

Task Force on Climate-related Financial Disclosures

Guidance on Metrics, Targets,
and Transition Plans

TCFD

TASK FORCE ON
CLIMATE-RELATED
FINANCIAL
DISCLOSURES

October 2021

Contents

A. Overview and Background	1
1. Overview	2
2. Background	4
B. Scope and Approach	6
1. Organizations in Scope	7
2. Approach	7
3. Key Considerations	8
C. Climate-Related Metrics	10
1. Characteristics of Effective Climate-Related Metrics	11
2. Disclosing Climate-Related Metrics	13
3. Driving Toward Comparability: Cross-Industry Metric Categories	14
4. Portfolio Alignment Metrics for the Financial Sector	27
D. Climate-Related Targets	29
1. Characteristics of Effective Climate-Related Targets	31
2. Disclosing Climate-Related Targets	35
E. Transition Plans	38
1. Characteristics of Effective Transition Plans	40
2. Transition Plan Considerations	41
3. Disclosing Transition Plan Information	43
F. Financial Impacts	45
1. Inputs for Estimating Financial Impacts	48
2. Disclosing Financial Impacts	49
Appendix 1: Further Information on Select Cross-Industry, Climate-Related Metric Categories	54
1. Scope 3 GHG Emissions	54
2. Internal Carbon Prices	59
Appendix 2: Example Disclosures	61
Appendix 3: Glossary and Abbreviations	65
Appendix 4: References	68

A. Overview and Background



78.64

77.10
79.06
75.12

43.34

59.87

48.96

80.12
63.13

38.86

62.98

10.03

32.34

88.95

56.13

10.65

12.45

A. Overview and Background

1. OVERVIEW

When the Task Force on Climate-related Financial Disclosures (the Task Force or TCFD) issued its [final recommendations](#) in June 2017 (2017 report), it understood the early nature of climate-related reporting and anticipated that disclosure would evolve as climate-related financial reporting matured.¹

Over the past few years, several market and industry initiatives have focused on converging reporting standards that cover climate issues as well as aligning and improving comparability of climate-related metrics ([Box A1](#), p. 3). These efforts include work to harmonize greenhouse gas (GHG) accounting methods to allow financial organizations to consistently measure GHG emissions financed by their loans and investments (referred to as financed emissions). In addition, many nations and organizations have committed to climate targets, such as those related to “net-zero” and the Paris Agreement.² These commitments have led users of climate-related financial disclosures — investors, lenders, and insurance underwriters — to increasingly seek decision-

useful information on organizations’ plans and progress to move to a low-carbon economy, referred to as transition plans, including the use of associated climate-related metrics and targets to track such progress.

Since 2017, the Task Force has sought to clarify issues raised by organizations in their implementation of the TCFD recommendations and provide additional supporting guidance and other information where appropriate. To address recent developments and feedback from users, preparers, and others, this document provides additional guidance for preparers regarding disclosures of climate-related metrics and targets and key information from transition plans. The Task Force also modified certain aspects of its 2017 [Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures](#) (2017 annex) to provide additional guidance on disclosing metrics, targets, and transition plan information in line with the TCFD recommendations ([2021 annex](#)).³

A. Overview and Background

B. Scope and Approach

C. Climate-Related Metrics

D. Climate-Related Targets

E. Transition Plans

F. Financial Impacts

Appendices



¹ The Task Force’s 2017 report states “as understanding, data analytics, and modeling of climate-related issues becomes more widespread, disclosures can mature accordingly” (p. 41).

² United Nations Framework Convention on Climate Change, “[Paris Agreement](#),” December 2015. According to the Intergovernmental Panel on Climate Change (IPCC), in order to keep warming to 1.5°C, GHG emissions must reach “net-zero” by 2050. The “net” in net-zero means any residual GHG emissions from hard-to-abate industries need to be removed from the atmosphere through technology or nature-based solutions.

³ TCFD, [Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures](#) (2017 annex), June 29, 2017; TCFD, [Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures](#) (2021 annex), October 14, 2021.

Box A1

Market and Industry Developments

Global Standard Convergence

- In December 2020, a group of sustainability standard setters — CDP, the Climate Disclosure Standards Board (CDSB), the Global Reporting Initiative (GRI), the International Integrated Reporting Council (IIRC), and the Sustainability Accounting Standards Board (SASB), referred to herein as the “the Alliance” — published a [prototype climate-related financial disclosure standard](#). The prototype outlines a shared vision that integrates both financial accounting and sustainability disclosure and builds on the TCFD recommendations.
- In February 2021, The International Financial Reporting Standards (IFRS) Foundation Trustees (Trustees) [announced plans](#) to produce a proposal for the establishment of a sustainability standards board.
- In February 2021, the International Organization of Securities Commissions (IOSCO) [welcomed the announcement](#) from the Trustees and further welcomed the Alliance prototype “as a potential basis for the [International Sustainability Standards Board (ISSB)] to develop climate-related reporting standards.”⁴
- In March 2021, the Trustees announced their [strategic direction](#) and established a [working group](#) to accelerate convergence in global sustainability reporting standards, building on the “well-established work” of both the TCFD and the Alliance. The working group is chaired by the IFRS Foundation and includes participation from CDSB, the International Accounting Standards Board, IIRC, SASB, TCFD, and the World Economic Forum (WEF).
- In June 2021, IOSCO released a [Report on Sustainability-related Issuer Disclosures](#) providing more details on gaps in current sustainability reporting as well as IOSCO’s vision for the ISSB.
- In April 2020, the CRO Forum, a group of Chief Risk Officers from large multinational insurance companies, released the [Carbon Footprinting Methodology for Underwriting Portfolios](#), which describes an approach for insurance underwriters to calculate a weighted average carbon intensity metric.
- In November 2020, the Partnership for Carbon Accounting Financials (PCAF) released the [Global GHG Accounting and Reporting Standard for the Financial Industry](#), which outlines methodologies for measuring financed emissions for specific asset classes in line with the GHG Protocol.
- In April 2021, the United Nations [launched the Glasgow Financial Alliance for Net Zero](#) (GFANZ) to bring together various financial-sector alliances focused on net-zero GHG emissions targets by mid-century.
- In April 2021, the Science Based Targets initiative (SBTi) released its [Financial Sector Science-Based Targets Guidance](#). The guidance encourages financial institutions to use PCAF’s Global GHG Accounting and Reporting Standard to measure financed emissions.
- In April 2021, the European Commission issued a proposed [Corporate Sustainability Reporting Directive](#) that would amend existing reporting requirements to include a broader range of companies and require sustainability reporting according to standards to be developed by the European Financial Reporting Advisory Group.⁵ The reporting standards would specify the information companies should report, including climate-related metrics and targets.
- Throughout 2019, 2020, and 2021, the World Business Council for Sustainable Development (WBCSD) published four reports to help non-financial companies implement the TCFD recommendations, including by providing sector-specific metrics and case studies. These TCFD Preparer Forums focused on the [Electric Utilities; Construction and Building Materials; Food, Agriculture, and Forest Products; and Auto](#) sectors.

Improving Comparability of Climate-Related Metrics, Targets, and Transition Plans

- In September 2019, the [Corporate Reporting Dialogue](#) released a report mapping the alignment between the TCFD’s recommended disclosures and CDP, GRI, and SASB indicators, which showed broad alignment across metrics.

A. Overview and Background

B. Scope and Approach

C. Climate-Related Metrics

D. Climate-Related Targets

E. Transition Plans

F. Financial Impacts

Appendices

⁴ “Securities regulators and other capital market authorities are responsible for the oversight of capital markets. This oversight responsibility generally includes the development, application and enforcement of accounting standards, auditing standards, and disclosure regulations.” IOSCO, [Report on Sustainability-related Issuer Disclosures](#), June 2021, p. 1.

⁵ The proposed [Corporate Sustainability Reporting Directive](#) would amend the existing requirements under the [Non-Financial Reporting Directive](#). For an overview of relevant amendments, see the European Commission’s [“Corporate sustainability reporting.”](#)

2. BACKGROUND

The Task Force was created to develop voluntary, consistent climate-related financial disclosures that would be useful to investors, lenders, and insurance underwriters in appropriately assessing and pricing climate-related risks (Figure A1 shows the Task Force’s recommendations). Without the right information, investors and others may incorrectly price or value financial assets, leading to a misallocation of capital.

Accurate and timely disclosure of the actual and potential impacts of climate-related risks and opportunities on an organization is fundamental to pricing risks. In addition, recognizing the importance of disclosing potential impacts associated with climate change, the Task Force asks organizations to describe the resilience of their strategies under different climate-related scenarios and encourages certain non-financial organizations to describe potential qualitative or quantitative financial implications of the climate-related scenarios used.⁶

Unfortunately, organizations’ disclosure of the resilience of their strategies under different climate-related scenarios is relatively low.⁷

As described in the Task Force’s four annual status reports, this information consistently has the lowest level of disclosure across the Task Force’s 11 recommended disclosures.

To monitor and promote implementation of its recommendations, the Task Force engages in formal and informal consultations and discussions with users, preparers, and other stakeholders. As part of those efforts, the Task Force has confirmed with users that such financial impact information is an important element in their assessments.

Based on a comprehensive survey of the specific types of climate-related information that investors, lenders, and insurance underwriters find the most useful, the Task Force found users were nearly unanimous in identifying the actual impact of climate-related issues on an organization’s businesses and strategy as the most useful. When asked to rank specific types of information that could be disclosed to describe a range of impacts, including both financial and non-financial, users were nearly unanimous in identifying financial impacts on capital expenditures and capital allocation as most useful. When asked about the most useful information organizations could disclose when

A. Overview and Background

B. Scope and Approach

C. Climate-Related Metrics

D. Climate-Related Targets

E. Transition Plans

F. Financial Impacts

Appendices

Figure A1 TCFD Recommendations

The Task Force’s recommendations on climate-related financial disclosures are structured around four thematic areas that represent core elements of how companies operate: governance, strategy, risk management, and metrics and targets.*

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.

*The four recommendations are supported by 11 recommended disclosures intended to help investors and others understand how reporting organizations assess and address climate-related risks and opportunities.

⁶ In the context of the TCFD recommendations, “non-financial organizations” refer to those organizations within the four sector groups specified in the 2017 report: (1) Energy, (2) Transportation, (3) Materials and Buildings, and (4) Agriculture, Food, and Forest Products.

⁷ TCFD recommended disclosure *Strategy c*, including information on potential financial impact, consistently has the lowest level of disclosure in the Task Force’s annual reviews of publicly available reporting: TCFD, *2021 status report*, October 14, 2021, p. 30; TCFD, *2020 status report*, October 2020, p. 11; TCFD, *2019 status report*, June 2019, p. 8; TCFD, *2018 status report*, September 2018, p. 9.

describing the resiliency of their strategies to climate-related issues — in other words, potential impact — users identified an indication of the direction or ranges of potential financial implications under different climate-related scenarios as most useful. For a summary of the complete survey results, please see the Task Force’s 2020 [status report](#).⁸

Given the importance to users of information describing the actual and potential financial impacts of climate-related issues on organizations and the low levels of disclosure associated with the latter, the Task Force undertook work in 2021 to better understand the types of information organizations use to describe the financial impacts associated with climate change and challenges associated with making such disclosures.

Based on the Task Force’s findings (as described in its 2021 status report) as well as market and industry developments, the Task Force believes it is critical to reinforce the importance of organizations disclosing the actual and potential financial impacts of climate change on their businesses and strategies to support users’ assessments. In addition, based on feedback through interviews and the Task Force’s 2021 public consultation on its [Proposed Guidance on Metrics, Targets, and Transition Plans](#), users are keenly interested in organizations disclosing certain fundamental categories of metrics that are critical inputs for measuring financial risk.^{9, 10}

The Task Force developed this guidance to support preparers in disclosing decision-useful metrics, targets, and transition plan information and linking those disclosures with estimates of financial impacts. Such information will enable users to appropriately assess their investment and lending risks.

The remainder of this document is organized as follows:

- **Section B. Scope and Approach.** This section outlines the types of organizations addressed in this report, the approach the Task Force took to develop this guidance, as well as some key considerations for preparers.
- **Section C. Climate-Related Metrics.** This section provides information on selecting and disclosing metrics, including the Task Force’s view on a set of metrics that all organizations should disclose.
- **Section D. Climate-Related Targets.** This section provides guidance on selecting and disclosing climate-related targets as well as details on the role of scenario analysis in determining targets.
- **Section E. Transition Plans.** This section describes how organizations might include aspects of their transition plans in their climate-related financial disclosures.
- **Section F. Financial Impacts.** This section underscores the way in which climate-related metrics, targets, and information from transition plans provide useful underlying information with which to estimate the actual or potential impact of climate-related issues on an organization’s financial performance and position.

A. Overview and Background

B. Scope and Approach

C. Climate-Related Metrics

D. Climate-Related Targets

E. Transition Plans

F. Financial Impacts

Appendices

⁸ TCFD, [2020 status report](#), pp. 27–34 and 93–103.

⁹ For more information on the interviews, see TCFD, [2021 status report](#), p. 58.

¹⁰ For a summary of responses from the consultation, see TCFD, [Proposed Guidance on Metrics, Targets, and Transition Plans Consultation: Summary of Responses](#), October 14, 2021.

B.
Scope and
Approach



B. Scope and Approach

Organizations implementing the Task Force’s recommendations come from various industries and use a wide range of strategies, metrics, and targets to assess and manage their climate-related risks and opportunities. The Task Force acknowledges that many informative climate-related metrics and targets will be specific to an organization’s industry or business model.¹¹

However, the Task Force received feedback through a number of channels related to implementation of the Strategy and Metrics and Targets recommendations that warranted further TCFD guidance. To address this feedback, the Task Force focuses this guidance on several key aspects of metrics, targets, and transition plans it believes most organizations can disclose to enhance their climate-related reporting.



A. Overview and Background

B. Scope and Approach

C. Climate-Related Metrics

D. Climate-Related Targets

E. Transition Plans

F. Financial Impacts

Appendices

1. ORGANIZATIONS IN SCOPE

In developing this document, the Task Force considered the types of organizations that might benefit most from additional guidance. This guidance is intended to cover a wide range of organizations. As with its recommendations in general, the Task Force expects this guidance to be useful to organizations of all sizes and located in various countries around the world.

