



*Transition Risk Analysis Support
Toolkit – Element 1*

Climate risk due diligence guide for asset owners

DNA Economics

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1. Introduction

This guide is part of the *Transition Risk Analysis Support Toolkit* developed as part of the South Africa-UK PACT supported project: *Aligning South Africa's climate-related financial disclosure with global best practice*. For an overview of the toolkit and a description of its other components please see *Introduction to the Transition Risk Analysis Support Toolkit* available from www.dnaeconomics.com/pages/sa_climate_disclosure/. This document, and other project outputs, are also available at this address.

The purpose of this guide is to explain the process required to implement the recommendations of the Taskforce on Climate-related Financial Disclosure (TCFD) by asset owners. It supplements a wide range of resources, reports and recorded webinars related to the TCFD from the link provided above. This guide is intended to provide a quick and easy entry point into the issue of climate-related financial risk and opportunity analysis and disclosure for asset owners. It succinctly summarises why asset owners should care about climate change (Section 2), how this links to fiduciary duty and evolving mandatory reporting requirements (Section 3), the value the TCFD creates for asset managers (Section 4) and guidance on implementing the recommendations of the TCFD.

The guide concludes with 11 questions provided as a practical tool to allow asset owners with limited knowledge of climate issues to effectively determine the level of climate competency of asset managers. It is intended as an easy and low effort way to conduct climate due diligence on asset managers while asset owners become more familiar with and start to implement the recommendations of the TCFD.

HOW TO USE THIS GUIDE

Readers with a limited understanding of the TCFD and the impact of climate risks on investments would benefit in reading this document in its entirety.

Readers with a good understanding of the TCFD, or those with limited time, can go directly to the due diligence questions in Section 6. The questions can be used without reading the rest of the document, but the preceding sections will help to engage in a richer discussion with asset managers.

2. Why should asset owners care about climate change?

During the last decade climate change has gone from being predominately a medium to long term concern to being an everyday reality. The *Sixth Assessment Report* by the Intergovernmental Panel on Climate Change (IPCC) released in 2021 showed unequivocally that the **physical impacts of climate change are materialising much sooner and much more intensely than expected** (IPCC 2021). Climate change is already affecting weather and climate systems across in every region around the world. With extreme weather events such as heatwaves, drought and floods increasing in frequency and intensity. The physical impacts of climate change result in damage to property, infrastructure, livelihoods, health outcomes, agricultural productivity and a loss of lives. This is caused by short-term extreme weather events and longer-term changes in weather and climate patterns. **This is increasingly impacting the values of physical and financial assets.**

Stranded assets provide returns that are much lower than were expected when they were acquired due to policy and other measures taken to reduce greenhouse gas (GHG) emissions. Often the value of these assets will fall to zero long before the end of their economic lives.

Furthermore, the IPCC *1.5 Degree Report* published in 2018 proved that the **window for avoiding catastrophic climate change is closing much faster than anticipated**. If the impacts of climate change are to remain predictable and manageable, net carbon dioxide (CO₂) emissions from human activities must be zero by 2050 (IPCC, 2018). The realisation that the already challenging move to a low carbon global economy will have to happen over a shorter than anticipated timescale means that both voluntary and mandatory actions by governments, companies, investors and consumers to reduce carbon emissions will have to become much more stringent

The transition to a low carbon economy could reduce the value of the largest companies listed on the JSE by between 5% and 8% by 2050 in net present value terms (Vivid Economics 2021). The impact on companies in some sectors could be much larger - with **companies in four sectors potentially losing a quarter or more of their value if business models are not amended**. This analysis did not consider the physical impacts of climate change, which will be significant in South Africa.

than they currently are ...and in the very near future (PRI 2019). **Carbon-intensive companies and assets will become increasingly unprofitable as the world transitions to a low carbon economy** (Vivid Economics 2021b).

If financial institutions do not account for these risks in their decision making and planning, they are at risk of reduced returns and stranded assets. Accordingly, it is important for asset owners, such as retirement funds, to ensure that their investments prioritises reducing climate-related risks and maximising (Carbon Tracker Initiative

2017) opportunities. Given their long-term investment horizons, failure to consider these risks in investment planning and deployment will expose their beneficiaries' capital to unnecessary risks.

Capital markets are not fully pricing climate risks and opportunities. Pricing transition risk is difficult as the future of climate policy is uncertain, there is currently limited international coordination, and local conditions will create incentives for divergent responses. The impact of physical risk events also varies significantly based on the type of disaster and the adaptive capacity of the country or region where the risk occurs. In addition to limited disclosure by companies, climate risks also have features that make them difficult to model with standard financial models (e.g. the presence of externalities, skewed tail risks, time horizons that stretch behind investment horizons, etc) (The Economist 2020; Thomä and Chenet 2017). Furthermore, current market pricing of assets says little about an investor's risk tolerance or the implications of different climate scenarios on portfolios (PCRIG 2021a). Currently, neither transition nor physical risk is reflected in asset prices (IMF 2020; KPMG 2021; Norges Bank Investment Management 2020).

