CO_2 emission regulations in each country and region. There will also be a jump in demand for data centers and data analysis systems to accommodate the expansion of financial services such as investments and loans for decarbonization businesses, green bond issues, and data utilization businesses.	**Business environment** Global demand for energy-saving industrial equipment will grow with tighter CO_2 emission regulations in each country and region.
	Risks Competitiveness will decline if there are delays in the development of innovative emission-reducing technologies including those to improve the efficiency of railway services through digital utilization such as dynamic headway (flexible operations in response to passenger demand) and new mobility services like MaaS.	**Risks** Delays in the construction of power networks that would enable the mass introduction of renewable energy with large output fluctuations.	**Risks** Competitiveness will decline if there is a lack of technological and human resource development to provide energy-saving and highly efficient IT solutions and also if decarbonized measures for energy-intensive data centers are delayed.	**Risks** Competitiveness will decline if there are delays in the development of high-efficiency, low-loss products.
	Opportunities Demand will grow for railways, which emit less CO_2 per distance covered. There will be a shift to energy-saving railcars from conventional models, and the efficiency of railway services will be improved through digital utilization. Data usage will also boost demand for new mobility services.	**Opportunities** Business opportunities will grow with rising demand for renewable energy—the key to a decarbonized future—and with the provision of grid solutions, digital service solutions, and energy platforms that can accommodate the diversification of energy suppliers.	**Opportunities** Demand will grow for energy-saving and high-efficiency information systems that contribute to zero-emissions. There will also be increased demand for platforms to offer such environment-related financial services as investments and loans for decarbonization businesses and green bond issues.	**Opportunities** Utilization of IoT, digitalization, and connected systems to develop innovative products and solutions that contribute to CO_2 emission reductions without relying on the energy-saving features of individual products.

[...]

We believe that by paying close attention to market trends and developing our business flexibly and strategically, we have high climate resilience in the medium to long term under either the 1.5°C or 4°C scenario

Source: Hitachi, Hitachi Sustainability Report 2021, September 29, 2021, pp. 51 – 52.
Note: Some content was reformatted in order to fit the page; and some content has been removed, denoted by [...].
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Example of Disclosure for *Strategy c)*: Scenario Analysis *(continued)*

Describe the resilience of the company’s strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario

Example Disclosure: Allianz (Insurance Companies, Asset Managers)

TCFD alignment: the following example highlights the impact of two transition risk scenarios — both 2°C or lower — on the risk exposure (i.e., resilience) of Allianz’s strategy. It shows various time horizons, asset types, risk levels, and factors that may enhance or mitigate potential risk exposures in order to increase resilience (e.g., policy, technology substitutions, and other market forces).

Assets and business impact under transition scenarios (source: Allianz, excerpt)

Global		2°C					1.5°C				
		2020	2025	2030	2035	2040	2020	2025	2030	2035	2040
Energy	Integrated oil and gas	(M)	(M)				(M)				T
Energy	Oil and gas storage and transportation										
Energy	Coal and consumable fuels				T, P	T, P				T, P	T, P
Materials	Fertilizers and agricultural chemicals	(T)	(T)	(T)	(T)	(T)	(T)	(T)	(T)	P	
Materials	Aluminium										
Materials	Steel										
Industrials	Industrial conglomerates										
Industrials	Airlines	(T)	P				(T)	P			
Consumer discretionary	Auto components										
Consumer discretionary	Automobiles			P	P, T	T		P	P	P, T	P, T
Utilities	Electric utilities	P	(M)		P	P	P	(M)		P	P
Utilities	Renewable electricity				T	T				T	T

Risk enhancer:	Risk mitigator:	Risk:
P = policy	(P) = policy	Low
T = substitution technology	(T) = little substitution technology	Medium
M = related market forces	(M) = countering market forces	High
		Very high

Source: Allianz Group, Sustainability Report 2020, April 29, 2021, p. 86
Note: Some content was reformatted in order to fit the page; and some content has been removed, denoted by [...].
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Example of Disclosure for *Strategy c)*: Financial Impacts

