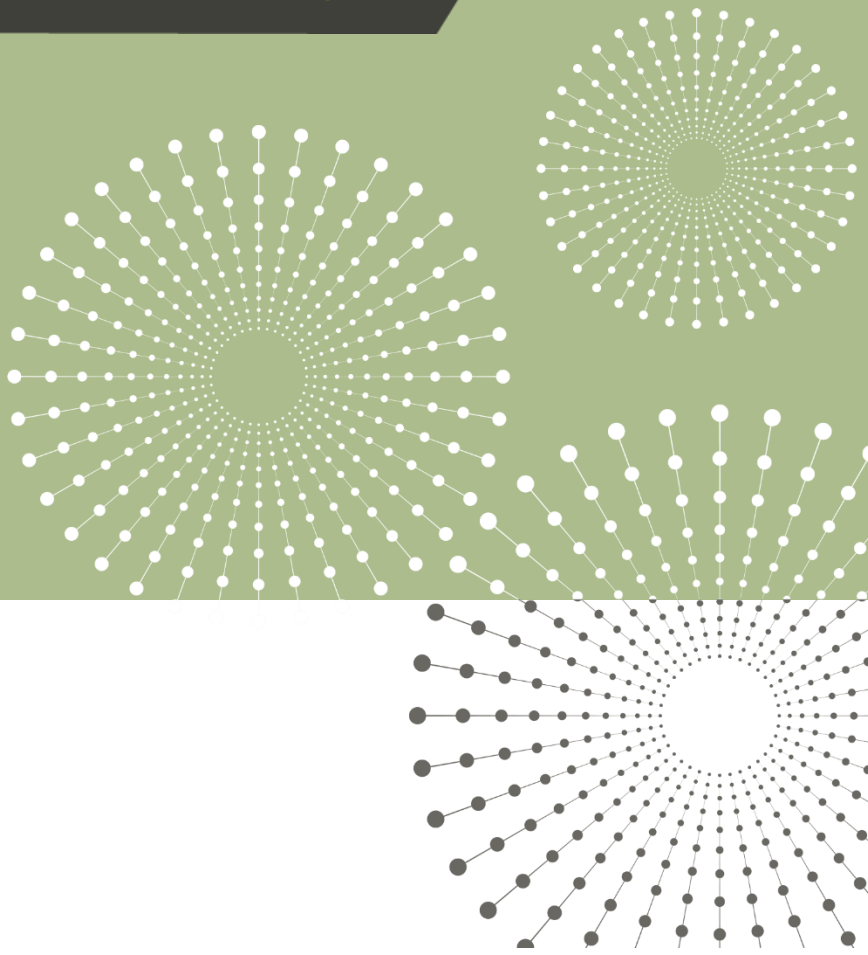
XRB | Te Kāwai Ārahi Pūrongo Mōwaho
EXTERNAL REPORTING BOARD

Climate-related disclosure

NZ CS 1: Guidance for MIS Managers



XRB staff guidance

July 2022

[WORKING DRAFT]

Contents

Introduction

Disclosing under NZ CS 1 as an MIS Manager

This sector-specific guidance is provided for Registered Managed Investment Scheme (MIS) Managers disclosing under New Zealand Climate Standard 1 (NZ CS 1). It addresses all of the disclosures under NZ CS 1, and MIS Managers therefore need not need refer to the XRB Staff 'Guidance for all sectors.'

For MIS Managers, the process of disclosure will be somewhat different than it is for other entities disclosing under NZ CS 1. While others must disclose the impacts of climate change on themselves as an entity, MIS Managers may instead disclose in respect of the Registered Investment Scheme(s) under their management which meet the legislation's definition of 'Large'. The guidance to follow has been drafted with this key difference in mind.

However, approaching the process of climate-related risk and opportunity analysis and disclosure from this narrower perspective may prove challenging. Globally, asset managers (the parallel to what are referred to here as MIS Managers) have tended to approach disclosure in a more holistic manner. This has involved referring to their own corporate governance, strategies, risk management and metrics and targets as appropriate, alongside references to the climate-related risks and opportunities of material importance to their investment portfolios. Sources of guidance available globally have been designed with this model in mind, making them difficult for MIS Managers to readily interpret and apply in a New Zealand context. In the context of fair presentation, it is also important to note that primary users may consider information on the MIS Manager as an entity to be material, and thus required to be disclosed.

This guidance focuses on the core disclosure requirements identified in NZ CS 1. However, it is important to note that when compliance with the specific requirements in Aotearoa New Zealand Climate Standards is insufficient to show a fair presentation, additional disclosures must be provided (see NZ CS 3, paragraph 5).

Our approach to this guidance

Although this guidance has been developed explicitly to support those required to prepare disclosures under NZ CS 1, it has been drafted with an eye to explaining the broader 'why and how' of climate-related risk and opportunity management. While disclosure is a vitally important output, the process of constructively engaging with climate-related risks and opportunities is equally important.

Our aim is to make this guidance as practical and accessible as it can be, given the relatively complicated subject matter it covers. The existing Taskforce on Climate-related Financial Disclosure (TCFD) guidance is the primary source material for this draft staff guidance. We focus on what preparers need to consider in applying TCFD guidance, which was developed in support of a voluntary regime, in the context of the mandatory disclosure requirements set out in in NZ CS 1. Guidance materials from other global sources provide additional reference points, and have been cited where they clearly add value without additional complexity.[i]

In drafting this guidance, we are seeking to illustrate how entities can approach the required disclosures in NZ CS 1. But an entity must exercise judgement, and first and foremost make its climate-related disclosures in a way that meets the needs and expectations of its primary users.

Finally, we have drafted this guidance to foster consistency through clarity of understanding, rather than through rules or templates. Climate-related disclosure is a swiftly evolving field and the greater the degree of freedom an entity can have to innovate and improve its analysis—while maintaining comparability and coherence—the better.

As the regime beds in and preparers become more familiar with the tasks at hand, we intend to provide opportunities for ongoing processes of feedback, review, and co-development of this guidance. This will no doubt see the approach taken to its development evolve as the requirements and expectations of primary users and preparers become clearer.

At various points in this guidance, we refer to real-world examples of existing, voluntary disclosure. Such examples were requested as a result of feedback received from numerous preparers. In referring to these examples we are not endorsing or validating the disclosures as 'good' or 'best' practice. They have simply been employed to explain or illustrate topics. Similarly, we have not reviewed or drawn any conclusions on the entity's broader voluntary disclosure, and instead note that these disclosures were made with respect to voluntary TCFD disclosures, not the mandatory requirements in NZ CS 1.

Before reading further an entity should read the disclosure requirements in [draft] **NZ CS 3 General Requirements for Climate-related Disclosures**. In particular, an entity should read the sections on

- Materiality
- Comparative information, consistency of reporting, and restatement of comparatives
- Methodologies, assumptions, and estimation uncertainty

1. Governance

The objective of the governance disclosures is to enable primary users to understand both the role an entity's governance body plays in overseeing climate-related risks and opportunities, and the role management plays in assessing and managing those climate-related risks and opportunities.

For an MIS Manager, governance focuses on the management of the schemes to which the disclosures apply, rather than the entity as a whole.

Figure 1: The positioning of governance in relation to the other TCFD categories (adapted from TCFD 2022, p.18).

Even with this narrower framing, the quality of governance structures and functions are likely to be among the key determinants of whether an investment manager can successfully identify, analyse, and manage the climate related risks and opportunities affecting a given investment scheme. For this reason, the TCFD place the governance disclosures in the outer, all-encompassing ring of the four that illustrate its categories of recommended disclosure (Figure 1).

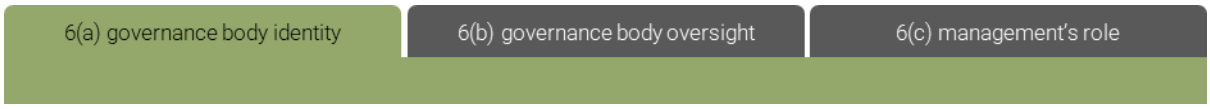
Climate governance is a relatively new field in investment management, but practical examples and 'how to' guidance are already beginning to emerge. In 2020, the Monetary Authority of Singapore (MAS) provided guidance on establishing effective climate governance for asset managers. Similarly, in 2021, the Hong Kong Securities and Futures Commission (HK SFC) published Consultation Conclusions on the Management and Disclosure of Climate-related Risks by Fund Managers, and sample industry practices for fund managers to draw on in developing their own approach to climate-related disclosure.

Publisher	Year	Source	Pages
TCFD	2022	TCFD Knowledge Hub - Governance	
MAS	2020	Guidelines on Environmental Risk Management (Asset Managers)	**p.4-5**
HK SFC	2020	Consultation Paper on the Management and Disclosure of Climate-related Risks by Fund Managers	**p.18-20**

Navigating the Governance disclosures

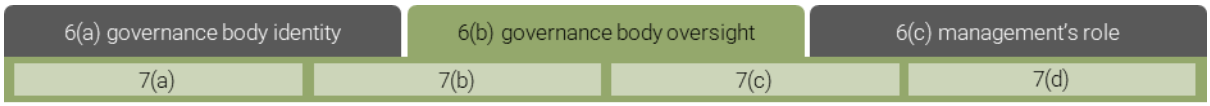
There are three over-arching disclosures in the Governance section of NZ CS 1. Two of the over-arching disclosures, 6(b) and 6(c), contain sub-disclosures. The disclosures are structured as follows:

1.1 Governance body identity (p.7):



Disclosure 6(a): Identity of the governance body responsible for oversight of climate-related risks and opportunities

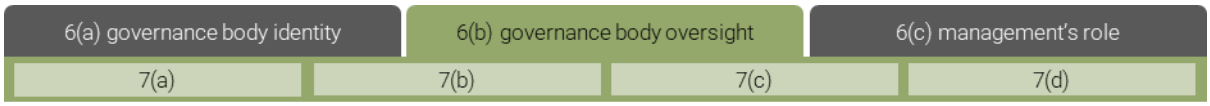
1.2 Governance body oversight (p.8):



Disclosure 6(b): a description of the governance body's oversight of climate-related risks and opportunities (see 7 (a) – (d)):

- **Disclosure 7(a):** the processes and frequency by which the governance body is informed about climate-related risks and opportunities
- **Disclosure 7(b):** how the governance body ensures that the appropriate skills and competencies are available to provide oversight of climate-related risks and opportunities
- **Disclosure 7(c):** how the governance body considers climate-related risks and opportunities when developing and overseeing implementation of the entity's strategy; and
- **Disclosure 7(d):** how the governance body sets, monitors progress against, and oversees achievement of metrics and targets for managing climate-related risks and opportunities, including whether and if so how, related performance metrics are incorporated into remuneration policies (see also paragraph 21(h)).

1.3 Management's role (p.11):



Disclosure 6(c): a description of management's role in assessing and managing climate-related risks and opportunities (see 8 (a) – (c)):

- **Disclosure 8(a):** how climate-related responsibilities are delegated to management-level positions or committees; and the process and frequency by which management-level positions or committees engage with the governance body
- **Disclosure 8(b):** the related organisational structure(s) showing where these management-level positions and committees lie; and
- **Disclosure 8(c):** the processes and frequency by which management is informed about, makes decisions on, and monitors, climate-related risks and opportunities

Guidance specific to each disclosure is provided in the following section.

1.1. Governance body identity: Disclosure 6(a)

6(a) governance body identity | 6(b) governance body oversight | 6(c) management's role

Disclosure 6(a): *Identity of the governance body responsible for oversight of climate-related risks and opportunities*

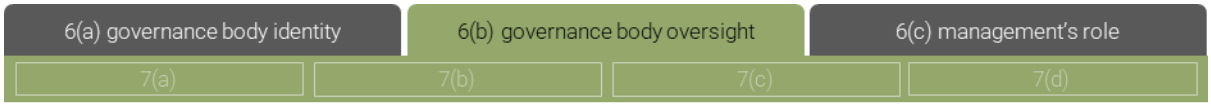
Primary users will want to know where ultimate responsibility for the oversight of climate-related risks and opportunities lies regarding their investment. This information will support capital allocation decision making.

The TCFD recommendations are based on the premise that disclosing entities operate with a Board and an Executive Management team governance structure. The board is assumed to be ultimately responsibility for the oversight of the entity with management carrying out the entity's core functions. Where this description holds true, preparers should refer to their board as the governance body responsible for oversight of climate-related risks and opportunities. However, if an entity does not have a board, and instead has a different governance structure, it should consider identifying the highest level of its governance hierarchy which oversees the climate-related risks and opportunities within the entity.

Where an MIS Manager has their investment strategies and the operational rules of the scheme(s) determined by an Investment Committee, this committee may fulfil the role of a 'governance body or bodies responsible for oversight of climate-related risks and opportunities' for the purposes of these disclosures. However, each MIS Manager will need to determine which body best meets this description under their specific circumstances.

Publisher	Year	Source	Pages
TCFD	2021	Implementing the Recommendations of the TCFD	**p.44**
CFRF	2020	Climate Financial Risk Forum Guide – Risk Management Chapter	**p.5-7**

1.2. Governance body oversight: Disclosure 6(b)



Disclosure 6(b): *A description of the governance body's oversight of climate-related risks and opportunities (see 7(a) – (d))*

Primary users will want to understand the extent to which climate-related risks and opportunities have been incorporated into the mainstream oversight functions of an entity's highest level governance body. This will contextualise the entity's position on climate-related risk for many primary users.

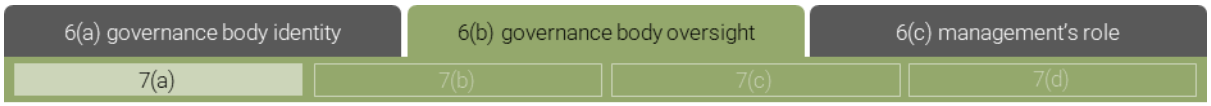
These disclosures must be prepared in respect of the scheme(s) under management which meet the 'Large' criteria set out in the Financial Sector (Climate-related Disclosures and Other Matters) Act 2021, Section 461Q. Preparers must make well-reasoned decisions about the appropriate level of governance body which applies 'in respect of the scheme(s)' in question and communicate these decisions to primary users. Unless specific governance arrangements are in place at fund level, the preparer will likely need to disclose governance at the highest level with respect to the scheme.

Many of the paragraph 7 disclosures may work well as figures or tables. For instance, preparers may choose to provide an org chart to communicate their governance structure and the processes involved in oversight of climate-related risk and opportunity in a clear and accessible manner.

The information provided under disclosures 7(a) – (d) provides the core detail of disclosure 6 (b). Preparers must add any additional information describing the governance body's oversight of climate-related risks and opportunities they believe to be material to a primary user.

Publisher	Year	Source	Pages
TCFD	2021	Implementing the Recommendations of the TCFD	**p.44**

1.4.1 Governance body oversight: Disclosure 7(a)



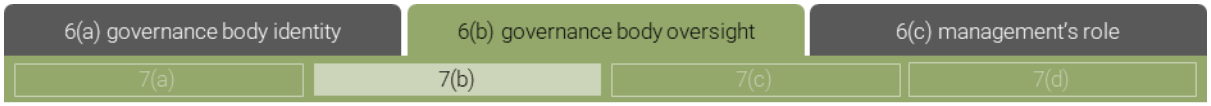
Disclosure 7(a): *the processes and frequency by which the governance body is informed about climate-related risks and opportunities.*

Disclosure 7(a) gives primary users insight into the extent to which the entity's highest level governance body is informed about climate-related risks and opportunities in its core oversight duties.