3. Asset owner responsibilities and climate change

There is increasing recognition that directors and trustees have a fiduciary duty to consider the impacts of climate change on companies and funds (DNA Economics 2021). Indeed, pension fund trustees in South Africa are required by law to consider climate-related issues in their investment decision-making process. Regulation 28 of the *Pension Funds Act* (NT 2011) requires that South African retirement funds consider ESG factors when making investment decisions. To effectively consider climate-related issues, asset owners require information from asset managers, consultants and/or investee companies – highlighting the need for climate-related financial disclosures.

While climate disclosure is largely voluntary at present, this is rapidly changing and it is **increasingly becoming mandatory in jurisdictions around the world** (Sporn 2021; Whistler and Longhini 2021). The G7 countries (Canada, France, Germany, Italy, Japan, the UK and the USA) have agreed to mandatory climate-related financial disclosure (Caswell 2021) and in the UK asset owners will be required to report from 2022. New Zealand, France and the UK already has mandatory climate-related financial reporting in place, Hong Kong and Switzerland are moving towards it, and the Australian Securities and Investments Commission requires disclose climate-related risk in prospectuses and operating and financial reviews where material (CDSB 2020; Hong Kong Monetary Authority 2021; Hughes 2021; Neghaiwi 2021; Thomas 2021). Several emerging markets are also considering mandatory reporting, including Mexico, Chile, Brazil and China, and South Africa regulators are showing growing interest in mandatory (Bloomberg News 2021; DNA Economics 2021; Sporn 2021; Whistler and Longhini 2021). In October 2021 the Central Bank of Kenya (2021) issues guidance that require local banks to put in place climate risk management and TCFD-aligned disclosure processes by June 2022.

For more information on drivers of climate disclosure and the need to consider climate issues when making investment decisions, see DNA Economics (2021).

4. Does the TCFD add value?

In 2015, the Financial Stability Board (FSB) – an international body that monitors and makes recommendations about the global financial system – established the Task Force on Climate-Related Financial Disclosures (TCFD) to make recommendations for consistent climate-related disclosures. The objective of the task force is to help financial market participants better understand their climate risks through better information. To achieve this goal the TCFD published a set of recommendations in 2017 which outlines how companies should voluntarily disclose consistent and meaningful information to lenders, insurers, investors, and other stakeholders (TCFD 2017b, 2017a). These recommendations are structured around four interlinking thematic areas that represent core elements of how companies operate: governance, strategy, risk management and metrics and targets. By disclosing climate-related information in line with the recommendations, **organisations and their investors will be in a better position to understand how resilient their business, financial and risk management strategies are to different climate and climate policy outcomes.**¹

The TCFD framework offers a number of benefits to asset owners (PRI 2018):

- Translates material climate-related financial risks and opportunities into **financial metrics** that can influence asset valuation, selection and monitoring.
- Strengthens **risk management processes** and supports effective **identification of climate-related opportunities.**
- Offers **flexibility** and is **easy to implement.** The TCFD is premised on an incremental approach where disclosures are improved and refined over time. **Barriers to initial disclosure are low** and basic initial disclosure followed by increasingly sophisticated and detailed disclosures are expected. The TCFD is well-aligned with and well-covered by existing reporting frameworks like the GRI, CDP and PRI (CDP 2021; Corporate Reporting Dialogue 2019; TCFD 2021).
- Provides **forward-looking approach** that is well-suited to dealing with the complex, non-linear and uncertain nature of both climate change and the policy response to contain it.

¹ For more information on the recommendations of the TCFD, please see (DNA Economics 2021; Vivid Economics 2021a). Several useful reports, guides and training to support the implementation of the TCFD recommendations can be accessed at <https://www.fsb-tcfd.org/publications/> and http://www.dnaeconomics.com/pages/sa_climate_disclosure/

- Creates trust in financial markets and allows trustees, directors and asset managers to **demonstrate that climate change have been prudently considered** – thereby reducing the risk of legal liability if adverse climate (or climate policy) events negatively impact asset values.
- **Responds to increasing demand for information on how information** on how climate change will impact retirement savings by beneficiaries, stakeholders and regulators.

For more information on the value of TCFD to South African asset owners, see (DNA Economics 2021; Six Capitals Advisory and WWF-SA 2021b, 2021a).

The TCFD framework serves different purposes for entities that disclose information and those that use the disclosures from third parties for decision-making or monitoring.

- **Disclosers** (entities that disclose in line with TCFD): Information is used to **identify, quantify, monitor, and manage climate risks and opportunities**.
- **Users** of TCFD disclosures by others: Indication that a **discloser is effectively (or not!) identifying, quantifying, monitoring, and managing climate risks and opportunities**.

5. Implementing the TCFD recommendations

Ideally, asset owners should fully embrace the TCFD recommendations to effectively identify, quantify, monitor, and manage climate risks and opportunities. Depending on the base level of climate change understanding within an organisation, it may make take time for asset owners to fully understand the recommendations of the TCFD and how they pertain to them. Some of the technical detail of the recommendations may be unfamiliar to organisations that have not disclosed TCFD-aligned information previously (IEMA & IFoA 2020). Concepts like the difference between physical and transition risk, different GHG emissions scopes, the use of scenario analysis, and the identification, assessment and quantification of climate risks and opportunities may be challenging.² Consequently, **in practice, however, asset owners often start as users of disclosures and, as their knowledge, skills and experience increase, become disclosers over time.**

² There are several resources available at http://www.dnaeconomics.com/pages/sa_climate_disclosure/ to assist asset owners to understand the key concepts and activities involved in climate-related financial disclosures, including a foundation-level webinar series.