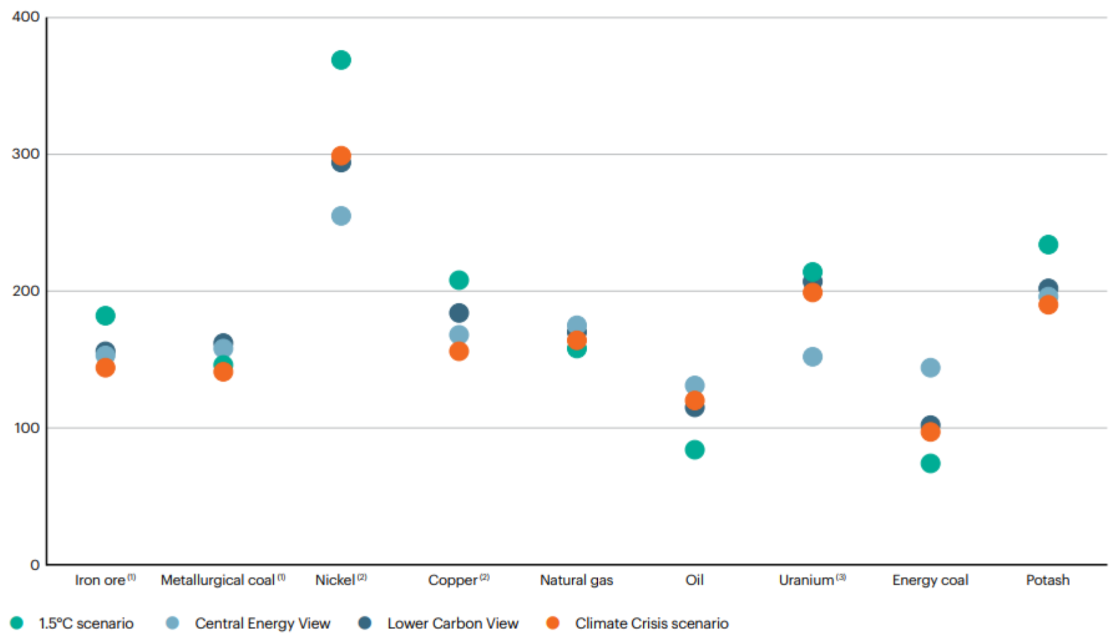
Describe the potential impact of climate-related issues on financial performance (e.g., revenues, costs) and financial position (e.g., assets, liabilities)

Example Disclosure: BHP (Energy)

TCFD alignment: the following examples illustrate BHP's portfolio assessment under different climate scenarios, specifically the cumulative demand predicted in the next 30 years for some of the commodities they provide, as well as the rolling present value of unlevered free cash flows relative to their Central Energy View over time. BHP considered four scenarios in their analysis: 1.5°C scenario (aligned with the goals of the Paris Agreement), Central Energy View (3°C increase by 2100), Lower Carbon View: (2.5°C increase by 2100), and Climate Crisis scenario. BHP's portfolio analysis demonstrates the resilience of their strategies to climate-related risks and opportunities, taking into consideration a transition to a low-carbon economy consistent with a 2°C or lower scenario, as it may present greater upside to their current portfolio and create additional opportunities for growth in future-facing commodities.

Figure 6. Cumulative demand in the next 30 years compared to the last 30 years

(100% = CY1990-CY2019 cumulative demand)



Source: BHP, Vivid Economics.
(1) Iron ore and Metallurgical coal demand accounts for Contestable Market = Global seaborne market plus Chinese domestic demand
(2) Nickel and Copper demand references primary metal
(3) Nuclear power was used as a proxy for historic cumulative demand for Uranium