The TCFD, and other sources such as the Global Reporting Initiative (GRI), provide guidance on how an MIS Manager can describe the processes and frequency by which the highest-level governance body involved in the management of the scheme is informed about climate-related risks and opportunities.

Publisher	Year	Source	Pages
TCFD	2021	Implementing the Recommendations of the TCFD	**p.44**
GRI	2022	GRI 2: General Disclosures 2021 – 3. Governance Disclosure 2-12	**p.23**

1.4.2 Governance body oversight: Disclosure 7(b)



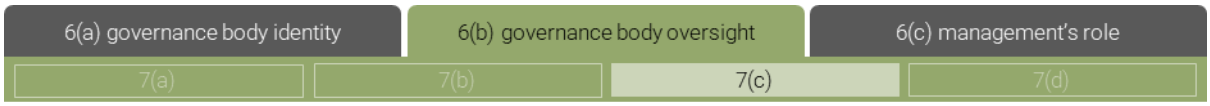
Disclosure 7(b): *how the governance body ensures that the appropriate skills and competencies are available to provide oversight of climate-related risks and opportunities.*

Disclosure 7(b) informs primary users as to the level of subject-specific capability the body has established to ensure climate-related risks and opportunities are managed competently. This may be internal to the entity or enhanced via external support to raise capabilities.

In the early years of the regime, disclosure 7(b) might simply reflect an entity's process of capacity building and the development of competencies that had not previously been focal areas. These capacities and competencies may be developed internally, or via access to external providers as a bridging mechanism but should ultimately aim to become facets of mainstream governance practices.

Publisher	Year	Source	Pages
TCFD	2021	Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures	**p.44**

1.4.3 Governance body oversight: Disclosure 7(c)



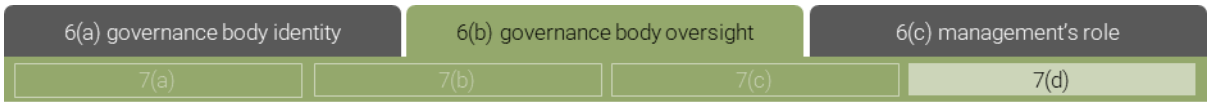
Disclosure 7(c): *how the governance body considers climate-related risks and opportunities when developing and overseeing implementation of the entity's strategy*

Primary users will seek clarity on the governance body's approach to integrating climate-related risks and opportunities into strategy development and implementation. This information helps to illustrate the merits of an entity's claims regarding the weight it attaches to climate-related risks and opportunities in its core strategic processes, and helps to contextualise subsequent Strategy disclosures.

Disclosure 7(c) provides the MIS Manager with an opportunity to demonstrate the coherence of their investment committee's efforts to incorporate climate-related risk and opportunity in the development of their investment strategy, and in bringing the strategy to fruition via the structures and philosophies adopted in the management of the scheme, and the investment decisions arrived at.

Publisher	Year	Source	Pages
TCFD	2021	Implementing the Recommendations of the TCFD	**p.44**
MAS	2020	Guidelines on Environmental Risk Management (Asset Managers)	**p.4-5**
HK SFC	2020	Consultation Paper on the Management and Disclosure of Climate-related Risks by Fund Managers	**p.18-20**

1.4.4 Governance body oversight: Disclosure 7(d)



Disclosure 7(d): *how the governance body sets, monitors progress against, and oversees achievement of metrics and targets for managing climate-related risks and opportunities, including whether and if so how, related performance metrics are incorporated into remuneration policies (see also 21(h)).*

Disclosure 7(d) offers primary users a view of how the governance body makes climate-related risk and opportunity metrics and targets a tangible, meaningful component of management's core responsibilities, linked to management performance evaluation criteria.

An MIS Manager should simply set out how their highest-level governance body goes about selecting climate-related metrics and targets, monitors progress toward them, and oversees their achievement. Managers should make specific reference to any remuneration policy linked to the achievement of these metrics and targets.

Publisher	Year	Source	Pages
TCFD	2021	Implementing the Recommendations of the TCFD	**p.44**
HK SFC	2021	Appendix 2 – Sample industry practices for managing climate-related risks	**p.4, 7, 10-11**
MAS	2020	Guidelines on Environmental Risk Management (Asset Managers)	**p.5**

1.3. Management's role: Disclosure 6(c)

6(a) governance body identity	6(b) governance body oversight	6(c) management's role
8(a)	8(b)	8(c)

Disclosure 6(c): *A description of management's role in assessing and managing climate-related risks and opportunities (see 8(a) – (c))*

Primary users will want to understand how the assessment and management of climate-related risks and opportunities is delegated among the scheme's management team.

An MIS Manager should describe their organisational structure(s) using figures or diagrams where appropriate.

How (and by whom) other risks are managed within the scheme could in many cases serve as an indicator of where management responsibilities might best be assigned in relation to climate risk. The UK Financial Conduct Authority's Climate Financial Risk Forum (CFRF) take the view that the management of climate-related risk should reside with one or two senior roles, such as Chief Risk Officer or Chief Investment Officer, to optimise accountability (CFRF 2020, p.6).

The information provided under disclosures 8(a) – (c) provides the core detail of disclosure 6(c). Preparers must add any additional information describing management's role in assessing and managing climate-related risks and opportunities that they believe to be material to a primary user.

Publisher	Year	Source	Pages
TCFD	2021	Implementing the Recommendations of the TCFD	**p.44**
CFRF	2020	Climate Financial Risk Forum Guide – Risk Management Chapter	**p.5-7**

1.5.1 Management's role: Disclosure 8(a)

6(a) governance body identity	6(b) governance body oversight	6(c) management's role
8(a)	8(b)	8(c)

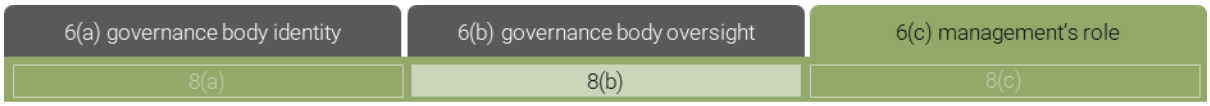
Disclosure 8(a): *how climate-related responsibilities are delegated to management-level positions or committees, and the process and frequency by which management-level positions or committees engages with the governance body;*

Primary users will want information on how management roles are delegated to assess and manage climate-related risks and opportunities within the scheme, and subsequently implement any investment strategy initiatives which aim to enhance the scheme's climate resilience of the entity.

Preparers should focus on the 'who' and 'how' of climate-related risk and opportunity management, documenting the assignment and delegation of responsibilities with respect to climate-related risks and opportunities. Some of this information may be set out at a high level in the Statement of Investment Policy and Objectives (SIPO) and/or Product Disclosure Statement (PDS) of the scheme. An MIS Manager should build on these descriptions as necessary to provide primary users with a clear picture of how climate-related roles are delegated in relation to the scheme, and the processes by which the scheme's governance body is informed about climate-related risks and opportunities.

Publisher	Year	Source	Pages
TCFD	2021	Implementing the Recommendations of the TCFD	**p.44**
CFRF	2020	Climate Financial Risk Forum Guide – Risk Management Chapter	**p.5-7**

1.5.2 Management's role: Disclosure 8(b)



Disclosure 8(b): *the related organisational structure(s) showing where these management-level positions and committees lie*

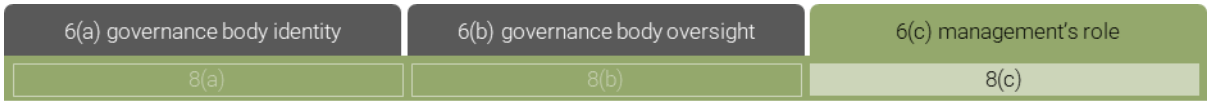
Other disclosures illustrate the delegation of roles and responsibilities, this disclosure gives primary users a contextual overview of where these delegated responsibilities lie within the entity.

In completing disclosure 8(b), preparers should be clear to illustrate the position within management hierarchies that the delegated management-level responsibilities described in 8(a) reside.

Delegated or passive funds: If an MIS Manager delegates investment management decision-making to a third party or sub-managers, or passively tracks an index, the overall responsibility for the oversight of climate-related risks and opportunities nevertheless remains with the Manager. It will be necessary to describe the processes and procedures in place by which the MIS Manager monitors the climate-related risk and opportunity competencies of those delegated with investment decision making and is informed about the third-party or sub-manager's decision making regarding their management. In the case of passive investment strategy/s, a description of the climate-related risk and opportunity management practices of the tracked index will be useful to primary users.

Publisher	Year	Source	Pages
TCFD	2021	Implementing the Recommendations of the TCFD	**p.44**
HK SFC	2020	Consultation Paper on the Management and Disclosure of Climate-related Risks by Fund Managers	**p.14-15, 18-20, 23**
MAS	2020	Guidelines on Environmental Risk Management (Asset Managers)	**p.4-5, 7**

1.5.3 Management's role: Disclosure 8(c)



Disclosure 8(c): *the processes and frequency by which management is informed about, makes decisions on, and monitors, climate-related risks and opportunities.*

Primary users are interested in understanding the extent to which management actively engages in exercising the climate-related roles and responsibilities delegated to them by the board or governing body.

Disclosure 8 (c) should involve a relatively straight-forward summary of how and how often an MIS Manager is involved in climate-related risk and opportunity monitoring and decision making.

Publisher	Year	Source	Pages
TCFD	2021	Implementing the Recommendations of the TCFD	**p.44**
CDSB	2021	TCFD Good Practice Handbook – 2nd Edition	**p.14-15**

2. Strategy

The objective of the strategy disclosures is to enable primary users to understand how climate change is currently impacting the entity and how it may do so in the future. This includes the scenario analysis it has undertaken, the climate-related risks and opportunities an entity has identified, the anticipated impacts and financial impacts of these, and how it will position itself as the global and domestic economy transitions towards a low-emissions, climate-resilient future state.

For an MIS Manager, Strategy disclosures should be made in relation to the strategy set out in the scheme's SIPO, or alternatively, wherever the investment strategy of the scheme is most clearly articulated.

Other disclosing entities will disclose in relation to their broader (corporate) strategy, but an MIS Manager need only do so in relation to their scheme(s). The focus on disclosure at scheme level may lead to the assumption that strategy disclosures should be purely quantitative. However, there are significant uncertainties and complexities involved in analysing the current and anticipated impacts (and subsequent financial impacts) of climate change, particularly with the scope for an MIS Manager encompassing entire geographies, asset classes and sectors. Therefore, beginning with a qualitative analysis of risk and opportunity is a pragmatic and legitimate solution given the ultimate need to communicate to primary users in a meaningful way.

MIS Managers must disclose how they have (and will continue to) exercise climate-resilient judgement in the development and implementation of investment strategies. This needs to be supplemented with information about the MIS Manager's views on how the current and anticipated impacts (and financial impacts) of climate change might materially affect the client's investments, and disclosures of their transition plan and the associated financial plans to deliver it.

The Strategy section includes a disclosure regarding the use of scenario analysis. We encourage preparers to start qualitatively in this area, primarily to avoid a (typically fruitless) pursuit of precise quantification. Quantitatively complex scenario analyses risk being hampered by an absence of data and so typically must be scoped so narrowly that they offer little by way of strategic insight. Quantification can be built in over time, and should be done carefully. In line with these lessons, we see sector level collaboration on scenario analysis playing an important role to enable an MIS Manager to ultimately provide consistent and comparable disclosures on scenario analysis to primary users.

Publisher	Year	Source	Pages
TCFD	2020	Guidance on Risk Management Integration and Disclosure	**p.44**
XRB	2022	Scenario analysis: Getting started at the sector level	

Navigating the Strategy disclosures

There are five over-arching disclosures in the Strategy section of NZ CS 1. Each overarching disclosure contains sub-disclosures. The disclosures are structured as follows:

2.1 Current impacts (p.16):

Disclosure 10(a): a description of its current climate-related impacts (see 11(a) – (c)

- **Disclosure 11(a):** its current physical and transition impacts
- **Disclosure 11(b):** the current financial impacts of its physical and transition impacts identified in paragraph 11(a), and
- **Disclosure 11(c):** if the entity is unable to disclose quantitative information for paragraph 11(b), an explanation of why that is the case

2.2 Scenario analysis (p.19):

Disclosure 10(b): a description of the scenario analysis it has undertaken (see 12)

- **Disclosure 12:** An entity must describe the scenario analysis it has undertaken to help identify its climate-related risks and opportunities and better understand the resilience of its business model and strategy. This must include a description of how it has analysed, at a minimum, a 1.5 degrees Celsius climate-related scenario, a 3 degrees Celsius or greater climate-related scenario, and a third climate-related scenario

2.3 Risks and opportunities (p.24):

Disclosure 10(c): a description of the climate-related risks and opportunities it has identified over the short, medium, and long term (see 13(a) – (d))

- **Disclosure 13(a):** how it defines short, medium and long term and how the definitions are linked to its strategic planning horizons and capital deployment plans
- **Disclosure 13(b):** a description of the time horizon over which each climate-related risk or opportunity could reasonably be expected to have a financial impact
- **Disclosure 13(c):** whether the risks and opportunities identified are physical or transition risks or opportunities and, where relevant, their sector and/or geography, and
- **Disclosure 13(d):** how climate-related risks and opportunities serve as an input to its financial planning processes, including for capital deployment and funding

2.4 Anticipated impacts (p.28):

Disclosure 10(d): a description of the anticipated impacts of climate-related risks and opportunities (see 14 (a) – (c))

- **Disclosure 14(a):** the anticipated impacts of climate-related risks and opportunities reasonably expected by the entity
- **Disclosure 14(b):** the anticipated financial impacts of climate-related risks and opportunities reasonably expected by the entity, and
- **Disclosure 14(c):** if the entity is unable to disclose quantitative information for paragraph 14(b), an explanation of why that is the case

2.5 Transition plans (p.33):

Disclosure 10(e): a description of how it will position itself as the global and domestic economy transitions towards a low-emissions, climate-resilient future state (see 15(a) – (c)

- **Disclosure 15(a):** a description of its current business model and strategy
- **Disclosure 15(b):** the transition plan aspects of its strategy, including how its business model and strategy might change to address its climate-related risks and opportunities, and
- **Disclosure 15(c):** the extent to which transition plan aspects of its strategy are aligned with its financial planning processes, including for capital deployment and funding

Guidance specific to each disclosure is provided in the following section.

2.1. Current impacts: Disclosure 10(a)

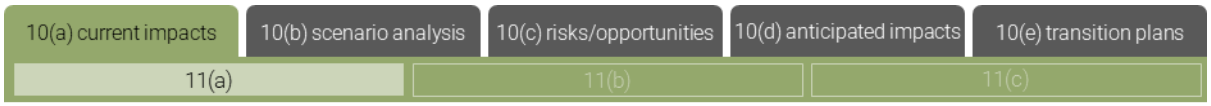
Disclosure 10(a): *a description of its current climate-related impacts (see 11(a) – (c))*

Primary users will want insights into how climate change currently affects an entity, or its investees in the case of Managed Investment Schemes. The crux of this disclosure therefore lies in the understanding that an entity has of the current physical and transition impacts of climate change, and how these have affected it to date.

The information provided under disclosures 11(a) – (c) forms the basis of disclosure 10(a). Preparers must add any additional information describing the current climate-related impacts that they believe to be material to a primary user.