2. APPROACH

As part of monitoring adoption of its recommendations, the Task Force has formally solicited stakeholder input on specific implementation issues. Although analysis of public company reporting shows that metrics and targets is one of the highest areas of disclosure, the majority of respondents to a 2019 Task Force [survey on implementation](#) found the Metrics and Targets recommendation “somewhat difficult” or “very difficult” to implement.¹²

Respondents that identified as preparers stated that increased standardization of metrics and targets would ease implementation challenges, while respondents that identified as users noted increased standardization would help drive toward comparability across companies’ climate-related financial disclosures.

In addition, the Task Force held two public consultations on elements of its Strategy and Metrics and Targets recommendations over the past year to understand current preparer practices on disclosure, including challenges regarding implementation, and to collect input from users on the types of climate-related information that would be more useful.

- The October 2020 [Forward-Looking Financial Sector Metrics Consultation](#) (consultation on forward-looking metrics) solicited views on decision-useful, forward-looking metrics to be disclosed by financial organizations, requesting feedback on forward-looking metrics that have gained interest from the financial sector in recent years and the challenges and usefulness of such metrics.¹³
- In June 2021, the Task Force released a draft version of this guidance for consultation, the [Proposed Guidance on Climate-related Metrics, Targets, and Transition Plans](#) (consultation on metrics, targets, and transition plans).¹⁴ The consultation asked preparers to provide information on their disclosure of certain

¹¹ The Task Force welcomes the ongoing work of existing standards setters, industry associations, and similar organizations that are best positioned to develop industry-specific climate-related frameworks or standards.

¹² TCFD, [2021 status report](#), p. 30; TCFD, [2020 status report](#), p. 11; TCFD, [2019 status report](#), p. 8; TCFD, [2018 status report](#), p. 9.

¹³ TCFD, [Forward-Looking Financial Sector Metrics Consultation](#), October 2020.

¹⁴ TCFD, [Proposed Guidance on Climate-related Metrics, Targets, and Transition Plans](#), June 7, 2021; Portfolio Alignment Team, [Measuring Portfolio Alignment: Technical Supplement](#), June 7, 2021.

metrics, targets, and transition plan elements, as well as the challenges of disclosure, and for users to assess the usefulness of such disclosures. The consultation also asked about proposed updates to the supplemental guidance for financial sectors, including on disclosure of Scope 3 GHG emissions and alignment of financial sector business activities with a 2°C or lower GHG emissions pathway (“portfolio alignment”).¹⁵ In addition, respondents provided input on developments and changes in user expectations since the original guidance was released in 2017.

Responses to these public consultations allowed the Task Force to better assess the burden of disclosure on preparers as well as the need for consistent and decision-useful information for users, a balance that is foundational to the Task Force’s work. Based on the over 400 responses received through both consultations, the Task Force has clarified and simplified the proposed guidance and updated specific sections of its *Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures* (2021 annex).¹⁶

The Task Force’s guidance for all sectors released in 2017 explicitly or implicitly addresses the

topics covered in this guidance. Nevertheless, the Task Force believes it is critical to emphasize the importance of disclosing certain climate-related metrics and targets and to explicitly address the types of information organizations should disclose as it relates to their plans for transitioning to a low-carbon economy, where such disclosures are appropriate.

3. KEY CONSIDERATIONS

The Task Force encourages preparers to read the guidance in the context of the following considerations.

Principles for Effective Disclosures. To underpin its recommendations and help guide developments in climate-related financial reporting, the Task Force developed a set of fundamental principles for effective disclosure (Figure B1). These principles can help achieve high-quality and decision-useful disclosures that enable users to understand the impact of climate change on organizations. The Task Force encourages organizations adopting its recommendations to consider these principles as they develop climate-related financial disclosures.

A. Overview and Background

B. Scope and Approach

C. Climate-Related Metrics

D. Climate-Related Targets

E. Transition Plans

F. Financial Impacts

Appendices

Figure B1
Principles for Effective Disclosures

1 Disclosures should represent relevant information	2 Disclosures should be specific and complete	3 Disclosures should be clear, balanced, and understandable	4 Disclosures should be consistent over time
5 Disclosures should be comparable among companies within a sector, industry, or portfolio	6 Disclosures should be reliable, verifiable, and objective	7 Disclosures should be provided on a timely basis	

¹⁵ Though the language released for consultation referenced a 2°C or lower temperature pathway, the Task Force recommendation on portfolio alignment has been updated to reference article two of the 2015 Paris Agreement, which commits parties to “holding the increasing in the global average temperature to **well below 2°C** above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels” (emphasis added).

¹⁶ TCFD, *Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures* (2021 annex), October 14, 2021.

The Task Force’s disclosure principles are informed by the qualitative and quantitative characteristics of financial information and further the overall goals of the Task Force to promote more effective climate-related financial disclosure. The principles, taken together, are designed to assist organizations in making clear the linkages and connections between climate-related issues and their governance, strategy, risk management, and metrics and targets. The Task Force’s fundamental principles for effective disclosure are described in Appendix 3 of the [TCFD 2017 report](#).

Cross-Industry Metric Categories. In [Section C. Climate-Related Metrics](#), the Task Force identifies a set of climate-related metric categories that all organizations should disclose, where data and methodologies allow. It is important to note that the cross-industry metric categories do not prescribe the exact metrics and units of measure to be used. Rather, they reflect broader categories of information that investors, lenders, and insurance underwriters find useful in making financial decisions. The Task Force recognizes that organizations may operationalize the metric categories in different ways most relevant to their industry, capabilities, and business model. Therefore, the metric categories help drive toward further comparability in disclosure in response to market feedback, but also allow flexibility for organizations, industries, standard setters, and jurisdictions to develop specific climate-related metrics within those defined categories.

Financial Sector Metrics. This guidance primarily addresses all types of organizations; however, there are certain areas in which it provides specific considerations for financial sector organizations due to the nature of their business activity. For example, within Scope 3 GHG emissions reporting, financial sector organizations are specifically encouraged to disclose GHG emissions related to their investing, lending, and underwriting activities.

In addition, following the Task Force’s consultation on forward-looking metrics, this guidance discusses the disclosure of the alignment of a financial organization’s business activities with a temperature pathway well below 2°C (“portfolio alignment”) in [Sub-Section C.4. Portfolio Alignment Metrics for the Financial Sector](#).¹⁷ The Task Force requested that an independent group of expert analysts from financial organizations (the Portfolio Alignment Team) develop [technical considerations](#) outlining its views on developing portfolio alignment metrics and areas of further work as a resource for organizations interested in exploring portfolio alignment.¹⁸

Transition Plans. While the Task Force’s Strategy recommendation asks for disclosure of the actual and potential impacts of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning, reporting on transition plans has emerged more recently as important to users. Therefore, guidance on transition plans is provided in [Section E. Transition Plans](#) and in the 2021 annex to assist preparers with developing disclosures that meet current user expectations.

Implementation Over Time. The Task Force recognizes that some areas addressed in this guidance are still maturing. While some organizations already disclose the information in this guidance today, others may need additional time to source appropriate data as well as update their internal processes and reporting capabilities before publicly disclosing some elements. The Task Force encourages reporting based on the updated 2021 annex to be implemented as soon as possible.

A.
Overview and Background

B.
Scope and Approach

C.
Climate-Related Metrics

D.
Climate-Related Targets

E.
Transition Plans

F.
Financial Impacts

Appendices

¹⁷ Article two of the 2015 [Paris Agreement](#) commits parties to “holding the increasing in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels.”

¹⁸ Portfolio Alignment Team, [Measuring Portfolio Alignment: Technical Considerations](#), October 2021.

C. Climate-Related Metrics



C. Climate-Related Metrics

This section aims to support organizations' disclosure of climate-related metrics by discussing characteristics of effective climate-related metrics, describing the types of information organizations should consider including in their disclosure of climate-related metrics, and setting out categories of metrics for disclosure across industries. It provides further details on these cross-industry, climate-related metric categories, including example disclosures. The section also includes discussion of metrics with which to measure the alignment of financial sector business activities with GHG emissions reduction goals.

As described in [Figure A1](#) (p. 4), the Task Force's recommendations are structured around four thematic areas that represent core elements of how organizations operate — governance, strategy, risk management, and metrics and targets. While all four recommendations are interrelated, the Task Force views metrics as the “connective tissue” between the recommendations ([Box C1](#)).

1. CHARACTERISTICS OF EFFECTIVE CLIMATE-RELATED METRICS

Many sources offer guidance on how to select business-relevant metrics.¹⁹ In particular, the Task Force believes that climate-related metrics should have several characteristics to help them meet the Task Force's fundamental principles for effective disclosure.²⁰

Decision-Useful. Climate-related metrics help organizations understand potential impacts of climate-related risks and opportunities over a specified time period, including financial impacts and operational consequences. To be decision-useful, these metrics should be relevant to the organization's risks and opportunities and show how the organization manages such risks and opportunities as part of its governance, strategy, and risk management processes.

Box C1 Relationship between Metrics and Other TCFD Recommendations

Climate-related metrics should inform, and be informed by, the organization's governance, strategy, and risk management processes and create a feedback loop over time in the same way that other key performance indicators and key risk indicators are used to inform business management processes.

- **Governance.** Climate-related metrics enable an organization's board and management to more effectively direct the business by measuring and describing the impacts of climate-related risks and opportunities on the organization — recommended disclosures *Governance a)* and *b)*. Metrics are also essential for informing investors, lenders, insurance underwriters, and other stakeholders about how senior management tracks and manages climate-related risks and opportunities. Climate-related metrics, such as remuneration, can show how directors and managers are incentivized to achieve climate-related objectives.
- **Strategy.** Climate-related metrics are critical to measuring and describing the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning — recommended disclosure *Strategy b)* — and the resilience of an organization's strategy under different climate-related scenarios — recommended disclosure *Strategy c)*.
- **Risk Management.** Climate-related metrics support the measurement of risk exposures and levels as part of an organization's broader risk management processes. In conjunction with risk tolerances, risk appetites, and risk thresholds, climate-related metrics inform the degree of risk that the organization is prepared to accept and its risk responses (e.g., accept, avoid, pursue, reduce, share/transfer) — recommended disclosures *Risk Management a)* and *b)*. Additional information is provided in the TCFD's [Guidance on Risk Management Integration and Disclosure](#), published on October 29, 2020.

A.
Overview and Background

B.
Scope and Approach

C.
Climate-Related Metrics

D.
Climate-Related Targets

E.
Transition Plans

F.
Financial Impacts

Appendices

¹⁹ For example: SASB, *SASB Conceptual Framework*, February 2017, p. 19; van Oudenhoven, et al., *Key criteria for developing ecosystem service indicators to inform decision making*, August 14, 2018; Shah, “Measuring What Matters: How To Pick A Good Metric,” March 29, 2013; Eckerson, “12 Characteristics of Effective Metrics,” April 19, 2010; Weber, et al., *Exploring Metrics to Measure the Climate Progress of Banks*, May 24, 2018; and Hoffmann, and Busch, “Corporate Carbon Performance Indicators: Carbon Intensity, Dependency, Exposure, and Risk,” November 11, 2008.

²⁰ TCFD, *2017 report*, June 29, 2017, pp. 51–53.

- A. Overview and Background
- B. Scope and Approach
- C. Climate-Related Metrics
- D. Climate-Related Targets
- E. Transition Plans
- F. Financial Impacts
- Appendices

Clear and Understandable. Disclosure of climate-related metrics is most effective when metrics are presented in a manner that aids understanding (e.g., both aggregated and disaggregated, where useful; clear labeling), including clear articulation of any limitations and cautions. Climate-related metrics should provide important context around such points as management’s thinking in terms of goal setting, internal process management, and communication objectives and should be supported by contextual and supporting narrative information on items such as organizational boundaries, governance, methodologies, and basis of preparation.

Reliable, Verifiable, and Objective. Climate-related metrics support effective internal controls for the purposes of data verification and assurance. Climate-related metrics should be free from bias and value judgment so that they yield an objective disclosure of performance that users can leverage regardless of their worldview or outlook.

Consistent over Time. There are three time horizons that are relevant to climate-related metrics: current, historical, and forward-looking, which are defined as follows:

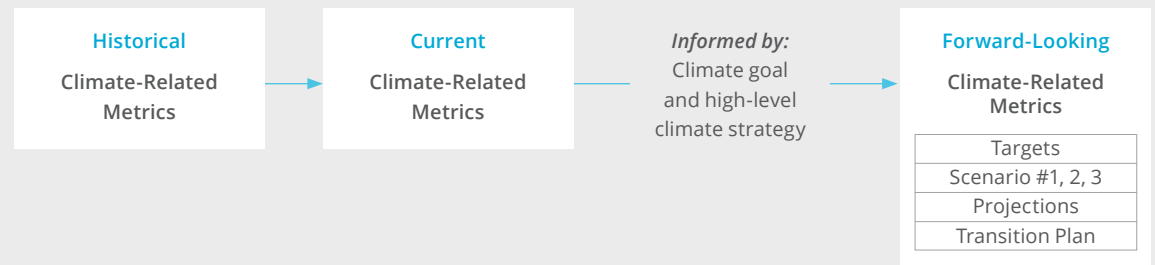
- **Current.** Current period data, outlining most recent reporting period and covering the same period as the current period in the organization’s financial filings (e.g., 12 months year to date).
- **Historical.** Data for the period(s) prior to the current period, covering at a minimum the same period as in the organization’s financial filings.²¹

- **Forward-Looking.** Future period data, covering short-, medium-, and long-term time horizons. Forward-looking metrics may be based on methodologies such as scenario analysis, trend analysis, sensitivity analysis, and simulations, as well as commitments and climate-related targets. Unlike historical and current data, forward-looking data are usually more appropriately reported as ranges based on assumptions about the future state of the world, often tied to one or more plausible climate scenarios. Forward-looking reporting is most useful when it is presented along with information on the designated time horizon, methodologies, and scenarios used, as well as key assumptions.

It is helpful for preparers to disclose climate-related metrics consistently from year to year in order to facilitate comparative and trend analysis and to clearly identify the time horizon over which climate-related metrics are measured. Climate-related metrics are most effective when the same item is reported across all time periods as shown in [Figure C1](#). Measuring the same metrics over time provides a way to track progress.