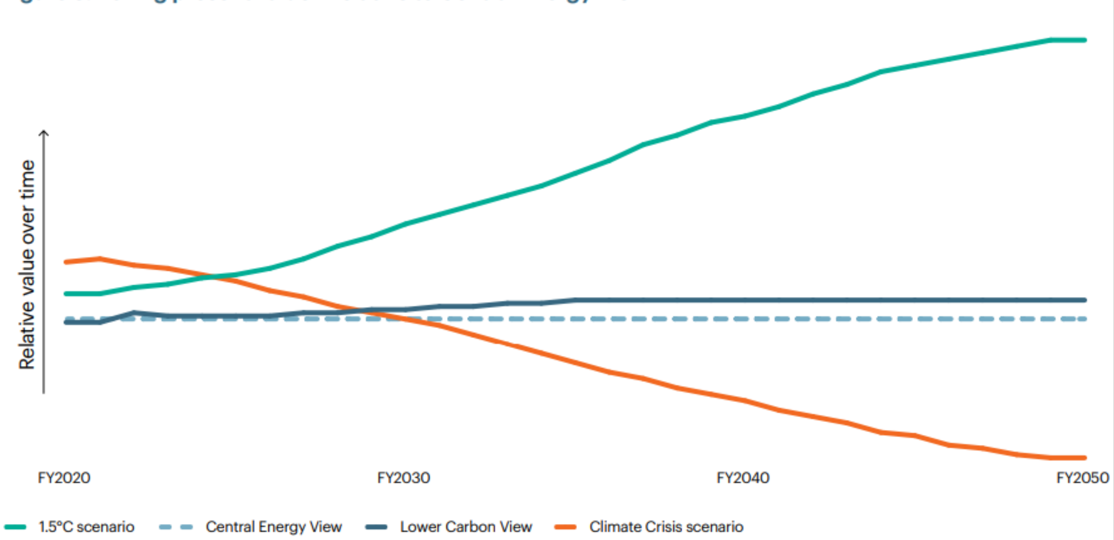
Example of Disclosure for *Strategy c)*: Financial Impacts *(continued)*

Describe the potential impact of climate-related issues on financial performance (e.g., revenues, costs) and financial position (e.g., assets, liabilities)

Example Disclosure: BHP (Energy)

TCFD alignment: the following examples illustrate BHP's portfolio assessment under different climate scenarios, specifically the cumulative demand predicted in the next 30 years for some of the commodities they provide, as well as the rolling present value of unlevered free cash flows relative to their Central Energy View over time. BHP considered four scenarios in their analysis: 1.5°C scenario (aligned with the goals of the Paris Agreement), Central Energy View (3°C increase by 2100), Lower Carbon View: (2.5°C increase by 2100), and Climate Crisis scenario. BHP's portfolio analysis demonstrates the resilience of their strategies to climate-related risks and opportunities, taking into consideration a transition to a low-carbon economy consistent with a 2°C or lower scenario, as it may present greater upside to their current portfolio and create additional opportunities for growth in future-facing commodities.

Figure 8. Rolling present value (1) relative to Central Energy View



Source: BHP, Climate Change Report 2020, September 2020, pp. 19 – 21.
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Discussion questions

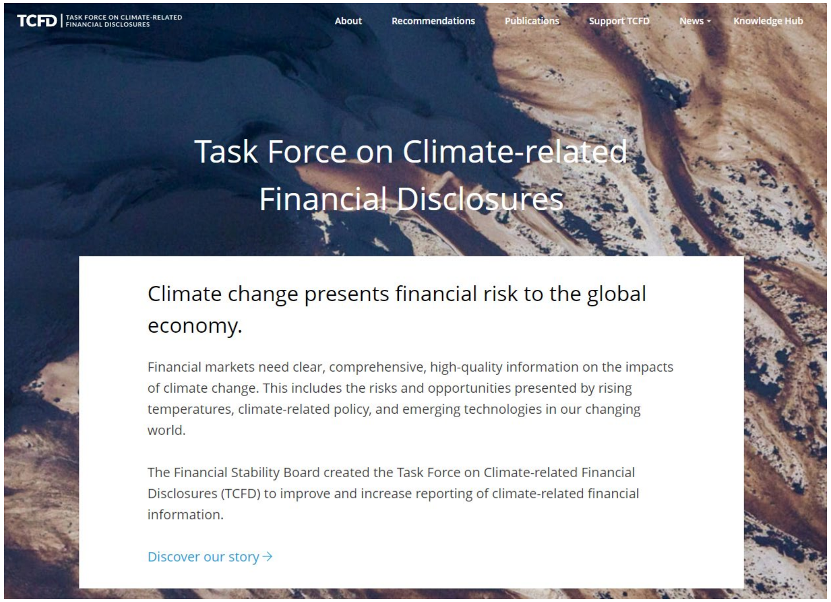
- Does your company disclose climate-related risks or opportunities?
- Has your organization considered the resilience of its strategy under different climate-related scenarios?

