



A user guide to climate-related financial disclosures

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Foreword



The TCFD recommendations and resulting disclosures are proving to be hugely influential in changing the disclosure landscape. As they become more widely adopted, and the disclosures evolve to become more informative, we will all be better placed to understand the impacts of climate change and the risks and opportunities posed to different organisations.

There are many resources for those who prepare disclosures, providing advice and support about what should be included and how it should be presented. But there has been much less focus on the users of the disclosures: how they can make the best use of them and avoid some of the pitfalls that are inevitable in a rapidly changing field. Responding to climate risk is a shared responsibility. We hope this guide supports users of disclosures to feel confident in understanding and in applying the insights obtained.

The IFoA's actuaries and IEMA's sustainability professionals are ideally placed to bring their complementary experience to bear on these issues for the benefit of all potential users of TCFD disclosures, regardless of their background. This guide reflects the fruitful collaboration between specialists that is becoming increasingly necessary as we recognise, and respond to, the nature of the systemic risks that the world is currently facing.

Louise Pryor FIA FIEMA



The assessment of risk and its financial implications is fundamental to the operation of banks, insurers and investors and the TCFD initiative accordingly offers the promise of properly embedding sustainability at the core of our economic system. Climate change is, however, a uniquely challenging risk to address. Beyond the regularly voiced concerns over long timescales and uncertainty over climate outcomes and related policy responses, we have complications of tipping points, non-linearity and lack of historical data.

We are facing a potentially existential risk with huge associated uncertainties that challenges existing financial risk methodologies. The appropriate response must surely involve building on the capabilities of current financial risk models to develop new approaches, drawing on a whole range of skills and experience in a transparent manner.

Moreover we must ensure that narrative and engagement is central to those methodologies, not only as an appropriate response to uncertainty but also to support internal and external discussion on appropriate risk strategies. Working across cultural and institutional barriers and developing the capabilities of individuals will therefore be important enablers. This should include finance and risk professionals developing their understanding of climate change and sustainability specialists building a better understanding of how financial services price and manage risks.

In this publication we deliberately construct a question and answer format that is intended to stimulate challenge and discussion. It aims to serve as a concrete example of bringing together communities of specialists with complementary knowledge. Hopefully it will also encourage those new to the topic to get more involved, bringing their expertise to help TCFD deliver on its potential for major change.

Paul Pritchard CEnv FIEMA

Contents

1	Introduction	6
1	1.1 Who is this guide for?	6
1	1.2 How to use this guide	7
1	1.3 Who has written this guide?	8
2	Climate-related financial disclosures	9
2	2.1 Background	9
2	2.2 An overview of TCFD recommendations	11
2	2.3 Decision-useful reporting	11
2	2.4 What do TCFD recommended disclosures look like?	12
	2.4.1 Physical and transition risk and opportunity	12
	2.4.2 Scenario analysis	13
	2.4.3 Greenhouse gas scopes	15
3	Understanding disclosures	16
3	3.1 A simple framework	16
3	3.2 Understanding your objectives	19
	3.2.1 Climate-related impact types	19
	3.2.2 Time horizon	20
3	3.3 What the disclosures can and can't do	20
4	Practical guidance and questions to help you interpret the disclosures	22
4	4.1 Decision-usefulness	22
4	4.2 How seriously is the organisation taking climate change?	22
4	4.3 Assessing the robustness of the organisation's claims	24
4	4.4 Risk modelling and scenario analysis	26
4	4.5 Incorporating wider considerations	27
5	Following up with the disclosing organisation	28
5	5.1 Governance	28
5	5.2 Strategy	28
5	5.3 Risk management	29
5	5.4 Metrics and targets	29
6	Further resources	30
7	Glossary	32

1. Introduction

Climate-related financial disclosures set out an organisation's assessment of the financial implications of the climate-related risks and opportunities they face. In June 2017, the Task Force on Climate-related Financial Disclosures (TCFD), established by the Financial Stability Board (FSB), published a set of recommendations aimed at helping organisations of all types to assess and communicate key climate-related information. Since the publication of the recommendations, more and more organisations are preparing climate disclosures using the guidelines, which have been supported by various governments and regulators.

There are now more than 1,000 organisations globally now supporting the TCFD recommendations¹. These include national governments (Belgium, Canada, Chile, France, Japan, Sweden and the United Kingdom), government ministries, central banks, regulators, stock exchanges, credit rating agencies, asset managers, asset owners, banks, and companies in sectors such as chemicals, energy, insurance, metals and mining, oil and gas, and transportation.

Many stakeholders are increasingly using these disclosures to gain insights into the organisations' responses to climate risk. If you are one of those stakeholders, this guide aims to help you understand what to look for in the disclosures so that you can draw valid and robust conclusions. It also identifies potential questions to help you in probing the disclosures or following up with the organisation that has produced them.

This guide focuses on disclosures that follow the TCFD recommendations. However, it is by no means a complete guide to the recommendations – it is primarily aimed at the users of disclosures. There is a wealth of information available, mostly aimed at organisations that are preparing disclosures, describing them in detail. Section 6 lists some of the information sources that users of the disclosures might find most useful.

1.1 Who is this guide for?

This guide is written to support all users of climaterelated financial disclosures. We hope it will help a wide range of stakeholders, from risk management specialists and sustainability practitioners, from investors, lenders and insurers, through to interested members of the public. Users of the disclosures have varying objectives: some stakeholders are interested in the financial impacts of climate change on the disclosing organisation, others in the impacts of the disclosing organisation on the environment, and others in broader sustainability issues, such as whether an organisation has committed to net-zero or other climate goals. The processes and challenges described in this guide are intended to be relevant to all of them.

As there is such a broad spread of potential users of disclosures, with different interests, areas of expertise, financial sophistication and knowledge of climaterelated issues, we have not attempted to provide a guide to all the aspects of disclosures: for instance, we cover neither financial analysis nor climate science. Instead, we focus on aspects that are particularly relevant to climate-related financial disclosures and may be new to significant numbers of users.

¹ More than 1,000 Global Organizations Declare Support for the Task Force on Climate-related Financial Disclosures and its Recommendations, TCFD 🖔

1.2 How to use this guide

Climate-related financial disclosures represent a new area of financial reporting.

Section 2 is an overview that puts the disclosures in context. In it we give some background information on the FSB Task Force, followed by an overview of the recommendations. Reading this section should help you understand both the purpose behind the disclosures and the type of information you can expect to find in them. If you are already aware of the context, and accustomed to analysing other types of disclosures, you may want to skip both this section and the first part of section 3.

Section 3 outlines a framework that will help you to get the most out of a set of disclosures. The framework is intended as a possible starting point for someone looking to get a better understanding of how an organisation's climate-related financial disclosures can be used.

Section 3.3 is likely to be useful to all readers, describing what the disclosures can and cannot tell you about an organisation's business model and the actions it is taking in relation to climate-related risks.

Section 4 gives some practical guidance on interpreting disclosures, through a set of questions that should help you to direct your analysis appropriately. It is also likely to be useful to all readers.

Section 5 suggests some questions on additional requirements that you may want to use in follow up discussions with the disclosing organisation. It is likely to be particularly useful to readers such as investment analysts, shareholders, journalists, environmental activists, and others who are prepared to engage directly with the disclosing organisation.