Disclosure of GHG emissions, for example, could include data on the organization’s previous GHG emissions levels, the amount of GHG emissions in the organization’s current reporting period — including an indication of progress against GHG-specific targets — and a forward-looking range for future GHG emissions.

Figure C1
Time Horizon



²¹ TCFD encourages organizations to provide at least two years of historical data in order to provide a basis for tracking progress.

2. DISCLOSING CLIMATE-RELATED METRICS

Effective disclosure of climate-related metrics generally involves providing metrics along with contextual and supporting narrative to help users understand the meaning and use of climate-related metrics and the basis on which they have been prepared. Climate-related metrics, and associated narrative, should be integrated with an organization's other disclosures to provide a coherent set of information on the organization's climate-related risks and opportunities and actual and potential financial impacts.²² Organizations should also consider which metrics to present as point estimates and which to present as ranges or qualitative categories, and whether to include the level of confidence associated with the value of the metric.

In presenting climate-related metrics and associated contextual information in their disclosures, an organization should consider providing the following, where relevant:²³

- **Types of measurements used**, including whether information comes from direct measurements, estimates, proxy indicators, or financial and management accounting processes.
- **Methodologies and definitions used**, including the scope of application, data sources, critical factors or parameters, assumptions, and limitations of the methodology. For example, the GHG Protocol suggests that organizations discuss GHG emissions factors, scope, and boundaries. For metrics informed by scenario analysis, organizations should include information on which climate scenarios were used and their assumptions and limitations (**Box C2**). Organizations should also provide context if they adjust the methodology or definition of particular metrics.
- **Trend data** to allow for consideration of how metrics have changed in absolute and relative amounts over time, including whether acquisitions, divestments, or policies have affected results.

- **How results are connected** with business units, company strategy, and financial performance and position. Where it aids understanding, organizations should consider disaggregating information by categories such as geographic area, business unit, asset, type, upstream and downstream activities, source, and vulnerability of area.
- **How value chains will be affected over time by climate-related transition and physical risks**, including life cycle GHG emissions reporting.
- **Reconciliation with financial accounting standards**, if needed. If climate-related metrics are presented in financial terms, disclosures should clarify how such metrics reconcile with financial accounting standards and explain any differences.

Box C2

Importance of Disclosing Details on Climate-Related Scenario Analysis

As noted in the 2020 TCFD *Guidance on Scenario Analysis for Non-Financial Companies*, users desire greater transparency into the types of scenarios preparers are using and their impact on the organization's strategy. In particular, preparers should "describe processes used for scenario analysis; the range and assumptions of scenarios used; key findings; whether it is a standalone analysis or integrated with company's risk management and strategy processes," TCFD, *Guidance on Scenario Analysis for Non-Financial Companies*, October 29, 2020, p. 45.

Using a common set of scenarios and inputs (e.g., parameters, timelines, industry-specific metrics, methodologies) increases comparability across companies, provides greater reliability and relevance, and can help reduce the resources required by preparers to develop scenarios in-house. On the other hand, using a common set of scenarios across organizations may reduce their ability to assess their individual situations and how climate-related risks may uniquely affect them, and thus could increase concentration of risk.

A. Overview and Background

B. Scope and Approach

C. Climate-Related Metrics

D. Climate-Related Targets

E. Transition Plans

F. Financial Impacts

Appendices

²² For more information see, for example, Section 3.5 Key Performance Indicators (pp. 12–20) within the European Commission, *Guidelines on non-financial reporting: Supplement on reporting climate-related information*, June 20, 2019.

²³ TCFD, *2021 annex*, pp. 7–8, provides more detail on location of disclosure.

3. DRIVING TOWARD COMPARABILITY: CROSS-INDUSTRY METRIC CATEGORIES

Climate-related metrics can be generally categorized into two groups — those that apply to all organizations (cross-industry) and those that are specific to an industry (industry-specific).²⁴ In its 2020 status report, the Task Force acknowledged industry associations, standard setters, and similar organizations are best positioned to identify and operationalize industry-specific metrics and highlighted many of the groups working on such metrics. Notably, the IFRS Foundation has since announced plans to establish the International Sustainability Standards Board (ISSB) to meet the need for globally consistent sustainability reporting.²⁵

The Task Force has identified seven categories of climate-related metrics from the Task Force's 11 recommended disclosures and guidance for all sectors that all organizations should disclose (Table C1, p. 16), recognizing that for some categories, implementation may take time as data and methodologies evolve. The Task Force encourages reporting based on the updated 2021 annex to be implemented as soon as possible, as disclosure of metrics aligned with these seven categories will support convergence in the disclosure of key metrics.

Importantly, the seven metric categories are not additions to the Metrics and Targets recommendation as they relate to metrics that have been part of the Task Force's recommended

disclosures and guidance for all sectors since the release of its 2017 report. In selecting metric categories, the Task Force sought to emphasize categories that meet several criteria, as follows:

- indicative of many basic aspects and drivers of climate-related risks and opportunities;
- useful for understanding how an organization is managing climate-related risks and opportunities;
- widely requested by climate reporting frameworks, lenders, investors, insurance underwriters, and regional and national disclosure requirements; and,
- key inputs for estimating financial impacts of climate change on organizations.

The Task Force, however, is not a standard-setting body and has defined metric categories broadly to allow flexibility for organizations, industries, and jurisdictions to develop and adopt specific climate-related metrics to support these metric categories. The current ability of organizations and industries to specify metrics applicable to these categories will vary, and the state of methodologies and data may need to further evolve in some areas. The TCFD believes, however, that it is important to articulate a common set of metric categories to encourage industries and standard setters to further operationalize specific metrics that address each category. In the meantime, preparers should use common taxonomies or methodologies, where appropriate.

A. Overview and Background

B. Scope and Approach

C. Climate-Related Metrics

D. Climate-Related Targets

E. Transition Plans

F. Financial Impacts

Appendices



²⁴ For further discussion of the distinction between cross-industry and industry-specific disclosures, see SASB, *Climate Risk Technical Bulletin*, April 13, 2021, p. 21.

²⁵ IFRS, *Consultation Paper on Sustainability Reporting*, September 2020; IFRS, "IFRS Foundation Trustees announce next steps in response to broad demand for global sustainability standards," February 2, 2021.

- A. Overview and Background
- B. Scope and Approach
- C. Climate-Related Metrics**
- D. Climate-Related Targets
- E. Transition Plans
- F. Financial Impacts
- Appendices

The Task Force recommends that preparers disclose metrics consistent with the cross-industry, climate-related metric categories for the current, historical, and forward-looking periods.²⁶ Forward-looking information, particularly information related to the organization’s medium- and long-term time horizons, may be more appropriate to report as ranges, qualitative directions, or numbers tied to specific assumptions about the future state of the world, such as those informed by scenario analysis.²⁷ It is also important to note that the recommended disclosures within both the Strategy and Metrics and Targets recommendations are subject to materiality, except for the disclosure of Scope 1 and Scope 2 GHG emissions (**Box C3**).

The Task Force encourages all preparers to begin disclosing metrics consistent with the cross-industry, climate-related metric categories, but acknowledges not all will have the resources to present quantitative information across all metric categories. Instead, **the Task Force encourages organizations to begin where resources and expertise allow**; for example, by disclosing qualitative information first or focusing on the sectors, business lines, or assets with the most significant climate-related risks and opportunities and improving quantitative disclosures over time.

Organizations typically use a wide variety of information internally and externally to manage their operations. These **cross-industry, climate-related metric categories are not meant to supplant or replace other information** that organizations track as part of their business planning or that industries converge on to track climate-related risks or opportunities specific to their industry or organization. Rather, the Task Force intends for this set of cross-industry metric categories to provide a base of comparability across and within industries and form a framework for the types of climate-related metrics that all organizations should report.

Box C3 Application of Materiality

When the Task Force released its recommendations and implementing guidelines in 2017, it noted that “[t]he disclosures related to the Strategy and Metrics and Targets recommendations involve an assessment of materiality,” while the disclosures related to governance and risk management do not.²⁸

As part of the *Proposed Guidance on Metrics, Targets, and Transition Plans*, the Task Force requested that respondents comment on whether the cross-industry metric categories, or a subset of them, should be disclosed independent of an assessment of materiality.²⁹ Respondents expressed strong support for disclosure of Scope 1 and Scope 2 GHG emissions independent of an assessment of materiality, with 70% saying Scope 1 and Scope 2 GHG emissions should be disclosed. An additional 47% supported disclosure of Scope 3 GHG emissions independent of a materiality assessment.³⁰ Further analysis of open-text responses highlighted the importance of Scope 1, Scope 2, and Scope 3 GHG emissions information as foundational data with which to assess climate-related risks and opportunities. Disclosure of the other metric categories was more mixed, with 33%–42% of respondents requesting disclosure independent of a materiality assessment across the remaining six categories.

Based on the consultation on metrics, targets, and transition plans, the Task Force has updated its 2021 annex to specify that “[t]he Task Force believes all organizations should disclose absolute Scope 1 and Scope 2 GHG emissions independent of a materiality assessment. The disclosure of Scope 3 GHG emissions is subject to materiality; however, the Task Force encourages organizations to disclose such emissions.”^{31, 32} The other cross-industry, climate-related metric categories remain subject to materiality. Organizations should determine materiality for climate-related metrics consistent with how they determine the materiality of other information included in their financial filings.

²⁶ As noted in the 2021 annex, “Asset owners and asset managers should report to their beneficiaries and clients, respectively, through existing means of financial reporting, where relevant and where feasible. Asset owners and asset managers are also encouraged to disclose publicly via their websites or other public avenues of disclosure” (p. 8).

²⁷ For more information, see TCFD, *Guidance on Scenario Analysis for Non-Financial Companies*, October 2020, pp. 46–51.

²⁸ TCFD, *2017 report*, pp. 33–34; TCFD, *2017 annex*, p. 3.

²⁹ TCFD, *Proposed Guidance on Metrics, Targets, and Transition Plans*, June 7, 2021, p. 31.

³⁰ Forty-seven percent responded that Scope 3 GHG emissions should be disclosed irrespective of materiality; 43% responded that they should be disclosed based on a materiality assessment; 10% were not sure. TCFD, *Consultation on Proposed Guidance on Metrics, Targets, and Transition Plans: Summary of Responses*, October 14, 2021.

³¹ TCFD, *2021 annex*, p. 7.

³² While the Task Force agreed that organizations should disclose Scope 1 and 2 GHG emissions independent of a materiality assessment, a few Task Force members preferred keeping such disclosures as subject to materiality.

Table C1
 Cross-Industry, Climate-Related Metric
 Categories and Example Metrics

Metric Category	Example Unit of Measure ³³	Example Metrics
GHG Emissions Absolute Scope 1, Scope 2, and Scope 3; ³⁴ emissions intensity	MT of CO ₂ e	<ul style="list-style-type: none"> • Absolute Scope 1, Scope 2, and Scope 3 GHG emissions • Financed emissions by asset class • Weighted average carbon intensity • GHG emissions per MWh of electricity produced • Gross global Scope 1 GHG emissions covered under emissions-limiting regulations
Transition Risks Amount and extent of assets or business activities vulnerable to transition risks*	Amount or percentage	<ul style="list-style-type: none"> • Volume of real estate collaterals highly exposed to transition risk • Concentration of credit exposure to carbon-related assets • Percent of revenue from coal mining • Percent of revenue passenger kilometers not covered by Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)
Physical Risks Amount and extent of assets or business activities vulnerable to physical risks*	Amount or percentage	<ul style="list-style-type: none"> • Number and value of mortgage loans in 100-year flood zones • Wastewater treatment capacity located in 100-year flood zones • Revenue associated with water withdrawn and consumed in regions of high or extremely high baseline water stress • Proportion of property, infrastructure, or other alternative asset portfolios in an area subject to flooding, heat stress, or water stress • Proportion of real assets exposed to 1:100 or 1:200 climate-related hazards
Climate-Related Opportunities Proportion of revenue, assets, or other business activities aligned with climate-related opportunities	Amount or percentage	<ul style="list-style-type: none"> • Net premiums written related to energy efficiency and low-carbon technology • Number of (1) zero-emissions vehicles (ZEV), (2) hybrid vehicles, and (3) plug-in hybrid vehicles sold • Revenues from products or services that support the transition to a low-carbon economy • Proportion of homes delivered certified to a third-party, multi-attribute green building standard

Continued on next page

³³ The Task Force has noted the most common unit of measure. There are multiple ways to measure and disclose metrics, and different jurisdictions or industries may follow different practices. Allowing for differences in units of measure can help provide organizations with flexibility without significantly impacting comparability as long as units are clearly stated.

³⁴ The Task Force believes Scope 3 GHG emissions are an important metric reflecting an organization's exposure to climate-related risks and opportunities and recognizes the data and methodological challenges associated with calculating such emissions. The Task Force encourages organizations to refer to the GHG Protocol's [The Corporate Value Chain \(Scope 3\) Accounting and Reporting Standard](#) for guidance on reporting these emissions.

A.
Overview and Background

B.
Scope and Approach

C.
Climate-Related Metrics

D.
Climate-Related Targets

E.
Transition Plans

F.
Financial Impacts

Appendices

Table C1 continued

Metric Category	Example Unit of Measure ³³	Example Metrics
Capital Deployment Amount of capital expenditure, financing, or investment deployed toward climate-related risks and opportunities	Reporting currency	<ul style="list-style-type: none"> Percentage of annual revenue invested in R&D of low-carbon products/services Investment in climate adaptation measures (e.g., soil health, irrigation, technology)
Internal Carbon Prices Price on each ton of GHG emissions used internally by an organization	Price in reporting currency, per MT of CO ₂ e	<ul style="list-style-type: none"> Internal carbon price Shadow carbon price, by geography
Remuneration Proportion of executive management remuneration linked to climate considerations**	Percentage, weighting, description, or amount in reporting currency	<ul style="list-style-type: none"> Portion of employee's annual discretionary bonus linked to investments in climate-related products Weighting of climate goals on long-term incentive scorecards for Executive Directors Weighting of performance against operational emissions' targets for remuneration scorecard

Note: While some organizations already disclose metrics consistent with these categories, the Task Force recognizes others — especially those in the early stages of disclosing climate-related financial information — may need time to adjust internal processes before disclosing such information.³⁵ In addition, some of the metric categories may be less applicable to certain organizations. For example, data and methodologies for certain metrics for asset owners (e.g., impact of climate change on investment income) are in early stages of development. In such cases, the Task Force recognizes organizations will need time before such metrics are disclosed to their stakeholders.