Additional Resources

Other resources on how to get started can be found on the TCFD website and the Knowledge Hub

TCFD Website

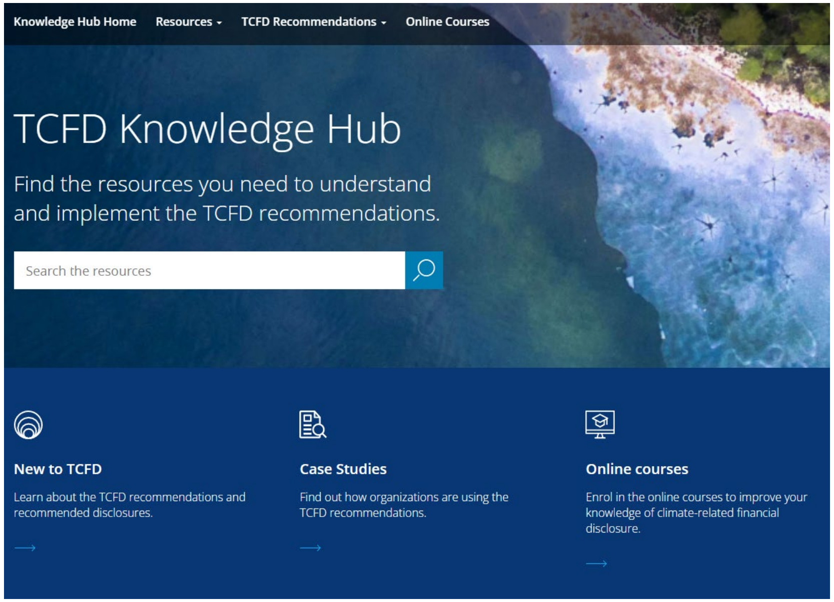
Find all the information you need about the TCFD on its official website, including the recommendations and all other publications.



https://www.fsb-tcfd.org/

Knowledge Hub

Find additional TCFD-related resources curated by the CDSB (information on the recommendations, alignment with other frameworks, online courses, etc).



https://www.tcfdhub.org/

TCFD Series of Workshops

The next session will focus on the Risk Management recommendation

Session		
1	**Fundamentals and Overview of TCFD**	
2	TCFD Recommendation: **Governance**	
3	TCFD Recommendation: **Strategy**	
4	TCFD Recommendation: **Risk Management**	***Next session***
5	TCFD Recommendation: **Metrics & Targets**	

Q&A

Appendix: Supplemental guidance for the financial sector and non-financial groups

Overview of the Supplemental Guidance

The Task Force identified certain areas where supplemental guidance was warranted, for both the financial sectors and non-financial groups

Financial Sector

The supplemental guidance is intended to provide additional context for the financial sector when preparing disclosures consistent with the Task Force's recommendations, namely for the following four major industries:

- Banks
- Insurance Companies
- Asset Owners
- Asset Managers

	Governance		Strategy			Risk Management			Metrics and Targets		
Industries	a)	b)	a)	b)	c)	a)	b)	c)	a)	b)	c)
Banks			■			□			□	□	
Insurance Companies				■	■	□	□		□	□	
Asset Owners				■	■	□	□		□	□	
Asset Managers				■		□	□		□	□	

Non-Financial Groups

Similarly, supplemental guidance is included for companies within four non-financial groups. These groups comprise industries in the following four areas:

- Energy
- Transportation
- Materials and Buildings
- Agriculture, Food, and Forest Products

	Governance		Strategy			Risk Management			Metrics and Targets		
Groups	a)	b)	a)	b)	c)	a)	b)	c)	a)	b)	c)
Energy				■	■				□		
Transportation				■	■				□		
Materials and Buildings				■	■				□		
Ag, Food, and Forest Products				■	■				□		

Source: TCFD, Annex : Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures , 2021