Publisher	Year	Source	Pages
TCFD	2021	Implementing the Recommendations of the TCFD	**p.45**

2.3.1 Current impacts: Disclosure 11(a)



Disclosure 11(a): *its current physical and transition impacts*

This disclosure provides primary users with information illustrating an MIS Manager's understanding of how climate-related impacts have affected their investments in the present or recent past. This provides primary users with an illustration of the MIS Manager's views of climate-related impacts, and baseline information about the exposure and sensitivity of the Manager's scheme(s) to these climate-related impacts.

In completing this disclosure, an MIS Manager should describe how, *if at all*, climate-related physical and transition impacts have affected the scheme(s) the disclosure relates to. These impacts may have been manifest in the availability of investment options, value in the market, choices made regarding what was invested in, where, and on which terms, or even via factors such as how the MIS Manager engaged with their investees regarding climate change. MIS Managers could describe the impacts on the scheme(s) of:

- discrete events (i.e., storms, droughts, protests, legal action)
- ongoing changes (i.e., to temperatures, precipitation, prices, regulations), or
- benefits realised (i.e., via market changes, resource efficiencies, etc.)

An MIS Manager need only describe in broad terms how the assets comprising the scheme(s), or their management of the scheme(s), were affected by the material impacts identified. The MIS Manager is also not expected to calculate current financial impacts under this disclosure, which are covered below in disclosure 11(b).

Publisher	Year	Source	Pages
TCFD	2021	Implementing the Recommendations of the TCFD	**p.45**
EU	2019	Guidelines on reporting climate-related information	**p.13-14**
BEIS	2022	Mandatory climate-related financial disclosures by publicly quoted companies, large private companies and LLPs Non-binding guidance	**p.12-14**

2.3.2 Current impacts: Disclosure 11(b)

Disclosure 11(b): *the current financial impacts of its physical and transition impacts identified in paragraph 11(a)*

This disclosure provides information about the current impacts of climate change on the financial performance and position of an MIS Manager's scheme(s). This will illustrate the scheme(s) current financial sensitivity to the impacts of climate-related risks and opportunities. Primary users may use this information to determine how well the MIS Manager is managing the climate-related financial impacts it faces, and also as a gauge of the extent to which future climate-related risks and opportunities might affect its financial position and performance.

Start with qualitative information and build toward quantitative data over time: Calculating the value of current investments excluding the impacts of climate related risks and opportunities is unlikely to be feasible. This, in turn may prevent a quantitative assessment of the current climate-related financial impacts on investment schemes.

Primary users will therefore want preparers to provide a considered, albeit necessarily subjective judgement of how climate has financially affected the investment scheme. An MIS Manager could give a qualitative view of how climate-related impacts have exerted an influence on the value of the scheme(s) over the reporting period, referencing any discrete or ongoing impacts which may have materially influenced financial outcomes (such as extreme events impacting asset values, or the emergence of new technologies creating new market opportunities).

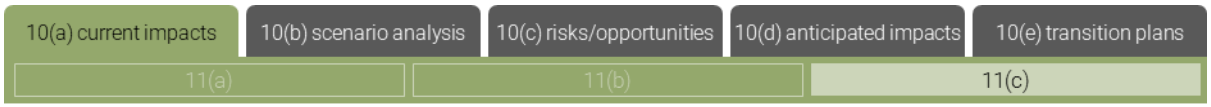
However, *if they find it is feasible to do so*, and likely to be of material relevance to primary users, an MIS Manager should quantify the current climate-related impacts on their scheme(s). Where such information is provided quantitatively, it can be expressed as a single value or as a range. Where the impact is direct and unambiguous, a single value may be more appropriate.

Over time, as the entities they invest in themselves disclose their climate change impacts, an MIS Manager will be in a much stronger position to quantify the current financial impacts of climate change on their investments. Qualitative analyses are a means of bridging the data gap, while demonstrating that the MIS Manager is aware of, and seeking to understand, current climate-related impacts.

First-time adoption relief is available for this disclosure (see **NZ CS 2**).

Publisher	Year	Source	Pages
TCFD	2021	Guidance on Metrics, Targets, and Transition Plans	**p.46-52**

2.3.3 Current impacts: Disclosure 11(c)



Disclosure 11(c): *if the entity is unable to disclose quantitative information for paragraph 11(b), an explanation of why that is the case.*

Primary users will seek financial bottom-line information which facilitates a ready comparison between different investment propositions. However, where quantitative financial impact data cannot be reliably sourced, primary users will see the value in qualitative, descriptive information, providing they feel confident regarding the rigour and transparency of the MIS Manager's efforts to provide it.

MIS Managers should provide a brief description of the process they have followed in attempting to quantify the financial effects of the current climate-related impacts affecting the assets they invest in. The ambiguities and complexities described above may make quantification impractical in the short term. Explaining what was considered, why its quantification is challenging, and how these challenges might be overcome in support of subsequent disclosures, may well satisfy primary users.

Publisher	Year	Source	Pages
ISSB	2022	Exposure draft: [Draft] IFRS S2 Climate-related Disclosures[1]	**p.37**

[1] Note that this is an exposure draft. This content may change in the final standard. Links may change

2.2. Scenario analysis: Disclosure 10(b)

Disclosure 10(b): *a description of the scenario analysis it has undertaken (see 12)*

Primary users will want to understand, with as much clarity and coherence as possible, how future risks and opportunities might affect the business model and strategy of an entity.

However, there is significant uncertainty surrounding the sensitivity of the climate to the concentration of atmospheric GHGs, and further uncertainty regarding the extent to which global efforts to reduce GHG emissions will be successful. These and other critical uncertainties make it very difficult for entities to assess future climate-related risks and opportunities, or the impacts that these may carry.

Scenario analysis offers one of the few routes available to systematically explore and prepare for uncertain future change. As such, it must be handled well if other aspects of an MIS Manager's strategy disclosures are to be considered credible by primary users.

The information provided in response to disclosure 12 forms the basis of disclosure 10(b). Preparers must add any additional information describing the scenario analysis they have undertaken which they believe will be material to a primary user.

Publisher	Year	Source	Pages
TCFD	2017	Final Report: Recommendations of the TCFD	**p.27**
TCFD	2020	Guidance on Scenario Analysis for Non-Financial Companies	**p.15-31, p.33-41, p.74-75**
MITSloan	2017	Using Scenario Planning to Reshape Strategy	

2.4.1 Scenario analysis: Disclosure 12

10(a) current impacts	10(b) scenario analysis	10(c) risks/opportunities	10(d) anticipated impacts	10(e) transition plans
	12			

Disclosure 12: *An entity must describe the scenario analysis it has undertaken to help identify its climate-related risks and opportunities and better understand the resilience of its business model and strategy. This must include a description of how it has analysed, at a minimum, a 1.5 degrees Celsius climate-related scenario, a 3 degrees Celsius or greater climate-related scenario, and a third climate-related scenario*

Scenario analysis offers insights into the potential impacts of climate-related risks and opportunities for a managed investment scheme, and as such provides primary users with a window on the future that would otherwise be unavailable to them.

Engaging with scenario analysis disclosures can at times be challenging for primary users. To date, under voluntary disclosure regimes, entities have given relatively sparse descriptions of the scenario analysis they have undertaken, making comparability difficult, and any information put forward in support of their claims of climate resilience difficult to evaluate.

Primary users therefore need disclosures which allow them to evaluate the merits of the assumptions the entity has employed, the process it has followed, and how well its scenarios are aligned with higher-level pathways and projections that others in the sector (or adjacent sectors) may be using.

Outputs that are understandable (clear and concise), complete and consistent and coherent will reassure primary users that the entity has meaningfully engaged in the scenario analysis process, inspiring confidence in its outputs despite the complexity, uncertainty, and unavoidable subjectivity it typically involves.

In disclosing under paragraph 12, preparers need to also directly consider **NZ CS 3**, particularly paragraph 50 and the required disclosures on methodologies and assumptions used as part of scenario analysis. If a scenario analysis has been undertaken at the sector level, this should provide helpful inputs for this disclosure, assuming the MIS Manager has used similar assumptions in its own scenario analysis.

An MIS Manager should take a relatively high-level approach in their first year of scenario analysis, touching on a broad range of different aspects of physical and transition risk and opportunity. This will provide an overview of the climate-related risk and opportunity landscape, from which more detailed work can be planned. In subsequent years the MIS Manager might then opt to undertake a narrower, deeper dive into climate-related factors of greatest importance to the resilience of their investment strategy.

A sector level, collaborative and qualitative approach to scenario analysis by MIS Managers will offer a tractable route to engaging with the macroeconomic and financial system impacts ('top-down') as illustrated by the CFRF in Figure 2. The NGFS' provide a short summary (and links to the underlying data) of their scenarios, which illustrate macroeconomic impacts.

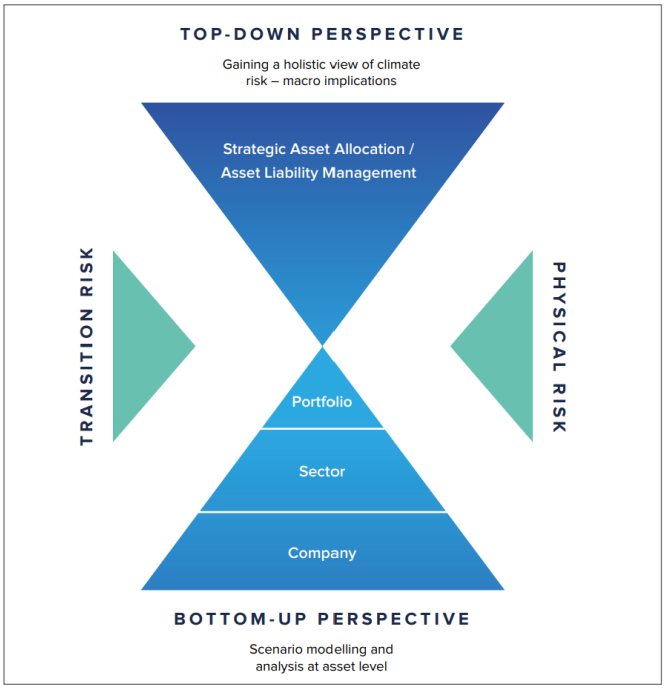


Figure 2: The CFRF illustrate the positioning of portfolio-level analyses as the intersection of bottom-up and top-down perspectives on climate-related risk.

MIS Managers could also refer to the UK Pensions Authority exploration of financial system impacts of climate-related risks.

An MIS Manager should initially focus on understanding and disclosing the aggregate scale of climate-related impacts, expressed in broad terms.To do this, MIS Managers can opt to follow the six-step approach set out in XRB staff guidance on 'getting started with scenario analysis' (Error! Reference s ource not found.). This is based on the recommended approach to climate-related scenario analysis as set out by the TCFD in its 2020 guidance, and adapted by XRB staff for use by sectors starting out with scenario analysis in Aotearoa New Zealand (2022). The TCFD also provides extensive guidance on employing scenario analysis in strategic management (2020, p.33-41).

Managers should incorporate an assessment of the potential impacts on their scheme of physical and transition risks and opportunities across a range of temperature outcomes and emissions reduction pathways. The Monetary Authority of Singapore's 2020 guidelines describes Asset Managers assessing the potential future impacts on revenue and profitability of investee companies along these lines, anticipating that investees may be exposed to physical risk factors such as sea level rise or extreme weather events, and transition risk factors such as increasing carbon price and changing consumer demand.

Examples of how Managers globally have begun to do tackle assessments of this nature are growing in number and diversity.

For instance, Macquarie's 2021 disclosure refers to the consideration of transmission channels via which climate-related impacts can alter the value of the assets they hold, noting that quantification is more readily achievable in some cases more than others (Macquarie 2021, p.15). Macquarie used a 'prototypical asset approach' which covered the physical climate risk impacts to their infrastructure equity investments in the utilities, oil and gas sectors (Figure 3).

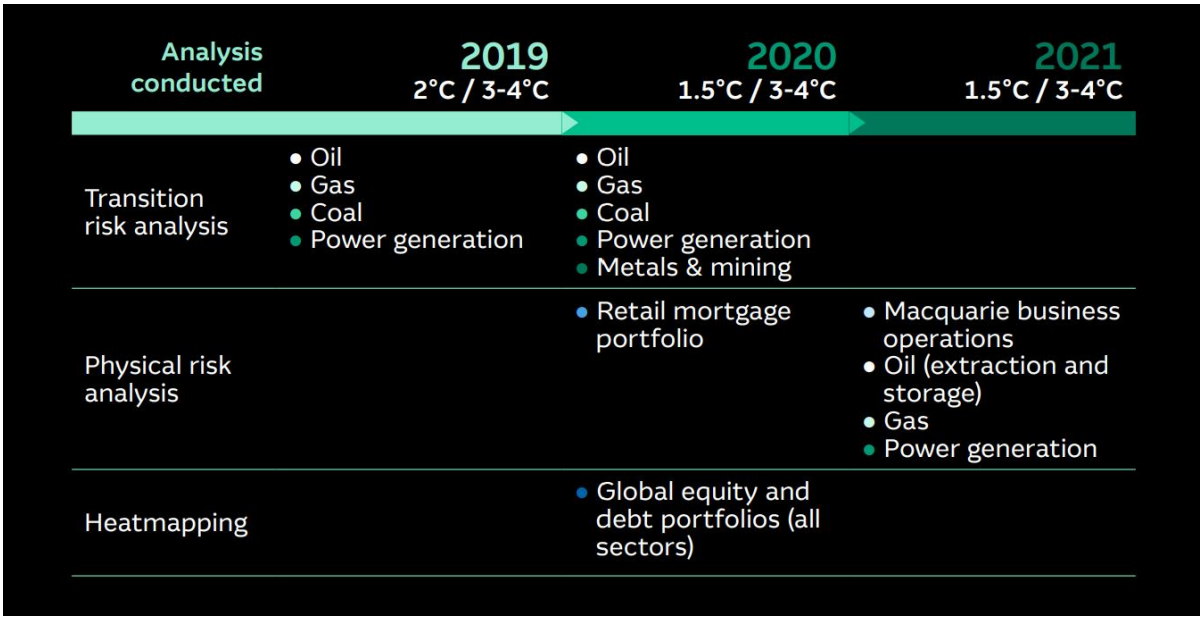
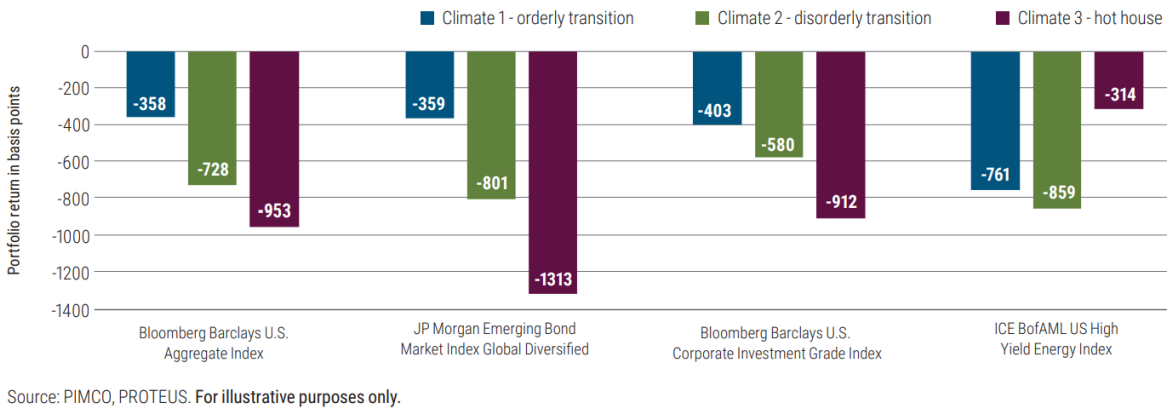


Figure 3: Macquarie have built an integrated understanding of the potential impacts of physical and transition risk over three years of scenario analysis spanning multiple geographies and industries. Referring to a prototypical equity portfolio of infrastructure assets, Macquarie use a blend of qualitative and quantitative impact data to gauge to net asset values to 2050 (Macquarie 2021, p.12-19).