On the application of materiality, the Task Force believes all organizations should disclose absolute Scope 1 and Scope 2 GHG emissions independent of a materiality assessment. The disclosure of Scope 3 GHG emissions is subject to materiality; however, the Task Force encourages organizations to disclose such emissions. The other cross-industry, climate-related metric categories remain subject to materiality. Organizations should determine materiality for climate-related metrics consistent with how they determine the materiality of other information included in their financial filings.

***Transition and Physical Risks:** Due to challenges related to portfolio aggregation and sourcing data from companies or third-party fund managers, financial organizations may find it more difficult to quantify exposure to climate-related risks. The Task Force suggests that financial organizations provide qualitative and quantitative information, when available.

****Remuneration:** While the Task Force encourages quantitative disclosure, organizations may include descriptive language on remuneration policies and practices, such as how climate change issues are included in balanced scorecards for executive remuneration.

Additional context, including alignment with existing standards and example disclosures, is provided in [Appendix 2: Example Disclosures](#).

The first category, GHG emissions, is foundational data on which other climate-related disclosures are often based. The next three categories, transition risks, physical risks, and climate-related opportunities, relate to point-in-time disclosure of climate-related risks and opportunities. The next, capital deployment, covers future capital expenditure, financing, or investment to address these risks and opportunities, while the last two categories, internal carbon prices and remuneration, relate to management's incorporation of climate considerations.

As part of the consultation on metrics, targets, and transition plans, the Task Force asked users whether the proposed cross-industry metric categories would be useful, whether preparers currently made such disclosures, and any remaining challenges to implementation.³⁶ A summary of the results related to cross-industry, climate-related metric categories is provided in [Box C4](#) (p. 18). Full results are discussed in the TCFD's *Proposed Guidance on Metrics, Targets, and Transition Plans Consultation: Summary of Responses*, October 14, 2021.

³⁵ Organizations may need time to evaluate and determine which metrics are relevant to disclose, identify and collect data and other information needed for the calculation of metrics, implement new or update existing processes to address or include relevant metrics, etc. The Task Force recognizes the amount of time needed to disclose certain metrics (e.g., physical risks) consistent with the categories identified in [Table C1](#) (p. 16) depends on various factors and encourages organizations to work with industry associations, standard setters, and others to agree on relevant and consistent metrics.

³⁶ The consultation questions referred to these "metric categories" as "metrics."

A. Overview and Background

B. Scope and Approach

C. Climate-Related Metrics

D. Climate-Related Targets

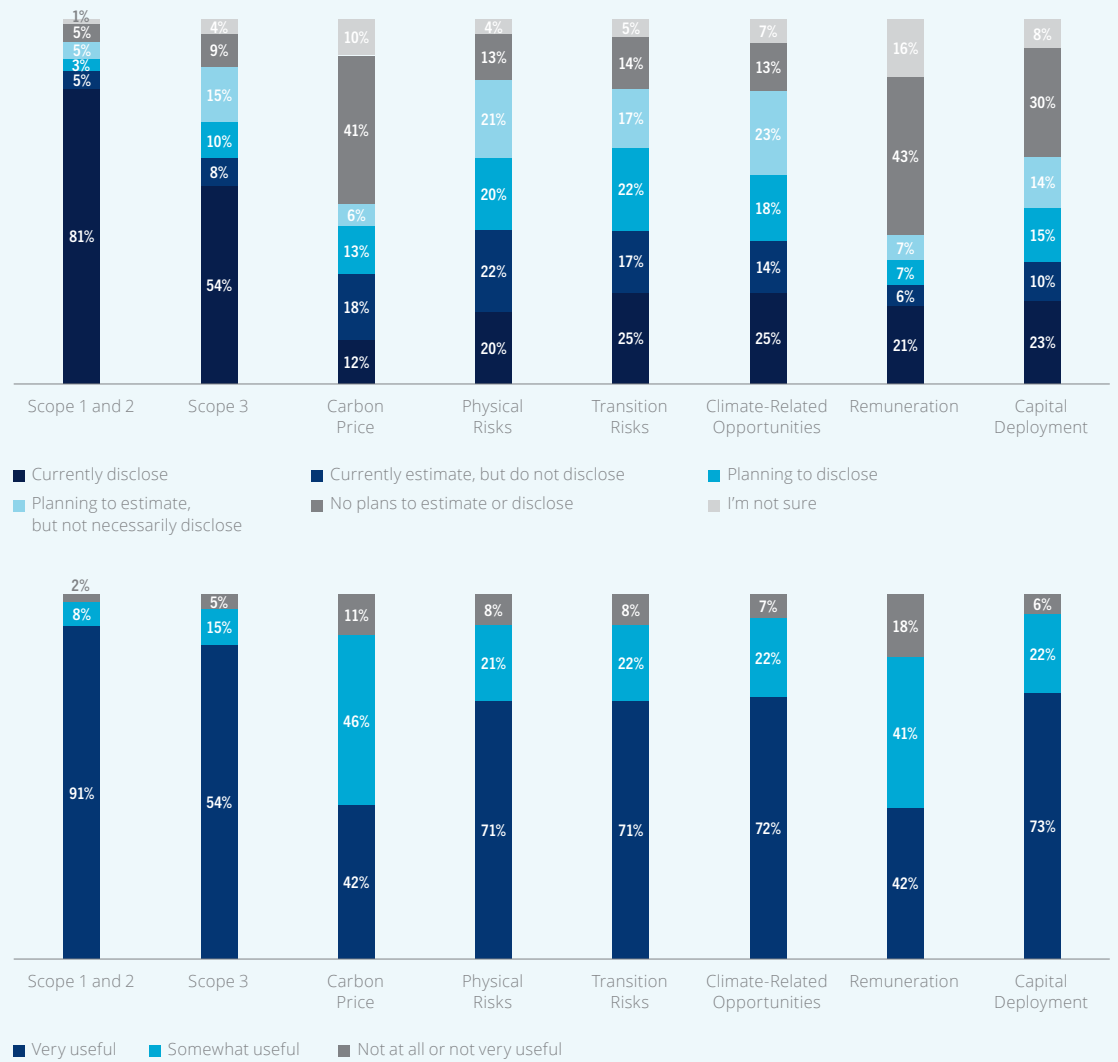
E. Transition Plans

F. Financial Impacts

Appendices

Box C4
Survey Results from the Consultation on Metrics, Targets, and Transition Plans

The results showed that many preparers are currently disclosing or planning to disclose the metric categories, particularly GHG emissions, and that users would find such disclosures useful.



Source: TCFD, Proposed Guidance on Metrics, Targets, and Transition Plans Consultation: Summary of Responses, October 14, 2021

A. Overview and Background

B. Scope and Approach

C. Climate-Related Metrics

D. Climate-Related Targets

E. Transition Plans

F. Financial Impacts

Appendices

(1) GHG Emissions: Absolute Scope 1, Scope 2, and Scope 3; emissions intensity

Disclosure of GHG emissions is crucial for users to understand an organization’s exposure to climate-related risks and opportunities and is also foundational information from which other climate-related information is estimated. Disclosure of absolute GHG emissions across an organization’s value chain provides insight into how a given organization may be affected by policy, regulatory, market, and technology responses to limit climate change, while associated

GHG emissions intensity information can provide a useful comparison across organizations.

Organizations with higher GHG emissions or with fewer options with which to reduce GHG emissions may be more impacted by transition risk. In addition, current or future constraints on GHG emissions, either set by policymakers or by the organizations themselves, may impact an organization’s strategy or financial planning. GHG emissions are also key inputs to estimating other metrics, determining financial impact, and performing scenario analysis.

A.	Overview and Background
B.	Scope and Approach
C.	Climate-Related Metrics
D.	Climate-Related Targets
E.	Transition Plans
F.	Financial Impacts
	Appendices

Recommended disclosure *Metrics and Targets b)* calls for organizations to disclose “Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions” and specifies in the guidance that such disclosures should be made in line with the GHG Protocol methodology to allow for aggregation across organizations and jurisdictions.^{37, 38}

Since 2017, there have been two major developments impacting the reporting of GHG emissions, including by broadening the range of organizations for which Scope 3 GHG emissions are appropriate.

- **An increasing number of organizations are reporting Scope 1, Scope 2, and Scope 3 GHG emissions**, suggesting that organizations are gaining experience with such reporting.³⁹
- There has been significant work to **advance the understanding and calculation of GHG emissions for financial organizations**, allowing financial preparers to disclose their own Scope 3 GHG emissions in a more comparable and complete manner.

The Task Force believes all organizations should disclose absolute Scope 1 and Scope 2 GHG emissions independent of a materiality assessment given the foundational aspect of these emissions in assessing exposure to climate-related issues. In addition, the Task Force strongly encourages all organizations to disclose Scope 3 GHG emissions.^{40, 41} The Task Force believes that disclosure of GHG emissions is critical to understanding an organization’s exposure to climate-related risks and

opportunities and hopes that encouraging more disclosure of GHG emissions will help support and accelerate improvements in methodology and coverage of disclosure.

The Task Force recognizes several challenges associated with disclosure of Scope 3 GHG emissions, including data availability, calculation methodologies, scoping, and organizational barriers ([Appendix 1: Further Information on Select Cross-Industry, Climate-Related Metric Categories](#) provides further details). In addition, there are inherent limitations of the methodology for Scope 3 GHG emissions accounting and reporting, including the issue of double counting emissions.⁴² The most well-known and widely referenced Scope 3 reporting methodology is the GHG Protocol’s *Corporate Value Chain (Scope 3) Accounting and Reporting Standard*, commonly referred to as the Scope 3 Standard, which notes that “companies shall publicly report [a] list of scope 3 categories and activities included in the inventory. A list of scope 3 categories or activities excluded from the inventory with justification of their exclusion.”⁴³

Nonetheless, disclosure of Scope 3 GHG emissions is an essential component of climate-related risk analysis in commercial and financial markets and is increasingly being requested by investors and other market participants. In particular, better disclosure of GHG emissions is necessary to inform lending, investing, and insurance underwriting decisions. Recognizing their importance, a growing number of organizations are working to improve how they calculate and disclose their Scope 3 GHG emissions.⁴⁴

As with all TCFD recommendations, organizations should take account of their regional or national

³⁷ While challenges remain, the GHG Protocol methodology is the most widely recognized and used international standard for calculating GHG emissions. Organizations may use national reporting methodologies if they are consistent with the GHG Protocol methodology.

³⁸ In collaboration with the World Resources Institute and WBCSD, the GHG Protocol established a [Land Sector and Removals Initiative](#) to develop new guidance on GHG accounting related to [carbon removals and land use](#). The guidance will build on the GHG Protocol Standards to cover the following activities: land use, land use change, carbon removals and storage, bioenergy and other biogenic products, and related topics. The guidance is expected for publication in Q4 2022.

³⁹ Eighty-one percent of respondents in the Task Force’s consultation on metrics, targets, and transition plans said they currently disclose Scope 1 and Scope 2 GHG emissions, with another 54% disclosing Scope 3 GHG emissions. Task Force analysis of 2,500 organizations within the MSCI All Country World Index ([ACWI Index](#)) found that from 2017–2019, organizations disclosing Scope 1 GHG emissions grew from 43% to 52%; organizations disclosing Scope 2 GHG emissions grew from 42% to 51%; and organizations disclosing Scope 3 GHG emissions grew from 28% to 34%.

⁴⁰ When considering whether to disclose Scope 3 GHG emissions, organizations should consider whether such emissions are a significant portion of their total GHG emissions. For example, see discussion of 40% threshold in SBTi’s paper [SBTi Criteria and Recommendations](#), Version 4.2, April 2021, Section V, p. 10.

⁴¹ CDP, [Transparency to Transformation: A Chain Reaction](#), February 2021, p. 14.

⁴² GHG Protocol, *Corporate Value Chain (Scope 3) Accounting and Reporting Standard*, September 2011, p. 6, notes “Use of this standard is intended to enable comparisons of a company’s GHG emissions over time. It is not designed to support comparisons between companies based on their Scope 3 GHG emissions. Differences in reported emissions may be a result of differences in inventory methodology or differences in company size or structure.”

⁴³ GHG Protocol, *Corporate Value Chain (Scope 3) Accounting and Reporting Standard*, September 2011, p. 119.

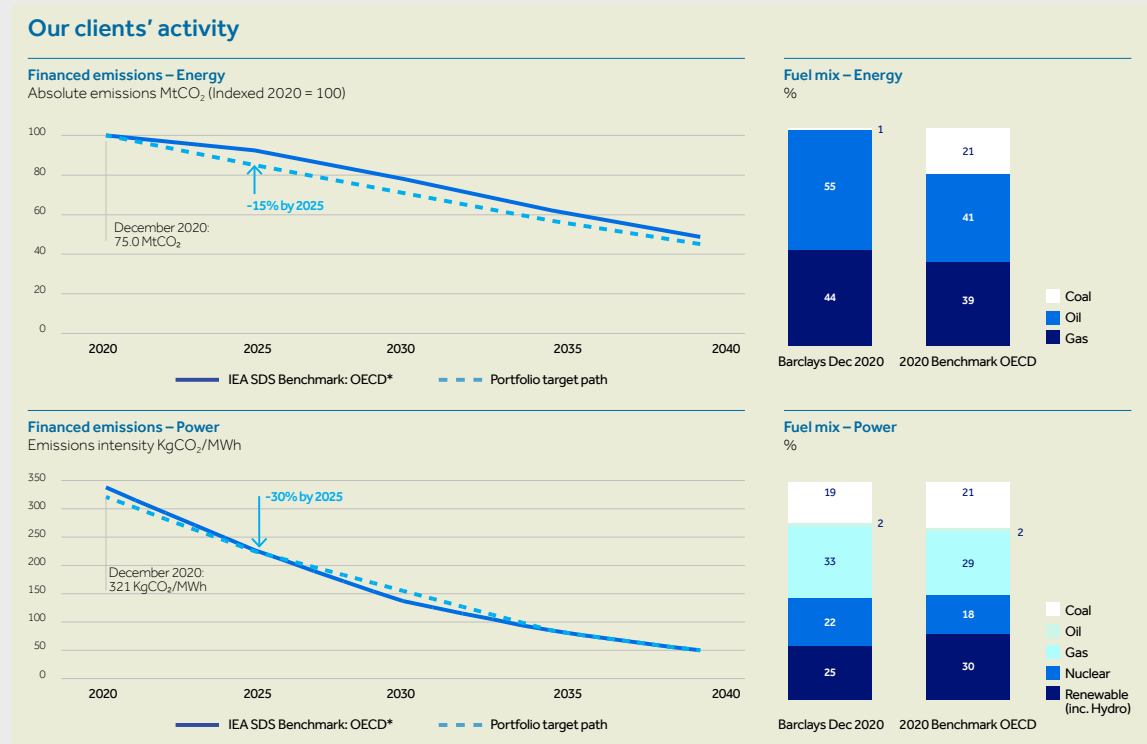
⁴⁴ WWF, [Overcoming Barriers for Corporate Scope 3 Action in the Supply Chain](#), November 2019; Blanco, Caro, and Corbett, [The State of Supply Chain Carbon Footprinting: Analysis of CDP Disclosures by US Firms](#), May 17, 2016; BHP, [Addressing greenhouse gas emissions beyond our operations: Understanding the ‘scope 3’ footprint of our value chain](#), August 2018.

disclosure requirements when disclosing Scope 3 GHG emissions.⁴⁵ For instance, the United Kingdom’s Financial Conduct Authority proposes in its consultation on “[Enhancing climate-related disclosures by asset managers, life insurers, and FCA-regulated pension providers](#)” that “firms should disclose Scope 3 GHG emissions from no later than 30 June 2024. This is 1 year later than the deadline for the first disclosures in accordance with the rest of our proposals.”⁴⁶

Organizations may find it useful to disclose GHG emissions by relevant business line, GHG

emissions split out by the seven gases covered by the Kyoto Protocol, and emissions intensity.⁴⁷ Disclosing cumulative GHG emissions over time relative to the baseline year used for an organization’s GHG emissions reduction target can also help users better understand an organization’s exposure to climate-related issues and the potential need to make stronger GHG emissions reductions in later years if earlier interim targets are not met.⁴⁸ [Figure C2](#) shows one bank’s approach to disclosing forward-looking estimates of its absolute and intensity-based financed emissions.

Figure C2
Example Disclosure: Barclays



Source: Barclays PLC, [ESG Report 2020](#), p. 16
Note: Some content was reformatted in order to fit the page.

⁴⁵ As noted in the [2017 report](#), “The Task Force’s recommendations were developed to apply broadly across sectors and jurisdictions and should not be seen as superseding national disclosure requirements. Importantly, organizations should make financial disclosures in accordance with their national disclosure requirements. If certain elements of the recommendations are incompatible with national disclosure requirements for financial filings, the Task Force encourages organizations to disclose those elements in other 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” (p. 17).

⁴⁶ Financial Conduct Authority, “[Enhancing climate-related disclosures by asset managers, life insurers, and FCA-regulated pension providers: Consultation paper](#),” June 2021, p. 32.

⁴⁷ The GHG Protocol Corporate Standard “covers the accounting and reporting of seven greenhouse gases covered by the Kyoto Protocol – carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF₆) and nitrogen trifluoride (NF₃).” For more information, see <https://ghgprotocol.org/corporate-standard>.

⁴⁸ Carbon budget, or cumulative emissions, refers to “the estimated cumulative amount of global carbon dioxide emissions that is estimated to limit global surface temperature to a given level above a *reference period*, taking into account global surface temperature contributions of other GHGs and climate forcers” (original emphasis). IPCC, “[Special Report: Global warming of 1.5°C Glossary](#).”

A. Overview and Background

B. Scope and Approach

C. Climate-Related Metrics

D. Climate-Related Targets

E. Transition Plans

F. Financial Impacts

Appendices

(2) Transition Risks: Amount and Extent of Assets or Business Activities Vulnerable to Transition Risks

As described in the [2017 report](#), organizations can be vulnerable to several types of climate-related transition risks: a) policy and legal risks reflecting changes in policy and litigation action; b) technology risk as emerging technologies impact the competitiveness of certain organizations; c) market risk from changes to supply and demand; and d) reputational risks tied to changing customer or community perceptions.⁴⁹

Disclosure of the amount and extent of an organization’s assets or business activities vulnerable to climate-related transition risks allows users to better understand potential financial vulnerability regarding issues such as possible impairment or stranding of assets, effects on the value of assets and liabilities, and changes in demand for products or services.

The way in which organizations disclose this metric category will depend on their industry- and organization-specific climate-related risks. For example, banks may look at the proportion of their lending activities or portfolios materially exposed to carbon-related assets, while non-financial companies may choose to report amount or percentage of operating earnings, revenues, or production output coming from high-carbon business lines. [Figure C3](#) shows a

metals and mining company’s disclosure of its production output from high-carbon business lines, which could be helpful in considering concentrations of risks in assets affected by the transition to a low-carbon economy.

(3) Physical Risks: Amount and Extent of Assets or Business Activities Vulnerable to Physical Risks⁵⁰

The 2017 report also describes the types of climate-related physical risks that organizations might be vulnerable to, distinguishing between a) acute risks, such as hurricanes, floods, and wildfires, that are event-driven and b) chronic risks, such as higher temperatures and sea-level rise, that refer to longer-term shifts in climate patterns.⁵¹ In determining vulnerability to physical risks, organizations should consider their climate-related hazards, exposures to those hazards, and their vulnerability.⁵²

Disclosure of the amount or extent of an organization’s assets or business activities vulnerable to material climate-related physical risks allows users to better understand potential financial vulnerability regarding such issues as impairment or stranding of assets, effects on the value of assets and liabilities, and cost of business interruptions. Organizations that are not yet able to disclose physical risk vulnerability could begin by describing the types of tools they are using to assess such risks.

A. Overview and Background

B. Scope and Approach

C. Climate-Related Metrics

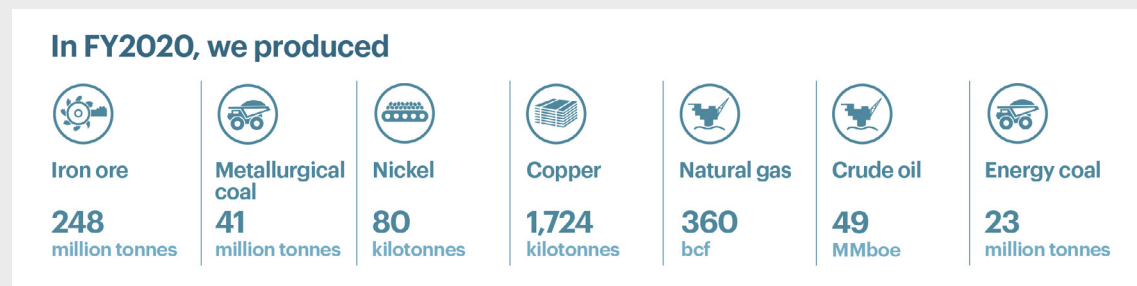
D. Climate-Related Targets

E. Transition Plans

F. Financial Impacts

Appendices

Figure C3
Example Disclosure: BHP Production



Source: BHP, [Climate Change Report 2020](#), p. 4

⁴⁹ TCFD, [2017 report](#), pp. 5–6.

⁵⁰ Consultation language included that organizations should disclose the proportion of assets “materially exposed” to recognize that under forward-looking scenarios with high emissions pathways, all an organization’s physical assets could be exposed to physical risk to some extent. However, several respondents noted that the use of the phrase “materially exposed” was confusing given that the TCFD’s Metrics and Targets recommendation is subject to materiality. Given that this materiality threshold applies to the cross-industry metric categories, except for Scope 1 and Scope 2 GHG emissions, the Task Force has removed “materially exposed” from the transition risk and physical risk categories.

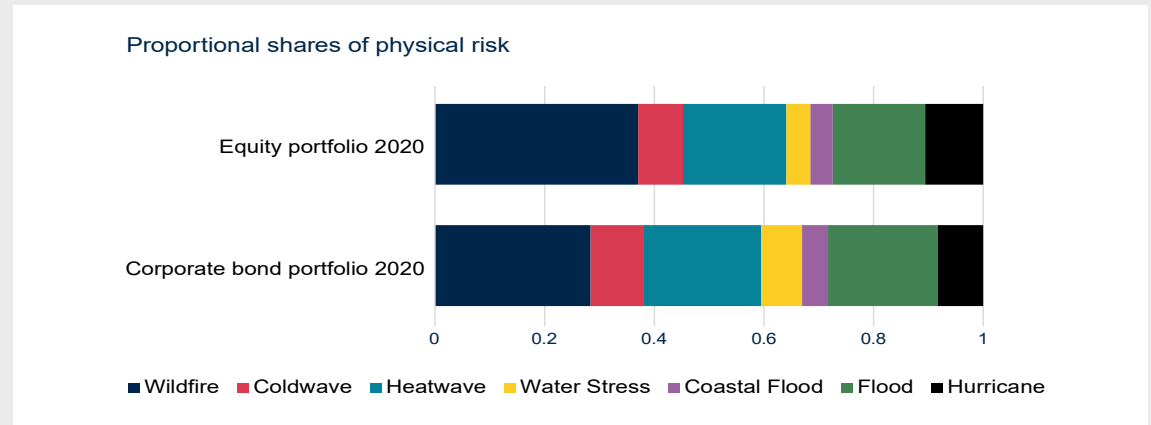
⁵¹ TCFD, [2017 report](#), p. 6.

⁵² Further guidance on reporting physical risks can be found in European Bank for Reconstruction and Development and Global Centre of Excellence on Climate Adaptation’s [Advancing TCFD Guidance on Physical Climate Risks and Opportunities](#), May 2018, and IPCC, [Emergent Risks and Key Vulnerabilities](#), October 15, 2014.

Physical risks will be specific to the geography where the assets or activities are located and their likely exposure or vulnerability to the risk. For example, certain assets may be most vulnerable to acute risks from hurricanes or wildfires, while others are more at risk from chronic changes in average temperature,

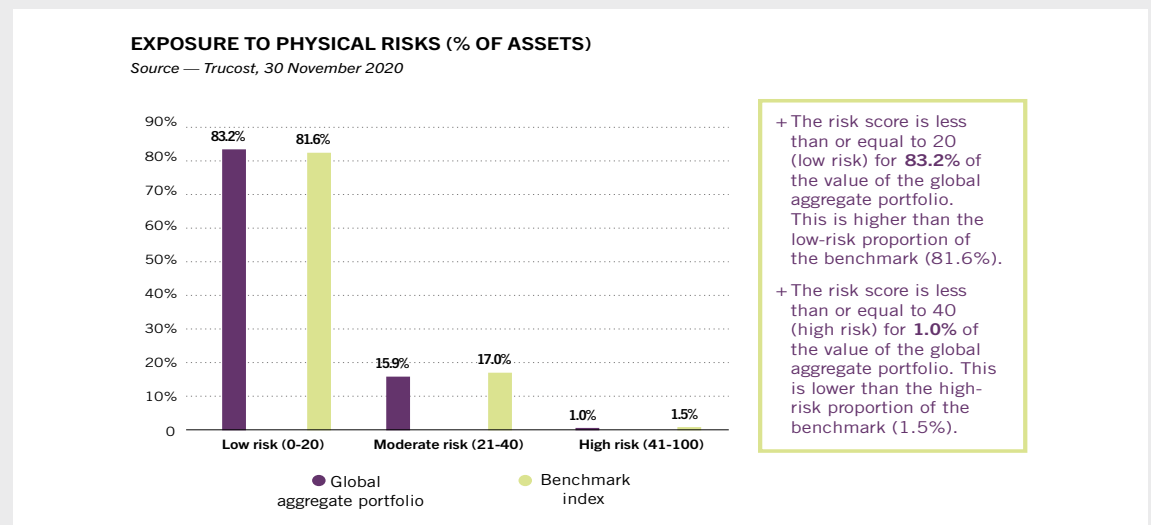
sea-level rise, or drought. Some disclosures focus on the risk type by business activity or asset category, such as the disclosure by the insurance company in Figure C4, while other organizations may choose to disclose their aggregate assets based on a severity characterization, such as the asset owner disclosure in Figure C5.

Figure C4
Example Disclosure: Ilmarinen



Source: Ilmarinen, [Annual and Sustainability Report 2020](#), p. 50
Note: Some content was reformatted in order to fit the page.

Figure C5
Example Disclosure: ERAFP



Source: ERAFP, [Public Report 2020](#), p. 89
Note: Some content was reformatted in order to fit the page.

A. Overview and Background

B. Scope and Approach

C. Climate-Related Metrics

D. Climate-Related Targets

E. Transition Plans

F. Financial Impacts

Appendices

(4) Climate-Related Opportunities: Proportion of Revenue, Assets, or Other Business Activities Aligned with Climate-Related Opportunities

The 2017 report also describes several categories of climate-related opportunities that organizations can capture. Examples include a) improved resource efficiency from reducing energy, water, and waste; b) use of energy sources that emit low or no GHG emissions; c) development of new products and services; d) access to new markets; and e) improved adaptive capacity and resilience.

Disclosure of the proportion of revenue, assets, or business activities aligned with climate-related opportunities provides insight into the position of organizations relative to their peers and allows users to understand likely transition pathways and potential changes in revenue and profitability over time.

The operationalization of this metric category will be specific to each industry’s or organization’s climate-related opportunities, as well as to the opportunities within specific business lines or asset classes. For example, auto manufacturers might report sales of electric vehicles relative to total vehicle sales, while utilities companies could

report renewable generation as a fraction of their total electricity generation. An agricultural company might report revenues received from the sale of drought-resilient seeds, while an asset manager could disclose the percent of resilient infrastructure in its portfolio. The example disclosure provided in Figure C6 shows how one chemicals company characterizes its sales by sustainability indicator.

Existing frameworks already provide some sector-specific guidance to help preparers disclose information on climate-related opportunities. For example, SASB’s Construction Materials Standard (SASB EM-CM-410a.1) asks companies to report the percentage of products that qualify for credits in sustainable building design and construction certifications; its Iron and Steel Producers Standard (SASB EM-IS-000.A) refers to percent raw steel production from basic oxygen furnace processes and electric arc furnace processes. In addition, the EU Technical Expert Group’s recommendations for the EU Taxonomy proposes technical screening criteria for economic activities that contributed substantially to climate change mitigation, while the International Capital Market Association (ICMA) provides voluntary guidance for issuers of green bonds.⁵³

A. Overview and Background

B. Scope and Approach

C. Climate-Related Metrics

D. Climate-Related Targets

E. Transition Plans

F. Financial Impacts

Appendices

Figure C6
Example Disclosure: BASF



Source: BASF, BASF 2020 Report, p. 45

⁵³ EU Technical Expert Group on Sustainable Finance, *Technical Report*, March 9, 2020; EU Technical Expert Group on Sustainable Finance, *Taxonomy Report: Technical Annex*, March 9, 2020; ICMA, *Green Bond Principles: Voluntary Process Guidelines for Issuing Green Bonds*, June 2021.

(5) Capital Deployment: Amount of Capital Expenditure, Financing, or Investment Deployed toward Climate-Related Risks and Opportunities

In addition to having different climate-related risks and opportunities, organizations differ in the extent to which they are deploying capital to manage their risks and increase their opportunities. Capital investment disclosure by non-financial organizations and financing by financial organizations gives an indication of the extent to which long-term enterprise value might be affected.

Deployment of capital in low-carbon technologies, business lines, or products may demonstrate that an organization is investing to make their businesses resilient to transition

risk or to capture climate-related opportunities. For example, organizations that are hardening infrastructure in response to increased incidence of physical risks can signal that short-term debt might increase as the organizations upgrade their assets but long-term costs may be lower.

Capital expenditures, capital investments, or the amount of financing for new technologies, infrastructure, or products can be reported in line with financial reporting standards and commonly used taxonomies for delineating climate-related risks and opportunities. It can be helpful for organizations to present traditional disclosures alongside climate-related disclosures to allow users to understand the scale of investment in different types of activities, such as the example provided by one insurance company in [Figure C7](#).

A. Overview and Background

B. Scope and Approach

C. Climate-Related Metrics

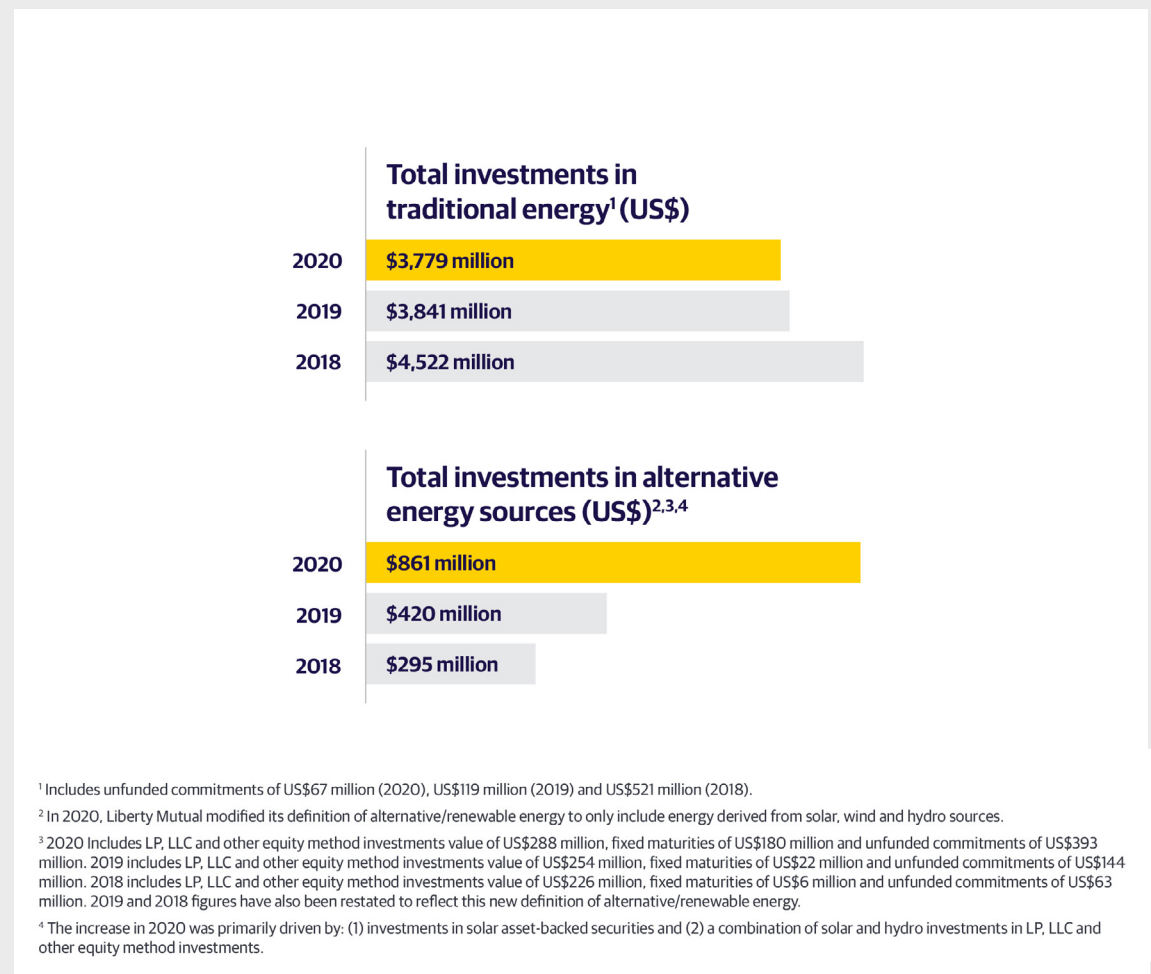
D. Climate-Related Targets

E. Transition Plans

F. Financial Impacts

Appendices

Figure C7
Example Disclosure: Liberty Mutual



Source: Liberty Mutual, [2020 Task Force on Climate-Related Financial Disclosures Report](#), p. 14

(6) Internal Carbon Prices: Price on Each Ton of GHG Emissions Used Internally by an Organization

Internal carbon pricing is a mechanism by which organizations can put a value on their GHG emissions to facilitate analysis of the actual and potential impacts of climate-related risks and opportunities. For example, non-financial organizations may use an internal carbon price to understand the potential future costs associated with developing new carbon-related assets. Financial organizations may use internal carbon prices to inform their decision-making; for example, by considering the impact of a given carbon price on an organization's profitability as part of the investing, lending, or insurance underwriting process.⁵⁴

Internal carbon prices also provide users with an understanding of the reasonableness of an organization's risk and opportunity assessment and strategy resilience.⁵⁵ The disclosure of internal carbon prices can help users identify which organizations have business models that are vulnerable to future policy responses to climate change and which are adapting their business models to ensure resilience to transition risks.

While internal carbon prices can take a variety of forms and amounts, an increasing number of companies are setting an internal notional or actual price on the amount of CO₂ emitted from assets and investment projects so they can see how, where, and when their GHG emissions could affect their strategy, profit-and-loss (P&L) statements, and investment choices.⁵⁶

There is no definitive source on what an organization's carbon price should be, and there are a variety of ways that the cost of carbon can be integrated into business practices. [Appendix 1.2. Internal Carbon Prices](#) provides additional considerations and resources to help organizations set an internal carbon price.

The Task Force acknowledges that internal carbon prices may not be relevant to all organizations, such as those without material physical or transition risks or those already subject to external carbon prices. Disclosure of how internal carbon prices relate to prices used in external sources, such as those used in publicly available scenarios, can help to provide further transparency into the alignment of internal prices with carbon prices that are consistent with various public climate scenarios. For example, the energy company shown in [Figure C8](#) (p. 26) provides its internal planning assumptions along with prices from two IEA scenarios.⁵⁷

(7) Remuneration: Proportion of Executive Management Remuneration Linked to Climate Considerations

Remuneration policies are important incentives for achieving an organization's goals and objectives and may provide insight on an organization's governance, oversight, and accountability for managing climate-related issues. The ways in which organizations link executive compensation to performance on issues related to climate change will be specific to their company and governance structure. Some organizations choose to report the percentage of the executive's pay linked to climate considerations, while others discuss weighting factors or total amount of compensation that could be impacted. For example, one bank's disclosure notes the percentage weighting given to climate consideration within the scorecards of its executive and managing directors ([Figure C9](#), p. 26).

Several respondents to the public consultation noted that remuneration might be best reported with qualitative language. While the Task Force encourages quantitative disclosure, organizations may include descriptive language on remuneration policies and practices, such as how climate change issues are included in balanced scorecards for executive remuneration.

A. Overview and Background

B. Scope and Approach

C. Climate-Related Metrics

D. Climate-Related Targets

E. Transition Plans

F. Financial Impacts

Appendices

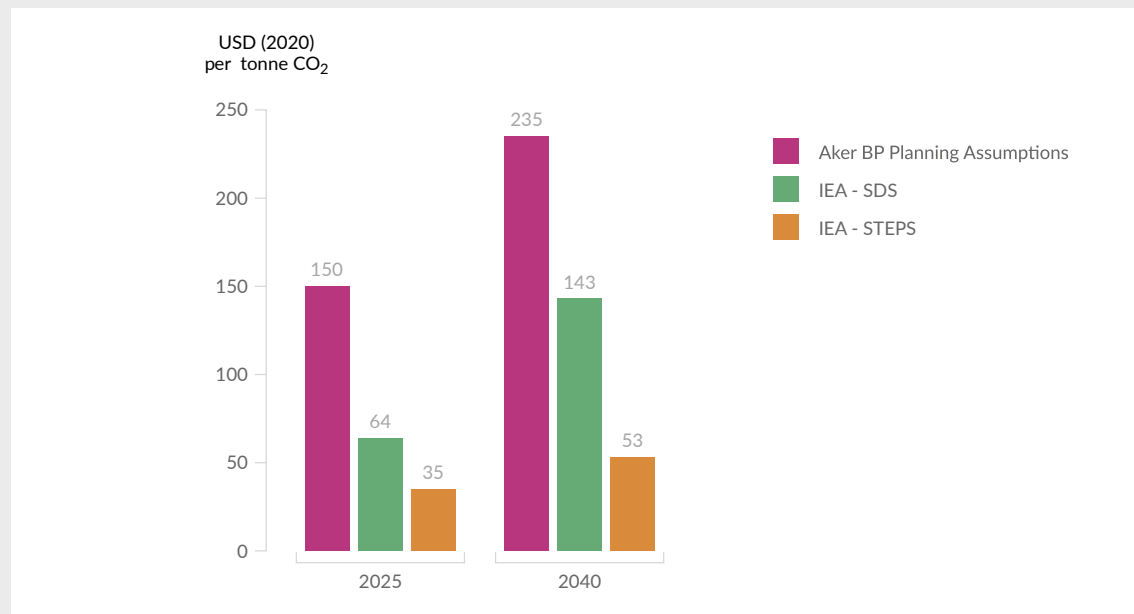
⁵⁴ Several organizations offer additional information on the use of carbon pricing within financial organizations, including Mikolajczyk, et. al., *Internal Carbon Pricing and Climate Finance Tracking for Banks*, September 2017, and Carbon Pricing Unlocked Partnership, *Internal Carbon Pricing for Low-Carbon Finance*, July 2019.

⁵⁵ For example, the CDP report *Putting a Price on Carbon* notes, "Despite 1,830 companies disclosing that they currently face or expect carbon pricing regulation, 60% (over 1,100) of these companies did not identify this regulation as a substantive risk to their stakeholders in their CDP disclosure — highlighting a potential gap in information that investors should explore" (April 2021, p. 5).

⁵⁶ CDP, *Putting a Price on Carbon: The state of internal carbon pricing by corporates globally*, April 2021; The Conference Board, *Internal Carbon Pricing: A Key Element of Climate Strategy*, January 2021; Carbon Pricing Unlocked, *Internal Carbon Pricing for Low-Carbon Finance*, July 2019; Yale University, *Internal Carbon Pricing: Policy Framework and Case Studies*; Aldy and Gianfrate, *Future-Proof Your Climate Strategy*, May–June 2019.

⁵⁷ For instance, depending on the baseline scenario, there are different carbon prices that are consistent with a 2°C pathway. For more information, see Riahi, et al., *The shared socioeconomic pathways and their energy, land use, and greenhouse gas emissions implications: an overview*, July 2017, pp. 153–168, and CDP, *Carbon Pricing Corridors*, May 2017.

Figure C8
Example Disclosure: Aker BP



Source: Aker BP, *Sustainability Report 2020*, p. 25

A. Overview and Background

B. Scope and Approach

C. Climate-Related Metrics

D. Climate-Related Targets

E. Transition Plans

F. Financial Impacts

Appendices

Figure C9
Example Disclosure: HSBC

Metrics and targets	
<p>Disclose the metrics used by the organisation to assess climate-related risk and opportunities in line with its strategy and risk management process</p>	<ul style="list-style-type: none"> - We use several metrics to measure and track our progress against key targets, and we will be refining our approach to financed emissions (scope 3), including carbon intensity, for specific portfolios. - We set a new sustainable finance and investment target of \$750bn to \$1tn by 2030, after reaching \$93.0bn of our \$100bn by 2025 target. The \$40.6bn achieved in 2020 counts towards both the existing 2025 target and the new target. - We continue to disclose our wholesale loan exposure to the six high transition risk sectors, and use our corporate customer transition risk questionnaire to help inform our risk management. - We include an environment measure in the scorecards of our executive Directors and Group Managing Directors. The long-term incentive scorecards of our executive Directors (three-year performance period to the end of December 2023) have a 25% weighting for targets aligned to our climate ambitions. - We continue to disclose business travel, energy-related emissions and renewable energy use, and aim to disclose further details on our own scope 3 emissions in future reporting. <p>▶ Read more on our climate metrics and targets on pages 25 to 26, and our ESG review pages 45 to 50 within our <i>Annual Report and Accounts 2020</i>.</p>
<p>Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets</p>	
<p>Disclose scope 1, scope 2 and, if appropriate, scope 3 greenhouse gas emissions and the related risks</p>	

Source: HSBC, *TCFD Update 2020*, p. 4

Note: Some content was reformatted in order to fit the page.

A.
Overview and Background

B.
Scope and Approach

C.
Climate-Related Metrics

D.
Climate-Related Targets

E.
Transition Plans

F.
Financial Impacts

Appendices



4. PORTFOLIO ALIGNMENT METRICS FOR THE FINANCIAL SECTOR

A few organizations within the financial sector have begun to disclose forward-looking climate-related metrics, including metrics on the alignment of their business activities with a temperature pathway well below 2°C (“portfolio alignment”).⁵⁸ In October 2020, an independent group of expert analysts from the financial sector, the Portfolio Alignment Team (PAT), released a [report](#) assessing the strengths and trade-offs of the options available to measure portfolio alignment and on methodologies for implementing implied temperature rise (ITR) metrics for those institutions wishing to do so.^{59, 60}

The Task Force conducted a public consultation from October 29, 2020–January 28, 2021, to gather feedback on developments, usefulness, and challenges of forward-looking metrics for the financial sector.⁶¹ Responses to the consultation suggested that some organizations are disclosing forward-looking metrics, with more planning to do so, but that many were looking for more clarity on methodologies and standardization.⁶²

Considering the findings of the consultation on forward-looking metrics, the Task Force requested that the PAT develop a technical report outlining their views on implementing portfolio and financial activity alignment metrics and identifying areas of further work. This sub-section provides a summary of the team’s report, [Measuring Portfolio Alignment: Technical Considerations](#) (PAT technical report), as a resource for financial organizations interested in understanding different portfolio alignment tools or approaches.⁶³

The purpose of the PAT technical report is to identify emerging thinking in portfolio alignment tool construction and use to promote more widespread adoption of consistent, robust, and decision-useful approaches. Attaining some degree of common practice related to portfolio alignment is important to facilitate comparability and transparency within and across financial organizations and to provide further clarity to non-financial preparers on how their transition plans may impact their interactions with investors and lenders.

⁵⁸ Article two of the 2015 [Paris Agreement](#) commits parties to “holding the increasing in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels.”

⁵⁹ The PAT was established by Mark Carney in his capacity as UN Special Envoy for Climate and Finance and is led by David Blood of Generation Investment Management. The team comprises participants from the following institutions: Bank of America, BBVA, Blackrock Investment Management, Generation Investment Management, Goldman Sachs, HSBC, McKinsey & Company, and the COP26 Private Finance Hub.

⁶⁰ Portfolio Alignment Team, [Measuring Portfolio Alignment: Assessing the Position of Companies and Portfolios on the Path to Net Zero](#), October 2020.

⁶¹ TCFD, [Forward-Looking Financial Sector Metrics Consultation](#), October 29, 2020.

⁶² TCFD, [Forward-Looking Financial Sector Metrics Consultation: Summary of Responses](#), March 2021.

⁶³ Portfolio Alignment Team, [Measuring Portfolio Alignment: Technical Considerations](#), October 2021.

The PAT technical report focuses on measuring the extent to which portfolios are aligned with a net-zero GHG emissions reduction ambition that would limit average temperature rise to 1.5°C by 2050. It notes that to achieve the goals of the Paris Agreement, financial organizations would have to decrease the total GHG emissions financed by their lending and investment portfolios to within a defined amount or budget. The budget allocated to individual financial portfolios depends on the composition of that portfolio, as different sectors and geographies will need to decarbonize at different rates. Portfolio alignment tools can inform portfolio-level target-setting frameworks and help financial organizations measure and manage toward the achievement of climate-related targets, given their unique portfolio composition. Portfolio alignment tools also allow investors, lenders, and insurance underwriters to evaluate organizations based on information included in their transition plans as well as demonstrated progress on reducing GHG emissions. This allows financial organizations to achieve their own GHG emissions reduction targets and facilitate GHG emissions reductions in the real economy through engagement rather than through divestment.

Financial organizations can measure portfolio alignment using a variety of methods (Figure C10). Some may choose to assess a binary categorization of the number of organizations with and without GHG emissions reduction targets. Others may choose to use benchmark divergence models or ITR models, which measure organizational alignment against industry- and geography-level benchmarks

and translate the alignment or misalignment of each organization to a temperature score. Each type has benefits and drawbacks, as well as important end uses; financial organizations should use the tool that best suits their individual context and capabilities.

The PAT technical report finds that, building on the more established and commonly used benchmark-divergence models, ITR tools allow financial organizations to translate the degree of alignment or misalignment of a given organization with a benchmark into consequences for a desired climate goal. This may be important information for some financial organizations as they manage their portfolios to become aligned with the goals of the Paris Agreement. However, the PAT technical report also notes that ITR tools currently face challenges including complexity and opacity regarding key assumptions, variation in approach, and limited data and scenario fidelity and availability, which may limit widespread adoption.

The PAT technical report outlines several considerations organized around nine key design judgments that financial organizations interested in measuring portfolio alignment should consider in order to drive convergence and improve fidelity of portfolio alignment approaches. Finally, the PAT technical report details some of the data and implementation challenges with portfolio alignment tools in order to support implementation by financial organizations considering these tools and highlights areas of future work to support implementation.

- A. Overview and Background
- B. Scope and Approach
- C. Climate-Related Metrics**
- D. Climate-Related Targets
- E. Transition Plans
- F. Financial Impacts
- Appendices

Figure C10 Types of Portfolio Alignment Tools

Example Types of Portfolio Alignment Tools

Binary Target Measurement

- Percent of investments or counterparties with declared net-zero targets
- Primary issue: incentivizes target setting, but does not provide temperature alignment assessment

Benchmark Divergence Models

- Measures forward-looking performance against normative benchmarks
- Primary issue: poorly constructed methods can lead to additional unintended consequences

Implied Temperature Rise Models (ITR)

- Translates degree of alignment into impact in the form of a temperature score
- Primary issue: complex and opaque regarding influence of key assumptions

D. Climate-Related Targets



D. Climate-Related Targets

This section provides an overview of the types of information the Task Force believes are useful to include in disclosures of climate-related targets as well as examples of quantified targets that align with the cross-industry, climate-related metric categories. Additionally, it outlines the importance of disclosing progress against climate-related targets and provides an example template for making such disclosures on GHG targets.

A climate-related target refers to a specific level, threshold, quantity, or qualitative goal that the organization wishes to meet over a defined time horizon in order to address its climate-related risks and opportunities. An organization's climate-related targets should inform, and be informed by, its strategy and risk management and be linked to its climate-related metrics.⁶⁴ Some organizations select climate-related metrics and then define climate-related targets that allow them to operationalize their high-level climate strategy. Others set targets and then select climate-related metrics to measure and track progress related to their targets.⁶⁵

A common target organizations set is around their commitments to reduce GHG emissions. Targets related to GHG emissions reductions may vary between organizations and may be

determined in part, or in whole, by regulatory or industry requirements. These targets should specify which emissions scopes are included. For instance, some organizations, such as those in high-emitting sectors, may choose to focus their reductions on Scope 1 and Scope 2 GHG emissions; others, such as financial organizations or auto manufacturers, may focus on reducing Scope 3 GHG emissions. In addition to efforts to meet emissions reduction targets, organizations can articulate how they aim to reduce their non-emissions risks and increase their opportunities in a low-carbon world.

Several initiatives emphasize the importance of setting GHG emissions reduction targets and provide more guidance on publicly reporting progress toward these commitments. For example, the United Nations Framework Convention on Climate Change (UNFCCC) launched the Race to Zero campaign, a global effort to aggregate net-zero commitments from a range of leading networks and initiatives across the real economy.⁶⁶ Race to Zero Partners include more than 20 networks and initiatives, including Business Ambition for 1.5°C, Fashion Charter for Climate Action, Paris Aligned Investment Initiative, and Glasgow Financial Alliance for Net Zero (GFANZ) member initiatives.

A. Overview and Background

B. Scope and Approach

C. Climate-Related Metrics

D. Climate-Related Targets

E. Transition Plans

F. Financial Impacts

Appendices



⁶⁴ While this guidance uses the term “target” throughout, it is important to note that organizations may use a variety of terms such as “aim,” “goal,” or “objective” to refer to the same concept.

⁶⁵ Note that while all targets typically have a metric associated with them, not all metrics correspond to a target.

⁶⁶ As of August 30, 2021, the UNFCCC Race to Zero covers nearly 25% of global CO₂ emissions and over 50% of GDP and includes initiatives representing 733 cities, 31 regions, 120 countries, 3,067 businesses, 173 of the largest investors, and 622 Higher Education Institutions. For more information, see [“Race to Zero Campaign.”](#)

1. CHARACTERISTICS OF EFFECTIVE CLIMATE-RELATED TARGETS

Disclosure of climate-related targets should include several characteristics in order to ensure the targets are “specific and complete” in line with the Task Force’s fundamental principles for effective disclosure.⁶⁷

Aligned with Strategy and Risk Management Goals. Climate-related targets should be

designed in consideration of an organization’s strategy and risk management processes, informed by scenario analysis and climate science (Box D1), and supported by appropriate metrics. Organizations should set targets at the level (e.g., aggregate, sector, portfolio) that best suits their business activities and strategy. As part of their disclosures, organizations should consider providing a description of how climate scenario analysis influenced the determination of targets and broader strategy and risk management goals.

Box D1

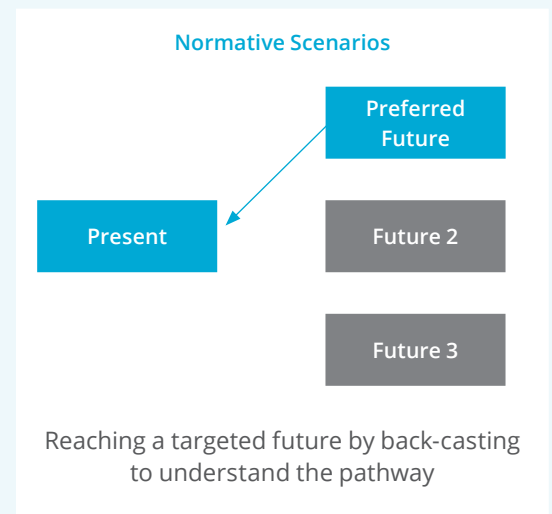
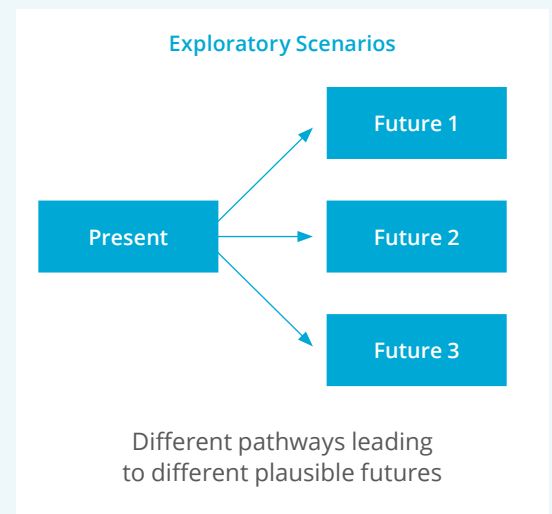
Role of Scenario Analysis in Setting Achievable Climate-Related Targets

“The two main types of scenarios are (1) exploratory scenarios used to explore a range of different possible futures and (2) normative scenarios used to plan for a preferred future. For normative scenarios, scenario analysis starts with a preferred or desired future outcome and then back-casts plausible pathways from the preferred future to the present in order to inform decisions on what is needed to achieve that preferred future. Examples of normative climate-related scenarios are those targeting net-zero emissions in 2050. Normative scenarios are typically used for assessment and setting of specific targets and implementation plans, rather than assessment of climate-related risks and uncertainties.

Exploratory scenarios describe a diverse set of plausible future states. These scenarios are then used to assess potential climate-related risks and uncertainties and test the resiliency of various strategies to a wide range of future conditions.

Some companies use both approaches — the exploratory approach when testing their strategies for resilience, and the normative approach for setting specific targets such as net-zero emission.”

Exploratory versus Normative Scenarios



Source: TCFD, 2020 TCFD Guidance on Scenario Analysis for Non-Financial Companies, pp. 15–16

- A. Overview and Background
- B. Scope and Approach
- C. Climate-Related Metrics
- D. Climate-Related Targets**
- E. Transition Plans
- F. Financial Impacts
- Appendices

⁶⁷ TCFD, 2017 report, pp. 51–53.

Linked to Relevant Metrics. Climate-related targets should be linked to defined metrics in order to measure and track progress against targets and assist with periodic reviews to determine whether updates to the targets may be necessary (Figure D1). For example, if an organization sets a target to reduce the proportion of asset value exposed to acute flooding risk by 50% by 2050, it should define metrics related to the physical risk of acute flooding in order to monitor progress against the target. Such metrics might be the proportion of assets located within a designated flood zone without flood-protection measures, the amount of capital deployed to harden assets or restore

natural flood protection, or other appropriate metrics related to the firm's exposure to acute flood risks.

Quantified and Measurable. Climate-related targets should be quantified and measurable, where possible, especially for processes that are fully in the organization's control, such as the amount of investment in reducing vulnerability to transition or physical risks.

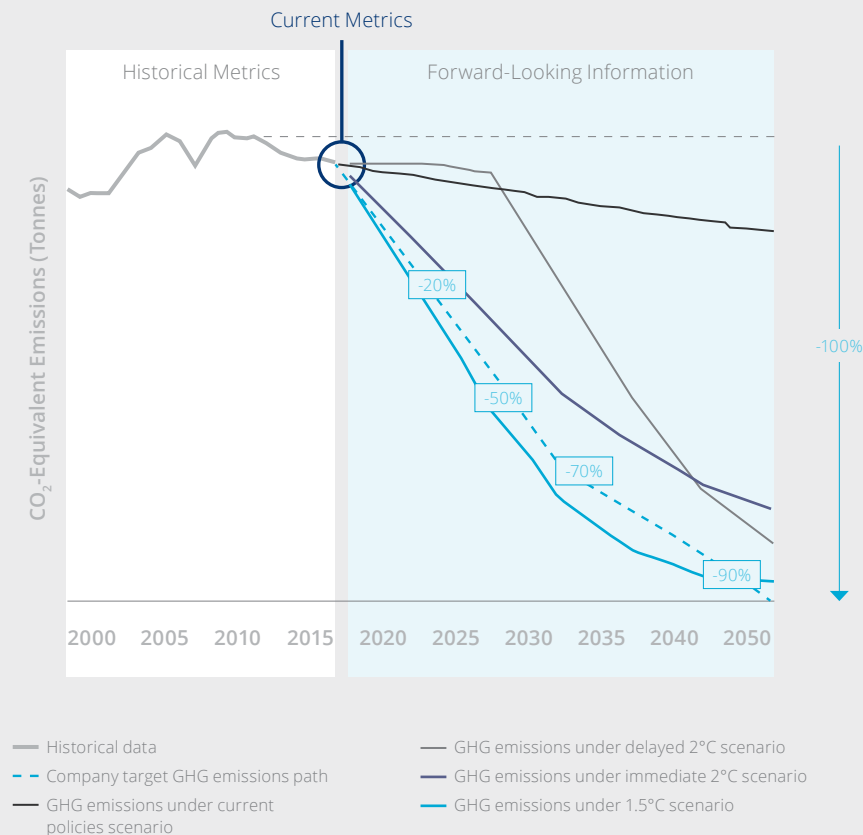
In its 2021 annex, the Task Force recommends that organizations disclose climate-related targets related to the seven cross-industry, climate-related metric categories, where relevant (recommended disclosure *Metrics and Targets c*).

- A. Overview and Background
- B. Scope and Approach
- C. Climate-Related Metrics
- D. Climate-Related Targets**
- E. Transition Plans
- F. Financial Impacts
- Appendices

Figure D1
Example Relationship between Metrics and Targets

The figure below shows the relationship between GHG emissions and targets for a hypothetical firm. The illustrative GHG emissions pathways were adapted from Network for Greening the Financial System (NGFS) scenario data.

Target: Our firm commits to reducing net Scope 1 and 2 GHG emissions — as defined by the GHG Protocol — to zero by 2050, with an interim target to cut Scope 1 and 2 GHG emissions by 50% relative to a 2015 baseline by 2030. We are working with suppliers to reduce Scope 3 GHG emissions.



Note: GHG emissions pathways were adapted from NGFS scenario data. Illustrative GHG emissions pathways for immediate and delayed 2°C scenarios and 1.5°C scenarios are aligned with economy-wide GHG emissions reductions for Kyoto gases under the REMIND limited Carbon Dioxide Removal (CDR) scenarios. The illustrative current policies scenario extends the short-term trend.

In support of such disclosure, [Table D1](#) provides examples of quantified targets that align with the cross-industry, climate-related metric categories.⁶⁸ The Task Force recognizes that the ability of organizations to set, track, and disclose climate-related targets aligned to the metric categories may vary across jurisdictions, sectors,

and business models. Accordingly, the Task Force acknowledges that not all illustrative targets will be relevant or applicable for all organizations, and that other targets may be more applicable. The Task Force encourages organizations to reference existing target-setting frameworks for sector-specific guidance.⁶⁹

Table D1
Examples of Quantified Targets

Cross-Industry Metric Category	Example Climate-Related Target
GHG Emissions Absolute Scope 1, Scope 2, and Scope 3; emissions intensity	<ul style="list-style-type: none"> Reduce net Scope 1, Scope 2, and Scope 3 GHG emissions to zero by 2050, with an interim target to cut emissions by 70% relative to a 2015 baseline by 2035
Transition Risks Amount and extent of assets or business activities vulnerable to transition risks	<ul style="list-style-type: none"> Reduce percentage of asset value exposed to transition risks by 30% by 2030, relative to a 2019 baseline
Physical Risks Amount and extent of assets or business activities vulnerable to physical risks	<ul style="list-style-type: none"> Reduce percentage of asset value exposed to acute and chronic physical climate-related risks by 50% by 2050 Ensure at least 60% of flood-exposed assets have risk mitigation in place in line with the 2060 projected 100-year floodplain
Climate-Related Opportunities Proportion of revenue, assets, or other business activities aligned with climate-related opportunities	<ul style="list-style-type: none"> Increase net installed renewable capacity so that it comprises 85% of total capacity by 2035
Capital Deployment Amount of capital expenditure, financing, or investment deployed toward climate-related risks and opportunities	<ul style="list-style-type: none"> Invest at least 25% of annual capital expenditure into electric vehicle manufacturing Lend at least 10% of portfolio to projects focused primarily on physical climate-related risk mitigation
Internal Carbon Prices Price on each ton of GHG emissions used internally by an organization	<ul style="list-style-type: none"> Increase internal carbon price to \$150 by 2030 to reflect potential changes in policy
Remuneration Proportion of executive management remuneration linked to climate considerations	<ul style="list-style-type: none"> Increase amount of executive management remuneration impacted by climate considerations to 10% by 2025

- A. Overview and Background
- B. Scope and Approach
- C. Climate-Related Metrics
- D. Climate-Related Targets**
- E. Transition Plans
- F. Financial Impacts
- Appendices

⁶⁸ The example quantified targets shown in Table D1 are for illustrative purposes only.

⁶⁹ Respondents to the Task Force's consultation on metrics, targets, and transition plans cited various climate-related target-setting and disclosure frameworks. Commonly referenced frameworks included the London Stock Exchange Group's Target Setting Framework (described in this section), *UN-Convened Net-Zero Asset Owner Alliance Inaugural 2025 Target Setting Protocol*, CA100+, *Net Zero Company Benchmark*, Paris Aligned Investment Initiative (PAII), *Net-Zero Investment Framework: Implementation Guide*, and SBTi's *Financial Sector Science-Based Targets Guidance*.

Clearly Specified over Time.⁷⁰ Climate-related targets should be defined clearly over time and specify the following:

- **Baseline:** Clear definition of baseline time period against which progress will be tracked, with a consistent base year across GHG emissions targets;⁷¹
- **Time horizon:** Defined time horizon by which targets are intended to be achieved.

Short-, medium-, and long-term time horizons should be consistent across an organization’s targets and, if feasible, consistent with key dates tracked by key international organizations, such as the Intergovernmental Panel on Climate Change (IPCC), or regulators (Figure D2); and

- **Interim targets:** An interim target is a checkpoint between the current period and the target end date in which an organization

Figure D2 Disclosing Business-Relevant Time Horizons

As stated in the 2017 report, “[B]ecause the timing of climate-related impacts on organizations will vary, the Task Force believes specifying time frames across sectors for short, medium, and long term could hinder organizations’ consideration of climate-related risks and opportunities specific to their businesses. The Task Force is, therefore, not defining time frames and encourages preparers to decide how to define their own time frames according to the life of their assets, the profile of the climate-related risks they face, and the sectors and geographies in which they operate.”⁷²

The TCFD 2020 Scenario Guidance provides the following diagram for the types of financial implications across various time horizons to assist organizations in thinking about time horizons. Organizations should think about their climate-related targets in the same manner.



Source: TCFD, 2020 TCFD Guidance on Scenario Analysis for Non-Financial Companies, Figure E2, p. 49

⁷⁰ This information is adapted from SBTi’s *Criteria and Recommendations for Financial Institutions* and SBTi’s *Science-Based Target Setting Manual*, Version 4.1. In its target-setting manual, SBTi recommends that “[c]ompanies should set a target that covers a minimum of 5 years and a maximum of 15 years from the date the target is submitted for approval. It is also recommended to set long-term targets beyond this interval and set interim milestones at five-year intervals” (p. 30).

⁷¹ The 2020 *Science-Based Target Setting Manual* recommends that for GHG emissions targets, organizations “use the same base year and target year for all targets within the mid-term timeframe and all targets within the long-term timeframe,” maintaining that “a common target period will simplify data tracking and communication around the target. Where value chain data are difficult to obtain, however, it is acceptable if scope 1 and 2 targets use a different base year from scope 3 targets” (p.30).

⁷² TCFD, 2017 report, p. 38.

- A. Overview and Background
- B. Scope and Approach
- C. Climate-Related Metrics
- D. Climate-Related Targets**
- E. Transition Plans
- F. Financial Impacts
- Appendices

assesses its progress and makes any adjustments to its plans and targets. Any medium- and long-term targets should have interim targets set at appropriate intervals (e.g., 5–10 years) covering the full medium- or long-term target time horizon.

Organizations may find it useful to disclose medium-term or long-term targets for 2030 and 2050, which have become key target dates following the publication of the IPCC’s *Special Report on Global Warming of 1.5°C*. This report noted that in order to limit global warming to 1.5°C “global net human-caused emissions of carbon dioxide (CO₂) would need to fall by about 45 percent from 2010 levels by 2030, reaching ‘net zero’ around 2050.”⁷³

Understandable and Contextualized. Climate-related targets should be presented in a manner that aids understanding (e.g., clear language, labeling) and includes descriptions of any limitations and cautions. Disclosures of targets should be supported by contextual, narrative information on items such as organizational boundaries, methodologies, and underlying data and assumptions, including those around the use of offsets.

Periodically Reviewed and Updated. Organizations should have a clear process for reviewing climate-related targets, at least every five years, and updating if necessary. Because targets can become outdated, a process to periodically refresh and update them is necessary to ensure continued relevancy and efficacy to a company’s overall strategy planning process. Considerations when determining whether or not to adjust targets may include changes to an organization’s climate strategy or goals as well as any developments related to progress against targets (e.g., either outpacing previously set targets or providing transparency on underperformance).

Reported Annually. Organizations should report on climate-related targets on at least an annual basis, including any new targets as well as progress against existing targets.

2. DISCLOSING CLIMATE-RELATED TARGETS

Similar to the disclosure of climate-related metrics, effective disclosure of climate-related targets includes grounding disclosures in narrative or qualitative information to help users understand their context. Organizations should describe the qualitative information that encompasses climate-related targets and reflects longer-term changes to an organization’s business or expected strategic direction. Such qualitative information may include describing what the management of climate-related risks and pursuit of climate-related opportunities might mean for the business and provide important context for specific targets.

In addition to providing contextual information about their climate-related targets, organizations should also consider disclosing in formats that would lead to better standardization and comparability. As more countries, non-financial companies, and financial organizations set GHG emissions reduction targets, including those aligned with net-zero, it is particularly important for disclosures of GHG emissions targets to be comparable across organizations and over time to allow users to assess the achievability and credibility of organizations’ goals. Respondents to the consultation on metrics, targets, and transition plans emphasized that standardization is key to driving effective, decision-useful disclosure of climate-related targets. Several recommended that preparers use the template developed by FTSE Russell to make such disclosures, which is included here as an example of a type of template that may be useful (Box D2, p. 36).

A. Overview and Background

B. Scope and Approach

C. Climate-Related Metrics

D. Climate-Related Targets

E. Transition Plans

F. Financial Impacts

Appendices

⁷³ IPCC, “Summary for Policymakers of IPCC Special Report on Global Warming of 1.5°C approved by governments,” October 8, 2018.

Box D2

Case Study: Disclosure Template for GHG Emissions Reduction Targets

The following template was developed by FTSE Russell, part of the London Stock Exchange Group (LSEG), to promote clear and concise disclosures on corporate GHG emissions reduction targets. The template is “agnostic on the type, scope, or ambition level of the emissions reduction target and provides a standardized format for companies to disclose information on their targets and the methodology.”⁷⁴ The template — shown here for a fictional target — was developed such that it could be completed for each of the organization’s targets, including interim targets, separately.

GHG emissions reduction target disclosure template				
Target ID				
Overall number of active GHG emissions targets:	4	Include interim targets in the count.		
Target number:	1 (of 4)			
Target type:	Absolute (interim target)	Indicate whether this is an interim target (e.g. a short-term milestone between the organisation's mid- or long-term target and current period).		
Date the target was set:	08/02/2019	Date that the target was last revised:	14/01/2021	
Target Information				
Scope(s) covered	Scope 1 & 2 (market-based) + 3 (cat 11: use of sold product)		For scope 2 emissions, indicate if calculations are location- or market-based. For scope 3 emissions, indicate the GHG protocol categories that are covered.	
Percentage of in-scope emissions covered by the target:	99%			
Base year:	2015	Base year emissions:	75 000 tCO ₂ e	For intensity targets, provide activity measure (e.g. tCO ₂ e/Mwh or tCO ₂ e/tonne of cementitious product).
Target year:	2030	Target year projected emissions:	30 000 tCO ₂ e	
Targeted reduction from base year (%)	60%			
Targeted reduction from current year (%)	50%	Current emissions:	60 000 tCO ₂ e (2020)	Please indicate the most current year for which emissions data is available.
Target Methodology				
Verified by an independent third party.	Yes. SBTi		Please indicate the name of the independent third party that verified the target.	
Source that describes how the percentage of in-scope emissions covered by the target has been calculated.	Sustainability Report 2020 (p.8, p.12)		Please indicate the title(s) of publicly available documents and relevant page numbers where information can be found.	
Source that describes transition plan outlining how this target will be met.	Roadmap to Net-zero 2050 (p.1 -10)		Please indicate the title(s) of publicly available documents and relevant page numbers where information can be found.	
For Scope 3 targets, source that describes the methodology used to calculate the Scope 3 emissions covered by the target.	GHG Emissions Methodology (p.15-16)			
Indicate the % of the target to be achieved through offsets and provide a source that specifies their type and the offset provider.	20% will be achieved through CCS. Roadmap to Net-zero 2050 (p. 8)			
For intensity targets, source that describes the methodology used to calculate the carbon intensity.	Sustainability Report 2020 (p.89)			

Source: Kooroshy, et al., [Towards investor-oriented carbon targets data](#), October 2021, p. 10

⁷⁴ Kooroshy, et al., [Towards investor-oriented carbon targets data](#), October 2021, p. 9.

A. Overview and Background

B. Scope and Approach

C. Climate-Related Metrics

D. Climate-Related Targets

E. Transition Plans

F. Financial Impacts

Appendices

Finally, the Task Force encourages organizations not to assume their climate-related targets contain confidential business information that would harm the organization if publicly disclosed. When evaluating whether certain climate-related targets contain confidential business information, the organization should consider the following:

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

- whether making such information public may cause a considerable economic loss for the organization.⁷⁵

If an organization determines that a particular climate-related target is confidential, the organization should provide relevant information in broader terms to support users' decision-making.⁷⁶

A.
Overview and Background

B.
Scope and Approach

C.
Climate-Related Metrics

**D.
Climate-Related Targets**

E.
Transition Plans

F.
Financial Impacts

Appendices

⁷⁵ European Innovation Council and SMEs Executive Agency (European Commission), *Trade Secrets: Managing Confidential Business Information*, July 2021, pp. 2–4.

⁷⁶ Based on footnote 10 from the European Commission *Guidelines on non-financial reporting: Supplement on reporting climate-related information*.