Finally, **section 6** describes some further resources that you might find helpful.



1.3 Who has written this guide?

This guide has been produced by a joint working party set up by the Institute and Faculty of Actuaries (IFoA) and the Institute of Environmental Management & Assessment (IEMA). It draws on the insights of both financial and sustainability risk practitioners.

The IFoA is a royal chartered, not-for-profit, professional body which represents and regulates over 32,000 actuaries worldwide. Actuaries provide commercial, financial and prudential advice on the management of assets and liabilities, especially where long-term risk and uncertainty are involved. The IFoA strives to act in the public interest by speaking out on issues where actuaries have the expertise to provide analysis and insight on social and public policy issues. www.actuaries.org.uk

IEMA is the professional body for everyone working in environment and sustainability, with over 15,000 members across more than 100 countries. IEMA provides resources and tools, research and knowledge sharing along with high-quality training, networks, qualifications and professional standards. We believe that together we're positively changing attitudes to sustainability as a progressive force for good. Together we're transforming the world to sustainability. www.iema.net

The working party members are: Nick Blyth, Greg Chant-Hall, Mike Clark, Roelof Coertze, Jonathan Foot, Martin McKee, Paul New, Paul Pritchard, Louise Pryor (Chair), Sara Ronayne, Wendy Walford.

We are very grateful to the following people who have commented on earlier drafts: Adrian Barnes, Seb Beloe, Nick Fedson, Chris Martin, Paul Meins, Russell Picot, V Rajeshwari, Andries Schutte, Shradha Shroff, Natasha Singhal. "It is highly encouraging to see actuaries and sustainability professionals collaborate and share their complementary knowledge to support users of climate-related financial disclosures. The easy to follow format of the guide will support users to greater understand and challenge disclosures, enabling them to play a role in encouraging consistent, decision-useful and forward-looking information on the material financial impacts of climaterelated risks and opportunities from all organisations, across all sectors."

Russell Picot

Special Advisor to the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD)

"Quakers in Britain have led the way since 2011 in divesting charitable funds from fossil fuel extraction companies as part of becoming a low-carbon, sustainable community. Quakers welcome moves towards requirements for corporate disclosure and campaign for greater transparency. This guide for the users of companies' climate-related disclosures will be very valuable in terms of helping Quakers and others to challenge companies in constructive and informed ways."

Chris Martin

Central England Quakers

2. Climate-related financial disclosures

Since their publication, the TCFD recommendations have become the most important development in relation to climate-related financial disclosures. This section provides a brief background on the TCFD recommendations, a summary of the TCFD's four interlinked areas for disclosure and short explanations of some key TCFD disclosure-related concepts. We do not cover the background to either financial analysis or climate change as there is a wealth of information available elsewhere.

2.1 Background

Climate change is increasingly seen as one of the most significant issues faced by organisations today. This has led to growing demand from investors and others for more information on the business implications and financial impacts of the risks it poses and the opportunities it presents. There are also a number of initiatives that seek to encourage a range of bodies, including corporates, pension schemes and governments, to commit to specific emissions targets, such as reaching net zero carbon emissions by a certain date, often 2050. TCFD disclosures can shed useful light on the medium term plans and short term targets supporting these longterm commitments, thus supporting an understanding of the organisation's overall position and maturity with respect to climate change. The TCFD recommendations aim to improve climaterelated disclosures produced by organisations globally, by addressing their consistency, comparability, reliability, clarity and efficiency. The TCFD hopes that better disclosures will enhance the assessment, management and pricing of climate-related risks. Climate-related disclosures can provide useful information for investment, lending and insuring decisions; they can also be used by other interested parties, such as clients, employees, suppliers and environmental campaigners. Importantly, they can help to identify organisations that are addressing the climate change agenda strategically and considering both risks and opportunities. In addition, they can enable organisations to better understand their own climate impacts and benchmark themselves against other organisations and standards.

Both financial regulators and governments are indicating or, in some cases, requiring that firms make disclosures in line with them – for example, from 2022 TCFDcompliant disclosures will be expected from listed companies in the UK². TCFD disclosures are also being widely adopted voluntarily: for example, from 2020 reporting based on the TCFD recommendations is mandatory for the several thousand signatories to the UN's Principles for Responsible Investment (PRI).

The TCFD recognises that this is a new and rapidly evolving process, and at present the content and quality of disclosures varies widely between organisations. Organisations are expected to develop and improve their disclosures over time, as they gain experience in this area and as best practice emerges.

Governance

Governance around climate-related risks and opportunities

- 1. How the board provides oversight
- 2. How the organisation's management assesses and manages them

Strategy

Actual and potential impacts of climate-related risks and opportunities on business strategy and financial planning

- 1. What risks and opportunities have been identified over the short, medium and long-terms
- 2. The impact on the organisation's business, strategy and financial planning
- 3. How resilient the strategy is under different climate scenarios

Core elements of disclosures from the TCFD recommendations

Risk management

The processes used to identify, access and manage climate related risks

- 1. Identifying and assessing climate-related risks
- 2. Managing them
- 3. Integrating climate risk management into

Metrics and targets

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

- Scope 1 and Scope 2 greenhouse gas (GHG) emissions (Scope 3 emissions should be disclosed 'if appropriate')
- 2. Climate-related targets and process made in achieving them

Figure 1: Core elements of TCFD disclosures

2.2 An overview of TCFD recommendations

The TCFD's recommendations cover four core elements of an organisation's disclosures. These recommendations are explained in detail in the TCFD Final Report of June 2017³ and are summarised in Figure 1. The key features of these recommendations are that they are:

- 1. Applicable to all organisations
- 2. Included in financial filings
- 3. Designed to solicit decision-useful, forward-looking information on financial impacts
- 4. Focus on risks and opportunities related to the transition to a lower-carbon economy.

The TCFD has also developed supplemental guidance to assist the implementation of the guidelines⁴.

The TCFD approach recognises that climate change will affect all sectors of the economy and that its implications need to be embedded throughout organisations' governance, strategy, management and reporting. It also recognises the uncertainties that climate change presents, both in the increasing variability of weather patterns and in the scope, scale and effectiveness of political and economic responses.

2.3 Decision-useful reporting

Decision-useful disclosures should contain enough detail, and be sufficiently clear, for you to use them when making your decisions. In addition, disclosures from different organisations should ideally be consistent, so they can be compared with each other. The TCFD recommendations provide a useful reference point for both content and clarity that can be applied by all organisations, including public bodies, NGOs, asset managers and asset owners (such as pension funds) as well as listed and private companies.

The TCFD expects that disclosures meeting its recommendations will start to identify the uncertainties facing the organisation as well as presenting the opportunities and competitive advantages that a proactive response can bring. The expectation is that this will lead to strategic change to address the issues that the organisation faces.

Good disclosures will meet a broad range of user needs and should enable you to draw out the decision-useful information whilst identifying the limitations of the reporting for any conclusions you may draw.

We hope this guide will help you to decide what is decision-useful information for you and how best to find it in disclosures.



³ Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures (June 2017)
⁴ TCFD Knowledge Hub

2.4 What do TCFD recommended disclosures look like?

The TCFD recommendations address four interlinked areas: governance, strategy, risk management, and metrics and targets, as shown in Figure 1. The information to be disclosed includes both qualitative information (for example on governance) and quantitative information (for example the metrics and targets). Disclosures under each of the four sections should be consistent and complementary. For example, the choice of metrics and targets should align with the organisation's strategy and the governance structures should support the identification and management of climate-related risks.

Some aspects of the recommendations may be unfamiliar to those using disclosures for the first time: the distinction between physical and transition risk, the use of scenario analysis, and greenhouse gas (GHG) scopes. We describe them below.

2.4.1 Physical and transition risk and opportunity

The TCFD identifies two broad classes of risks that climate change poses to organisations: physical and transition risk.

 Physical risks derive from the effects that most people think of when they consider climate change, and can be subdivided into two further categories, acute and chronic. Acute physical risks are event-driven, including increased severity of extreme weather events, such as cyclones, hurricanes, or floods. Chronic physical risks arise from longer-term shifts in climate patterns (e.g. sustained higher temperatures) that may cause rising sea levels or heatwaves. Transition risks arise from the transition to the lowcarbon economy. They include policy and legal risks, risks from changing technology and shifting patterns of demand and consumption, and reputational risks associated with a failure to adequately respond to climate change.

In the past there has been considerable emphasis on physical risks, which it might be thought are more tangible than transition risks, but may occur over a longer time frame. However, transition risks may impact organisations in the short term: those who fail to assess them adequately may be leaving themselves exposed to significant business risk.

Opportunities may arise from both the physical effects of climate change and the transition to a low carbon economy through a reduction in GHG emissions. For example, companies may develop new products to address the problems of adapting to climate change or to provide ways of lowering emissions.

The degree to which these classes of risk and opportunity are relevant to a given organisation depends on the organisation's scale, its business sector and specific activities, and the location of its operations (including its supply chains). It will also depend on the response of governments, regulators, consumers, and competitors. Both physical and transition risk are associated with uncertainties, in both outcomes and the timescales over which they will emerge. The precise level of temperature change at a specific location and the resulting impacts are hard to predict. Extreme weather events are projected to become more common but exactly where and when they will occur cannot be predicted over any reasonable length of time. The cost of carbon (i.e. CO2 and other GHG emissions) will undoubtedly rise but to what level and at what cost to business is unclear. New technologies will emerge, but at what rate?

The balance between the impact on organisations of the two types of risk and opportunity will also be different under different climate pathways. Through the Paris Agreement⁵ governments have committed to taking action to keep global average temperature rises relative to a pre-industrial baseline to well below 2°C. However, even with the currently committed policies there remains a significant probability that warming will exceed 3°C by the end of the century⁶ and physical climate impacts are likely to dominate. Alternatively, should countries be successful in realising the pathway envisaged in the Paris Agreement, rapid decarbonisation and huge technological shifts will be involved, presenting significant transition impacts for many organisations (along with less severe but still significant physical impacts). Long-term forecasting is incredibly difficult, and the range of potential outcomes is huge. Although climate risk will be significant for all organisations, there is uncertainty around whether physical or transition risk will dominate.

Liability and reputation risks have received less attention than physical and transition risks but may also be important. Liability risk is the risk that comes from people or businesses seeking compensation from the organisation for losses they may have suffered from physical or transition risks. Reputation risk concerns the damage to an organisation's reputation from its response (or lack of response) to climate risk. Again, there is uncertainty about the extent and level of these risks.

The TCFD recommendations indicate that climaterelated disclosures should reflect these risks, opportunities, and uncertainties through the use of scenario analysis.

2.4.2 Scenario analysis

The TCFD recommends that scenario analysis is used to help assess the potential implications of climate-related risks and opportunities for the organisation and to help inform stakeholders about how resilient the organisation is in the light of these risks and opportunities. Given the uncertainties described above, scenario analysis can be complex and difficult both for producers and users of disclosures. It is an emerging area where different approaches are being used⁷ and what constitutes good practice is still emerging.

It is expected that good disclosures will present a set of scenarios that cover a reasonable variety of future outcomes. In practice, at least two scenarios will be needed: one should be broadly 'Paris-aligned⁸' (ie lower temperature) and the other should encompass more limited climate action (ie higher temperature). Scenario analysis can be either qualitative or quantitative, and the sophistication of an organisation's approach is likely to increase over time. In a sophisticated quantitative approach, each scenario will be a highly complex structure including detailed mitigation assumptions, effects on relevant industries and developing assumptions about climate.

Discussion Paper: The 2021 biennial exploratory scenario on the financial risks from climate change 🖱

⁵ The Paris Agreement 🖔

⁶ UNEP Emissions Gap Report 2019 🔭

⁷The Use of Scenario Analysis in Disclosure of Climate-Related Risks and Opportunities 🎨

^{*} IIGCC Paris Aligned Investment Initiative 🖔

A 'Paris-aligned' scenario will have transition risks to the fore, and temperature rises of well below 2°C. It may be difficult to judge whether a particular scenario is indeed 'Paris-aligned': a scenario with 1.5°C temperature rises should fit the bill, as long as all its assumptions are consistent, but one that is described as 'net zero emissions' may or may not. It would depend on when and how the emissions target is achieved, and especially on the extent of the use of negative emission approaches such as carbon capture technologies and natural carbon sequestration. In addition, the transition risks posed by earlier and later action to achieve the Paris Agreement target will have significantly different impacts, and good disclosures are likely to include both scenarios⁹.

The IPCC's Special Report¹⁰ highlights the dramatic differences between a world warmed by 1.5°C rather than 2°C:

- The window for action to achieve 1.5°C, where emissions will need to be cut by 45% from 2010 levels by 2030 (compared with a 20% cut under the 2°C pathway) and to zero by 2050 (compared with 2075 for 2°C)
- The dramatic difference in reduced climate impacts between a world warmed by 1.5°C rather than 2°C (1.5°C is now increasingly seen as the appropriate goal to pursue in line with sustainable development principles).

The scenarios that organisations choose to use in their disclosures will provide information on the extent to which they have a broad understanding of the risks that climate change presents to them and the robustness of the actions they are taking to address those risks.

When reading the disclosures it is important to remember that a scenario is not a prediction or a forecast: it is simply a plausible path of development leading to a particular outcome. Scenarios can enhance critical strategic thinking by exploring alternative outcomes that challenge conventional wisdom about the future.

It is also important to realise that the scenarios used by different organisations may be significantly different, even if they are given the same name or description. Organisations may use different assumptions about what a 1.5°C scenario looks like, for example, and may also draw different conclusions about the impacts on the environment, political situation, and on the economy.

In future we anticipate that there may well be an emerging consensus on suitable reference scenarios – which may, however, differ by industry or sector.



⁹ Discussion Paper: The 2021 biennial exploratory scenario on the financial risks from climate change
¹⁰ Global Warming of 1.5C

2.4.3 Greenhouse gas scopes

Users of climate disclosures need to understand how the organisation measures and monitors its climate-related risks and opportunities. TCFD recommends that the metrics used to assess and manage relevant climate-related risks and opportunities are disclosed to enable comparisons across industries and sectors. While other metrics may be provided, organisations should disclose their greenhouse gas (GHG) emissions calculated in line with the GHG Protocol Corporate Standard methodology.