The HK SFC (2021) also provide several examples of different approaches to scenario analysis that Asset Managers have taken. Similarly, the CFRF (2021) provide case studies of the practical application of scenario analysis among Asset Managers. Among these, PIMCO's case study of building on the NGFS scenarios to incorporate climate-related factors into their internal repricing tool for scenario analysis and portfolio stress testing is highlighted (Figure 4).



Source: PIMCO, PROTEUS. **For illustrative purposes only.**

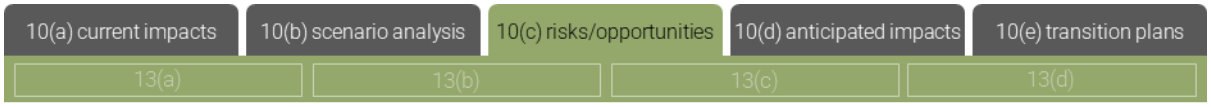
Figure 4: PIMCO created an exploratory macro model to try to overcome data challenges, complexity and uncertainty in estimating the impacts of physical and transition risk exposure of their holdings at sectoral and regional levels of analysis (PIMCO 2021, p.28-32)

Publisher	Year	Source	Pages
TCFD	2017	Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures	**p.27**
CFRF	2021	Climate Financial Risk Forum Guide 2021: Scenario Analysis	**p.52-72**
NGFS	2021	NGFS Climate Scenarios for central banks and supervisors	**p.6-41**
UK PA	2020	Climate scenario analysis for pension schemes	**p.4-42**
TCFD	2020	Guidance on Scenario Analysis for Non-Financial Companies	**p.15-31, p.33-41, p.74-75**
TCFD	2021	Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures	**p.46**
MAS	2020	Guidelines on environmental risk management (asset managers)	**p. 8-9**
Macquarie	2021	TCFD implementation progress and scenario analysis	**p.12-19**
HK SFC	2021	Circular to licensed corporations Management and disclosure of climate-related risks by fund managers – Appendix 2: Sample industry practices for managing climate-related risks	**p.17-19**
Pimco	2021	Bonds for change: ESG Investing Report 2021	**p.28-32**

STEP	KEY TASKS AND PROCESSES	OUTPUTS
1 Stakeholders	**Engage internal stakeholders and assess the external environment** • Engage the Board/governance body as project sponsors; task Senior Leaders and Management to undertake entity-level scenario analysis • Explore climate-related risks and opportunities currently affecting the entity, *OR* • Review risks and opportunities put forward by a sectoral analysis; add any entity-specific risks and opportunities CREs see as requiring further analysis	Briefing paper, project charter
2 Focal question	**Define or validate the focal question and scope** • Define a focal question and scope of relevance to the entity's analysis, *OR* • Validate the focal question and scope of a sectoral scenario analysis, noting any amendments required to tailor the scenarios with respect to their time horizon, geography, technology, market or value chain coverage, in order to address the entity's need to assess the resilience of its business model and strategy	Focal question, scope, and timeframe
3 Driving forces	**Identify or refine driving forces** • Identify driving forces and assess their interaction with the entity's business model and strategy, *OR* • Review driving forces put forward by sectoral analysis and assess their interaction with the entity's business model and strategy, noting any additional driving forces which the entity may need to account for in its own analysis	Driving forces prioritisation, conceptual model
4 Outcomes & pathways	**Select or review scenario outcomes and pathways, developing additional combinations as necessary** • Select scenario temperature outcomes and emissions pathways which are most relevant and challenging for the entity, *OR* • Check the scenario outcomes and pathways selected at sectoral scale are sufficiently relevant and challenging for the entity, developing additional outcome and pathway combinations if deemed necessary	Scenarios from most relevant and challenging pathways
5 Draft & quantify	**Refine narratives and quantify to suit entity-specific needs** • Draft scenario narratives which follow each scenario's internal logic to develop a plausible pathway to the selected outcome, *OR* • Refine the sectoral scenario narratives to incorporate specific reference to the entity • If required and deemed feasible, generate new, entity-specific data illustrating the implications of the scenarios for the entity's business model, strategy and financial planning.	Narratives, quantified where appropriate
6 Assess strategic resilience	**Apply scenario insights in strategic management** • Document the implications of the scenarios for the entity's business model and strategy. • Investigate and prioritise options to address these implications, developing transition plan aspects of strategy as needed. • Monitor signals of change to identify trends; review, and plan to reiterate the process.	Assessment of resilience of business model and strategy

Figure 5: The six steps of the TCFD scenario analysis process (adapted from TCFD, 2020, p.20-31). An entity can follow TCFD guidance in developing strategy-relevant scenarios for use in their climate-related risk and opportunity analysis.

2.3. Risks and opportunities: Disclosure 10(c)



Disclosure 10(c): *a description of the climate-related risks and opportunities it has identified over the short, medium, and long term (see 13(a) – (d))*

Primary users will want to understand the material climate-related risks and opportunities that an MIS Manager has identified. This information will inform a primary user's view of the scheme's viability as an investment option.

Climate-related risks and opportunities should be described in terms of their:

- anticipated timeframe of occurrence (i.e., short, medium, and long terms, with an explanation of what these timeframes mean for the entity and how they have been defined)
- type (i.e., whether physical or transition)

Disclosure of commercially sensitive information: Concerns about the disclosure of commercially sensitive information have been raised both internationally and in New Zealand, particularly regarding the disclosure of opportunities.

The TCFD are clear that an entity should not claim business confidentiality as a reason for avoiding disclosure. As a matter of principle, an entity should err on the side of disclosure. However, judgement will be required as to the level of granularity of disclosures, particular with respect to opportunities. In exercising that judgement, the entity should have regard for TCFD's suggested considerations:

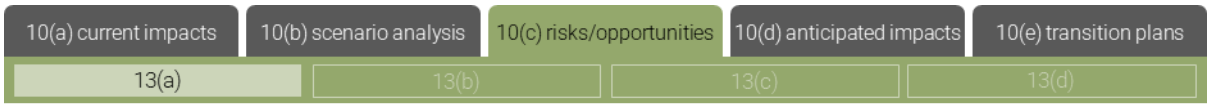
- whether the information provides the organisation with an economic benefit that translates into a competitive advantage because the information is unknown to its competitors;
- whether making such information public may cause a considerable economic loss for the organisation;
- consider a stepwise approach to disclosure – rather than decide not to disclose. For example, a company may start by disclosing *broader*, qualitative information and move to more *specific,* quantitative data and information over time.

JP Morgan Chase provided an example of opportunity disclosure in their 2019 'Understanding Our Climate-related Risks and Opportunities report'. The information is described at a high-level, avoiding specifics which could create any loss of competitive advantage:

The information provided in response to disclosures 13(a) – (d) forms the basis of disclosure 10(c). Preparers must add any additional information describing climate-related risks and opportunities which they believe will be material to a primary user.

Publisher	Year	Source	Pages
TCFD	2021	Implementing the Recommendations of the TCFD	**p.45**
JP Morgan Chase	2019	Understanding Our Climate-Related Risks and Opportunities	**p.8-10**

2.5.1 Risks and opportunities: Disclosure 13(a)



Disclosure 13(a): *how it defines short, medium, and long term and how the definitions are linked to its strategic planning horizons and capital deployment plans*

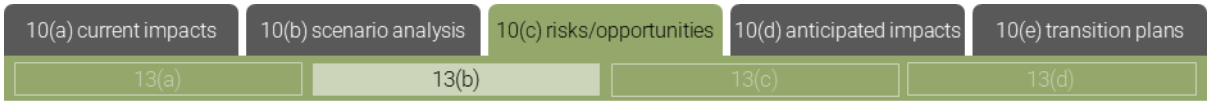
Primary users will want to know how an MIS Manager has assessed and incorporated the timeframes involved in climate-related risks and opportunities into the development and implementation of their investment strategies. Some climate-related risks and opportunities may already be evident, while some may evolve over periods of years or even decades into the future. Primary users want to clearly understand to what extent an entity's operational and strategic planning horizons align with the timescales of climate-related physical and transition risks and opportunities it has identified.

Managers should explain how they have selected short, medium, and long-term timeframes of relevance to the analysis of climate-related risks and opportunities, referencing how these relate to the entity's strategic planning and investment processes.

Managers should consider explicitly pointing out any instances where a timeframe of climate-related risk and opportunity analysis *does not* align with the timeframes of its strategic planning and/or investment decision making processes, explaining why the incompatibility is immaterial or how it will be addressed.

Publisher	Year	Source	Pages
TCFD	2021	Implementing the Recommendations of the TCFD	**p.45,** 11
PRA	2019	A framework for assessing financial impacts of physical climate change	**p.19**

2.5.2 Risks and opportunities: Disclosure 13(b)



Disclosure 13(b): *a description of the time horizon over which each climate-related risk or opportunity could reasonably be expected to have a financial impact on the entity*

Investors globally are seeking a deeper understanding of the financial impacts of climate-related risks and opportunities. While expectations that this can be achieved in a precise or accurate manner are realistically low at this point in the maturity of climate-related risk disclosure, there is a growing desire among primary users to understand, at least in broad terms, *when* financial impacts might reasonably be anticipated to affect the entities they are investing in.

To begin with, MIS Managers may opt to estimate the time horizon (and perhaps the scale) of financial impacts they anticipate encountering in categorical rather than precise terms. For instance, a Manager may choose to group risks and opportunities into broad categories of short, medium, and long term in year 1 (Table 1), refining their precision of these descriptions thereafter.

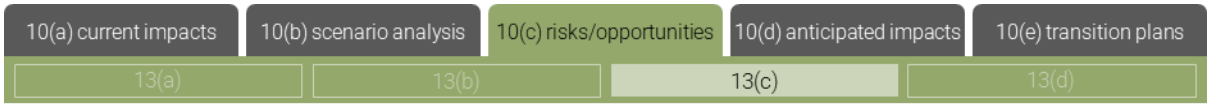
☺ First-time adoption relief is available for this disclosure (see **NZ CS 2**).

Publisher	Year	Source	Pages
TCFD	2021	Implementing the Recommendations of the TCFD	**p.45**
TCFD	2021	Guidance on Metrics, Targets, and Transition Plans	**p.46-52**

Table 1: if an entity has identified five risks and three opportunities with potential financial impacts, they may opt to provide categorical estimations of when each risk and opportunity might arise, and with what scale of financial impact

Scale of potential financial impacts	**Time horizon**		
	Short term (x-x years)	Medium term (x-x years)	Long term (x-x years)
Small ($x to $x)	**Transition Risk 1; Transition Risk 2**	**Physical Risk 1**	**Physical Opportunity 1; Physical Opportunity 2**
Moderate ($x to $x)	**Transition Opportunity 1**	**Physical Risk 2**	**Transition Opportunity 4; Physical Risk 3**
Large ($x to $x)	**Transition Risk 3; Transition Opportunity 2**	**Transition Opportunity 3**	**Physical Risk 4**

2.5.3 Risks and opportunities: Disclosure 13(c)



Disclosure 13(c): *whether the risks and opportunities identified are physical or transition risks or opportunities and, where relevant, their sector and/or geography*

Primary users have come to expect risks and opportunities to be characterised as either physical or transitional, as this is a framework for risk comparison which is now globally accepted.

Physical risks and opportunities are those resulting from climate change itself, including via temperature, rainfall, storms, extreme events, and sea level rise.

Transition risks and opportunities are those resulting from the economic, regulatory, social, technological, and legal responses *to* climate change (Figure 6Figure 6).

MIS Managers should provide a short summary or table describing the characteristics of the climate-related risks and opportunities they have identified which are of specific relevance to their managed scheme. There are several examples of climate-related risks and opportunities provided by the TCFD (cited below). Additional examples of climate-related risks and opportunities in a New Zealand context are illustrated in Table 2.

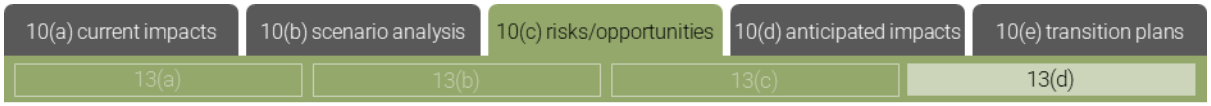
Publisher	Year	Source	Pages
TCFD	2021	Implementing the Recommendations of the TCFD	**p.74-78,** 18, 9

Figure 6: A conceptual breakdown of physical and transition risk

Table 2: Illustrative examples of climate-related risks and opportunities in a New Zealand context

Type	Illustrative risks
TRANSITION	Increasing NZU price under the ETS imposing additional costs on an entity
	Mainstream adoption of alternative proteins in key dairy and red meat export markets undermining market share for primary sector entities
	Shift away from NZ as tourist destination due to carbon-footprint of traveller air-miles, reducing revenues for tourism and hospitality sector entities
PHYSICAL	Extra-tropical cyclones tracking across New Zealand and damaging farmlands, infrastructure
	Extended drought conditions hitting key water-sensitive dairy areas
	Increasing incidence of fluvial flooding (river flooding) striking urban centres and densely populated suburbs
	Sea-level rise accelerating coastal erosion, undermining water and electricity infrastructure
Type	**Illustrative opportunities**
TRANSITION	Energy efficiency gains in process heat triggered by emissions reduction obligations reducing overhead costs for industry
	Emergence of new, high-value markets in low-emissions, low-intensity primary produce
	Transport mode shifts to reduce emissions (cycling, walking, mass-transit, clean vehicles) improving productivity by reducing worker sick days and cutting commute/transit times lost to traffic gridlock.
PHYSICAL	Development of new fisheries as sub-tropical species migrate into New Zealand's exclusive economic zone (EEZ)
	Longer growing period and greater number of growing-degree days enabling the development of new horticultural enterprises
	Warmer winter temperatures reducing the energy demand and costs of heating

2.5.4 Risks and opportunities: Disclosure 13(d)



Disclosure 13(d): *how climate-related risks and opportunities serve as an input to its financial planning processes, including for capital deployment and funding*

This disclosure informs primary users about the relative prominence of climate-related risks and opportunities in an entity's financial planning. This information also contextualises for primary users the entity's statements regarding risk mitigation, and transition planning to follow.

MIS Managers may choose to meet this disclosure by providing a brief narrative description, figure or table illustrating how their analysis of climate-related risks and opportunities is integrated within their wider financial planning, capital deployment and funding processes relating to their scheme(s).

Managers should describe how, *if it all*, the need to account for climate-related risks and opportunities determines financial planning processes in relation to the management of their scheme(s). These could, for instance, take the form of investments in professional services providers, or internal staff capacity building and training, to assess the impacts of climate-related risks and opportunities on the value of current and potential investments, or factors such as internal capacity building to better assess and manage those risks and opportunities internally.

Publisher	Year	Source	Pages
TCFD	2021	Implementing the Recommendations of the TCFD	**p.45**
MAS	2020	Guidelines on environmental risk management (asset managers)	**p. 5, 8**
HK SFC	2021	Circular to licensed corporations Management and disclosure of climate-related risks by fund managers – Appendix 2:	**p.11**

2.4. Anticipated impacts: Disclosure 10(d)

Disclosure 10(d): *a description of the anticipated impacts of climate-related risks and opportunities (see 14(a) – (c))*

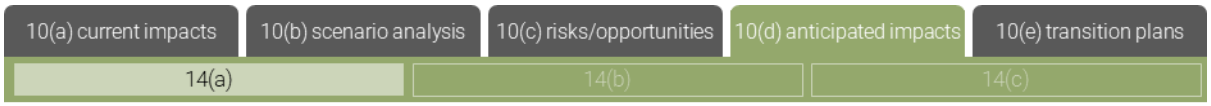
Primary users will expect an MIS Manager to have a clear understanding of the anticipated impacts of climate-related risks and opportunities their scheme(s) faces As with the climate-related risks and opportunities identified under 10(c), their anticipated impacts and financial impacts will help to inform a primary user's view of the scheme(s) viability as an investment option.

It is important that preparers bear in mind that this information need not be precise to be relevant – in most cases it can and should remain high level. An MIS Manager should provide information conveying their considered opinion of the potential scope and scale of anticipated impacts, translating these estimations into financial terms to as great a degree as possible, while being wary of straying into insupportable precision.

The information provided in response to disclosures 14(a) – (d) forms the basis of disclosure 10(d). Preparers must add any additional information describing the anticipated impacts of climate-related risks and opportunities which they believe will be material to a primary user.

Publisher	Year	Source	Pages
TCFD	2021	Guidance on Metrics, Targets, and Transition Plans	**p.46-52**

2.6.1 Anticipated impacts: Disclosure 14(a)



Disclosure 14(a): *the anticipated impacts of climate-related risks and opportunities reasonably expected by the entity*

While disclosure 11(a) explored the current climate-related impacts facing an entity, this disclosure aims to inform primary users about plausible future impacts an MIS Manager may face resulting from climate-related risks and opportunities.

As with the current impacts disclosed under 11(a), an MIS Manager could describe the anticipated physical and transition impacts of:

- discrete events (i.e., storms, droughts, protests, legal action)
- ongoing changes (i.e., to temperatures, precipitation, prices, regulations), or
- realisable benefits (i.e., via market changes or resource efficiencies),

For an MIS Manager, the scope of anticipated impacts is likely to be too broad to facilitate a specific breakdown of impacts by asset (unless the manager has a small pool of relatively unchanging investments). Therefore, disclosures developed on the basis of prototypical portfolio composition, at a level of detail no greater than asset class or category, may prove to be a practical and valuable compromise solution.

There are a growing number of examples in the disclosures of asset managers globally of how this type of analysis can be undertaken and communicated to primary users. Allianz presents a heatmap of the impacts of climate transition risk on its proprietary investment portfolio (Figure 7).

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

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

Risk enhancer:
P = policy
T = substitution technology
M = related market forces

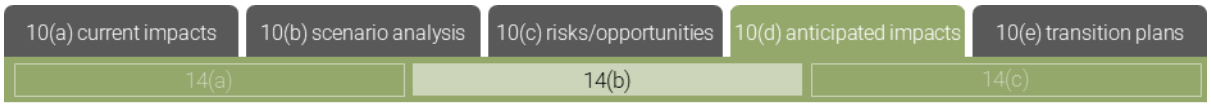
Risk mitigator:
(P) = policy
(T) = little substitution technology
(M) = countering market forces

Risk:
Low
Medium
High
Very high

Figure 7: A heatmap representation of the impacts of climate change on Allianz's investments (Allianz, 2020, p.86)

Publisher	Year	Source	Pages
TCFD	2021	Implementing the Recommendations of the TCFD	**p.10-11, 45**
Allianz	2020	Allianz Group Sustainability Report 2020: Collaborating for a sustainable future	**p.85**

2.6.2 Anticipated impacts: Disclosure 14(b)



Disclosure 14(b): *the anticipated financial impacts of climate-related risks and opportunities reasonably expected by an entity*

This is a critical disclosure in support of the allocation of capital on the part of primary users based on risk appetite. Investors' differing requirements in relation to anticipated risk and return need to be catered for via the provision of financial impact information which is as relevant, accurate and verifiable as can be practically achieved.

It is important to note the limitations imposed by the uncertainty of forward-looking projections of change. These limitations mean that primary users will be seeking transparency on how anticipated financial impacts have been calculated, for instance, what any significant assumptions are, and what other sources of significant estimation uncertainty may be – particularly where anticipated financial impacts appear precise or free of contextual caveats.

An MIS Manager is expected to make reasonable efforts to disclose the anticipated financial impacts of climate-related risks and opportunities on the financial performance and position of their scheme(s), having regard for paragraphs 46 to 49 of **NZ CS 3** which require the disclosure of significant assumptions and sources of estimation uncertainty.

Alongside their analysis of different climate-related scenarios, the TCFD suggest entities draw on their metrics, targets, and transition planning in attempting to gauge potential financial impacts (TCFD, 2021, p.48-49).

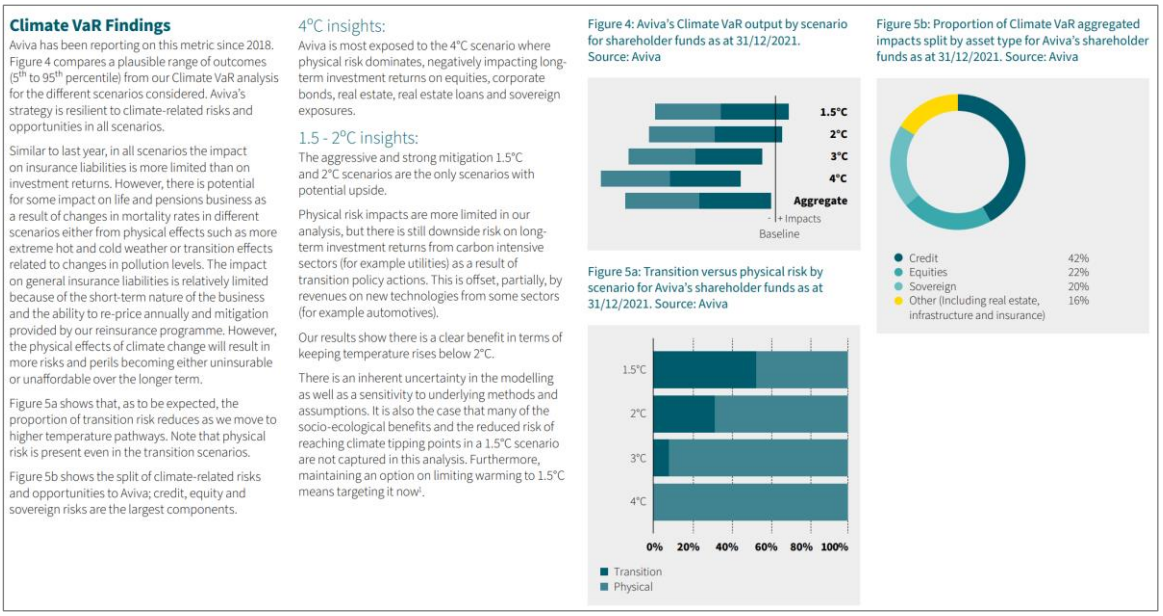
An MIS Manager should disclose the anticipated impacts of climate-related risks and opportunities on the financial performance of their scheme(s) via such factors as set out in Table 3 below. In doing so, the limitations imposed by complexity and uncertainty in the interaction of climate-related risks and opportunities over longer timeframes should be borne in mind when preparing disclosures.

Where such information is provided quantitatively, an MIS Manager should consider using range estimates. Disclosing a range enables an MIS Manager to communicate the significant variance of potential outcomes associated with the monetised effect for their scheme(s). If the outcome is considered to be more certain, a single value may be more appropriate than a range.

Due to the complexity and uncertainty referenced above, MIS Managers may need to approach this disclosure qualitatively in the early stages of their disclosure journey, as even third-party providers may have limited information with which to calculate potential financial impacts on Registered Investment Schemes in New Zealand.

Managers may nevertheless explore different routes to provide estimates or ranges of potential financial impact, drawing on the examples and guidance provided by the TCFD (such as the examples adapted in Table 3), and the approaches described by HK SFC.

A further example is provided by Aviva, which illustrates the financial impacts of climate-related risk on its investments via reference to Climate Value-at-Risk (VaR), and other metrics such as Weighted average carbon intensity (WACI) and weather-related losses to gauge the potential future impacts of climate on investments (Figure 8).



Climate VaR Findings

Aviva has been reporting on this metric since 2018. Figure 4 compares a plausible range of outcomes (5th to 95th percentile) from our Climate VaR analysis for the different scenarios considered. Aviva's strategy is resilient to climate-related risks and opportunities in all scenarios.

Similar to last year, in all scenarios the impact on insurance liabilities is more limited than on investment returns. However, there is potential for some impact on life and pensions business as a result of changes in mortality rates in different scenarios either from physical effects such as more extreme hot and cold weather or transition effects related to changes in pollution levels. The impact on general insurance liabilities is relatively limited because of the short-term nature of the business and the ability to re-price annually and mitigation provided by our reinsurance programme. However, the physical effects of climate change will result in more risks and perils becoming either uninsurable or unaffordable over the longer term.

Figure 5a shows that, as to be expected, the proportion of transition risk reduces as we move to higher temperature pathways. Note that physical risk is present even in the transition scenarios.

Figure 5b shows the split of climate-related risks and opportunities to Aviva; credit, equity and sovereign risks are the largest components.

4°C insights:

Aviva is most exposed to the 4°C scenario where physical risk dominates, negatively impacting long-term investment returns on equities, corporate bonds, real estate, real estate loans and sovereign exposures.

1.5 - 2°C insights:

The aggressive and strong mitigation 1.5°C and 2°C scenarios are the only scenarios with potential upside.

Physical risk impacts are more limited in our analysis, but there is still downside risk on long-term investment returns from carbon intensive sectors (for example utilities) as a result of transition policy actions. This is offset, partially, by revenues on new technologies from some sectors (for example automotives).

Our results show there is a clear benefit in terms of keeping temperature rises below 2°C.

There is an inherent uncertainty in the modelling as well as a sensitivity to underlying methods and assumptions. It is also the case that many of the socio-ecological benefits and the reduced risk of reaching climate tipping points in a 1.5°C scenario are not captured in this analysis. Furthermore, maintaining an option on limiting warming to 1.5°C means targeting it now[1].

Figure 4: Aviva's Climate VaR output by scenario for shareholder funds as at 31/12/2021. Source: Aviva

Figure 5a: Transition versus physical risk by scenario for Aviva's shareholder funds as at 31/12/2021. Source: Aviva

Figure 5b: Proportion of Climate VaR aggregated impacts split by asset type for Aviva's shareholder funds as at 31/12/2021. Source: Aviva

Figure 8: The Climate VaR impacts of different physical and transition scenarios on Aviva's investments (Aviva, 2021, p.25, with further information on relevant metrics provided on p.56))

Another approach is that employed by BNY Mellon, which illustrates the potential financial impacts of climate-related risks and opportunities as percentage changes in equity values under alternate scenarios of climate-induced stress (Figure 9).

		Change in equity value for sections of investment portfolio		
		Scenario A Transition/Physical	**Scenario B Transition/Physical**	**Scenario C Transition/Physical**
Extraction	Gas/Coal/Oil	-45%	-40%/-5%	NA/-20%
Generation	Gas/Coal/Oil	-65%	-55%/-5%	NA/-20%
Transport	Automotive/ Marine/ Aviation	-30%/NA	-18%/-5%	NA/-10%
Energy Intensive	First order processing of chemicals, cement, iron etc.	-35%/NA	-25%/-10%	NA/-20%
Agriculture	Agriculture, forestry, fishing etc.	-65%/-5%	-50%/-10%	NA/-20%
Real Estate	Change in property value	-20%/NA	NA/-30%	NA/-60%
Sovereigns & Municipal Bonds	Credit Rating downgrades	-20bp	-30bp	-20bp

Figure 9: BNY Mellon followed Bank of England Prudential Regulation Authority guidance to assess the financial impacts of climate-related risks and opportunities on equity values in investment portfolios (BNY Mellon, 2021, p.18).

Over time, quantitative analysis of potential financial impacts on the part of MIS Managers will likely become the norm, as the quality and breadth of data disclosed by their investees improves.

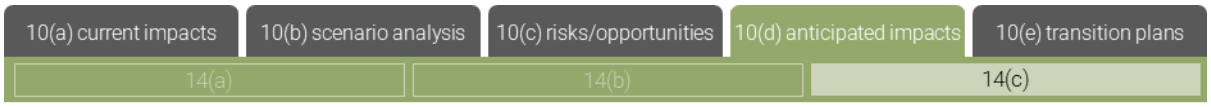
☺ First-time adoption relief is available for this disclosure (see **NZ CS 2**).

Publisher	Year	Source	Pages
TCFD	2021	Guidance on Metrics, Targets, and Transition Plans	**p.48-51**
HK SFC	2021	Circular to licensed corporations Management and disclosure of climate-related risks by fund managers – Appendix 2:	**p.6-7**
Aviva	2021	Climate-related financial disclosure	**p.25**
BNYMellon	2021	Considering Climate at BNY Mellon	**p.18**

Table 3: The anticipated financial impacts of climate-related risks and opportunities on financial performance and position (Adapted from TCFD, 2021, p.49-51)

Anticipated financial impacts of climate-related risks and opportunities relevant to MIS Managers (in respect of the scheme(s) they manage)
increases in revenue from climate opportunities / new climate-related investment products, funds or schemes;
changes to operating cash flow from changes in costs associated with managing a given scheme;
changes to the value of financial assets due to exposure to physical and transition risks;
changes to the expected portfolio value given climate-related risks and opportunities; and
changes in liability and equity due to increases or decreases in asset values (e.g., due to low-carbon capital investments or to sale or write-offs of stranded assets).

2.6.2 Anticipated impacts: Disclosure 14(c)



Disclosure 14(c): *if the entity is unable to disclose quantitative information for paragraph 14 (b), an explanation of why that is the case*

Primary users are likely to seek financial bottom-line information which facilitates a ready comparison between different investment propositions. However, where quantitative financial impact data cannot be reliably sourced, primary users will see the value in qualitative, descriptive information, providing they feel confident regarding the rigour and transparency of the MIS Manager's efforts to provide it.

Managers should provide a brief description of the process they have followed in attempting to quantify the financial effects of the anticipated climate-related impacts facing their scheme. There are undoubtedly ambiguities and complexities to navigate in doing so, particularly in attempting to calculate future financial impacts. Explaining to a primary user what was considered, why its quantification is challenging, and how these challenges might be overcome in support of subsequent disclosures, may well assuage their concerns.

Publisher	Year	Source	Pages
ISSB	2022	Exposure draft: [Draft] IFRS S2 Climate-related Disclosures[2]	**p.37**

[2] Note that this is an exposure draft. This content may change in the final standard. Links may change

2.5. Transition plans: Disclosure 10(e)

Disclosure 10(e): *a description of how it will position itself as the global and domestic economy transitions towards a low-emissions, climate-resilient future state (see 15 (a) – (c))*

This disclosure provides an opportunity for MIS Managers to communicate their future climate resilience to primary users.

An MIS Manager should describe how they will position their scheme(s) to thrive in a world which is attempting to rapidly reduce its emissions and adapt to the unavoidable consequences of climate change which will result from GHG emissions already in the atmosphere. This transition will pose significant challenges for many entities that MIS Managers may invest in. Primary users will likely seek reassurance that an MIS Manager has a strategic view of how to enhance the climate resilience of the scheme(s) under their management.

The information provided in response to disclosures 15(a) – (c) forms the basis of disclosure 10(e). Preparers must add any additional information describing how it will position itself as the global and domestic economy transitions towards a low-emissions, climate-resilient future state which they believe will be material to a primary user.

Publisher	Year	Source	Pages
TCFD	2021	Guidance on Metrics, Targets, and Transition Plans	**p.39-44**

2.7.1 Transition plans: Disclosure 15(a)

Disclosure 15(a): *description of its current business model and strategy*

Primary users will want to understand in general, high-level terms what an MIS Manager's business model and strategy is. This contextualises the disclosures to follow that illustrate *how* the MIS Manager may change its business model and strategy in response to climate change, allowing primary users to make better informed judgements regarding those statements.

The terms business model and strategy must be interpreted differently by MIS Managers than other entities, as MIS Managers need only disclose their business model and strategy in respect of the scheme(s) they manage.

The term **business model** should be read in respect of the scheme. The term is capturing how the MIS Manager creates value with their investment scheme(s), which has subsequent implications for the MIS Manager's exposure to the impacts of climate change. This information is often covered by what an MIS Manager discloses in the description of their scheme(s), investment philosophy and investment process sections of the SIPO (including such factors as whether it is active/passive, multi-manager, etc.). However, some supplemental information and concise summarising may be necessary.

The term **strategy** should be interpreted to refer to the MIS Manager's *investment strategy* first and foremost, whether operative at scheme level or specific to individual funds. The investment strategy may be clearer for primary users if it can be read in the context of the broader strategy of the MIS Manager (as a corporate entity), particularly if the MIS Manager has an overarching climate strategy to align with.

Publisher	Year	Source	Pages
TCFD	2021	Implementing the Recommendations of the TCFD	**p.45**
EU	2019	Guidelines on reporting climate-related information	**p.13-14**

2.7.1 Transition plans: Disclosure 15(b)

Disclosure 15(b): *the transition plan aspects of its strategy, including how its business model and strategy might change to address its climate-related risks and opportunities*

With the climate crisis now a mainstream topic of concern, expectations have arisen that entities will inform their stakeholders about the role they will play in reducing the level of climate-related risks facing present and future generations. For investors, this expectation is expressed as a demand for credible transition plans among those they invest in.

Primary users of this disclosure will therefore seek evidence that an entity's statements in regard to their transition toward a low-emissions, climate resilient future state are consistent with the entity's core business model and strategy, and that it's stated aspirations are backed by concrete actions.

This disclosure also provides primary users with information about the options available to an entity in response to the climate-related risks and opportunities it has identified as having a material impact on its business model and strategy. Primary users will be looking for evidence of optimal flexibility in the

face of uncertain future change, represented by the strategy and business model options that the entity envisions as feasible to pursue as circumstances demand.

In the context of MIS Managers, the XRB are aware that preparing a transition plan in respect of managed investment scheme(s) is a different undertaking. MIS Managers will require targeted guidance, which is currently under development. What follows is guidance on transition planning of a more generic nature which may be useful for MIS Managers to engage with in the interim.

Transition plans

A transition plan is an aspect of an MIS Manager's strategy that sets out how the Manager will position their scheme(s) as the global and domestic economy transitions towards a low-emissions, climate resilient state.

The development of transition plans is a rapidly evolving field. Examples of asset managers engaging in transition planning are beginning to emerge, and investment-oriented transition guidance is becoming mainstream. New insights are informing new standards, expectations, benchmarks, and guidance from groups such as the TCFD, the International Sustainability Standards Board (ISSB), UK Transition Plan Taskforce (TPT), Glasgow Financial Alliance for Net Zero (GFANZ), Climate Action 100+, Investor Group on Climate Change (IGCC), and in New Zealand, the Climate Leaders Coalition (CLC). The most relevant guidance for MIS Managers is that developed by GFANZ in relation to financial institutions, which contains a number of examples of asset manager transition plans. MIS Managers can also refer to the IGCC's recently updated Investment Climate Action Plans Guidance and the Net Zero Asset Managers' Initiative Commitment for further illustrations of how asset managers globally are engaging with the subject of transition planning.

KEY GUIDANCE TO HAVE REGARD TO	
1 Listed issuers	• IGCC investor expectations • CLC Member statement guidance • TCFD guidance on Metrics, Targets and Transition Plans
2 Banks, insurers, credit unions and building societies	• GFANZ guidance for financial institutions • CLC Member statement guidance • TCFD guidance on Metrics, Targets and Transition Plans

Early approaches to transition planning tended to envision transition as solely an emissions reduction issue, excluding or minimising the role of physical risk, adaptation, and resilience. This in turn requires the creation of additional, separate adaptation plans, creating additional resourcing and administrative overheads while introducing the risk that two potentially disconnected or even mutually exclusive plans are developed.

To overcome these issues, both an MIS Manager's emissions reduction and climate-resilience aspirations for their scheme(s) fall within the definition of transition planning. Under NZ CS 1, a 'transition plan' is defined as: *"An aspect of an entity's overall strategy that describes an entity's targets and actions for its transition towards a low-emissions, climate-resilient state."* An MIS Manager should note that this definition broadens the scope of what a transition plan should cover, removing the need for the development of separate adaptation considerations in their investment strategy processes.

Primary users will likely expect the following content under this framing of transition plans, noting that this has been drafted envisaging an entity wide transition:

Category	Illustrative content (adapted from GFANZ, IGCC and CLC)
Foundations – objectives and targets	• Its overall position on climate (aspirations with respect to emissions reduction, resilience enhancement, climate leadership, etc.) • Its support for a just transition to a low emissions, climate resilient global and domestic economy • In relation to emissions reduction targets, the expectation is that these are aligned with a 1.5°C emissions reduction pathways, national and sectoral emissions reduction pathways and cover interim targets.
Implementation	• Emissions reduction and adaptation action identification, prioritisation, and decision points • Business model and strategy, including innovation and options for change • Products and services, including innovation and options for change • Integration of transition planning with budget, capital allocation and long-term financial planning processes
Engagement	• Engagement with value chain, industry peers and public sector stakeholders • For financial institutions, engagement with portfolio companies
Metrics & Targets	• Metrics and targets to assess and monitor progress towards net-zero, climate resilience objectives
Governance	• Development of transformational skills and culture • Roles, responsibilities, support for implementation and remuneration

An important component of transition planning is the extent to which an MIS Manager's **business model and strategy** might change to enable the achievement of its transition targets and objectives. The MIS Manager should describe any options to enhance the resilience of its business model and strategy that it sees as feasible to implement, over what timescale, and where possible, under which conditions it will make choices between them. This disclosure may draw on elements of the transition plan, drawing specific attention to how the MIS Manager intends to leverage the plans to optimise its business model and strategy in response to climate-related risks and opportunities.

First-time adoption relief is available for this disclosure (see **NZ CS 2**).

Publisher	Year	Source	Pages
TCFD	2021	Guidance on Metrics, Targets, and Transition Plans	**p.39-44**
UK TPT	2022	A Sector-Neutral Framework for private sector transition plans: Call for Evidence	**p.10-22**
GFANZ	2022	Recommendations and Guidance: Financial Institution Net-zero Transition Plans	**p.19-101**
CA100+	2021	Climate Action 100+ Net Zero Company Benchmark v1.1	**p.1-6**
IGCC	2022	Corporate climate transition plans: a guide to investor expectations	**p.6-16**
CLC	2022	Statement of Ambition Information for Sustainability Practitioners	**p.12-13**

2.7.1 Transition plans: Disclosure 15(c)

Disclosure 15(c): *the extent to which transition plan aspects of its strategy are aligned with its financial planning processes, including for capital deployment and funding*

Primary users will want information that illustrates the extent to which an MIS Manager's statements regarding transition planning are backed by clear linkages to:

- financial planning,
- capital deployment and
- future funding, particularly where they involve additional outlay, such as the development of additional internal skillsets, resources, methods or tools to enable the realisation of the Manager's transition objectives.

Given ongoing concerns regarding greenwashing in the corporate and financial sectors, an MIS Manager which is unable to demonstrate alignment between its transition planning and its core financial plans may risk having its transition plan statements disregarded by primary users.

Preparers should disclose what linkages, *if any*, exist between their transition plans and their core financial planning processes. Any information supporting commitments in capital deployment or funding should be made explicit.

First-time adoption relief is available for this disclosure (see **NZ CS 2**).

Publisher	Year	Source	Pages
TCFD	2021	Guidance on Metrics, Targets, and Transition Plans	**p.40-43**

3. Risk Management

The objective of the risk management disclosures is to enable primary users to understand how an entity's climate-related risks are identified, assessed, and managed and how those processes are integrated in existing risk management processes.

Risk Management disclosures made by MIS Managers in respect of their registered investment scheme will differ from the risk management processes (and disclosures) made by corporate entities. The latter typically have Enterprise Risk Management frameworks within which climate-related risks are expected to be integrated. MIS Managers will instead need to approach the identification, assessment, and management of climate-related risks within their scheme(s), integrating this process with the identification, assessment and management of other material investment risks.

The Monetary Authority of Singapore (2020, p.8) recommend that asset managers incorporate these types of risk management processes as a mainstream, on-going aspect of investment management:

> *"Asset managers should put in place appropriate processes and systems to monitor, assess and manage the potential and actual impact of environmental risk on individual investments and portfolios on an ongoing basis, where material. Should there be developments (such as occurrences of natural disasters and changes in regulations) that could materially affect the operations and financials of an investee company, an asset manager should re-assess the risk and return profile of the investment or portfolio. This would allow the asset manager to make an informed decision on whether to continue with the investment, make adjustments to the composition of the portfolio, or put in place other mitigating measures to better manage the environmental risk in the investment or portfolio. The asset manager should also escalate these material environmental risk exposures and exceptions in accordance with its internal escalation process to ensure appropriate and timely actions are taken to address the risk."*

The TCFD and CFRF also point out that there are useful crossovers between some of the tools and methods which are used in support of strategy disclosures and those that contribute to the identification and analysis of climate-related risk. Adopting a coherent, integrated approach to their use is therefore advisable and may streamline the resourcing and cost involved in preparing disclosures.

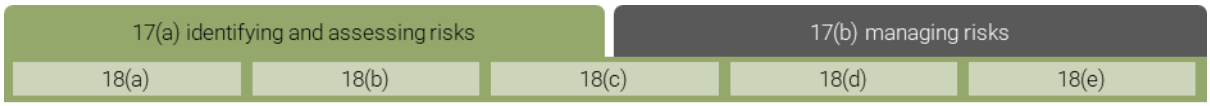
While each MIS Manager will have different challenges to overcome in moving toward risk management processes capable of accommodating climate-related risks, the disclosures set out under NZ CS 1 provide ample opportunity to illustrate how they have done so. The CFRF observe that "a common approach is to perform a materiality assessment and initially focus on a small set of risks with scope and sophistication increasing over time" (CFRF 2020, p.3).

Publisher	Year	Source	Pages
MAS	2020	Guidelines on environmental risk management (asset managers)	**p.8**
CFRF	2020	Climate Financial Risk Forum Guide – Risk Management Chapter	**p.3**

Navigating the Risk Management disclosures

There are two over-arching disclosures in the Risk Management section of NZ CS 1. One, 17(a), contains sub-disclosures. The disclosures are structured as follows:

Identifying and assessing risks (p.40):



Disclosure 17(a): a description of its processes for identifying, assessing, and managing climate-related risks (see 18(a) – (e))

- **Disclosure 18(a):** the tools and methods used to identify, and to assess the scope, size, and impact of, its identified climate-related risks
- **Disclosure 18(b):** the short-term, medium-term, and long-term time horizons considered, including specifying the duration of each of these time horizons
- **Disclosure 18(c):** whether any parts of the value chain are excluded
- **Disclosure 18(d):** the frequency of assessment, and
- **Disclosure 18(e):** how it prioritises climate-related risks relative to other types of risks

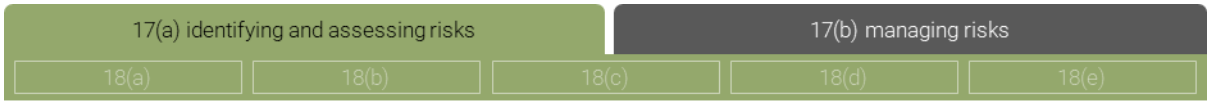
Managing risks (p.46):

Disclosure 17(b): a description of how its processes for identifying, assessing, and managing climate-related risks are integrated into its overall risk management processes

Guidance specific to each disclosure is provided in the following section.

Before reading further, preparers should engage with the TCFD's primary guidance resources on Risk Management. These provide readers with an awareness of the unique characteristics of climate-related risks, an introduction to the various tools and approaches available to help identify and assess climate related risks, and insight into what is involved in integrating those risks within broader risk management frameworks. Our guidance to follow either explicitly refers to this material or will be more readily contextualised where preparers have a prior understanding of the fundamentals of climate-related risk management that the TCFD material provides.

3.1. Identifying and assessing risks: Disclosure 17(a)



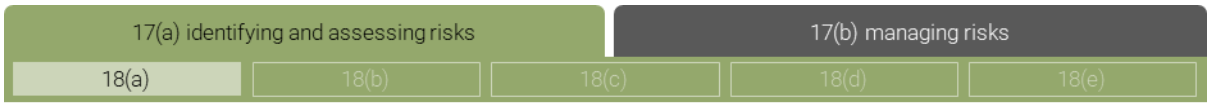
Disclosure 17(a): *a description of its processes for identifying, assessing, and managing climate-related risks (see 18(a) – (e))*

For an MIS Manager, the climate-related risks referred to in this disclosure effectively relate to their existing and potential investees. Primary users will want to understand how the MIS Manager goes about identifying, assessing, and managing the levels of climate-related risks within their scheme(s).

The information provided in response to disclosures 18(a) – (e) forms the basis of disclosure 17(a). Preparers must add any additional information describing the entity's processes for identifying, assessing, and managing climate-related risks that they believe will be material to a primary user.

Publisher	Year	Source	Pages
TCFD	2020	Guidance on risk management integration and disclosure	**p.1-5**
TCFD	2021	Implementing the Recommendations of the TCFD	**p.47**

3.3.1 Identifying and assessing risks: Disclosure 18(a)



Disclosure 18(a): *the tools and methods used to identify, and to assess the scope, size, and impact its identified climate-related risks*

Primary users will view the tools and methods MIS Managers have used as a contributing factor in their evaluation of whether climate-related risks have been identified and assessed robustly. Subsequent risk management disclosures will illustrate for primary users how comprehensively a given tool or method has been applied by an MIS Manager.

The CFRF provide guidance on financial market risk identification, assessment and monitoring in its 2020 Risk Management chapter (p.34-35). Key points to note include the CFRF's statement that "climate risks can be relevant to a variety of sectors and can directly impact equity values, credit spreads, commodities, interest rates, foreign exchange, bond prices and all other associated market parameters" (p.34). The CFRF also draw attention to the assessment and monitoring of climate-related risks on assets and markets via reference to metrics. An MIS Manager should account for the limitations of metrics such as Scope 1, 2, and 3 emissions, portfolio carbon intensity, or climate 'value at risk' (VaR). Data underpinning their analysis are typically scarce and will likely remain so until climate-related disclosures have been in place for a sufficient length of time to provide a solid baseline. Additionally, these metrics are 'proxies', and often backwards looking, giving a limited window on the true level of risk the asset or market is exposed to.

CFRF guidance on financial market risk positions portfolio (or scheme)-level analysis at the intersection of top-down and bottom-up perspectives (referred to in Disclosure 12, Figure 2), specifically referring to scenario analysis that incorporates modelling of asset level risk and the implications of climate-related macroeconomic change as the primary tool of financial market risk identification..

The CFRF also provide a database of climate risk data providers tools and methodologies, while the United Nations Environment Program Finance Initiative (UNEP FI) provided a comprehensive guide to climate-related financial risk assessment methodologies in 2021, followed up by a supplement offering implementation case study insights in 2022.

The TCFD also provide a more broadly scoped overview of risk identification and assessment tools (adapted in Table 4 below). These can provide MIS Managers with an understanding of the range of tools and methods on offer to address the uniquely challenging characteristics of climate-related risks.

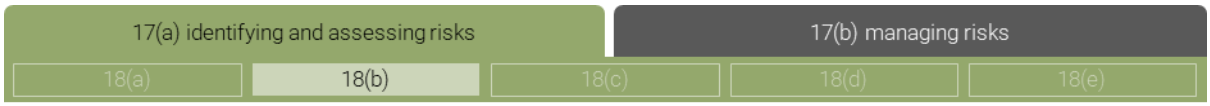
Publisher	Year	Source	Pages
TCFD	2020	Guidance on risk management integration and disclosure	**p.12-17**, **42-45, 5**
UNEP-FI	2021	The Climate Risk Landscape: A comprehensive overview of climate risk assessment methodologies	

Table 4: An overview of tools and methods of climate risk identification, analysis, and response (Adapted from TCFD 2020, p.43-44). Scenario analysis is often highlighted as a key risk identification tool and is a useful means of encouraging structured exploratory thinking on how risks might emerge, evolve, and intersect. Where data are limited and uncertainty unavoidable, scenario analysis may be one of the only tools available to help entities to think through the implications of risk in a structured manner.

Tools/ methods	Description	Application	Risk process:		
			Identify	Assess	Respond
Scenario analysis	A process for identifying and assessing potential implications of a range of plausible future states under conditions of uncertainty	Explore and develop an understanding of how climate-related risks and opportunities might plausibly impact an entity over time	✓	✓	✓
Stakeholder Engagement	A means of obtaining input for decision making from those parties who may be affected by the decision or have knowledge that may inform the decision	Seek insight from a range of stakeholders within and outside a company (e.g., management executives, suppliers) who can provide feedback on changing conditions and potential impacts associated with climate-related risks	✓	✓	✗
Delphi Method	Structured communication method for eliciting information and opinions from experts	Conduct interviews or collect expert input from business leaders, actuaries, insurers, meteorologists, oceanographers, climate, and atmospheric scientists	✓	✓	✗
Economic Scenario Generator	Models that simulate possible future states of economies and financial markets based on risk factors to identify unexpected but plausible outcomes	Test valuation models under a broad range of possible economic and financial conditions (e.g., considering climate change and socioeconomic factors)	✓	✓	✗
Forecasting	An approach for predicting the impact of a future event based on past and present data	Use historical data and lookback studies to understand previous climate-related impacts to inform estimates of potential future impacts, changing key parameters (e.g., frequency, duration, intensity) within plausible ranges	✓	✗	✗
Hazard Maps	Location-level information on the extent or severity of perils using assumptions on the frequency, severity, and location parameters of primary events and dependencies with secondary perils	Present peril event scenarios based on current and potential future states considering the impact from climate change, which will result in different frequency and severity of events affecting certain locations	✓	✓	✗

Tools/ methods (cont.)	Description	Application	Risk process: Identify	Assess	Respond
Probabilistic Modelling	*General models.* Systems modelling involving probabilistic inputs, processes, and outputs	Numerical weather and climate predictions that allow a representation of uncertainties, a reduction of systematic biases, and improved representation of long-term climate variability	✓	✗	✗
	Catastrophe Models. Probabilistic models based on deep understanding of the physical parameters that define a natural hazard (e.g., wind speeds) and characteristics of the exposures (e.g., location)	Estimate potential losses from natural catastrophes	✓	✓	✓
Sensitivity Analysis	Statistical analysis that examines the change in a desired output relative to a change in input parameters	Analyse a company's sensitivity to changing climate-related conditions (e.g., carbon or commodity prices or demand)	✓	✗	✗
Simulation	Use of models to imitate a situation many times to estimate the likelihood of various possible outcomes (e.g., Monte Carlo method)	Assess the likelihood or propensity of different climate-related scenario pathways accommodating multiple variables and parameters	✓	✗	✗
Horizon Scanning	Systematic and proactive approach to risk identification based on available information	Identifying various climate-related risk types across different spatial and temporal scales	✓	✗	✗

3.3.2 Identifying and assessing risks: Disclosure 18(b)



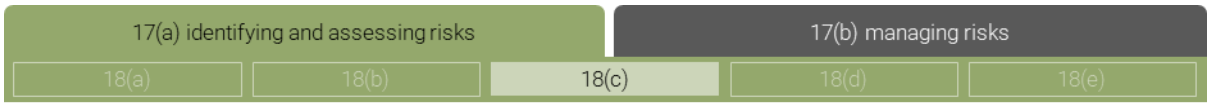
Disclosure 18(b): *the short-term, medium-term, and long-term time horizons considered, including specifying the duration of each of these time horizons*

The issue that primary users are seeking insight on from this disclosure is how the complex, frequently long-term risks of climate change are being integrated within an MIS Manager's wider risk management frameworks. Climate-related risks which are manifest over timescales exceeding BAU risk management processes and time horizons (for instance, beyond 5-10 years) may be of particular concern for primary users with long-term investment aims, unless an entity can illustrate how longer-term factors will enter their risk calculus to inform decisions taken in the short to medium term.

MIS Managers will already have nominated the timeframes they view as appropriate for the analysis of climate-related risks (and opportunities) under disclosure 13(a). Taking a coherent approach to the handling of time-horizons for these analyses is advisable, as continuity between the timeframes nominated in disclosures 13(a) and 17(b) will facilitate the integration of the entity's risk identification and management within strategic investment processes..

Publisher	Year	Source	Pages
TCFD	2020	Guidance on risk management integration and disclosure	**p.12**

3.3.3 Identifying and assessing risks: Disclosure 18(c)



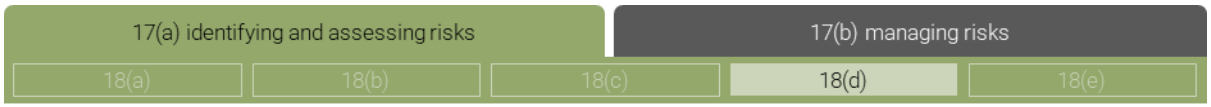
Disclosure 18(c): *whether any parts of the value chain are excluded*

'Value chain' considerations for an MIS Manager's primary users relate to those of the scheme(s) investees. At this stage it is unclear to what extent primary users expect MIS Managers to explore value chain risks among investee entities, but there is likely to be primary user interest in exploring the higher-level value chain implications for sectors (for instance utilities, mining, transport). A typical approach involves exploration of investee Scope 1 and 2 emissions, moving on to Scope 3 when feasible.

MIS Managers should disclose the extent to which value chain considerations enter their climate-related risk identification and assessment processes.

Publisher	Year	Source	Pages
HK SFC	2021	Appendix 2: Sample industry practices for managing climate-related risks	**p.6-7**
MAS	2020	Guidelines on environmental risk management (asset managers)	**p.8-9**

3.3.4 Identifying and assessing risks: Disclosure 18(d)



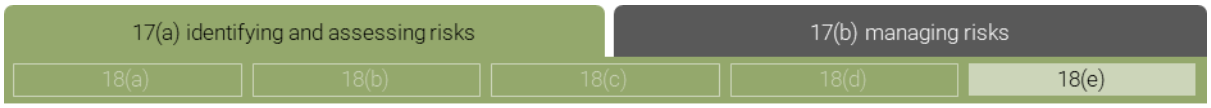
Disclosure 18(d): *the frequency of assessment*

The TCFD describes processes for the integration of climate-related risk in entity risk management processes as iterative (TCFD 2020, p.8), requiring review and revision on a regular frequency to maintain relevance and currency. Primary users want to know how entities have interpreted this in the context of their own risk management processes.

An MIS Manager should disclose the frequency at which their climate-related risk assessment process is undertaken.

Publisher	Year	Source	Pages
TCFD	2020	Guidance on risk management integration and disclosure	**p.8-12**

3.3.5 Identifying and assessing risks: Disclosure 18(e)



Disclosure 18(e): *how it prioritises climate-related risks relative to other types of risks*

Primary users are looking for insight into the relative prioritisation of climate related risks by the entity in its wider risk consideration. There are likely to be some sectors and entities in the economy which face climate-related risk exposure more than others, and primary users will likely want to see climate-related risk prioritisation differentiated accordingly.

An MIS Manager should disclose the method or approach they adopt to prioritise climate-related risks relative to other investment risks. One consideration that an MIS Manager may find useful is the TCFD's risk integration principle of 'proportionality', which states that: "the integration of climate-related risks into existing risk management processes should be proportionate in the context of the company's other risks, the materiality of its exposure to climate-related risks, and the implications for the company's strategy."

Publisher	Year	Source	Pages
TCFD	2020	Guidance on risk management integration and disclosure	**p.7**

3.2. Managing risks: Disclosure 17(b)

17(a) identifying and assessing risks | 17(b) managing risks

Disclosure 17(b): *a description of how its processes for identifying, assessing, and managing climate-related risks are integrated into its overall risk management processes*

The climate-related risk processes of disclosure 17(b) are likely to be implemented via an entity's existing risk management processes and practices. An MIS Manager should describe how climate-related risk identification, assessment and management is integrated within these existing processes and practices.

An example of the integration of climate-related risks in investment risk management is the approach taken by AllianceBernstein (2020, p.4):

> *"Climate risks and opportunities can have a sizable impact on performance, so we focus intently on integrating them into our research and investing process. Our fundamental analysts and economists assess climate risk for equity and debt issuers, reviewing climate strategy, potential environmental liabilities, GHG emissions, and the political and regulatory backdrop. If aspects of an issuer's past, current or expected climate-related risks or behaviours are material to its future expected returns, analysts incorporate them into research reviews, short-, medium- and long-term forecasts of risks and opportunities, and ultimately, investment decisions. AB's portfolio managers ensure that climate risks and opportunities are appropriately assessed in the context of their specific investment strategies, some of which focus on identifying issuers with innovative products and services that will make a positive impact in adapting to, and mitigating, climate change."*

The types of investment processes that primary users are interested in seeing climate-related risk identification, assessment and management integrated into include:

- sector / asset class / company level / jurisdictional / asset selection and analysis
- investment manager (if outsourced) selection / review
- investment performance monitoring
- investment strategy development / review
- investment policy development / review; and
- SIPO setting / review.

Publisher	Year	Source	Pages
TCFD	2020	Guidance on risk management integration and disclosure	**p.7, 15-16, 38**
AB	2020	AB'S climate change/TCFD statement	**p.4**
CFRF	2020	Climate Financial Risk Forum Guide – Risk Management Chapter	**p.8-9**

4. Metrics and Targets

The objective of the Metrics and Targets disclosures is to enable primary users to understand how an entity measures and manages its climate-related risks and opportunities. Metrics and targets also provide a basis upon which primary users can compare entities within a sector or industry.

The metrics and targets used by an MIS Manager should inform, and be informed by, their governance, strategy and risk management processes. Over time, this will create a feedback loop in the same way that other key performance and risk indicators may feed into the Manager's investment management processes.

Climate-related metrics, and any associated narratives, should be integrated with an entity's other disclosures to provide a coherent set of information on the entity's climate-related risks and opportunities and current and anticipated financial impacts.

Climate related metrics are related to disclosures in the governance, strategy, and risk management sections.

Governance: Climate-related metrics enable an entity's governance body and management to direct the entity more effectively by measuring and describing the impacts of climate-related risks and opportunities on the entity — disclosures 6(b) and 6(c). Metrics are also essential for informing primary users about how management tracks and manages climate-related risks and opportunities. Climate-related metrics, such as remuneration, can show how directors and managers are incentivised to achieve climate-related objectives.

Strategy: Climate-related metrics are vital to measuring and describing the impact of climate-related risks and opportunities on an entity. These include current climate-related impacts – disclosure 10(a) — and the description of how it will position itself as the global and domestic economy transitions towards a low-emissions, climate-resilient future state — disclosure 10(e). Metrics also help an entity to monitor the effectiveness of the implementation of its strategy.

Risk Management: Climate-related metrics support the measurement of risk exposures and levels as part of an entity's broader risk management processes. Metrics can be incorporated into the processes for identifying, assessing and managing climate-related risks –disclosure 17(a) and how these are incorporated into its overall risk management processes – disclosure 17(b).

Metrics in the context of climate-related risks and opportunities

Metrics should be:

- decision useful
- clear and understandable
- reliable, verifiable and objective
- consistent over time

The TCFD note that it is helpful for preparers to disclose metrics consistently from year to year to facilitate comparative and trend analysis and to clearly identify the time horizon over which climate-

related metrics are measured. Metrics are most effective when the same item is reported across all time periods as shown in Figure 5.

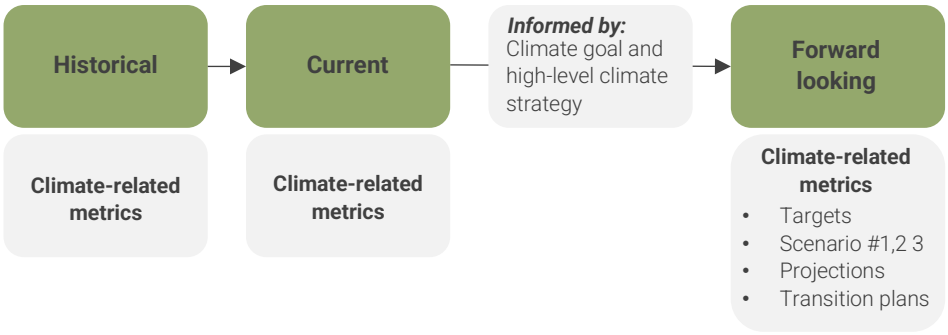


Figure 10: Time horizons for climate-related metrics (adapted from TCFD Metrics and Targets Guidance 2021, p.12)

Metrics can be presented as point estimates or ranges. Some may work well as figures or tables.

To support comparative analysis, metrics should be presented with results for the previous reporting period(s) where appropriate (see **NZ CS 3** Comparatives). A comparative analysis is useful where it:

- analyses the main trends evident from a comparison of entities results from the previous to the current reporting period
- cross-refers to targets, baselines and other criteria used for analysing performance, and
- explains significant changes in results from one period to another

The type of comparative analysis that is encouraged includes, where appropriate, a description of and explanation for:

- Any significant changes to performance, impacts, or unexpected results against targets due to:
  - Changes in the entity's strategy, policies and governance
  - Changes in the methodology or KPIs used for calculating results
  - Changes due to acquisitions, divestments, organic growth or decline, efficiency or process improvements, alterations to processes for collecting data, practices in satellite operations, missing data etc.
  - Changes in operating contexts, business relationships, or the entity's activities
- The extent to which forward-looking disclosures made in previous reporting periods have been borne out, including how and why the performance of the organisation is short of, meets or exceeds previously made forward-looking disclosures.