A framework for how to fully engage with the recommendations of the TCFD is outlined in **Table 1** overleaf and potential actions that asset owners can take to implement the recommendations is shown in **Figure 1** below.

Figure 1: Actions asset owners can take to implement the TCFD recommendations

TCFD Recommendations		Potential Actions for Asset Owners		
GOVERNANCE	Board oversight: (a) Disclose the Board's oversight of climate-related risks and opportunities	Clarify oversight responsibilities	Articulate risks	Review Board-approved policies
	Role of management: (b) Describe management's role in assessing and managing climate-related risks and opportunities	Define management responsibilities	Define processes	Disclose process and progress
STRATEGY	Identify risks and opportunities: (a) Describe the climate-related risks and opportunities over the short, medium and long-term	Identify risks	Identify opportunities	Define processes
	Impact on investment strategy: (b) Describe the impact of climate-related risks and opportunities on investment strategy	Asset allocation frameworks	Performance review processes	Due diligence processes
	Resilience of investment strategy: (c) Describe the resilience of the investment strategy, taking into consideration different climate related scenarios, including a 2 ° C or lower scenario	Evaluate climate-related scenarios	Undertake scenario analysis	Describe response
RISK MANAGEMENT	Assess risks: (a) Describe the processes for identifying and assessing climate-related risks	Identify data sources	Undertake engagement	Utilise data
	Manage risks: (b) Describe the processes for managing climate-related risks	Assess materiality	Prioritise risks	Mitigate risks
	Integrate risks: (c) Describe how climate-related risks are integrated into risk management processes	Governance of risks	Measure risks	Monitor risks
METRICS / TARGETS	a) Use of metrics: Disclose the metrics used to assess climate-related risks and opportunities in line with the investment strategy and risk management process.	Disclose metrics	↑ Review process ↓	↑ Link to strategy and risk management ↓
	b) Measurement of GHG emissions: Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	Disclose GHG emissions		
	c) Set targets: Describe the targets used to manage climate related risks and opportunities and performance against targets	Disclose targets		

Source:(PRI 2018)

Table 1: Framework for fully engaging with TCFD recommendations

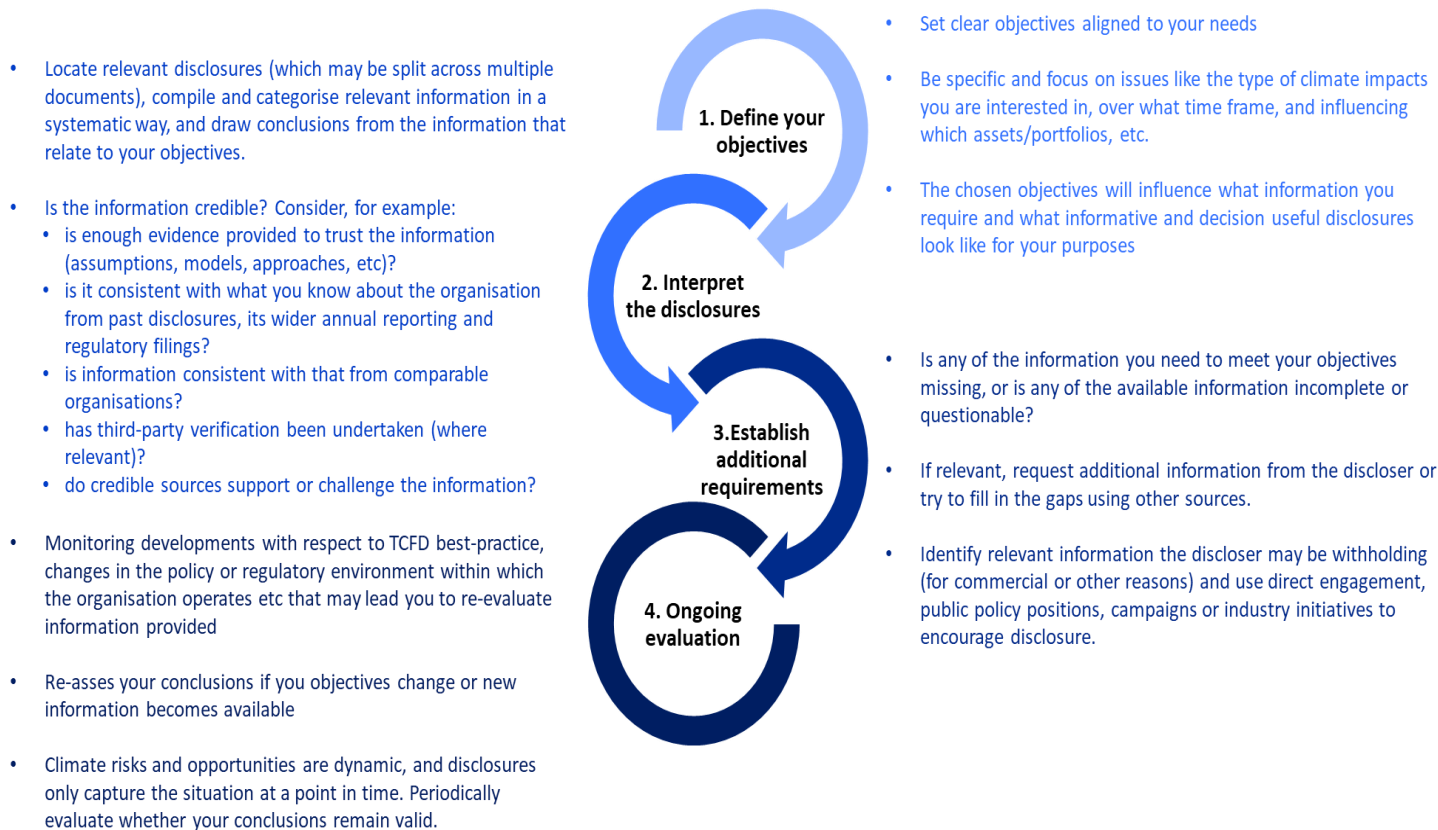
Internal Processes		External engagement	
<i>Formalise and document climate change in investment approach and governance structures</i>	<i>Integrate climate-related issues into strategy and risk management processes. Identify, assess and manage key climate-related risks and opportunities.</i>	<i>Require asset managers, consultants, third-party advisors and service providers to demonstrate climate competence</i>	<i>Engage with investee companies and stakeholders</i>
1. Investment policy statement Investment beliefs set the direction of investment policy and inform investment decisions. Asset owners should define how climate change fits into their investment beliefs and how this will influence investment management. This should form the basis for integrated climate change into the mandates for the management of different asset classes.	3. Strategy Asset owners need to understand how climate change could impact their assets and portfolios. Key steps are to identify key impacts they are exposed to under different climate and policy scenarios, and to assess the resilience of their portfolios to different climate outcomes in the short, medium and long term. Use scenario analysis to inform climate risks and opportunity analysis	6. Engagement with service providers Engage with asset managers, consultants, third-party advisors and service providers to understand their views on and approaches to climate risk and opportunity management. These engagements should be used to assess whether service providers have the requisite skills and experience, and to learn about climate-related risk analysis and management best practice.	8. Engagement with investee companies Engage with investee companies and other reporting entities (directly and/or via service providers) to reduce information asymmetry and improve quality of available climate-related information. Signal the importance of climate factors in the investment approach and emphasise the importance of access to decision-useful climate disclosures. Engage with investee companies that create significant climate risks within portfolios to understand and try to reduce these risks
2. Governance Ensure there is effective trustee oversight and internal management processes in place to effectively manage climate-related risks and opportunities. Trustees and management should have adequate knowledge, resources and support to identify, assess and manage climate-related issues. Link remuneration to climate risks and opportunity management processes and targets over the short, medium and long term.	4. Risk management Integrate climate risks into risk management process to allow them to be identified, assessed, prioritised and managed alongside other material risks. 5. Metrics and Targets Define and track metrics to assess climate-related risks and opportunities and ensure these are integrated into investment, strategy and risk management processes. Metrics should go beyond considering GHG emissions and reflect exposure and resilience to risks. Science-based targets should be included. Define targets for metrics that will reduce climate-related risks over time and increase opportunities.	7. Asset manager screening Asset owners should undertake due diligence to ensure their selected asset managers have the capabilities, policies, approaches and processes to rigorously consider climate-related risks and opportunities. The due diligence should go beyond asset managers' climate policies and consider how these are executed. Build climate considerations into asset manager selection and review processes.	9. Disclosure Publicly disclose climate-related actions and outcomes in annual reports and via relevant reporting frameworks. Report metrics that signal competence and can be used to measure progress. Improve disclosure over time to reflect growing understanding of climate-related risks and opportunities, impact on investment performance, and maturity of processes to deal with these factors. Share experience of implementing TCFD framework with other asset owners and industry bodies.

Source: (A4S 2018, 2021; Latham 2020; PCRIG 2021b, 2021c, 2021a; PRI 2018; Sackers 2021)

Preparing decision-useful TCFD-aligned disclosures often involve access to detailed data, strong quantitative skills and the use of new, complex and evolving methodologies. This means that properly interpreting TCFD-related disclosures is not a trivial task and requires skills to be developed or in-sourced. Even if these skills are available, disclosures may be difficult to interpret without engaging with disclosers to understand the key methodologies, assumptions and sensitivities involved in generating the disclosures (IEMA & IFoA 2020).

The wealth of information included in good TCFD-related disclosures means that they can be overwhelming to the uninitiated. **To get the most out of TCFD-related disclosures it is important that a structured approach is used.** A simple four-step approach, however, will enable this as illustrated in **Figure 2**.

Figure 2: Framework for effectively analysing TCFD disclosures



Source: Adapted from (IEMA & IFoA 2020)

The flexibility of the TCFD framework, and the fact that TCFD disclosure is conceptualised as a journey of iterative improvement, means that it is difficult to define what best-practice in responding to the TCFD recommendations are – and this is particularly true with respect to initial disclosures³. **When evaluation TCFD disclosures, it is useful to focus on four key questions:**

1. **Do disclosures signal intent?** Is an organisation taking climate related issues seriously, and does it seem committed to fully implement the TCFD framework now or in future? Is there sufficient board and senior management support for implementing the recommendations and are sufficient resources being devoted to this.
2. **Is there progress over time?** Unless disclosures are very detailed and address every aspect of the recommendations fully (and meets the requirements for question 4 listed below), it is important that the quality of disclosures improve over time. Disclosures should be easily comparable to earlier disclosures (with any deviations, changes or gaps clearly explained) and should provide more and better information. The disclosures should create a time series of indicators that can be used to analyse trends over time, and preferably also include benchmarks and other comparator data that make it easier to interpret the disclosures.
3. **Is competency in understanding and managing climate-related risks and opportunities clearly signalled?** The TCFD framework is closer to a strategic management framework than a pure disclosure standard in that it is intended to support the creation of expertise, and systems within organisations to identify, assess and management climate-related risks and opportunity. Confidence in the structures, processes and decisions that underly disclosure is thus arguably more important than the disclosed information itself. Information asymmetries will continue to exist no matter how good disclosure, and it is thus crucial that organisations signal to investors that they are on top, or at least busy getting on top, of climate issues.
4. **Is the information provided useful?** The TCFD was created to ensure that climate-related risks and opportunities are accurately priced to enable enlightened decision-making and reduce systemic risk in financial markets. The defining characteristic of TCFD-related disclosures is thus that the information should enable companies, investors, regulators and other stakeholders to make better decisions. If this is not the case, or the path towards this

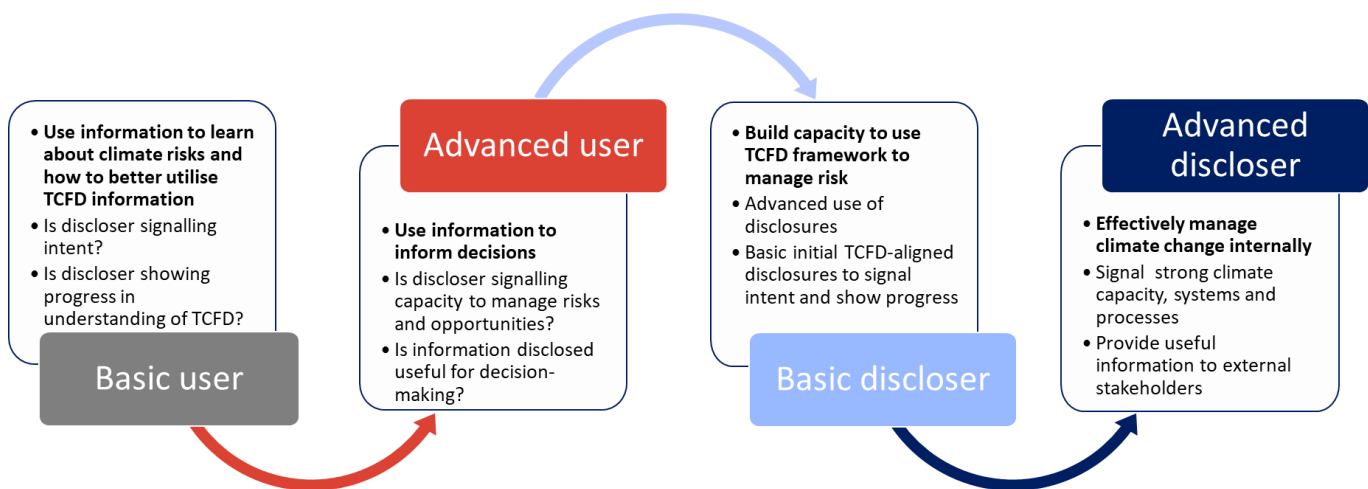
³ See Toolkit element number 2 *Financial Sector Good Practice TCFD-aligned Disclosure Examples* for examples of good disclosure.

is not spelled out very clearly, asset owners should seriously consider whether a company or asset should be within their portfolio.

The **skills that are required to effectively interrogate TCFD disclosures are also the basic skills required to implement the recommendations of the TCFD and generate quality disclosures.**

There is thus a natural progression from user of TCFD-aligned disclosures to a generator of these disclosures. The evolution of from basic user of TCFD-aligned disclosures to fully utilising the TCFD recommendations to manage climate risks and opportunities is shown below.

Figure 3: TCFD journey from user to generator of TCFD-aligned disclosures



Source: DNA Economics

There are several useful guides and other resources that can assist asset owners to embark on this journey (in addition to the resources referenced in this document, please see DNA Economics (2022) for details). As mentioned previously, asset managers and other services providers are also a useful source of support along this journey. Furthermore, asset managers and asset consultants will play an important role in implementing the guidance provided by asset owners on how to manage climate-related risks and opportunities. In fact, **selecting asset managers and consultants that are well-versed in dealing climate issues will be one of decisions that will go furthest towards ensuring that the portfolios of asset owners are resilient to climate change.** And this decision is particularly important while asset owners are building the internal capacity and putting in place the support needed to effectively consider climate-related risks and opportunities. For this reason, much of the guidance available to assist asset owners to implement the recommendations of the TCFD include questions to ask asset managers and/or consultants (see, for example, (ICSWG 2021; IEMA & IFoA 2020; PCRIG 2021b; PRI 2018; The Pensions Regulator 2021)). The next section of this guide provides a short list of key questions to use when engaging with asset managers to ascertain their climate competence.

6. Asset manager due diligence questions

Table 2 provides **key questions to ask asset managers about their policies and process for considering climate-related risks and opportunities**. The questions are provided as a practical tool to support asset manager selection and review while asset owners are familiarising themselves with the TCFD framework. Based on the guidance in Section 5, it is recommended that the questions should be replaced by an asset owner-specific due diligence process based on the needs and objectives of the organisation as soon as possible. But in the meantime, the questions below provide a mechanism for asset owners (or their services providers) to interrogate the climate competency of their asset managers with minimal effort.

Importantly, the questions are intended to start a discussion with asset managers. Guidance that can be used to interpret answers to these questions are also provided below. As mentioned above, the TCFD recommendations create a flexible framework and asset managers may focus on different aspects of the recommendations as progress on their disclosure journey. Consequently, information that can be used to understand where an asset manager is in terms of implementing the TCFD recommendations and its key components is provided rather than a set of ‘right’ answers.

- **Positive indicators:** Information points toward an institution providing **good disclosure in an area**. An indication of best practice information requirements is also provided. For some questions ‘good’ disclosure equates to best practice, while for other questions it is highlighted as a good that can be attained during future disclosures.
- **Neutral indicators:** Meeting this criteria signals that an organisation is on track to develop good disclosures in future. Disclosures can be considered **‘good enough’ at present**, but disclosures need to improve going forward.
- **Negative indicators:** Information indicates that organisation **may be lagging its peers** with respect to climate-related financial disclosure. Asset owners (or their service providers) should discuss these questions with a senior representative of the asset manager to understand the situation better as this may indicate that the asset manager does not have the required competency to consider climate issues.

Table 2: Eleven Questions to understand the climate competencies of asset managers

Theme	Question	Positive indicators	Neutral indicators	Negative indicators
Support for TCFD 	1. Do you issue TCFD-aligned disclosures ? If not, do you plan to do so and when?	Information on more than 2 TCFD themes are included in disclosures and is relatively easy to access. TCFD is explicitly mentioned, even if information is still incomplete Best Practice: Standalone TCFD report covering all 4 themes	Information is not highlight according to TCFD theme in disclosures, but there is information on at least two themes and organisation has indicated it plans to issue TCFD-aligned disclosures in future	No mention of TCFD. Information is hard to find, interpret and/or match to TCFD themes
Governance 	2. Does your board provide oversight over climate-related issues? If so, how often does this happen?	Statement that board provides oversight over climate-related issues. Best Practice: Statement of oversight, frequency, responsible committee(s), how the board is informed about climate-related issues	Statement that the board is cognisant of climate-related issues and monitoring them.	No mention of board role.
	3. Does senior management have an explicit responsibility to monitor climate-related issues? If so, who is ultimately responsible for this?	Best practice: Roles and responsibilities of executive management in climate governance are provided.	Executive management has a role in climate governance, but no details are provided.	No mention of role of executive management
Strategy 	4. Is there a company-wide strategy in place to identify the risks and opportunities related to climate change? If so, please briefly explain it.	A strategy for dealing with climate-related risks and opportunities is described in detail, or mention is made of how climate change has been incorporated/has changed existing strategy. Best practice: Detailed climate strategy exists and it is prominently disclosed (e.g. in Stewardship Report/Risk report/ESG Policy etc). Details of how risks and opportunities are identified and how materiality is determined are provided	A strategy exists, or mention that climate change is adequately addressed by existing strategy, but little detail is proved.	No mention of a coherent climate strategy or how climate change is considered within the existing strategy

Theme	Question	Positive indicators	Neutral indicators	Negative indicators
Strategy 	5. What are your main climate-related risks and opportunities as an organisation over the short, medium and long term ?	Climate risks and opportunities are context-specific (geography, asset class, investment strategy, industry, etc) and displays insights into company strategy and circumstances. Best practice: Detailed company and portfolio risks and opportunities are disclosed and categorised as short-, medium- and long-term.	Climate risks and opportunities are mentioned, but in relatively generic industry terms.	Generic mention of climate risks and opportunities are made but this is not investment or investment manager-specific
	6. Do you use scenario analysis to consider climate-related risks and opportunities? If so, please briefly explain how?	Scenario analysis is planned with target date. Scenario analysis is being undertaken, even if only in very specific areas. Best practice: Climate scenarios covering multiple variables are being used to identify, assess and quantify risks and opportunities across all portfolios	Scenario analysis is being considered. Or clear rationale is provided for why it is not considered appropriate	No engagement with scenario analysis
Risk management 	7. Do you have a process for monitoring climate-related risks ? If so, please briefly describe the process.	Best Practice: Climate change is fully integrated into existing risk management processes and detail is provided on how risks are identified, ranked, treated and monitored, and how materiality is assessed.	Risks are integrated into standard risk management processes, but little detail is provided.	No process is mentioned, or process for monitoring risks is not described in sufficient detail to be useful.
	8. Has a process been established to assess and integrate climate-related risks into investment decisions ? If so, please briefly describe the process.	Detail is provided on how climate change is integrated into the investment process. Examples of processes, tool and resources are provided. Best practice: Climate-related risks and opportunities are fully integrated into process. Processes, tools, resources and responsibilities are outlined.	Mention that climate change is integrated into the investment process, but limited detail is provided (e.g. generic comment around ESG integration).	No mention of how climate risks and opportunities are integrated into the investment process

Theme	Question	Positive indicators	Neutral indicators	Negative indicators
Metrics and targets 	9. What climate-related metrics , if any, does your organisation use? Please include both asset-level and portfolio level metrics.	Metrics for both company and portfolio are used. Emissions and/or intensity values are disclosed. The more metrics provided the better. Best-practice: Several metrics are tracked reported over time. Benchmark metrics are provided for comparison. Weighted-average carbon intensity by unit of revenue (WACI) is recommended by TCFD, but climate-value-at-risk (CVaR) is gold standard.	Metrics like emissions, emissions intensity, stranded assets exposure etc are mentioned, but no detail is provided.	No mention of climate-related metrics.
	10. Are you able to provide portfolio-specific risk metrics by client ? If so, which metrics and at what interval?	As per neutral but committed to increasing number of metrics and ability to customise to client needs. Best-practice: Various detailed client portfolio-specific metrics can be shared at intervals that meet the monitoring and disclosure needs of clients.	On or two basic metrics (e.g. total emissions and emissions intensities). Metrics are available and can be shared, but only at long intervals and with limited customisation based on the needs of the client.	Limited metrics can be shared, and not on a client-specific basis.
	11. Do you any climate-related targets in place? If so, what are they, over what timeframe will they be achieved and now will they be monitored?	Targets with dates are in place, but no indication of how they will be achieved yet. Relative targets are a start, but absolute and net zero targets are better. Best Practice: Net Zero by 2050 targets with intermediate 2030 target and detailed roadmap of how this will be achieved.	Company targets are in place and portfolio targets are being considered. Targets exist but they do not link to metrics currently being reported and/or do not have clear time frames.	No targets in place and no plans to set any targets currently.

7. References

- A4S. 2018. *TCFD Recommendations Maturity Map*. London. <https://www.accountingforsustainability.org/content/dam/a4s/corporate/home/Knowledge Hub/Guide-pdf/TCFD Recommendations Maturity Map 2018.pdf.downloadasset.pdf>.
- . 2021. *ESG Maturity Map: Example Behaviours for Pension Fund Trustees*. London. <https://www.accountingforsustainability.org/content/dam/a4s/corporate/home/Knowledge Hub/Guide-pdf/The A4S ESG Maturity Map - Example behaviours for pension trustees.pdf.downloadasset.pdf>.
- Bloomberg News. 2021. “China to Make Climate Information Disclosure Mandatory.” *Bloomberg Green*. <https://www.bloomberg.com/news/articles/2021-06-04/china-to-make-climate-information-disclosure-mandatory-yi-says>.
- Carbon Tracker Initiative. 2017. “Stranded Assets.” *carbontracker.org*.
- Caswell, Graham. 2021. “G7 Nations Agree on Mandatory Climate-Related Disclosure.” *Green Central Banking website*. <https://greencentralbanking.com/2021/06/08/g7-nations-mandatory-climate-related-disclosure/>.
- CDP. 2021. *CDP Technical Note on the TCFD*. London.
- CDSB. 2020. “New Zealand Becomes First to Implement Mandatory TCFD Reporting.” *Climate Disclosure Standards Board website*. <https://www.cdsb.net/mandatory-reporting/1094/new-zealand-becomes-first-implement-mandatory-tcf-reporting>.
- Central Bank of Kenya. 2021. *Guidance on Climate-Related Risk Management*. Nairobi. <https://www.centralbank.go.ke/wp-content/uploads/2021/10/Guidance-on-Climate-Related-Risk-Management.pdf>.
- Corporate Reporting Dialogue. 2019. *Driving Alignment in Climate-Related Reporting - Year One of the Better Alignment Project*. London. https://www.integratedreporting.org/wp-content/uploads/2019/09/CRD_BAP_Report_2019.pdf.
- DNA Economics. 2021. *The State of Climate-Related Financial Disclosure in South Africa*. Pretoria. http://www.dnaeconomics.com/pages/sa_climate_disclosure/.
- . 2022. *Resources to Support Climate-Related Financial Disclosures*. Pretoria. http://www.dnaeconomics.com/pages/sa_climate_disclosure/.
- Hong Kong Monetary Authority. 2021. “Cross-Agency Steering Group Announces next Steps to Advance Hong Kong’s Green and Sustainable Finance Strategy.” *Hong Kong Monetary Authority*

Press Release. <https://www.hkma.gov.hk/eng/news-and-media/press-releases/2021/07/20210715-4/>.

Hughes, S. 2021. "Corporate Governance Update: Climate Change Risk and Disclosure." *Speech by ASIC Commissioner Sean Hughes at the Governance Institute of Australia Fellows Roundtable, Thursday 14 October 2021*. <https://asic.gov.au/about-asic/news-centre/speeches/corporate-governance-update-climate-change-risk-and-disclosure/>.

ICSWG. 2021. *Guide for Assessing Climate Competency of Investment Consultants*. London. https://e7a18d87-3bd6-4eca-8fcf-85395be1f363.filesusr.com/ugd/361411_ea1c7c3d05214d4abefdf9a19be57530.pdf.

IEMA & IFoA. 2020. *A User Guide to Climate-Related Financial Disclosures*. Lincoln. <https://www.iema.net/knowledge/policy-horizon/corporate-sustainability/climate-related-financial-disclosures>.

IMF. 2020. "Climate Change: Physical Risk and Equity Prices." In *Global Financial Stability Report 2020 - Markets in the Time of COVID-19*, Washington DC: International Monetary Fund, 120.

IPCC. 2021. "Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change." In *Cambridge University Press*, eds. V. Masson-Delmotte et al. Cambridge University Press., 3949. https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Full_Report.pdf.

KPMG. 2021. *Can Capital Markets Save the Planet?* <https://assets.kpmg/content/dam/kpmg/xx/pdf/2021/10/can-capital-markets-save-the-planet.pdf>.

Latham, Amanda. 2020. "Getting Ahead on Governance: Pension Scheme Climate Disclosures." *Barnett Waddingham*.

Neghaiwi, Brenna Hughes. 2021. "Swiss Join France, Others in Laying out Climate Disclosure Timeline." *Reuters Sustainable Business*. <https://www.reuters.com/business/sustainable-business/swiss-join-france-others-laying-out-climate-disclosure-timeline-2021-08-18/>.

Norges Bank Investment Management. 2020. *Responsible Investment Government Pension Fund Global 2019*. Oslo. https://www.nbim.no/contentassets/aaa1c4c4557e4619bd8345db022e981e/spu_responsible-investments-2019_web.pdf.

NT. 2011. "Pension Funds Act, 1956: Amendment of Regulation 28 of the Regulations Made Under Section 36." *Government Gazette* 3(34070). https://www.gov.za/sites/default/files/gcis_document/201409/34070rg9485gon183.pdf.

PCRIG. 2021a. *Aligning Your Pension Scheme with the TCFD Recommendations: Part I - Introduction*. London.

- . 2021b. *Aligning Your Pension Scheme with the TCFD Recommendations: Part II - Quick Start Guide*. London.
- . 2021c. *Aligning Your Pension Scheme with the TCFD Recommendations*.
- PRI. 2018. *Implementing the Task Force on Climate-Related Financial Disclosure (TCFD) Recommendations*. London.
- . 2019. *The Inevitable Policy Response*. London.
- Sackers. 2021. *ESG and Climate Change for Pension Funds: A Guide to Trustee Disclosures from 2021*. London.
- Six Capitals Advisory and WWF-SA. 2021a. "Climate Risk and Reporting: How Do SA Companies Measure Up?" *Atleha-Edu Special Is*(Climate-related financial disclosure: Aligning South Africa to global best practice).
- . 2021b. *The Emerging Importance of the TCFD Framework for South African Companies and Investors*. Cape Town. https://www.wwf.org.za/our_research/publications/?33962/TCFD-framework-importance.
- Sporn, K. 2021. *Towards Mandatory TCFD*. London. <https://www.allenoverly.com/en-gb/global/news-and-insights/publications/towards-mandatory-tcfd>.
- TCFD. 2017a. *Implementing the Recommendations of the Task Force on Climate-Related Financial Disclosures*. Basel. <https://assets.bbhub.io/company/sites/60/2020/10/FINAL-TCFD-Annex-Amended-121517.pdf>.
- . 2017b. *Recommendations of the Task Force on Climate-Related Financial Disclosures*.
- . 2021. *Task Force on Climate-Related Financial Disclosures 2021 Status Report*. Basel.
- The Economist. 2020. "Why Are Investors Not Pricing in Climate-Change Risk?" *Economist.com - Graphic Detail*. <https://www.economist.com/graphic-detail/2020/06/02/why-are-investors-not-pricing-in-climate-change-risk>.
- The Pensions Regulator. 2021. "Governance and Reporting of Climate-Related Risks and Opportunities." *Funding and Investment - Detailed Guidance*. <https://www.thepensionsregulator.gov.uk/en/document-library/scheme-management-detailed-guidance/funding-and-investment-detailed-guidance/climate-related-governance-and-reporting>.
- Thomä, Jakob, and Hugues Chenet. 2017. "Transition Risks and Market Failure: A Theoretical Discourse on Why Financial Models and Economic Agents May Misprice Risk Related to the Transition to a Low-Carbon Economy." *Journal of Sustainable Finance & Investment* 7(1): 82–98. <https://doi.org/10.1080/20430795.2016.1204847>.
- Thomas, Leigh. 2021. "France Strives for Global Green Leadership with Climate Disclosure Rules."

Reuters Sustainable Business. <https://www.reuters.com/business/sustainable-business/france-strives-global-green-leadership-with-climate-disclosure-rules-2021-06-22/>.

Vivid Economics. 2021a. *Climate-Related Disclosures for Financial Institutions*. London. <http://www.dnaeconomics.com/pages/SAclimatedisclosure>.

———. 2021b. *Scenario Analysis in TCFD Reporting - Disclosure Example*. London. http://www.dnaeconomics.com/pages/sa_climate_disclosure/.

Whistler, Simon, and Marco Longhini. 2021. *TCFD for Real Asset Investors*. London. <https://www.unpri.org/infrastructure-and-other-real-assets/tcf-for-real-assets-investors/7495.article>.



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