Supplemental Strategy Guidance for the Financial Sector

Strategy Disclose the actual and potential impacts of climate-related risks and opportunities on the company's businesses, strategy, and financial planning where such information is material.	
Banks	
Recommended disclosure a) Describe the climate-related risks and opportunities the company has identified over the short, medium, and long term	Banks should describe **significant concentrations of credit exposure to carbon-related assets**. Additionally, banks should consider **disclosing their climate-related risks** (transition and physical) in their lending and other financial intermediary business activities
Insurance Companies	
Recommended disclosure b) Describe the impact of climate-related risks and opportunities on the company's businesses, strategy, and financial planning	Insurance companies should describe the potential **impacts of climate-related risks and opportunities** as well as provide supporting quantitative information where available, on their core businesses, products, and services, including: ▪ information at the business division, sector, or geography levels; ▪ how the potential impacts influence client or broker selection; and ▪ whether specific climate-related products or competencies are under development, such as insurance of green infrastructure, specialty climate-related risk advisory services, and climate-related client engagement.
Recommended disclosure c) Describe the resilience of the company's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	Insurance companies that perform **climate-related scenario analysis on their underwriting activities** should provide the following information: ▪ description of the climate-related scenarios used, including the critical input parameters, assumptions and considerations, and analytical choices. In addition to a 2°C scenario, insurance companies with substantial exposure to weather-related perils should consider using a greater than 2°C scenario to account for physical effects of climate change and ▪ time frames used for the climate-related scenarios, including short, medium-, and long-term milestones.

Note: For readability, we removed footnote references from these excerpts. Please see the annex referenced below for more information.
Source: TCFD, Annex : Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures , 2021

Supplemental Strategy Guidance for the Financial Sector *(cont.)*

Strategy Disclose the actual and potential impacts of climate-related risks and opportunities on the company's businesses, strategy, and financial planning where such information is material.	
Asset Owners	
Recommended disclosure b) Describe the impact of climate-related risks and opportunities on the company's businesses, strategy, and financial planning	Asset owners should describe **how climate-related risks and opportunities are factored into relevant investment strategies**. This could be described from the perspective of the total fund or investment strategy or individual investment strategies for various asset classes.
Recommended disclosure c) Describe the resilience of the company's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	Asset owners that perform scenario analysis should consider providing a **discussion of how climate-related scenarios are used**, such as to inform investments in specific assets.
Asset Managers	
Recommended disclosure b) Describe the impact of climate-related risks and opportunities on the company's businesses, strategy, and financial planning	Asset managers should describe **how climate-related risks and opportunities are factored** into relevant products or investment strategies. Asset managers should also describe **how each product or investment strategy might be affected by the transition** to a low-carbon economy.

Source: TCFD, Annex : Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures , 2021

Supplemental Guidance for the Non-Financial Groups

Strategy Disclose the actual and potential impacts of climate-related risks and opportunities on the company's businesses, strategy, and financial planning where such information is material.	
Energy, Transportation, Materials & Buildings, and Agriculture, Food, and Forest Products	
Recommended disclosure b) Describe the impact of climate-related risks and opportunities on the company's businesses, strategy, and financial planning	Companies should consider discussing how climate-related risks and opportunities are integrated into their (1) **current decision-making** and (2) **strategy formulation**, including planning assumptions and objectives around climate change mitigation, adaptation, or opportunities such as: ▪ Research and development (R&D) and adoption of new technology. ▪ Existing and committed future activities such as investments, restructuring, write-downs, or impairment of assets. ▪ Critical planning assumptions around legacy assets, for example, strategies to lower carbon-, energy-, and/or water-intensive operations. ▪ How GHG emissions, energy, and water and other physical risk exposures, if applicable, are considered in capital planning and allocation; this could include a discussion of major acquisitions and divestments, joint-ventures, and investments in technology, innovation, and new business areas in light of changing climate-related risks and opportunities. ▪ The company's flexibility in positioning/repositioning capital to address emerging climate-related risks and opportunities.
Recommended disclosure c) Describe the resilience of the company's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	Companies with more than one billion U.S. dollar equivalent (USDE) in annual revenue should consider conducting more robust scenario analysis to **assess the resilience of their strategies against a range of climate-related scenarios**, including a 2°C or lower scenario and, where relevant to the company, scenarios consistent with increased physical climate-related risks. Companies should consider discussing the **implications of different policy assumptions, macro-economic trends, energy pathways, and technology assumptions** used in publicly available climate-related scenarios to assess the resilience of their strategies. For the climate-related scenarios used, companies should consider **providing information on the following factors** to allow investors and others to understand how conclusions were drawn from scenario analysis: Critical input parameters, assumptions, and analytical choices for the climate-related scenarios used, particularly as they relate to key areas such as policy assumptions, energy deployment pathways, technology pathways, and related timing assumptions. ▪ Potential qualitative or quantitative financial implications of the climate-related scenarios, if any.

Note: For readability, we removed footnote references from these excerpts. Please see the annex referenced below for more information.
Source: TCFD, Annex : Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures , 2021

TCFD TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES