

TCFD, 2019

2019 Status Report

Task Force on

- Climate-related
Financial Disclosures:
Status Report

May 31, 2019

Mr. Randal Quarles
Chair
Financial Stability Board
Bank for International Settlements
Centralbahnplatz 2
CH-4002 Basel
Switzerland

Dear Chair Quarles,

It is my pleasure to present the second status report of the Task Force on Climate-related Financial Disclosures (TCFD). This report focuses on the continued progress of companies in disclosing information on climate-related risks and opportunities since the release of the final TCFD recommendations in June 2017.

Increasingly, we see evidence and acknowledgement that climate change presents financial risk to the global economy. According to the United Nations, delays in tackling this issue could cost companies nearly \$1.2 trillion over the next 15 years.

The relevance of climate-related risks to today's financial decisions and the need for greater transparency have only become clearer and more urgent over the past two years. Nearly 800 public- and private-sector organizations have announced their support for the TCFD and its work, including global financial firms responsible for assets in excess of \$118 trillion.

I applaud the recent acknowledgement from the Network for Greening the Financial System (NGFS), a group of 36 central banks and supervisors, that "climate-related risks are a source of financial risk [and it] falls squarely within the mandates of central banks and supervisors to ensure the financial system is resilient to these risks." As one of their six key recommendations to foster a resilient financial system, the NGFS highlighted the importance of disclosure and encouraged companies to disclose in line with the TCFD recommendations.

In this report, the Task Force finds that important progress is being made. Our review of over 1,000 companies showed that, for some recommended disclosures, the percentage of companies disclosing information increased up to nearly 15% over a two-year period. The results of our survey indicate that many companies are putting significant thought and effort into implementing the recommendations, and that many investors have seen this work pay off in the form of increases in the availability and quality of disclosure.

However, progress must be accelerated. Today's disclosures remain far from the scale the markets need to channel investment to sustainable and resilient solutions, opportunities, and business models. I believe in the power of transparency to spur action on climate change through market forces.

The Task Force remains committed to market transparency and stability. Over the next year we look forward to continuing to encourage and facilitate implementation of the TCFD recommendations, to making further progress on this critical work, and to providing you with a third status report next year. Thank you for your support of the Task Force.

Sincerely,



Michael Bloomberg

Executive Summary

In June 2017, The Task Force on Climate-related Financial Disclosures (Task Force or TCFD) released its final recommendations (2017 report), which provide a framework for companies and other organizations to develop more effective climate-related financial disclosures through their existing reporting processes.¹ In its 2017 report, the Task Force emphasized the importance of transparency in pricing risk—including risk related to climate change—to support informed, efficient capital-allocation decisions.² The large-scale and complex nature of climate change makes it uniquely challenging, especially in the context of economic decision making. Furthermore, many companies incorrectly view the implications of climate change to be relevant only in the long term and, therefore, not necessarily relevant to decisions made today. Those views, however, have begun to change.³

A Call to Action

Based on a recent report issued by the Intergovernmental Panel on Climate Change, a global group of climate scientists convened by the United Nations, urgent and unprecedented changes are needed to meet the goals of the Paris Agreement.^{4,5} The report warns limiting the global average temperature to a maximum of 1.5°C “require[s] rapid and far-reaching transitions in energy, land, urban and infrastructure [systems] (including transport and buildings), and industrial systems.” In fact, according to a recent United Nations Environment Programme report on emissions, global greenhouse gas emissions have to peak by 2020 and decline rapidly thereafter to limit the increase in the global average temperature to no more than 1.5°C above pre-industrial levels.⁶ However, based on current policies and commitments, “global emissions are not even estimated to peak by 2030—let alone by 2020.” As a result, governments and private-sector entities are considering a range of options for reducing global emissions, which could result in disruptive changes across economic sectors and regions in the near term.

Limiting the global average temperature requires “rapid and far-reaching transitions in land, energy, industry, buildings, transport, and cities.”⁷

Figure E1 (p. iii) illustrates the level of impact and risk on people, economies, and ecosystems associated with global average temperature increases. Importantly, four of the five categories of risk have increased since 2014 “based on multiple lines of evidence.”⁸ Now more than ever it is critical for companies to consider the impact of climate change and associated mitigation and adaptation efforts on their strategies and operations and disclose related material information. Companies that invest in activities that may not be viable in the longer term may be less resilient to risks related to climate change; and their investors may experience lower financial returns.

¹ In this report, the Task Force uses the term “companies” to refer to entities with public debt or equity as well as asset managers and asset owners, including public- and private-sector pension plans, endowments, and foundations.

² In December 2015, the Financial Stability Board established the Task Force on Climate-related Financial Disclosures to develop voluntary, consistent climate-related financial disclosures that would be useful in understanding material risks related to climate change.

³ For example, rising global average temperatures are increasing the frequency and severity of extreme weather events, with combined insured losses related to natural catastrophes of \$219 billion in 2017 and 2018, the highest ever for a two-year period (Swiss Re Institute, *Natural catastrophes and man-made disasters in 2018: “secondary” perils on the frontline*, April 10, 2019.).

⁴ Intergovernmental Panel on Climate Change, *Summary for Policymakers: Global Warming of 1.5°C*, October 2018.

⁵ United Nations Framework Convention on Climate Change, “*The Paris Agreement*,” December 2015. Under the Paris Agreement, nearly 200 governments have agreed to strengthen the response to the threat of climate change by “holding the increase in the global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels.”

⁶ United Nations Environment Programme, *The Emissions Gap Report 2018*, November 2018.

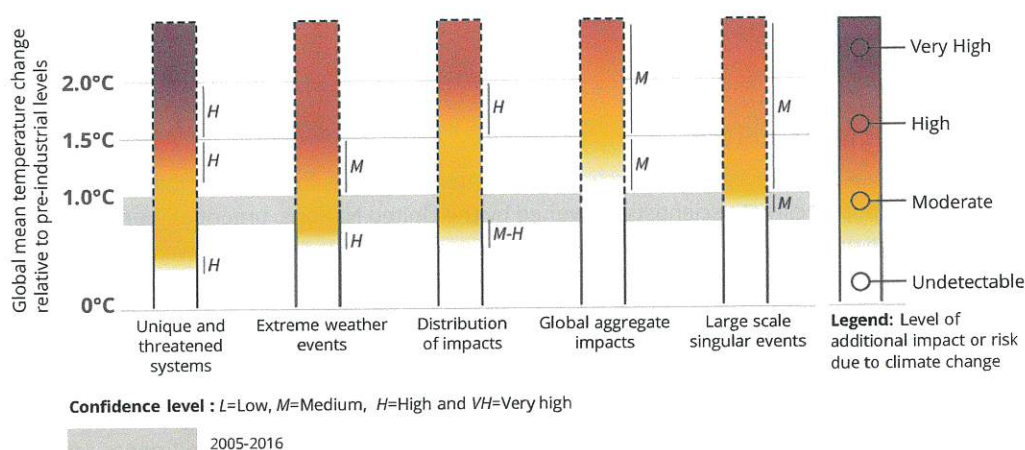
⁷ Intergovernmental Panel on Climate Change, “*Press Release: Summary for Policymakers: Global Warming of 1.5°C*,” October 8, 2018.

⁸ Ibid and Intergovernmental Panel on Climate Change, *Fifth Assessment Report*, Cambridge University Press, 2014.

Compounding the effect on longer-term returns is the risk that present valuations do not adequately factor in climate-related risks because of insufficient information. As such, investors need better information on how companies—across a wide range of sectors—have prepared or are preparing for a lower-carbon economy; and those companies that meet this need may have a competitive advantage over others.

Figure E1

Level of Impact and Risk Associated with Temperature Increases



See Intergovernmental Panel on Climate Change, *Summary for Policymakers: Global Warming of 1.5°C* for more information, including definitions of terms used.

In addition, there is a growing demand for decision-useful, climate-related financial information by investors. There are likely many factors driving investor demand, ranging from European regulations requiring certain investors to disclose climate-related information to weather-driven events resulting in significant financial impacts and leading investors to seek better information on their exposure to climate-related risks.⁹ As evidence of this demand, more than 340 investors with nearly \$34 trillion in assets under management have committed to engage the world's largest corporate greenhouse gas emitters to strengthen their climate-related disclosures by implementing the TCFD recommendations as part of Climate Action 100+.¹⁰

There is also growing interest in climate-related financial disclosures by financial regulators. In April, the Network for Greening the Financial System (NGFS)—comprised of 36 central banks and supervisors and six observers, representing five continents—issued six recommendations aimed at facilitating the role of the financial sector in achieving the objectives of the Paris Agreement. One of the recommendations is to achieve robust and internationally consistent climate and environment-related disclosure; and the NGFS “encourages all companies issuing public debt or equity as well as financial sector institutions to disclose in line with the TCFD recommendations.”¹¹

⁹ For example, see France's *Article 173-VI of the Law on Energy Transition for Green Growth*, *EU Directive on the activities and supervision of institutions for occupational retirement provision*, and the United Kingdom's *Clarifying and strengthening trustees' investment duties*.

¹⁰ See *Climate Action 100+*.

¹¹ NGFS, *A call for action: Climate change as a source of financial risk*, April 17, 2019.





Climate-Related Financial Disclosure Practices

As part of its efforts to promote adoption of the recommendations, the Task Force prepared this status report to provide an overview of current disclosure practices as they relate to the Task Force's recommendations, highlight key challenges associated with implementing the recommendations, and outline some of the efforts the Task Force will consider undertaking in coming months to help address some of the implementation challenges.

To better understand current climate-related financial disclosure practices and how they have evolved, the Task Force reviewed—using artificial intelligence technology—reports for over 1,000 large companies in multiple sectors and regions over a three-year period. In addition, the Task Force conducted a survey on companies' efforts to implement the TCFD recommendations as well as users' views on the usefulness of climate-related financial disclosures for decision-making. While the Task Force found some of the results of its disclosure review and survey encouraging, it is concerned that not enough companies are disclosing *decision-useful* climate-related financial information. This could be problematic for financial markets if market participants do not have sufficient information about the potential financial impact of climate-related issues on companies. [Table E1](#) summarizes the key themes and findings from the Task Force's disclosure review and survey results.

Table E1

Key Themes and Findings

	<p>Disclosure of climate-related financial information has increased since 2016, but is still insufficient for investors. Based on the TCFD survey, the artificial intelligence review, and input from external initiatives, the Task Force sees progress being made to improve the availability and quality of climate-related financial information. However, given the speed at which changes are needed to limit the rise in the global average temperature—across a wide range of sectors—more companies need to consider the potential impact of climate change and disclose material findings.</p>
	<p>More clarity is needed on the potential financial impact of climate-related issues on companies. The top area identified by users of climate-related financial disclosures as needing improvement is for companies to provide more clarity on the potential financial impact of climate-related issues on their businesses. Without such information, users may not have the information they need to make informed financial decisions.</p>
	<p>Of companies using scenarios, the majority do not disclose information on the resilience of their strategies. Three out of five companies responding to the TCFD survey that view climate-related risk as material and use scenario analysis to assess the resilience of their strategies do <i>not</i> disclose information on the resilience of their strategies. This is an important gap in disclosure for companies with material climate-related risks, but it is consistent with the Task Force's understanding from discussions with various companies, industry associations, and other groups that companies are still early in the process of using climate-related scenarios internally, evolving their approaches, and learning how to integrate scenarios into corporate strategy formulation processes.</p>
	<p>Mainstreaming climate-related issues requires the involvement of multiple functions. While sustainability and corporate responsibility functions are the primary drivers of TCFD implementation efforts, risk management, finance, and executive management are increasingly involved as well. The Task Force believes involvement of multiple functions is critical to mainstreaming climate-related issues, especially the involvement of the risk management and finance functions.</p>

In addition, [Figure E2](#) (p. vi) provides a summary of additional themes and findings from this report, and [Section A.2. Purpose of Report](#) provides an overview of the report's major sections.

Overall, the Task Force found signs of progress in implementing the recommendations among companies traditionally engaged on climate-related issues. These companies demonstrate that disclosing climate-related information consistent with the TCFD recommendations is possible and is a journey of continuing improvement. Given the urgent and unprecedented changes needed to meet the goals of the Paris Agreement, the Task Force is concerned that not enough companies are disclosing information about their climate-related risks and opportunities.

The Task Force strongly encourages more companies to use its recommendations as a framework for reporting on climate-related risks and opportunities, especially companies with material climate-related risks. Companies in early stages of evaluating the impact of climate change on their businesses and strategies and those that have determined climate-related issues are not material are encouraged to disclose information on their governance and risk management practices.¹² To accelerate the disclosure of consistent, comparable, reliable, and clear climate-related financial information, the Task Force encourages investors and other users of such information to engage with companies on the specific types of information that are most useful for decision making.

The Task Force has often highlighted that implementation of its recommendations would be a journey, and it applauds those who have started down the path. The Task Force urges those companies to continually improve the quality and usefulness of their climate-related financial disclosures. For those companies that are “piloting” reporting internally, it is time to begin disclosing; and for those who have not started, now is the time.

Next Steps

The Task Force believes its climate-related financial disclosures review and survey results highlight the need for continued efforts to support implementation of the recommendations, especially in terms of companies using scenario analysis to assess the resilience of their strategies under a range of plausible future climate states. As such, over the next several months, the Task Force will continue to promote and monitor adoption of its recommendations and will prepare another status report for the Financial Stability Board in September 2020. In addition, the Task Force is considering additional work in the following areas:

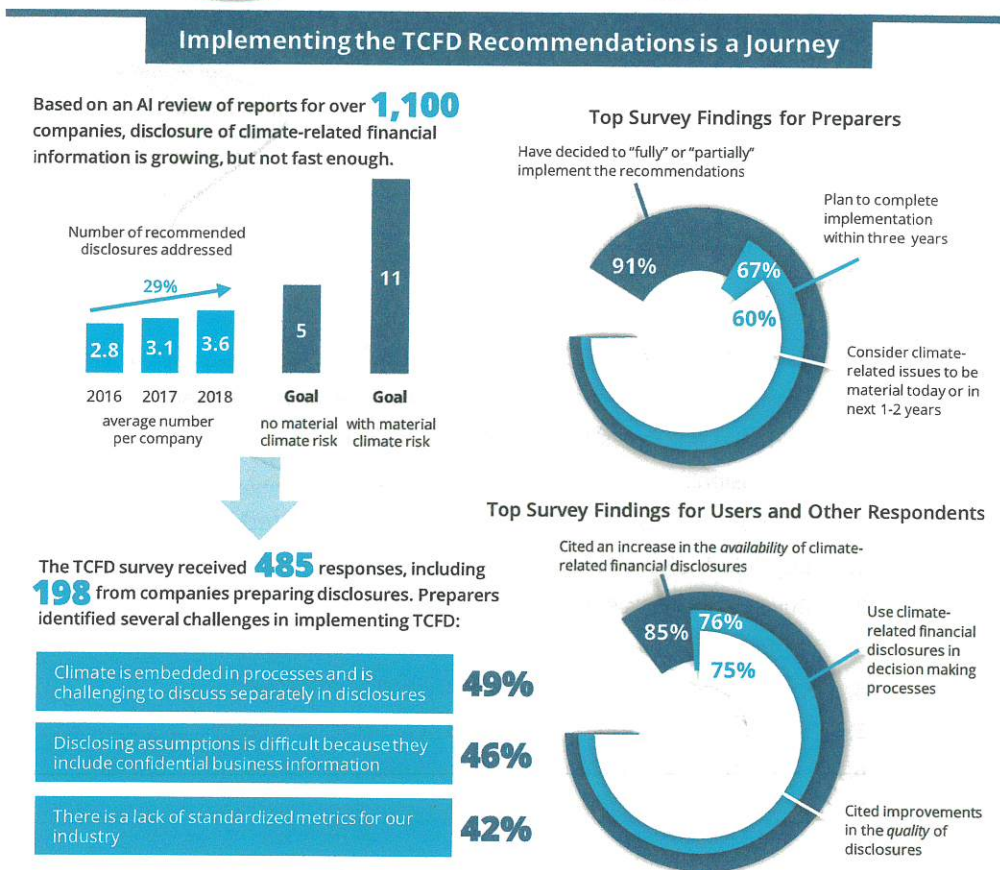
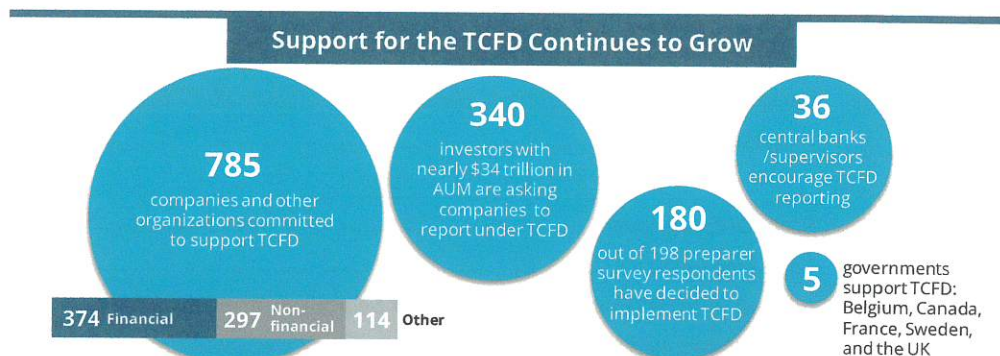
- Clarifying elements of the Task Force’s supplemental guidance contained in the annex to its 2017 report ([Implementing the Recommendations of the TCFD](#)),
- Developing process guidance around how to introduce and conduct climate-related scenario analysis, and
- Identifying business-relevant and accessible climate-related scenarios.

The Task Force believes the success of its recommendations depends on continued, widespread adoption by companies in the financial and non-financial sectors. Through widespread adoption, climate-related risks and opportunities will become a natural part of companies’ risk management and strategic planning processes. As this occurs, companies’ and investors’ understanding of the financial implications associated with climate change will grow, information will become more useful for decision making, and risks and opportunities will be more accurately priced, allowing for the more efficient allocation of capital and contributing to a more orderly transition to a low-carbon economy.

¹² The Task Force understands many investors want insight into the governance and risk management context in which companies’ financial and operating results are achieved. The Task Force believes disclosures that follow its Governance and Risk Management recommendations directly address this need for context.

Figure E2

2019 TCFD Status Report: Additional Themes and Findings



Contents

Letter from Michael R. Bloomberg.....	i
Executive Summary	ii
A. Introduction	1
1. Background on the Task Force	1
2. Purpose of Report	4
B. State of Climate-Related Financial Disclosures.....	6
1. Scope and Approach.....	6
2. Key Takeaways.....	7
3. Climate-Related Financial Disclosures for Select Industries 2016-2018.....	11
4. TCFD-Aligned Reporting by Asset Managers and Asset Owners	41
C. Adoption and Use of the TCFD Recommendations	49
1. Scope and Approach.....	49
2. Overview of Results	51
3. Preparer Perspectives	52
4. User Perspectives.....	57
5. Conclusion.....	60
D. Disclosure of Strategy Resilience Using Scenario Analysis	62
1. Background.....	62
2. Results from the TCFD Survey	63
3. Challenges Related to the Use of Climate-Related Scenario Analysis	64
4. Selected Companies' Use of Scenario Analysis.....	67
5. Conclusion.....	74
E. User Perspectives on Decision-Useful Climate-Related Financial Disclosures	76
1. Buy Side Analyst's Perspective on a Materials Company	76
2. Buy Side Analyst's Perspective on an Electric Utility Company	80
3. Portfolio Manager's Perspective on a Utilities Company	83
4. Credit Analyst's Perspective on an Oil and Gas Company	87
5. Buy Side Analyst's Perspective on a Technology Company	91
6. Buy Side Analyst's Perspective on an Integrated Oil and Gas Company.....	97
7. Buy Side Analyst's Perspective on a Technology Company	103
F. Initiatives Supporting TCFD.....	110
1. Implementation Initiatives	110
2. Alignment of Reporting Frameworks	112
3. Government and Regulatory Efforts.....	113
4. Initiatives Related to Scenario Analysis	116
Appendix 1: Task Force Members.....	118
Appendix 2: Disclosure Selection and Review Methodology	120
Appendix 3: Glossary and Abbreviations	124
Appendix 4: References.....	127

- A Introduction



A Introduction

1. Background on the Task Force

In April 2015, the G20 Finance Ministers and Central Bank Governors asked the Financial Stability Board to convene public- and private-sector participants and review how the financial sector can take account of climate-related issues.¹³ As part of its review, the Financial Stability Board identified the need for better information to support informed investment, lending, and insurance underwriting decisions and improve understanding and analysis of climate-related risks. To help identify the information needed by investors, lenders, and insurance underwriters to appropriately assess and price climate-related risks and opportunities, the Financial Stability Board established an industry-led task force: the Task Force on Climate-related Financial Disclosures (Task Force or TCFD).¹⁴ The Task Force was asked to develop voluntary, consistent climate-related financial disclosures that would be useful to investors, lenders, and insurance underwriters in understanding material risks. The 29-member Task Force is global; and its members were selected by the Financial Stability Board and come from various organizations, including large banks, insurance companies, asset managers, pension funds, large non-financial companies, accounting and consulting firms, and credit rating agencies. See [Appendix 1](#) for a list of current Task Force members.

A Introduction

B State of Climate-Related Financial Disclosures

C Adoption and Use of the TCFD Recommendations

D Disclosure of Strategy Resilience Using Scenario Analysis

E User Perspectives on Decision-Useful Climate- Related Financial Disclosures

F Initiatives Supporting TCFD

Appendices

The Task Force's Recommendations

On June 29, 2017, the Task Force released its [Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures](#) (2017 report). The report is centered on four widely adoptable recommendations on climate-related financial disclosures that are applicable to both non-financial and financial companies across industries and jurisdictions ([Figure 1](#)). Importantly, the Task Force believes asset managers and asset owners should implement the recommendations. Large asset owners and asset managers sit at the top of the investment chain and, therefore, have an important role to play in influencing the companies in which they invest to provide better climate-related financial disclosures.

The Task Force structured its recommendations around four thematic areas that represent core elements of how companies operate: governance, strategy, risk management, and metrics and targets. The four overarching recommendations are supported by 11 recommended disclosures that build out the framework with information that will help investors and others understand how reporting companies assess climate-related risks and opportunities ([Figure 2](#), p. 2). In addition, there is guidance to support all companies in developing climate-related financial disclosures consistent with the recommendations and recommended disclosures. For the financial sector and certain non-financial sectors, *supplemental* guidance was developed to highlight important sector-specific considerations and provide a fuller picture of potential climate-related financial impacts in those sectors. The Task Force's guidance and supplemental guidance is included in [Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures](#) (Annex).

Figure 1

Key Features of Recommendations

- Adoptable by all organizations
- Designed to solicit decision-useful, forward-looking information on potential financial impacts of climate change
- Brings the “future” nature of climate-related issues into the present through scenario analysis
- Strong focus on risks and opportunities related to the transition to a lower-carbon economy

¹³ “Communiqué from the G20 Finance Ministers and Central Bank Governors Meeting in Washington, D.C. April 16-17, 2015,” April 2015.

¹⁴ FSB, “FSB to establish Task Force on Climate-related Financial Disclosures,” December 4, 2015.

Figure 2

Recommendations and Supporting Recommended Disclosures

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

A	Introduction
B	State of Climate-Related Financial Disclosures
C	Adoption and Use of the TCFD Recommendations
D	Disclosure of Strategy Resilience Using Scenario Analysis
E	User Perspectives on Decision-Useful Climate-Related Financial Disclosures
F	Initiatives Supporting TCFD
	Appendices

Disclosure in Mainstream Financial Filings

The Task Force recommends that preparers of climate-related financial disclosures provide such disclosures in their mainstream (i.e., public) annual financial filings.¹⁵ In most G20 jurisdictions, companies with public debt or equity have a legal obligation to disclose material information in their financial filings—including material climate-related information. The Task Force believes climate-related issues are or could be material for many companies, and its recommendations should be useful to companies in complying more effectively with existing disclosure obligations.

Importantly, companies 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 companies 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.

The Task Force recognizes reporting by asset managers and asset owners is intended to satisfy the needs of clients, beneficiaries, regulators, and oversight bodies and follows a format that is generally different from corporate financial reporting. For purposes of adopting the Task Force's recommendations, asset managers and asset owners should use their existing means of financial reporting to their clients and beneficiaries where relevant and where feasible.

The Task Force believes that climate-related financial disclosures should be subject to appropriate internal governance processes. Since these disclosures should be included in annual financial filings, the governance processes should be similar to those used for existing financial reporting and would likely involve review by the chief financial officer and audit committee, as appropriate.

Principles for Effective Disclosures

To underpin its recommendations and help guide current and future developments in climate-related financial reporting, the Task Force developed seven principles for effective disclosure (Figure 3), which are described more fully in the 2017 report. When used by companies in preparing their climate-related financial disclosures, these principles can help achieve high-quality and decision-useful disclosures that enable users to understand the impact of climate change on companies. The Task Force encourages companies to consider these principles as they develop climate-related financial disclosures.

The Task Force's disclosure principles are largely consistent with internationally accepted frameworks for financial reporting and are generally applicable to most providers of financial disclosures. The principles are designed to assist companies in making clear the linkages between climate-related issues and their governance, strategy, risk management, and metrics and targets.

Figure 3

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 Financial filings refer to the annual reporting packages in which organizations are required to deliver their audited financial results under the corporate, compliance, or securities laws of the jurisdictions in which they operate. While reporting requirements differ internationally, financial filings generally contain financial statements and other information such as governance statements and management commentary.

2. Purpose of Report

In February 2017, the Financial Stability Board welcomed a proposal by the Task Force to continue its work until at least September 2018 to focus on promoting and monitoring adoption of the recommendations by companies.¹⁶ As part of its efforts to promote and monitor adoption of the recommendations, the Task Force prepared a [status report](#) for the FSB, published on September 26, 2018. In its [press release](#) announcing the 2018 status report, the FSB noted that it asked the Task Force to publish a further status report in June 2019 to allow for analysis of disclosures made in 2018 financial reports. This report—the Task Force’s 2019 status report—provides (1) an overview of disclosure practices that are aligned with the Task Force’s recommendations over a three-year period, (2) information on the adoption and use of the TCFD recommendations, and (3) other information to support preparers in implementing the recommendations.

The remainder of this report is organized as follows:

- **State of Climate-Related Financial Disclosures.** This section provides an overview of the current state of climate-related financial disclosures in terms of their alignment with the TCFD recommendations across different industries and highlights how such disclosures have changed over a three-year period. It also includes examples of disclosures that provide information aligned to one or more of the 11 recommended disclosures.
- **Adoption and Use of the TCFD Recommendations.** This section summarizes the results of a survey on companies’ efforts to implement the TCFD recommendations as well as users’ views on the usefulness of available climate-related financial disclosures for financial decision-making.
- **Disclosure of Strategy Resilience Using Scenario Analysis.** This section highlights the use of scenario analysis by companies for assessing the resilience of their strategies as well as trends and potential challenges facing companies in disclosing information about the resiliency of their strategies to a range of climate-related scenarios.
- **User Perspectives on Decision-Useful Climate-Related Financial Disclosures.** This section describes the types of information individual investors and analysts (users) look for in climate-related financial disclosures and provides examples of disclosures that, consistent with the TCFD recommendations, those individual users view as providing decision-useful information.
- **Initiatives Supporting TCFD.** This section describes various initiatives aimed at supporting preparers and users of climate-related financial disclosures.
- **Appendices.** These sections provide supplemental information on the Task Force, the methodology for its review of disclosures, a glossary of terms, and references.

A	Introduction
B	State of Climate-Related Financial Disclosures
C	Adoption and Use of the TCFD Recommendations
D	Disclosure of Strategy Resilience Using Scenario Analysis
E	User Perspectives on Decision-Useful Climate-Related Financial Disclosures
	Initiatives Supporting TCFD
	Appendices

¹⁶ FSB, “FSB assesses implementation progress and effects of reforms,” February 28, 2017.

Appendix 4: References

- 2° Investing Initiative. "Paris Agreement Capital Transition Assessment."
<https://www.transitionmonitor.com/>.
- AES. *AES Climate Scenario Report*. November 13, 2018.
https://s2.q4cdn.com/825052743/files/doc_downloads/2018/11/AES_Climate_Scenario_Report111318.pdf.
- Arbejdsmarkedets Tillægspension (ATP). *Responsibility 2018*. February 2019.
https://www.atp.dk/sites/default/files/esg-rapport-2018_gb.pdf.
- ASX Corporate Governance Council. *Corporate Governance Principles and Recommendations 4th Edition*. February 2019. <https://www.asx.com.au/documents/asx-compliance/cgc-principles-and-recommendations-fourth-edn.pdf>.
- Aurizon. *2018 Sustainability Report. Delivering a sustainable future*. October 2018.
<https://www.aurizon.com.au/en/sustainability>.
- AXA. *Climate-Related Investment & Insurance Report 2018*. April 27, 2018.
<https://group.axa.com/en/newsroom/news/combining-analysis-and-action-axa-publishes-its-first-tcfd-climate-risk-report>.
- BHP. *Climate Change: Portfolio Analysis Views*. September 29, 2015. <https://www.bhp.com/-/media/bhp/documents/investors/reports/2015/bhpbillionclimatechangeportfolioanalysis2015.pdf>.
- BlueScope. *2017-2018 Sustainability Report*. October 29, 2018. <https://s3-ap-southeast-2.amazonaws.com/bluescope-corporate-umbraco-media/media/2480/fy2018-bluescope-sustainability-report.pdf>.
- BNP Paribas. *2018 Registration Document and Annual Financial Report*. March 5, 2019.
<http://media.bnpparibas.com/fluidbook/REGISTRATION-DOCUMENT-2018/m/data/document.pdf>.
- BRF S.A.. *Annual and Sustainability Report 2017*. November 2018. https://ri.brf-global.com/wp-content/uploads/sites/38/2018/11/BRF_Relatorio2017_ENG.pdf.
- Bursa Malaysia. *Sustainability Reporting Guide*. February 22, 2018.
<https://bursasustain.bursamalaysia.com/droplet-details/resources/sustainability-reporting-guide>.
- Cadbury, Adrian. *Report of the Committee on the Financial Aspects of Corporate Governance*. London, 1992. <http://cadbury.cjbs.archios.info/report>.
- Cambridge Institute for Sustainability Leadership (CISL). *Embedding environmental scenario analysis into routine financial decision-making in México*. October 2018.
<https://www.cisl.cam.ac.uk/resources/sustainable-finance-publications/embedding-environmental-scenario-analysis-into-routine-financial-decision-making-in-mexico>.
- CISL. *Embedding environmental scenario analysis into routine financial decision-making in South Africa*. October 2018. <https://www.cisl.cam.ac.uk/resources/publication-pdfs/embedding-environmental-scenario-analysis-into-financial-decision-making-in-south-africa>.
- CISL. *Physical risk framework: Understanding the impact of climate change on real estate lending and investment portfolios*. February 22, 2019. <https://www.cisl.cam.ac.uk/resources/sustainable-finance-publications/physical-risk-framework-understanding-the-impact-of-climate-change-on-real-estate-lending-and-investment-portfolios>.
- CISL. *Sailing from different harbours. G20 approaches to implementing the recommendations of the Task Force on Climate-related Financial Disclosures*. May 2018.
<https://www.cisl.cam.ac.uk/resources/publication-pdfs/cisl-tcfd-report-2018.pdf>.
- CISL. "The ClimateWise Principles." 2019.
<https://www.cisl.cam.ac.uk/business-action/sustainable-finance/climatewise/principles>.

A
Introduction

B
State of Climate-Related
Financial Disclosures

C
Adoption and Use of the
TCFD Recommendations

D
Disclosure of Strategy
Resilience Using Scenario
Analysis

E
User Perspectives on
Decision-Useful Climate-
Related Financial
Disclosures

F
Initiatives Supporting
TCFD

Appendices

CISL. *Transition risk framework: Managing the impacts of the low carbon transition on infrastructure investments*. February 22, 2019. <https://www.cisl.cam.ac.uk/resources/sustainable-finance-publications/transition-risk-framework-managing-the-impacts-of-the-low-carbon-transition-on-infrastructure-investments>.

Carbon Tracker Initiative and the Principles for Responsible Investment. "2 degrees of separation: Transition risk for oil & gas in a low carbon world." 2019. <http://2degreeseperation.com/>.

CDP. "CDP Technical Note on the TCFD: Disclosing in line with the TCFD's Recommendations in 2019." March 22, 2019. <https://www.cdp.net/en/guidance/guidance-for-companies>.

CDP. *Scoring Introduction 2019*. April 11, 2019. http://b8f65cb373b1b7b15feb-c70d8ead6ced550b4d987d7c03fcd1d.r81.cf3.rackcdn.com/cms/guidance_docs/pdfs/000/000/233/original/Scoring-Introduction.pdf?1524216279.

China Light and Power Company (CLP). *CLP Annual Report 2018*. February 25, 2019. https://www.clpgroup.com/en/Investors-Information-site/Documents/Financial%20Report%20PDF/e_2018%20Annual%20Report.pdf.

Citi. *Finance for a Climate-Resilient Future: Citi's TCFD Report*. November 13, 2018. <https://www.citigroup.com/citi/sustainability/data/finance-for-a-climate-resilient-future.pdf>.

Climate Action 100+. "Climate Action 100+." 2019. <http://www.climateaction100.org/>.

Climate Disclosure Standards Board (CDSB). *CDSB Framework for Reporting Environmental Information, Natural Capital and Associated Business Impacts*. April 2018. https://www.cdsb.net/sites/default/files/cdsb_framework_2.1.pdf.

CDSB. "TCFD Knowledge Hub." 2019. <https://www.tcfdhub.org/>.

CDSB and Sustainable Accounting Standards Board. *TCFD Implementation Guide*. May 2019. https://www.cdsb.net/sites/default/files/sasb_cdsb-tcfid-implementation-guide-a4-size-cdsb.pdf.

Corporate Reporting Dialogue (CRD). "Corporate Reporting Dialogue: Better Alignment Project." November 2018. <http://corporatereportingdialogue.com/wp-content/uploads/2018/11/Corporate-Reporting-Dialogue-Better-Alignment-Project.pdf>.

CPP Investment Board (CPPIB). *Report on Sustainable Investing: Investing Responsibly for CPP Contributors and Beneficiaries 2018*. October 15, 2018. http://www.cppib.com/documents/1922/CPPIB_SI_2018_ENG.pdf.

Department for Work and Pensions (UK). *Clarifying and strengthening trustees' investment duties*. September 2018. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/739331/response-clarifying-and-strengthening-trustees-investment-duties.pdf.

Department of Finance (Canada). *Investing in the Middle Class Budget 2019*. March 19, 2019. <https://budget.gc.ca/2019/docs/plan/budget-2019-en.pdf>.

Electric Power Research Institute. *Grounding Decisions: A Scientific Foundation for Companies Considering Global Climate Scenarios and Greenhouse Gas Goals*. October 2018. <https://publicdownload.epri.com/PublicDownload.svc/product=000000003002014510/type=Product>.

Electrolux AB. *Electrolux Sustainability Report 2018*. March 2019. <https://www.electroluxgroup.com/en/wp-content/uploads/sites/2/2019/03/electrolux-sustainability-report-2018.pdf>.

Energie Baden-Württemberg (EnBW). *Integrated Annual Report 2018*. March 2019. <https://www.enbw.com/integrated-annual-report-2018/further-information/download-center/>.

Energias de Portugal (EDP). *EDP Sustainability Report 2018*. April 2019. https://www.edp.com/sites/default/files/portal.com/documents/relatorio_de_sustentabilidade_2018_en_0.pdf.

European Financial Reporting Advisory Group. "European Lab [Project Task Force] PTF on Climate-related Reporting." 2019. <https://www.efrag.org/About/Governance/41/European-Lab-PTF-on-Climate-related-Reporting?AspxAutoDetectCookieSupport=1>.

A	Introduction
B	State of Climate-Related Financial Disclosures
C	Adoption and Use of the TCFD Recommendations
D	Disclosure of Strategy Resilience Using Scenario Analysis
E	User Perspectives on Decision-Useful Climate-Related Financial Disclosures
F	Initiatives Supporting TCFD
Appendices	

- European Parliament and The Council of The European Union. *Directive (EU) 2016/2341 of the European Parliament and of the Council of 14 December 2016 on the activities and supervision of institutions for occupational retirement provision (IORPs)*. December 23, 2016. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016L2341&rid=9>.
- Financial Conduct Authority (UK). *Discussion Paper (DP18/8): Climate Change and Green Finance*. October 2018. <https://www.fca.org.uk/publication/discussion/dp18-08.pdf>.
- Financial Reporting Council (UK). "Call for Participants in new Lab project: Climate and workforce reporting." September 12, 2018. <https://www.frc.org.uk/news/september-2018/call-for-participants-in-new-lab-project-climate>.
- Financial Stability Board (FSB). "FSB assesses implementation progress and effects of reforms." February 28, 2017. <http://www.fsb.org/2017/02/fsb-assesses-implementation-progress-and-effects-of-reforms/>.
- FSB. "Press Release: FSB to establish Task Force on Climate-related Financial Disclosures." December 4, 2015. <https://www.fsb-tcfd.org/wp-content/uploads/2016/01/12-4-2015-Climate-change-task-force-press-release.pdf>.
- FSB. "Press Release: Task Force report shows momentum building for climate-related financial disclosures." September 26, 2018. <http://www.fsb.org/wp-content/uploads/R260918.pdf>.
- Financial Stability, Financial Services and Capital Markets Union. *Technical Expert Group on Sustainable Finance: report on climate-related disclosures*. February 20, 2019. https://ec.europa.eu/info/publications/190110-sustainable-finance-teg-report-climate-related-disclosures_en.
- G20. "Communiqué from the G20 Finance Ministers and Central Bank Governors Meeting in Washington, D.C. April 16-17, 2015." April 2015. <http://www.g20.org.tr/wp-content/uploads/2015/04/April-G20-FMBCBG-Communique-Final.pdf>.
- Goldstein, A., Turner, W., Gladstone, J., Hole, D. (2018). "The private sector's climate change risk and adaptation blind spots." *Nature Climate Change*, published online December 10, 2018.
- Gold Fields Limited. *Integrated Annual Report 2018*. March 29, 2019. <https://www.goldfields.com/pdf/investors/integrated-annual-reports/2018/iar-2018.pdf>.
- Gruppo Mondadori. *2018 Annual Report*. March 2019. <http://static.mondadori.it/content/uploads/2019/03/Annual-report-2018.pdf?855b8b>.
- Hermes Investment Management. *RI Transparency Report 2018*. 2018. <https://reporting.unpri.org/surveys/PRI-reporting-framework-2018/B862F260-E30F-43F5-AB22-E2F0A9D576D7/79894dbc337a40828d895f9402aa63de/html/2/?lang=en&a=1>.
- Hitachi, Ltd. *Hitachi Integrated Report 2018*. November 8, 2018. <http://www.hitachi.com/IR-e/library/integrated/2018/ar2018e.pdf>.
- HKEX. *How to Prepare an ESG Report? A Step-by-Step Guide to ESG Reporting*. November 2018. <https://www.hkex.com.hk/-/media/HKEX-Market/Listing/Rules-and-Guidance/Other-Resources/Listed-Issuers/Environmental-Social-and-Governance/How-to-Prepare-an-ESG-Report/steps.pdf?la=en>.
- Institute for Climate Economics, *Climate Brief No61: Very few companies make good use of scenarios to anticipate their climate-constrained future*. February 2019. <https://www.i4ce.org/download/very-few-companies-make-good-use-of-scenarios-to-anticipate-their-climate-constrained-future/>.
- Institute of International Finance. "Sustainable Finance Working Group." <https://www.iif.com/Advocacy/Policy-Issues/Sustainable-Finance-Working-Group-SFWG>.
- Institutional Investors Group on Climate Change (IIGCC). *Addressing climate risks and opportunities in the investment process*. June 11, 2018. <https://www.iigcc.org/resource/addressing-climate-risks-and-opportunities-in-the-investment-process/>.
- IIGCC. *Navigating climate scenario analysis – a guide for institutional investors*. April 2, 2019. <https://www.iigcc.org/resource/navigating-climate-scenario-analysis-a-guide-for-institutional-investors/>.

- Intergovernmental Panel on Climate Change (IPCC). "3.4.1.1 Decarbonization trends," Climate Change 2007: Working Group III: Mitigation of Climate Change, 2007. <https://www.ipcc.ch/assessment-report/ar4/>.
- IPCC. *Climate Change 2014 Mitigation of Climate Change*, Cambridge University Press, 2014.
- IPCC. *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press. 2014. <https://www.ipcc.ch/report/ar5/syr/>.
- IPCC. "Press Release: Summary for Policymakers of IPCC Special Report on Global Warming of 1.5°C approved by governments." October 8, 2018. https://www.ipcc.ch/site/assets/uploads/2018/11/pr_181008_P48_spm_en.pdf.
- IPCC. *Summary for Policymakers: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty*. World Meteorological Organization. October 2018. https://www.ipcc.ch/site/assets/uploads/sites/2/2018/07/SR15_SPM_version_stand_alone_LR.pdf.
- International Airlines Group. *Annual Report and Accounts 2018*. March 5, 2019. <http://www.iairgroup.com/phoenix.zhtml?c=240949&p=irol-reportsannual>.
- International Association of Insurance Supervisors and the Sustainable Insurance Forum. *Issues Paper on Climate Change Risks to the Insurance Sector*. July 2018. https://www.insurancejournal.com/research/app/uploads/2018/08/IAIS_and_SIF_Issues_Paper_on_Climate_Change_Risks_to_the_Insurance_Sector_-1.pdf.
- International Energy Agency. "Energy and climate change." 2019. <https://www.iea.org/weo/energyandclimatechange/>.
- International Forum of Sovereign Wealth Funds. *The One Planet Sovereign Wealth Fund Framework*. June 7, 2018. https://www.ifswf.org/sites/default/files/One_Planet_Sovereign_Wealth_Fund_Framework.pdf.
- International Organization of Securities Commission. "Statement on Disclosure of ESG Matters by Issuers." January 18, 2019. <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD619.pdf>.
- Investor Leadership Network. "Climate Disclosures." 2018. <https://www.investorleadershipnetwork.org/en/climate-disclosures/>.
- IPIECA. "Reporting Survey Results 2018." September 2018. <http://www.ipieca.org/resources/good-practice/reporting-survey-results-2018/>.
- Itaú Unibanco Holding S.A.. *Consolidated Annual Report 2017*. April 20, 2018. https://www.itaubank.com.br/arquivosstaticos/RI/pdf/en/Itau_RAC_2017_ing.pdf.
- JBS S.A.. *Annual and Sustainability Report 2018*. May 3, 2019. <https://jbss.infoinvest.com.br/en/4980/RAS%202018%20-%20Ingls.pdf>.
- JetBlue Airways Corporation. *2017 Environmental Social Governance Report: A Sustainability Accounting Standards Board (SASB) and Task Force on Climate-related Financial Disclosures (TCFD) Report*. April 2018. <http://investor.jetblue.com/~media/Files/J/Jetblue-IR-V2/Annual-Reports/jetblue-sasb-tcf-2017.pdf>.
- LafargeHolcim. *Annual Report 2018*. March 7, 2019. <https://www.lafargeholcim.com/annual-interim-reports>.
- Law n° 2015-992 (French Energy Transition Law). Article 173. August 17, 2015. <https://www.legifrance.gouv.fr/eli/loi/2015/8/17/DEVX1413992L/jo#JORFARTI000031045547>.
- Legal & General Investment Management. *Group TCFD Report 2018*. March 14, 2019. http://www.lgim.com/files/_document-library/capabilities/lgim_tcf-2018-report.pdf.
- Lenovo Group Ltd. *2017/18 Sustainability Report*. December 14, 2018. <https://investor.lenovo.com/en/sustainability/reports/FY2018-lenovo-sustainability-report.pdf>.

- London Stock Exchange Group. *Revealing the full picture: Your guide to ESG reporting*. January 2018. https://www.lseg.com/sites/default/files/content/images/Green_Finance/ESG/2018/February/LSEG_ESG_report_January_2018.pdf.
- Ministry of Economy, Trade, and Industry (Japan). *Guidance on Climate-Related Financial Disclosures*. December 2018. https://www.meti.go.jp/english/press/2018/pdf/1225_006b.pdf.
- Ministry of the Environment (Japan). "MOEJ releases Practical guide for Scenario Analysis in line with TCFD recommendations." March 19, 2019. <https://www.env.go.jp/en/headline/2396.html>.
- Mitsubishi Electric Group. *Environmental Performance Review 2018*. September 2018. https://www.mitsubishielectric.com/sites/GWS/en/sustainability/reports/pdf/2018/Environmental_Performance_Review_2018_en.pdf.
- Nasdaq. *ESG Reporting Guide*. May 15, 2019. <https://business.nasdaq.com/esg-guide/>.
- Network for Greening the Financial System (NGFS). *A call for action: Climate change as a source of financial risk*. April 17, 2019. https://www.banque-france.fr/sites/default/files/media/2019/04/17/ngfs_first_comprehensive_report_-_17042019_0.pdf.
- NGFS. *NGFS: First Progress Report*. October 11, 2018. <https://www.banque-france.fr/sites/default/files/media/2018/10/11/818366-ngfs-first-progress-report-20181011.pdf>.
- New York State Common Retirement Fund. *2018 Comprehensive Annual Financial Report*. October 31, 2018. https://www.osc.state.ny.us/retire/word_and_pdf_documents/publications/cafr/cafr_18.pdf.
- Oil Search. *Annual Report 2018*. March 28, 2019. https://www.oilsearch.com/_data/assets/pdf_file/0012/33114/OSH-2018-Annual-Report.pdf.
- Oil Search. *Climate Change Resilience Report 2017*. March 22, 2018. https://www.oilsearch.com/_data/assets/pdf_file/0005/18968/OSL-Climate-Change-Resilience-Report_FINAL.pdf.
- Olam International. *Olam International Limited Annual Report 2018*. April 8, 2019. <https://www.olamgroup.com/content/dam/olamgroup/investor-relations/ir-library/annual-reports/annual-reports-pdfs/Olam-annual-report-fy18-3-in-1.pdf>.
- One Planet Summit: A Platform of Commitments to Meet the Challenge of Climate Change. "Lasting commitments and specific objectives." <https://www.oneplanetsummit.fr/en/lasting-commitments-and-specific-objectives-71>.
- One Planet Summit: A Platform of Commitments to Meet the Challenge of Climate Change. "The One Planet Lab." <https://www.oneplanetsummit.fr/en/one-planet-lab-68>.
- OPTrust. *Portfolio Climate Risk Assessment*. January 24, 2017. https://www.optrust.com/documents/OPTrust_PortfolioClimateRiskAssessment_Mercer.pdf.
- Organisation for Economic Co-operation and Development. *G20/OECD Principles of Corporate Governance*. OECD Publishing, Paris, 2015. https://www.oecd-ilibrary.org/governance/g20-oecd-principles-of-corporate-governance-2015_9789264236882-en.
- Ørsted. *Annual Report 2018*. January 31, 2019. https://orsted.com/-/media/Annual_2018/Orsted_Annual_report_2018.ashx?la=en&hash=A64F4AF34FD9CA0EEE78FE7FA690B484.
- Ørsted. *ESG Performance Report 2018*. January 31, 2019. https://orsted.com/-/media/Annual_2018/Orsted_ESG_performance_report_2018.ashx?la=en&hash=315A4E48E0AD794B64B9AC56EE7ED2F1.
- Ørsted. *Sustainability Report 2018*. January 31, 2019. https://orsted.com/-/media/Annual_2018/Sustainability_report_2018.ashx?la=en&hash=7FF3F040A8CD706E766816E8285C3ACD.
- Ping An Insurance (Group) Company of China. *2018 Sustainability Report*. March 12, 2019. http://www.pingan.cn/app_upload/file/official/2018ESGReport_EN.pdf.
- Principles for Responsible Investment (PRI). *An asset owner's guide to the TCFD recommendations*. May 11, 2018. <https://www.unpri.org/climate-change/an-asset-owners-guide-to-the-tcfd-recommendations/3109.article>.

- PRI. *Annual Report 2018*. August 14, 2018.
https://d8g8t13e9vf2o.cloudfront.net/Uploads/g/f/c/priannualreport_605237.pdf.
- PRI. "Directory of Climate Scenario Tools." 2019. <https://www.unpri.org/climate-change/directory-of-climate-scenario-tools/3606.article>.
- PRI. "TCFD-based reporting to become mandatory for PRI signatories in 2020." February 18, 2019.
<https://www.unpri.org/news-and-press/tcfd-based-reporting-to-become-mandatory-for-pri-signatories-in-2020/4116.article>.
- Prudential Regulation Authority (PRA) (UK). *Consultation Paper | 23/18: Enhancing banks' and insurers' approaches to managing the financial risks from climate change*. October 2018.
<https://www.bankofengland.co.uk/-/media/boe/files/prudential-regulation/consultation-paper/2018/cp2318.pdf?la=en&hash=8663D2D47A725C395F71FD5688E5667399C48E08>.
- PRA (UK). *Supervisory Statement | SS3/19: Enhancing banks' and insurers' approaches to managing the financial risks from climate change*. April 2019. <https://www.bankofengland.co.uk/-/media/boe/files/prudential-regulation/supervisory-statement/2019/ss319.pdf?la=en&hash=7BA9824BAC5FB313F42C00889D4E3A6104881C44>.
- Repsol Group. *2018 Annual Corporate Governance Report*. February 28, 2019.
https://www.repsol.com/imagenes/global/en/280219_HR3_HR_IAGC_2018_SCIIF_EN_tcm14-147377.pdf.
- Repsol Group. *2018 Integrated Management Report*. February 28, 2019.
https://www.repsol.com/imagenes/global/en/integrated-management-report-and-independent-verification-report-non-financial-2018_tcm14-147660.pdf.
- Repsol Group. *Strategic Update. Delivering value growth through the cycle*. June 2018.
https://www.repsol.com/imagenes/global/en/060618_hr1_strategic_update_2018_2020_tcm14-132515.pdf.
- Repsol Group. *Walking the talk on energy transition*. November 2018.
https://www.repsol.com/imagenes/global/en/equity_story_esg_vf_tcm14-131394.pdf.
- Rio Tinto. *Our Approach to Climate Change*. February 27, 2019.
https://www.riotinto.com/documents/RT_Our_approach_to_climate_change_2018.pdf.
- Royal DSM. "Advocating climate change." 2019.
<https://www.dsm.com/corporate/sustainability/climate-change/advocating-climate-action.html>.
- Royal DSM. "DSM sets science-based reduction targets for emissions." March 13, 2019.
<https://www.dsm.com/corporate/media/informationcenter-news/2019/03/07-19-dsm-sets-science-based-reduction-targets-for-emissions.html>.
- Royal DSM. "DSM Strategy Update." June 20, 2018.
<https://www.dsm.com/corporate/media/informationcenter-news/2018/06/19-18-dsm-strategy-update.html>.
- Royal DSM. "Enabling the low-carbon economy." 2019.
<https://www.dsm.com/corporate/sustainability/climate-change/enabling-the-low-carbon-economy.html#>.
- Royal DSM. *Royal DSM Integrated Annual Report 2018*. March 2019.
https://annualreport.dsm.com/content/dam/annualreport/ar2018/en_US/downloads/DSM-Annual-Report-2018.pdf.
- Royal Dutch Shell. *2018 Annual Report and Form 20-F*. March 14, 2019.
<https://reports.shell.com/annual-report/2018>.
- Royal Dutch Shell. *Energy Transition Report*. 2018. https://www.shell.com/energy-and-innovation/the-energy-future/shell-energy-transition-report/_jcr_content/par/toptasks.stream/1524757699226/3f2ad7f01e2181c302cdc453c5642c77acb48ca3/web-shell-energy-transition-report.pdf.
- Royal Dutch Shell. "Greenhouse Gas Emissions (GHGs)." 2019.
<https://www.shell.com/sustainability/sustainability-reporting-and-performance-data/performance-data/greenhouse-gas-emissions.html#vanity-aHR0cHM6Ly93d3cuc2h1bGwuY29tL2doZW>.

- Royal Dutch Shell. *Sustainability Report 2017*. April 2018. <https://reports.shell.com/sustainability-report/2017/>.
- S&P Global. *Environmental, Social, and Governance Evaluation Analytical Approach*. April 10, 2019. https://www.spglobal.com/_Assets/documents/Ratings/RatingsDirect_EnvironmentalSocialAndGovernanceEvaluationAnalyticalApproach_1176513_Apr-10-2019.pdf.
- Salesforce.com, Inc. *2018 Annual Report*. February 28, 2018. https://s1.q4cdn.com/454432842/files/doc_financials/2018/Salesforce-FY18-Annual-Report.pdf.
- Salesforce.com, Inc. "CDP Climate Change 2018 Report." 2018. <https://www.cdp.net/en/reports/archive>.
- Salesforce.com, Inc. *FY2018 Stakeholder Impact Report*. 2018. https://www.salesforce.com/content/dam/web/en_us/www/documents/reports/sustainability-FY18-stakeholder-impact-report.pdf.
- Salesforce.com, Inc. "Salesforce's Step Up Commitments." https://www.salesforce.com/content/dam/web/en_us/www/documents/white-papers/step-up-commitments.pdf.
- SAP. *2018 SAP Integrated Report*. February 28, 2019. <https://www.sap.com/integrated-reports/2018/en.html>.
- SAP. "Connectivity of Financial and Non-Financial Indicators." <https://www.sap.com/integrated-reports/2018/en/connectivity.html>.
- SAP. "Interactive Chart Generator." <https://www.sap.com/integrated-reports/2018/en/interactive-chart-generator.environment.greenhouse-gas-emissions.html>.
- Science-Based Targets Initiative. "What is a science-based target?" <https://sciencebasedtargets.org/what-is-a-science-based-target/>.
- Scotiabank. *2018 Annual Report*. November 27, 2018. https://www.scotiabank.com/content/dam/scotiabank/corporate/quarterly-reports/2018/q4/BNS_Annual_Report_2018.pdf.
- Sustainable Stock Exchange Initiative. "About the SSE." <http://www.sseinitiative.org/about/about-the-sse/>.
- Swiss Re. *2018 Financial Report*. April 18, 2019. https://reports.swissre.com/2018/servicepages/downloads/files/2018_financial_report_swissre_ar18.pdf.
- Swiss Re Institute. *Natural catastrophes and man-made disasters in 2018: "secondary" perils on the frontline*. April 10, 2019. https://www.swissre.com/dam/jcr:c37eb0e4-c0b9-4a9f-9954-3d0bb4339bfd/sigma2_2019_en.pdf.
- UBS. *Our climate strategy*. March 2019. <https://www.ubs.com/global/en/ubs-society/our-documents.html>.
- Unilever. *Unilever Annual Report and Accounts 2018*. March 6, 2019. https://www.unilever.com/Images/unilever-annual-report-and-accounts-2018_tcm244-534881_en.pdf.
- United Nations Environment Programme. *The Emissions Gap Report 2018*. November 2018. http://wedocs.unep.org/bitstream/handle/20.500.11822/26895/EGR2018_FullReport_EN.pdf?sequence=1&isAllowed=y.
- United Nations Environment Programme Finance Initiative (UNEP FI). *Changing Course: A comprehensive investor guide to scenario-based methods for climate risk assessment, in response to the TCFD*. May 2019. <http://www.unepfi.org/wordpress/wp-content/uploads/2019/05/TCFD-Changing-Course.pdf>.
- UNEP FI. *Extending our Horizons: Assessing credit risk and opportunity in a changing climate (Part 1: Transition-related risks & opportunities)*. April 2018. <http://www.unepfi.org/publications/banking-publications/extending-our-horizons/>.

- UNEP FI. *Navigating a New Climate: Assessing credit risk and opportunity in a changing climate (Part 2: Physical risks & opportunities)*. July 2018. <http://www.unepfi.org/publications/banking-publications/navigating-a-new-climate-assessing-credit-risk-and-opportunity-in-a-changing-climate/>.
- United Nations Framework Convention on Climate Change. "The Paris Agreement." December 2015. http://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf.
- Task Force on Climate-related Financial Disclosures (TCFD). *2018 Status Report*. September 26, 2018. <https://www.fsb-tcfd.org/wp-content/uploads/2018/08/FINAL-2018-TCFD-Status-Report-092518.pdf>.
- TCFD. *Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures*. June 29, 2017. <https://www.fsb-tcfd.org/wp-content/uploads/2017/06/FINAL-TCFD-Report-062817.pdf>.
- TCFD. *Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures*. June 29, 2017. <https://www.fsb-tcfd.org/wp-content/uploads/2017/12/FINAL-TCFD-Annex-Amended-121517.pdf>.
- TCFD. *Technical Supplement: The Use of Scenario Analysis in Disclosure of Climate-related Risks and Opportunities*. June 29, 2017. <https://www.fsb-tcfd.org/wp-content/uploads/2017/06/FINAL-TCFD-Technical-Supplement-062917.pdf>.
- Tiger Brands Limited. *Sustainable Development Report 2018*. December 2018. <http://www.tigerbrands.com/wp-content/uploads/2018/12/sd-full-1.pdf>.
- Transition Pathway Initiative. "Overview of the TPI." 2019. <http://www.lse.ac.uk/GranthamInstitute/tpi/about/>.
- Woolworths Group. *2018 Sustainability Report*. August 20, 2018. https://www.woolworthsgroup.com.au/icms_docs/195398_2018-sustainability-report.pdf.
- World Business Council for Sustainable Development (WBCSD). *Climate-related Financial Disclosure by Oil and Gas Companies: Implementing the TCFD Recommendations*. July 19, 2018. <https://www.wbcsd.org/Programs/Redefining-Value/External-Disclosure/TCFD/Resources/Climate-related-financial-disclosure-by-oil-and-gas-companies>.
- WBCSD. "Task Force on Climate-related Financial Disclosure (TCFD) Preparer Forums." 2019. <https://www.wbcsd.org/Programs/Redefining-Value/External-Disclosure/TCFD>.
- World Economic Forum. *How to Set Up Effective Climate Governance on Corporate Boards: Guiding Principles and Questions*. January 2019. http://www3.weforum.org/docs/WEF_Creating_effective_climate_governance_on_corporate_boards.pdf.
- World Resources Institute and World Business Council for Sustainable Development. *The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)*, March 2004. <https://ghgprotocol.org/corporate-standard>.

A	Introduction
B	State of Climate-Related Financial Disclosures
C	Adoption and Use of the TCFD Recommendations
D	Disclosure of Strategy Resilience Using Scenario Analysis
E	User Perspectives on Decision-Useful Climate-Related Financial Disclosures
F	Initiatives Supporting TCFD

Appendices

Nothing in this document constitutes an offer or a solicitation of an offer to buy or sell a security or financial instrument or investment advice or recommendation of a security or financial instrument. The Task Force on Climate-related Financial Disclosures believes the information herein was obtained from reliable sources, but does not guarantee its accuracy. Copyright 2019 The Task Force on Climate-related Financial Disclosures.