For reporting purposes, the GHG Protocol¹¹ splits greenhouse gas emissions into three 'scopes' depending on their sources and the degree of control that the organisation has over them.

Scope 1 – All direct emissions from the activities of an organisation or under their control. Including fuel combustion on-site such as gas boilers, fleet vehicles and air-conditioning leaks.

Scope 2 – Indirect generation emissions from electricity, heat or steam purchased and used by the organisation. Emissions are created during the production of the energy that is eventually used by the organisation. This can be disclosed based on the location or the contractual purchase of electricity. For example, in the UK you could report grid average (a location-based method) and the fact that you may have a 100% renewable energy contract to supply your business (a market-based method). Good practice is to report on both sets of numbers. Scope 3 - All other indirect emissions from activities of the organisation, occurring from sources that they do not own or control. These are usually the greatest share of the carbon footprint, covering emissions associated with business travel, procurement (including the inputs to the organisation's products), waste and water. In addition, Scope 3 emissions include emissions resulting from customer use of the organisation's products and emissions arising from end-of life product disposal. Some organisations, such as food manufacturers or house builders, will have significant upstream Scope 3 emissions as production of their purchased goods will be highly emissions intensive. In other sectors, such as automotive and energy, it is downstream Scope 3 emissions from the use of their sold products that represent the overwhelming proportion of their overall footprint.

Comprehensive Scope 3 data collection presents significant challenges and the specific Scope 3 elements included in the disclosures should be clear. For example, information on business travel may be easier to collect but much less important than GHG emissions associated with the supply chain. To put this into context, it was recently reported that global Scope 3 emissions are on average around five and a half times Scope 1 and 2 emissions combined¹². There are several organisations that produce guidance to help identify which industries have material Scope 3 emissions¹³.

The TCFD recommends that Scope 1 and 2 emissions should be disclosed, and that Scope 3 emissions should be disclosed 'if appropriate'. Good disclosures will make clear the extent of Scope 3 disclosures and will indicate the likely significance of sources of emissions that have been omitted from the disclosures. In particular, good disclosures from organisations with significant upstream or downstream Scope 3 emissions should include those emissions and discuss the associated risks. Disclosures that fail to do so are likely to be misleading.

"Greenhouse Gas Protocol 🖔

12 Global Supply Chain Report 2019 🖔

13 For instance, the Greenhouse Gas Protocol, the Climate Disclosure Standards Board (CDSB) and the Science Based Targets Initiative 🖱

3. Understanding disclosures

As you try to interpret climate-related financial disclosures, you may encounter difficulties in finding the required information. The disclosing organisation may well be approaching the issues from a different standpoint to yours, as well as having different aims. This section aims to help you to get the most useful information from disclosures.

3.1 A simple framework

Climate-related financial disclosures are an evolving area, and therefore have a number of limitations. Using a simple framework can help you avoid being misled or forming a view based on incomplete information. The framework is illustrated in Figure 3, and described below.

Stage 1. Define your objectives

 Before you move on to the actual disclosures, you should think about your own objectives in analysing them. Take time to set clear objectives that help meet your needs. Make your objectives as specific as possible (see also section 3.2).

Once you have decided on your overarching objective you will be able to work out what information you will need. Some example objectives might be:

- To determine whether the organisation's governance displays a proactive approach to managing climate risk above and beyond that of similar organisations
- b. To determine the level of temperature rise to which the organisation's strategy is aligned
- c. To understand how a significant rise in global temperatures might affect the value of your investment

- d. To understand how the transition to a low carbon economy might affect the organisation's business model, and how resilient it is to a 1.5 – 2 degree scenario
- e. To understand how the disclosures compare with good practice expectations in the organisation's sector
- f. To develop an understanding of the carbon footprint of the organisation and its supply chain
- g. To identify what corporate social responsibility the organisation demonstrates in seeking to reduce its climate change contribution, and how it supports others in reducing their climate change contributions.



Figure 2: a framework for getting the most out of disclosures

 Use your objectives to determine what 'good' and decision-useful disclosures look like for your purposes. Take into account what disclosures can and can't tell you, as described in section 3.3. Doing this will help you to identify what you should be looking out for in the disclosures.

Stage 2. Interpret the disclosures

Once you've defined your objectives, you can move on to looking at the disclosures themselves.

- **3.** Locate the organisation's disclosures. The disclosures may be split across multiple documents, not necessarily included in the main report and accounts.
- 4. Compile relevant information from the climaterelated disclosures in a focused and methodical way. Establish what information contained in the disclosures is most relevant for each of your objectives. Be alert to the fact that disclosures from different organisations can vary significantly in structure and content, and so the location of information you are seeking may not be consistent across organisations.
- 5. Analyse and draw conclusions from the information you have collected. Form an overall view of the organisation based on the disclosure, and separately consider the following in relation to each of your objectives:
 - a. What the disclosures say
 - b. How reliable you believe that information to be
 - c. How well does the information you have been provided compare with other similar organisations?
 In particular, do they cover the same material issues? Do they have the same gaps?

- d. Do NGOs or other stakeholders provide additional and credible information supporting or challenging the organisation's disclosure?
- 6. Be alert to the general limitations of disclosures as set out in section 3.3. In particular, you will need to be aware of the underlying assumptions made by the disclosing organisation, even if they are not explicitly stated. Be prepared to challenge the information provided.
- 7. Remember that disclosures are just one part of the wider suite of information available about the organisation. To gain a fuller picture you could consider cross-referencing conclusions against other information sources such as the annual Report and Accounts, past climate-related disclosures the organisation has made, and other sustainability disclosures as well as investor presentations, press coverage and marketing material. Information about other similar organisations might also be relevant.

Section 4 contains a selection of questions that may help you interpret disclosures.

Stage 3. Establish additional requirements

Having analysed the disclosures, you can work out what's missing.

- 8. Determine any gaps where either information to meet your objectives is not available or where the information provided is not sufficiently robust for your purposes.
- 9. Decide whether to seek additional information from the disclosing organisation in order to fill in the gaps you have identified. Section 5 provides examples of questions you may wish to raise.
- **10. Identify what information that would be useful to you is being withheld** on the grounds of commercial sensitivity or for other reasons. Use influence through direct contact, public policy positions or campaigns to encourage disclosure.

Stage 4. Ongoing evaluation

You should be prepared to change your conclusions when necessary. The whole process of climate-related disclosures is still new, so it is expected that the quality of disclosures will improve over time. Organisations' approaches to climate risk are also likely to change, partly as a result of the disclosure process.

- 11. Monitor sources of additional information. Activity prompted by the TCFD recommendations is expanding rapidly, and there may also be sudden significant shifts in policy responses. You should monitor key areas that have informed your conclusions. Alongside organisation-specific disclosures, further resources that you might find helpful to monitor are described in section 6.
- 12. Reassess past conclusions if your objectives change or new information becomes available, for example responses to questions raised with the organisation.
- 13. Be aware that climate-related disclosures reflect the situation at a specific point in time and the climate risks the organisation is facing and its approach to address these may be evolving rapidly. For example, views on disclosure may evolve in response to better understanding of climate risk or expectations of good corporate practice. Ongoing evaluation will ensure that your conclusions remain robust.



3.2 Understanding your objectives

There is a wide range of possible users of disclosures, each with different interests and seeking different information. For example, if you are within a disclosing organisation you may be interested in information that will support your business decisions, or in comparing your organisation with competitors. You might be an external stakeholder interested in the financial viability of the organisation, how well it fits culturally with your aims, whether it is complying with regulations, or taking advantage of climate-related opportunities or you may be interested in the organisation's effect on the environment. You may be well informed about climate change and the related risks but know little about financial analysis; conversely you might be a financial expert with only rudimentary environmental knowledge.

It's important to think carefully about your objectives and the limits of your expertise so that you can work out whether the disclosures you are looking at are providing information that is useful to you, or whether the surface message is potentially misleading.

When thinking about your objectives, you need to be clear about two things: what type of climate-related impacts you are concerned about, and your time horizon.

3.2.1 Climate-related impact types

The first major issue is to clarify what type of climaterelated impacts interest you. There are different taxonomies, and not all are consistent with each other. Good disclosures should be clear about the meaning they attach to such terms as 'climate risk', as different organisations may attach different meanings to the same term.

Climate change poses risks to the organisation, and the organisation's activities may pose risks to the environment. Although the latter is not the focus of the TCFD recommendations, it will be the main interest of some users and disclosures will provide useful information about it. Good disclosures will be very clear about the differences (and connections) between these types of risk.

Another distinction that is made is between physical and transition risk, as described in section 2.4.1. Sometimes liability risk and reputation risk are also distinguished from physical and transition risk. These are all risks posed by climate change to the organisation.

Sometimes organisations do not explicitly identify climate risk in their taxonomies of risks they are exposed to but include it within categories such as operational risk.

Finally, some organisations consider only the negative impacts of climate change – they focus on the risks rather than on opportunities. Good disclosures will cover both risks and opportunities and will identify potential positive side-effects of managing the risks.

3.2.2 Time horizon

Depending on your objectives, your time horizon may be as short as a few years or may stretch far into the future. You will need to analyse the disclosures in the light of your time horizon. Disclosures providing only short-term information on expected impacts will be of limited use if you are concerned with the situation over the next 30 or more years. However, if an organisation is to achieve long-term goals, it will need to have short term objectives that move it in the right direction and it should be held to account for them. Conversely, although some risks may not be expected to crystallise for many years, the impact on the economic value of the organisation could be felt more immediately. If the time horizon underlying the disclosures differs significantly from yours, you may not be able to make robust decisions without further investigation.

3.3 What the disclosures can and can't do

The disclosures may give insight into issues such as:

- How seriously the organisation is taking climaterelated risk and opportunities
- Whether the organisation has an overall strategic objective linked to decarbonisation, such as net-zero
- The material risks the organisation faces
- Opportunities opening up for the organisation
- The organisation's business model and culture and how they are changing
- The organisation's progress in reducing emissions
- The impacts of the organisation on the environment
- Potential climate-related liabilities that may arise
- What actions the organisation is taking to manage the risks
- How quickly the organisation's business model is changing

However, not all disclosures will be equally helpful, especially as the quality of disclosures evolves over time. And as with all financial disclosures, lack of consistency may make direct comparisons between organisations difficult.



You should also be alert to greenwashing: organisations sometimes convey a false impression that they or their products are environmentally sound by being selective in the information that they disclose. They may accentuate the positives, while remaining silent on their weaknesses. In general, the disclosures can only tell you directly about the areas that they cover: it is often the omissions that are significant. You should therefore try to work out what is covered and what is not and ask yourself whether the absence of information is most likely to represent immaturity in disclosure or risk management, or a conscious hiding of material facts.

Some of the recommended approaches to preparing disclosures require access to scarce data and skills, and the use of complex and potentially poorly understood techniques – this is especially true of both scenario analysis and the quantification of Scope 3 GHG emissions. This means that in some cases the information in disclosures may be difficult to interpret without full access to the assumptions and methodologies that have been used and may be overly sensitive to key assumptions.

It's also important to realise that climate disclosures are just one component in the full suite of information that may be available on a given organisation, rather than standing in isolation. The other information might include annual reports and accounts, regulatory filings, press coverage, marketing materials, and so on. Especially in the early years of the climate disclosure process, some disclosures may cover only a subset of the information that you might be looking for. Finally, any disclosures relate to a particular point in time, and may be to some extent outdated even by the time they are published. Market conditions can change rapidly and unexpectedly due to changing customer or stakeholder sentiment; risks can also materialise suddenly and unexpectedly.

In summary, you should be clear on how the information that is available relates to your own objectives. It's always useful to cross-reference disclosures with other information and take a holistic view rather than relying on any one source. And you should also be prepared to challenge and request additional information from the organisation if necessary.



4. Practical guidance and questions to help you interpret the disclosures

This section contains a selection of questions to help you interpret disclosures. In some cases, additional guidance is provided in italics.

4.1 Decision-usefulness

An important part of your analysis is to assess how useful the disclosures will be in meeting your objectives, as your objectives may not align with those of the disclosing organisation. These questions should help you work out whether the disclosures are decision-useful in the context of your objectives.

Q 1. Do the disclosures clearly distinguish between the financial risks to the organisation from the effects of climate change, and the risks to the environment from the organisation's operations?

When terms such as 'climate risk' are used in the disclosure, is it clear which type of risk they refer to?

Q 2. Do the time horizons considered include those relevant for you?

Organisations should include both a view over long-term time horizons in order to demonstrate understanding of the issue and also a shorter-term assessment to provide specific actions that will enable them to achieve their long-term objectives.

Q 3. Do the disclosures explicitly address risks and opportunities that are specific to the sector that the organisation operates in, and distinguish them from risks and opportunities that arise from factors that are unique to the organisation?

> How does this organisation's strategic risks section of the annual report compare to peers in the same sector? Is this organisation identifying opportunities that have been overlooked by others?

4.2 How seriously is the organisation taking climate change?

Organisations are responding to the increased focus on climate-related issues at different levels of urgency. When interpreting the disclosures, the following questions aim to help you form an overall view of the organisation, and how reliable you believe that information to be.

Q 4. Does the organisation have a strategic objective around decarbonisation, such as net-zero?

A long-term strategic objective should be accompanied by realistic, credible and costed medium term targets and short term actions. These may include items such as incorporating carbon considerations in investment decisions, including decarbonisation targets in executive remuneration and ensuring that lobbying activity supports the objectives of the Paris Agreement

Q 5. Is there evidence of greenwashing in this, or other, disclosures?

This might include cherry-picking achievements as a simple list rather than a demonstration of progress against key objectives. The same achievements may have been reported several times over extended time periods. Q 6. Are there measurable commitments for which the organisation will be held to account?

What might be the consequences of them not achieving their commitments? Does the organisation have a track record (as detailed in disclosures or other publicly available information) of meeting its prior commitments to climate actions?

Credible TCFD disclosures need not present lengthy details of achievement. However, it would be expected that they reference the organisation's track record either as an indicator that the organisation is transitioning effectively, or possibly as background to help underpin a new urgency.

- Q 7. If the organisation has a simple 'scorecard' or 'dashboard' to measure its overall performance, are climate impacts and the organisation's responses to them included?
- Q 8. To what extent is the organisation's board discussing and taking responsibility for the organisation's climate actions?
- Q 9. Is there evidence that climate risk is being managed across functions within the organisation, and integrated into existing risk management processes? Are the disclosures incorporated into mainstream reporting processes?

It is important that climate risks are treated as a business issue, rather than a specialist concern to be covered only within sustainability or corporate responsibility reporting. Detailed information on sustainability impacts may require further dedicated and separate disclosure. Some organisations treat TCFD as primarily a compliance exercise, while other see climate-related reporting as an opportunity to display how they are thinking strategically about protecting and enhancing value in a rapidly changing world. Q 10. Are the climate-related financial disclosures consistent with other disclosures made by the organisation? Are the disclosures generally consistent with the rest of the report (if any) in which they are contained?

For example, is the information consistent with the information in the organisation's annual report and accounts? Or with any recent press coverage or investor presentations?

Q 11. Is there evidence of building the skills and capabilities with respect to climate change issues, to ensure relevant climate-related information can readily be used in everyday business activities?

> This should consider the needs of the wider (nonspecialist) workforce as well as those resources that might be dedicated to climate/sustainability risk.

Q 12. Is the organisation engaged with external parties? Is it proactively working to support wider initiatives and to influence others? If so, what types of initiatives does it support?

Very few organisations will be able to address their long-term climate risks by themselves. Many will need to collaborate within the sector, within geographies or across their extended value chain. Leadership or participation in such approaches can be a useful indicator of preparedness and commitment. Q 13. Is there alignment with the stated values of the organisation and its public policy positions and practice?

Are the areas of climate risk, and the approaches to them, that are disclosed under TCFD consistent with the organisation's stated high level corporate aims? For example, the organisation may align itself with sectoral decarbonisation initiatives which infer public policy developments such as support for development of specific abatement technologies. Does the organisation take part in climate lobbying, or belong to industry bodies that do so?

Q 14. Do the disclosures show the connection between the organisation's approach to climate change and its overall strategy? How well integrated is that approach?

> Do the overall strategic ambitions for the organisation explicitly acknowledge the relevance of climate change and/or TCFD?

Q 15. Do the disclosures cover all the TCFD recommended areas? Does the report highlight areas of further development and include clear commitments to report on all TCFD recommended areas?

> As a new area of reporting, it is expected that organisations may take several iterations to develop their TCFD reporting and capabilities. The disclosures should clearly signpost an organisation's future plans to enable comparability and understanding of the areas that require further development. Disclosures that fail to identify any gaps and weaknesses may be an indication of potential greenwashing.

Q 16. Overall, do the disclosures give the impression that the organisation is taking climate change seriously? Is it being given sufficient attention at board and executive management level?

4.3 Assessing the robustness of the organisation's claims

Comparing the risks and opportunities identified in the disclosures across similar markets will help form a view of how the broader market is likely to respond, and help you form insights on the realism of the organisation's assessment of their competitive advantage and the robustness of their claims. Some questions you may want to use to aid you in this goal are:

- Q 17. What degree of internal or external assurance is there around the completeness and accuracy of the disclosures?
- Q 18. Is there a clear description of the process involved in assessing the risks?

There is likely to be considerable subjective judgement involved, particularly in the transition risk assessment.

Q 19. Is there adequate consideration of both downside risk and opportunity in the disclosure? Are both risks and opportunities addressed in a balanced way?

> Alignment of business models with climate concerns will necessarily involve an examination of the future opportunities for the organisation's products and services. This might involve modification to existing products or new market opportunities associated with the transition.

¹⁴ For example, see Corporate Climate Policy Footprint 2019 the 50 Most Influential 🖔

Q 20. How much of the business model is covered in the disclosure? Does it cover all the organisation's activities, including subsidiaries and joint ventures? Does anything significant appear to be missing from the scope of the report?

> There may be very different levels of risk, opportunity and resilience across an organisation's different lines of business and geographies. Policy and regulations can differ widely between countries, for example. Also, it is possible the most material risk exposures may be faced in a small (and otherwise insignificant) part of the overall organisation. For financial institutions such as banks and insurers, are the risks to both assets and liabilities considered? For asset-owners, are aspects of the disclosures limited to certain asset classes?

- Q 21. Is there adequate consideration of forwardlooking disclosures, such as capital expenditure and investment?
- Q 22. Is the organisation's full value chain addressed in the disclosure?

While impacts associated directly with the business form a starting point, it is likely that many organisations will find significant risks and opportunities both in their supply chain and in the products and services used by their customers.

Q 23. How complete are the disclosures of GHG emissions?

Scope 1, 2 and 3 emissions are described in section 2.4.3. Indirect scope 3 emissions are likely to be harder to quantify but may nonetheless be very important (in some business contexts dwarfing the direct and operational emissions of scopes 1 and 2). It is important that disclosures are clear about what emissions are included and any obvious restrictions: for example, emissions such as fugitive methane being estimated with limited accuracy. Q 24. Do the disclosures indicate a credible and holistic transition approach? Do they assume specific technological solutions such as NETs (negative emission technologies) or CCS (carbon capture and storage)?

> Technological solutions are at varying stages of development, and many of them are untested, not yet available, or have not proven to be economically viable.

Q 25. Is the climate resilience of the organisation's strategy discussed?

The risks from climate change will present different challenges to organisations' strategies. Transition risk may require additional investment and development of the business model. Physical risk may require significant adaptation efforts or even make current business models unsupportable. It is important that the organisation can demonstrate that it has understood and considered the strategic consequences of these very different scenarios.

Q 26. Does the organisation disclose information that makes it possible to assess progress against targets? Is there evidence that progress is being made?

> Evidence of progress against reduction targets (particularly those that are updated annually or science based¹⁵) is an important indicator of progress.

¹⁵ Science based targets. ^(h) The science-based target initiative certifies targets consistent with a 2 degree pathway, reflecting the language of the Paris agreement.

Q 27. How does the information provided in the disclosures compare to other publicly available information on the organisation or its peers? How do the current disclosures compare with those from previous years?

Well-established standards for greenhouse gas and sustainability measurement and reporting include the ISO 14000 and ISO14064-5 series of standards¹⁶, the Greenhouse Gas Protocol¹⁷ and the Sustainability Accounting Standards Board (SASB) suite¹⁸.

Q 28. How does the organisation's approach compare to that of competitors? Does their approach align with any strategic advantage they are claiming?

> An organisation's disclosures are likely to put a positive slant on their activities and goals. Comparisons across organisations operating in similar markets can help form a view of how the broader market is likely to respond and insights on the achievability of the organisation's assessment of their advantage.

4.4 Risk modelling and scenario analysis

Risk modelling and scenario analysis should help you understand potential business implications of climaterelated risks and opportunities. Scenario analysis is potentially complex and what constitutes good practice is still emerging in this area. It is accordingly important to understand the key assumptions used and limitations of the exercise¹⁹. The following questions should help you assess the risk modelling and scenario analysis undertaken.

Q 29. Are the respective roles of qualitative and quantitative scenario analysis explained in the disclosure?

Organisations may start with qualitative explorations of issues of concern such as that described in the CDP guide to scenario analysis²⁰. Potentially significant concerns may then be translated into estimates of financial impact on the organisation.

Development of quantitative methods is at an earlier stage of development. An IFoA working party of pensions actuaries²¹ found limited material on the potential impact of climate change on pension scheme funding and the macroeconomic variables used in actuarial valuations. While there are no established methodologies yet and tools available will vary by sector, many companies are testing the financial impact of established energy models such as the IEA Sustainable Development Scenario²².

¹⁶ ISO 14000 Family – Environmental management 👸

¹⁷ Greenhouse Gas Protocol 🔭

¹⁸ SASB standards overview

¹⁹ Useful publications include Issues Paper on Climate Change Risks to the Insurance Sector 🎨

and A Practical Guide to Climate Change for Life Actuaries 🖑

²⁰ CDP Technical note on scenario analysis: Conducting and disclosing scenario analysis. Version 2 2019 🖔

²¹Resource and Environment Issues for Pensions Actuaries: Considerations for Setting Financial Assumptions, Resource and

Environment Issues for Pensions Actuaries Working Party IFoA , 15 October 2018

Q 30. Has stress testing or sensitivity analysis been undertaken on reported disclosures?

This might involve, for example, exploring the impact of a range of carbon prices and the timing of anticipated policy measures. In the financial services sector, does the stress testing align with that currently required as part of the regulatory framework?

Q 31. Is consideration given to the unavoidable uncertainty around data quality and models?

There is limited data available in many areas, and what there is may be of poor quality. Even within the context of established scope 1 and 2 GHG reporting there are quality issues. It is estimated that approximately 80% of disclosed emissions (scope 1 and 2) needed to be estimated or re-worked before being used to calculate the carbon footprint of investment portfolios because of data problems²³.

Q 32. Are any scenarios or stress tests that are reported consistent with those you consider most relevant? Are the assumptions behind a scenario consistent? How do they relate to the wider market or scientific consensus? Do the disclosures adequately reference and use the latest internationally-accepted science in relation to the chosen scenarios?

> An approach that is increasingly adopted is to use a 3 degree (or more) warming scenario for assessing physical risk and a 1.5 degree (or Paris-consistent below 2 degree) scenario for transition risk.

4.5 Incorporating wider considerations

Although greenhouse gas emissions are an important component of impact assessment, it is important to recognise that there are other climate-related sustainability issues such as water availability, human rights, biodiversity, and the benefits provided to humans by the natural environment and healthy ecosystems (ecosystem services)²⁴. These may be important for manufacturing processes or supply chains. The Just Transition is becoming a commonly used term to encompass the need to consider the impacts of the low carbon transition on all workers and communities, such as the loss of jobs in fossil fuel dependent industries or the implications for less developed economies associated with these issues²⁵.

- Q 33. Do the disclosures explicitly consider climaterelated issues beyond greenhouse gas emissions?
- Q 34. Is scenario analysis being used to consider sustainability risks beyond climate change?
- Q 35. How does the range of climate-related sustainability risks considered compare to those you consider relevant?
- Q 36. Does the organisation employ (and report on) internal carbon pricing or similar approaches?

Utilising an internal carbon pricing approach can provide a stress test on future scenarios.

23 EU Technical Expert Group on Sustainable Finance, Taxonomy Technical Report June 2019 🖔

²⁴ A global assessment report on biodiversity and ecosystem services from the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) indicates that goals for conserving and sustainably using nature cannot be met by current trajectories. ²⁵ See for example financing a just transition and climate change and the just transition a guide for investor action ⁸

5. Following up with the disclosing organisation

Once you have reviewed an organisation's disclosures, you may wish to direct some specific questions to the organisation on matters that have not been covered to your satisfaction. The following questions may prove useful. Again, the text in italics, if present, expands on their relevance. Those marked with (A) are relevant primarily for organisations that are asset owners, investment managers, or investment consultants.

5.1 Governance

- Q 1. What climate change expertise is there on your board (or accessible to it through advisory panels or other arrangements)?
- Q 2. Have you reviewed your membership of trade associations to ensure you are not funding organisations whose position is less progressive on climate issues than your own?
- Q 3. What are your quality assurance and compliance approaches for climate-related financial information?

The same level of assurance should be provided for climate-related financial information as for finance, management and governance disclosures.

- Q 4. Does your remuneration policy include any metrics related to climate change?
- Q 5. (A for asset owners) Does your reporting to members, beneficiaries or savers include climate-related issues?
- Q 6. (A for investment consultants) How do your investment manager recommendations take account of their climate risk management and voting record on climate-related resolutions?

5.2 Strategy

- Q 7. What is your organisation's strategy around decarbonisation? Have you set a long-term objective around net-zero, with accompanying short and medium term goals?
- Q 8. What do you believe are the most important climate-related risks and opportunities to your organisation over the time horizon I'm interested in?
- Q 9. What engagement do you have with policymakers, regulators, professional bodies and wider collaborations on climate-related issues?
- Q 10. What are the leading climate initiatives in your sector? How are you engaged with them and what has your experience been? When you state you are a leader in your sector, how do you evidence that? What is your contribution to the sector?

(A) Initiatives include Climate Action 100+²⁶, the Institutional Investors Group on Climate Change (IIGCC)²⁷ and the UN's Principles for Responsible Investment (PRI)²⁸.

- Q 11. Do you believe your organisation has any strategic advantages related to low carbon economy opportunities and carbon risk management? Please elaborate.
- Q 12. What plans do you have for developing your disclosures and for the further integration of climate risks into your business model?

26 Climate Action 100+ 🖔

²⁷ IIGCC Paris Aligned Investment Initiative

²⁸ Principles for Responsible Investment

5.3 Risk management

Q 13. Explain how you have treated liability risk in your disclosures.

For example, organisations might be exposed to litigation risk through a failure to disclose climate risks properly, or failure to mitigate impacts and ensure resilience.

Q 14. How do you address climate risks in your supply chain?

Supply chain risk assessment will require an understanding beyond GHG emissions including location-dependent aspects (such as political and water risk).

- Q 15. How well integrated is climate risk management into your business risk management? What time horizons do you consider? (A) In what ways do you consider climate risks and opportunities in your investment process, and to what extent does this affect investment decisions?
- Q 16. How have you chosen the scenarios that you use? Has IPR²⁹ (the Inevitable Policy Response, which seeks to forecast potential future policy changes) influenced your decision-making? (A) To what extent, and for how long, have you been using climate scenario analysis in your investment process?
- Q 17. (A for asset owners and asset managers) What is your voting record on climate-related resolutions?
- Q 18. (A for asset owners) What oversight do you exercise over your asset managers' approach to climate risk management?

- Q 19. (A for defined benefit pension funds) Have you discussed climate risks with the Scheme Actuary?
- Q 20. (A for asset owners and asset managers) How do you engage with investee companies on climate change?
- Q 21. (A) When valuing your (or your clients') portfolios, how do you address stranded asset risk?
- Q 22. (A) How are you addressing climate risks to index-tracking investment funds?
- Q 23. (A for asset owners and asset managers) How do you take account of climate considerations when selecting and monitoring third party providers?

5.4 Metrics and targets

- Q 24. What role do science-based reduction targets play in your organisation's strategy? How realistic are those targets?
- Q 25. What is your view on the current level of carbon pricing? Have you analysed how a higher carbon price might affect your organisation either directly or through your supply chain?
- Q 26. Is reported climate and emissions data independently audited or assured?
- Q 27. (A) What metrics do you use to monitor and manage climate risks at a portfolio level? What targets have you set to improve these metrics over time?

²⁹ What is the Inevitable Policy Response?

6. Further resources

There is a wealth of resources available on climaterelated financial disclosures. Many of the reports, guides and other resources seek to support the preparers of disclosures. Our goal in this guide is to help broader users find further information in their area of interest.

The TCFD Knowledge Hub³⁰ is a good place to start. This online resource is powered by the Climate Disclosure Standards Board (CDSB) which is part of CDP Worldwide. As might be expected, a significant proportion of the items posted on the Hub are aimed at preparers of TCFD-oriented reports. Some of the items are directed at a specific industry, while others are more general. Resources cover a wide range of issues such as capex, investment mandates, carbon pricing and scenarios. They are typically flagged with one or more of the four TCFD thematic areas: G (Governance), S (Strategy), R (Risk management), M (Metrics and Targets). The site can be searched by Resource type (e.g. Legislation/Regulation), by country and by industry.

The March 2020 TCFD overview booklet³¹ provides a good summary of the initiative including progress to date.

Section E of the TCFD's latest Status Report³², published in June 2019, gives a number of examples of climaterelated financial disclosures that individual users view as having decision-useful information aligned with one or more of the Task Force's recommendations. Section F is devoted to initiatives supporting TCFD-oriented reports. It categorises them into:

- Implementation initiatives
- Alignment of reporting frameworks
- Government and regulatory efforts
- Initiatives related to scenario analysis.

Other sections of the report give a helpful overview of the multiple areas of activity prompted by the TCFD recommendations. This activity is expanding rapidly.

Recent publications that are particularly relevant include the Financial Reporting Council (FRC) report 'Climaterelated corporate reporting: Where to next?'³³, as well as the TCFD Implementation Guide³⁴ and the TCFD Good Practice Handbook³⁵, which were both produced by CDSB and the Sustainability Accounting Standards Board (SASB). These publications highlight examples of current good practice disclosure and the FRC report also provides a set of questions designed to help companies make their reporting more effective. The Institute of Chartered Accountants in England and Wales (ICAEW) guide to reporting on climate risks and opportunities aims to produce practical guidance in the style of FAQs³⁶.

In addition the Climate Financial Risk Forum has published guidance to help the financial industry address climate-related financial risks, including a specific chapter on disclosure³⁷.

³¹ Task Force on Climate-related Financial Disclosures 🖔

³⁰ TCFD Knowledge Hub 🝈

³² TCFD: 2019 Status Report (June 2019) 👸

³³ Climate-related corporate reporting: Where to next?

³⁴ TCFD Implementation Guide 🖔

³⁵ TCFD Good Practice Handbook 👸

³⁶ Reporting on climate risks and opportunities ³⁶/₁

³⁷ Climate Financial Risk Forum

The United Nations Environment Programme Finance Initiative (UNEP FI) has been convening 'TCFD Pilot Projects' involving some of the banks, investors and insurers in its membership³⁸. These projects aim to pioneer practical approaches to implementing the framework, and some of them have produced reports describing their experiences.

The primary audience for the February 2020 Issues Paper on the Implementation of the Recommendations of the Task Force on Climate-related Financial Disclosures³⁹ from the International Association of Insurance Supervisors (IAIS) is obviously the regulatory community, nonetheless it provides useful indicators on the way the initiative may develop, including highlighting the need to work inside and outside the financial sector and the importance of transparency as a precondition for pricing risk.

Many organisations are producing guides to implementing the TCFD recommendations. For a more general view, the Committee of Sponsoring Organizations of the Treadway Commission (COSO) guidance on applying enterprise risk management to environmental, social and governance risks may be useful⁴⁰. Finally, there are some publications that discuss specific elements of disclosures. The CICERO Center for International Climate Research has produced "Climate Scenarios demystified: a climate scenario guide for investors"⁴¹ which is useful for anybody wanting to understand more about climate scenarios, whether they are investors or not. An executive briefing⁴² from the Carbon Pricing Leadership Coalition argues that internal carbon pricing is a critical tool for managing climaterelated risks and opportunities, while the Carbon Pricing Unlocked Partnership suggests that carbon pricing can be used to link climate-related risks and opportunities to financing decisions for investors and banks⁴³.

38 TCFD Pilot Projects 🖔

43 Internal carbon pricing for low-carbon finance 🖔

³⁹Draft sif iais issues paper on tcfd recommendations 🖱

[🍄] Enterprise Risk Management: Applying enterprise risk management to environmental, social and governance-related risks 🖄

⁴¹Climate scenarios demystified. A climate scenario guide for investors 👸

⁴² Carbon Pricing and the Task Force on Climate-related Financial Disclosures (TCFD)

7. Glossary

ссс	The UK's Committee on Climate Change
CDP	Formerly the Carbon Disclosure Project, CDP now runs a global disclosure system for organisations regarding their environmental impacts
CDSB	Climate Disclosure Standards Board
CICERO	Centre for International Climate Research
COSO	Committee of Sponsoring Organizations of the Treadway Commission
ERM	Enterprise Risk Management
ESG	Environmental, Social and Governance
FRC	Financial Reporting Council
FSB	Financial Stability Board
GHG	Greenhouse gas
IAIS	International Association of Insurance Supervisors
ICAEW	Institute of Chartered Accountants in England and Wales
IEA	International Energy Agency
IEMA	Institute of Environmental Management & Assessment
IFoA	Institute and Faculty of Actuaries
IIGCC	The Institutional Investors Group on Climate Change
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IPCC	Intergovernmental Panel on Climate Change
IPR	Inevitable Policy Response. See section 5.3
ISO	International Organization for Standardization
Physical risk	Risk arising from the physical impacts of climate change. See section 2.4.1
PRI	The UN's Principles for Responsible Investment
SASB	Sustainability Accounting Standards Board
Scopes 1 2 and 3	Different sources of emissions. See section 2.4.3
SIF	Sustainable Insurance Forum
TCFD	Task force on climate-related financial disclosures
Transition risk	Risk arising from the transition to a low carbon economy. See section 2.4.1
UNEP FI	United Nations Environment Programme Finance Initiative





Institute and Faculty of Actuaries



IEMA

+44 (0)1522 540069 | info@iema.net | iema.net IEMA, City Office Park, Tritton Road, Lincoln, LN6 7AS. UK



7th Floor, Holborn Gate, 326-330 High Holborn, London, WC1V 7PP +44 (0) 20 7632 2100 | policy@actuaries.org.uk | actuaries.org.uk

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