Primary users are also increasingly expecting to see metrics and targets used in the context of the transition plan, to set emissions reduction targets and then also to set other targets and use metrics to monitor progress. The general rule is that any metrics and targets used in the transition plan should also be disclosed under this section. Any metrics and targets disclosed under this section, however, do not need to be disclosed as part of the transition plan unless they are genuinely being used by the entity in that way. The minimum expectation from primary users is that transition plans include emissions reductions targets aligned with a 1.5 degrees emissions pathway.

Publisher	Year	Source	Pages
TCFD	2021	Guidance on Metrics, Targets and Transition Plans	**11-13**

Navigating the Metrics and Targets disclosures

There are four over-arching disclosures in the Metrics and Targets section of NZ CS 1. Two, 20(a) and 20(d), contain sub-disclosures. Disclosures 21(a) and 22(e) contain nested sub-disclosures. The disclosures are structured as follows:

Cross-industry metrics (p.50):

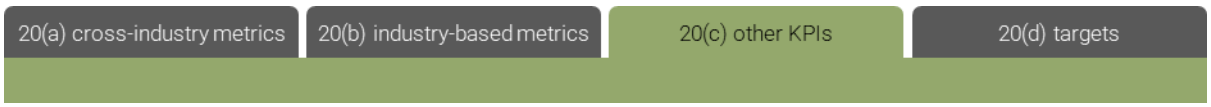
Disclosure 20(a): the cross-industry metrics, which are relevant to entities regardless of industry and business model (see 21(a) – (h)

- **Disclosure 21(a):** greenhouse gas (GHG) emissions: gross emissions in metric tonnes of carbon dioxide equivalent (CO_2^e) classified as: (see 23(a) – (c)): (i) Scope 1, (ii) Scope 2, (iii) Scope 3.
    - **Disclosure 23(a):** a statement describing the recognised standard or standards that the entity's GHG emissions have been measured in accordance with
    - **Disclosure 23(b):** the consolidation approach for emissions: whether equity share, financial control, or operational control
    - **Disclosure 23(c):** a summary of specific exclusions of sources, facilities and/or operations
- **Disclosure 21(b):** GHG emissions intensity
- **Disclosure 21(c):** transition risks: amount or percentage of assets or business activities vulnerable to transition risks
- **Disclosure 21(d):** physical risks: amount or percentage of assets or business activities vulnerable to physical risks
- **Disclosure 21(e):** climate-related opportunities: amount or percentage of assets, or business activities aligned with climate-related opportunities
- **Disclosure 21(f):** capital deployment: amount of capital expenditure, financing, or investment deployed toward climate-related risks and opportunities
- **Disclosure 21(g):** internal emissions price: price per metric tonne of CO_2^e used internally by an entity
- **Disclosure 21(h):** remuneration: management remuneration linked to climate-related risks and opportunities in the current period, expressed as a percentage, weighting, description or amount (see also paragraph 7(d)).

Industry-based metrics (p.62):

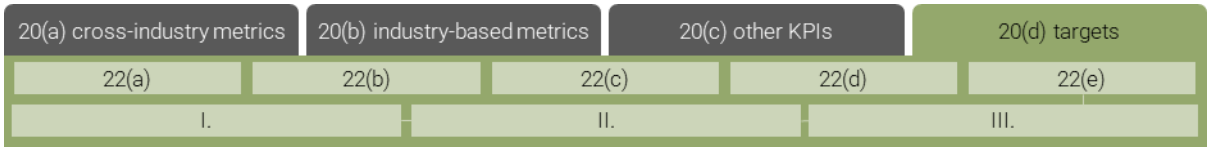
Disclosure 20(b): industry-based metrics relevant to its industry or business model used to measure and manage climate-related risks and opportunities

Other key performance indicators (p.63):



Disclosure 20(c): any other key performance indicators used to measure and manage climate-related risks and opportunities

Targets (p.63):

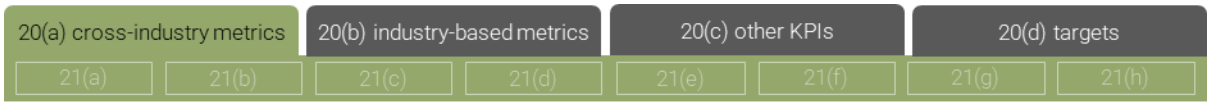


Disclosure 20(d): the targets used to manage climate-related risks and opportunities and performance against those targets (see 22(a) – (e))

- **Disclosure 22(a):** the time frame over which the target applies
- **Disclosure 22(b):** the associated interim targets
- **Disclosure 22(c):** the base year from which progress is measured
- **Disclosure 22(d):** a description of performance against targets
- **Disclosure 22(e):** For each GHG emission target:
    - **Disclosure 22(e) I.:** internal emissions price: price per metric tonne of CO_2^e used internally by an entity
    - **Disclosure 22(e) II.:** internal emissions price: price per metric tonne of CO_2^e used internally by an entity
    - **Disclosure 22(e) III.:** internal emissions price: price per metric tonne of CO_2^e used internally by an entity

Guidance specific to each disclosure is provided in the following section.

4.1. Cross-industry metrics: Disclosure 20(a)



Disclosure 20(a): *the cross-industry metrics, which are relevant to entities regardless of industry and business model (see 21(a) – (h)*

These metric categories are widely requested by primary users and provide key inputs for estimating financial impacts of climate change on entities.

These metric categories are widely requested by primary users and provide key inputs for estimating financial impacts of climate change on entities. An MIS Manager should consider using industry-specific metrics to satisfy cross-industry metric categories where possible. These metrics can be presented as point estimates or ranges. Some may work well as figures or tables.

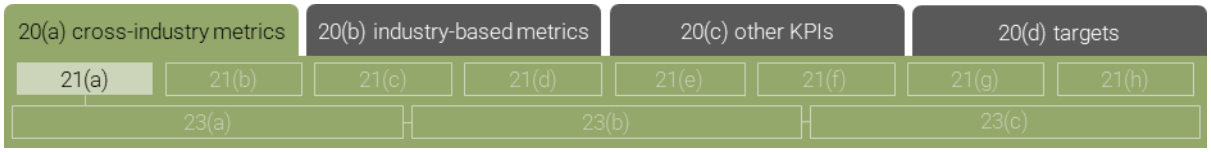
The information provided in response to disclosures 21(a) – (h) forms the basis of disclosure 20(a). Preparers must add any additional information describing their use of cross-industry metrics, which are relevant to entities regardless of industry and business model, that they believe to be material to a primary user.

Refer to [draft] **NZ CS 3**:

- General Requirements paragraphs 27 to 38 when considering whether disclosures for cross-industry metrics are material.

Publisher	Year	Source	Pages
TCFD	2021	Guidance on Metrics, Targets and Transition Plans	**14-28**

4.3.1 Cross-industry metrics: Disclosure 21(a)



Disclosure 21(a): *greenhouse gas (GHG) emissions: gross emissions in metric tonnes of carbon dioxide equivalent (CO_2^e) classified as: (see 23(a) – (c)):*

(i) Scope 1,
(ii) Scope 2,
(iii) Scope 3.

This disclosure provides primary users with information to understand where an MIS Manager has the greatest exposure to and, therefore greatest risk from, greenhouse gas emissions in their scheme(s).

Scope 3 emissions represent the largest source of emissions for MIS Managers and present the most significant opportunities to influence GHG reductions and achieve a variety of GHG-related entity objectives.

An MIS Manager reporting in respect of a scheme is unlikely to have material scope 1 and 2 emissions (as activities causing these emissions are unlikely to be carried out by the scheme). If there are no material scope 1 or 2 emissions, then this should be reported in the disclosures.

An MIS Manager must nevertheless consider the full value chain of the investment scheme when considering scope 3 emissions sources and report any categories which may be material to the primary user. Preparers are referred to both the GHG Protocol Corporate Standard and the GHG Protocol Value Chain (Scope 3) Standard to calculate their full value chain emissions.

MIS Managers measuring and disclosing emissions financed by loans and investments are referred to the PCAF Standard (2021).

Scope 3 emissions are value chain emissions and include both upstream and downstream sources (**Error! Reference source not found.**). The GHG Protocol includes 'investment' as one of its categories of s cope 3 emissions. ISO have four categories that equate to scope 3 emissions, the sub-categories for these are identified in Annex B of ISO 14064-1:2018. These sub-categories align closely with the GHG Protocol categories (see Table 5).

Preparers should note that this disclosure (and associated disclosures 23(a) – (c)) will be subject to assurance for reporting periods that end on or after 27 October 2024. Appendix C of the GHG Protocol's Corporate Value Chain (Scope 3) Standard provides an outline of a data management plan which can help entities prepare for an assurance engagement. Entities may wish to review reporting requirements for the GHG Protocol Corporate, GHG Protocol Value Chain (Scope 3) and/or ISO 14064-1:2018 and/or PCAF standards for guidance as to what might be required for internal record keeping and assurance purposes. A GHG emissions report is not required under this standard although an entity may choose to prepare one and make this publicly available.

The GHG Protocol Corporate Standard Chapter 7 covers managing inventory quality and The GHG Protocol Corporate Value Chain (Scope 3) Standard Appendix B covers Uncertainty in Scope 3 emissions. ISO 14064-1:2018 section 8.3 covers Assessing Uncertainty. The GHG Protocol has additional guidance and tools for assessing uncertainty on its website.

Refer to [draft] **NZ CS 3** for required disclosures for:

- comparative information, consistency or reporting, and restatement of comparatives
- methodologies, assumptions and estimation uncertainty.

First-time adoption relief is available for disclosure 21(a)(iii) covering Scope 3 GHG emissions (see **NZ CS 2**).

The XRB Board strongly encourages entities to start measuring their Scope 3 GHG emissions immediately. Beginning the measurement process will put entities in good stead for disclosing these emissions as part of their second year of reporting. As discussed above, for most entities, Scope 3 emissions are where their most significant emissions risks and opportunities lie. Obtaining a clear picture of the scale and scope of these emissions sources will greatly assist entities to understand their climate-related risks and opportunities and assist with transition planning.

First-time adoption relief is available for comparatives for metrics and analysis of trends (see **NZ CS 2**).

Publisher	Year	Source
PCAF	2021	The Global GHG Accounting and Reporting Standard for the Financial Industry
UN PRI	2022	Greenhouse gas accounting and reporting for the private equity sector
GHG Protocol	2015	Corporate Standard
GHG Protocol	2013	Value Chain (Scope 3 standard)
ISO	2018	ISO 14064-1:2018. Greenhouse gases — Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals

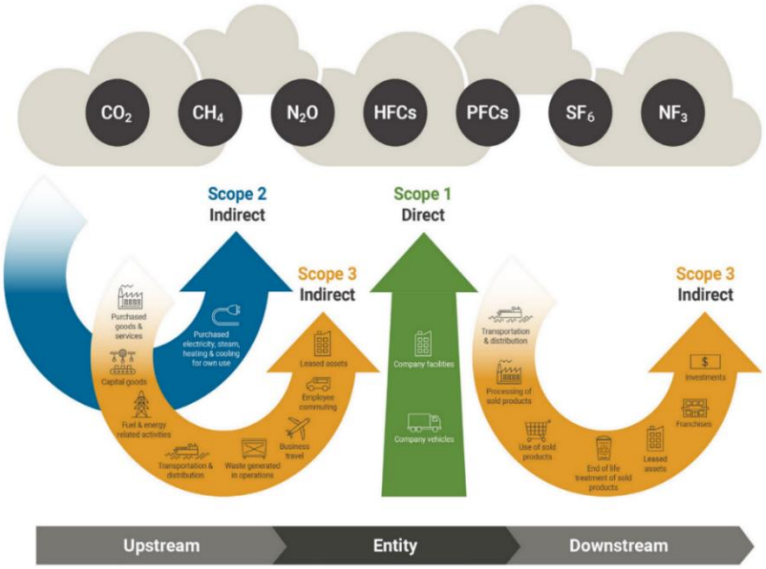
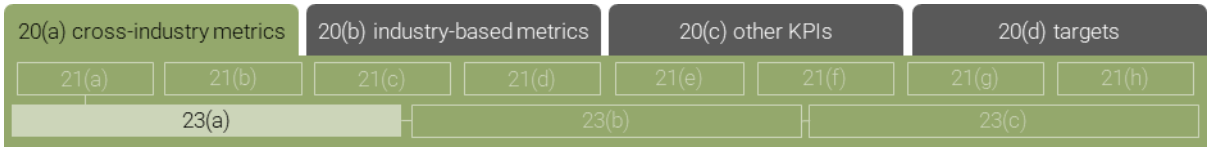


Figure 11: Overview of GHG Protocol scopes and emissions across the value chain (adapted from GHG Protocol)

Table 5: Comparison GHG Protocol scopes and categories with ISO categories and sub-categories

GHG Protocol Scope	ISO Inventory Category	ISO example sub-category (Annex B)	GHG Protocol
1	Direct GHG emissions	• Stationary combustion • Mobile combustion • Process • Fugitive • Land use, land use change, and forestry (LULUCF)	• Stationary combustion • Mobile combustion • Process • Fugitive • Land use, land use change, and forestry (LULUCF)
1	Direct GHG removals	• Process • Land use, land use change, and forestry (LULUCF)	• Process • Land use, land use change, and forestry (LULUCF)
2	Indirect GHG emissions from imported energy	• Electricity • Energy	• Electricity • Energy
3	Indirect GHG emissions from transportation	• Upstream transport and distribution for goods • Downstream transport and distribution for goods • Client and visitor transport • Business travel	4. Upstream transportation and distribution 9. Downstream transportation and distribution 7. Employee commuting 6. Business travel 3. Fuel- and energy-related
3	Indirect GHG emissions from products used by the organisation	• Purchased goods • Capital goods • Waste disposal (liquid and solid) • Equipment leased by reporting organisation • Services not described above	1. Purchased goods and services 2. Capital goods 7. Waste generated in operations 8. Upstream leased assets 1. Purchased goods and services
3	Indirect GHG emissions associated with use of products from the organisation	• Use stage of product • Downstream leased assets • End of life stage of product • Investments	11. Use of sold product 13. Downstream leased assets 7. End-of-life treatment of sold product 15. Investments 10. Processing of sold product
3	Indirect GHG emissions from other sources		14. Franchises

4.3.1(a) Cross-industry metrics: Disclosure 23(a)



Disclosure 23(a): *a statement describing the recognised standard or standards that the entity's GHG emissions have been measured in accordance with*

Primary users will expect GHG emissions to be measured in accordance with a recognised standard. A concise statement setting out the standards, frameworks and methodologies which the entity has used to prepare its GHG emissions report will serve this purpose. For example, 'Our emissions disclosures have been prepared in accordance with the Greenhouse Gas Protocol's Corporate and Scope 3 (Value Chain) Standards. We complied with the PCAF Financed Emissions Standard for our scope 3 financed emissions.'

Publisher	Year	Source	Pages
TCFD	2021	Guidance on Metrics, Targets and Transition Plans	**p.19**

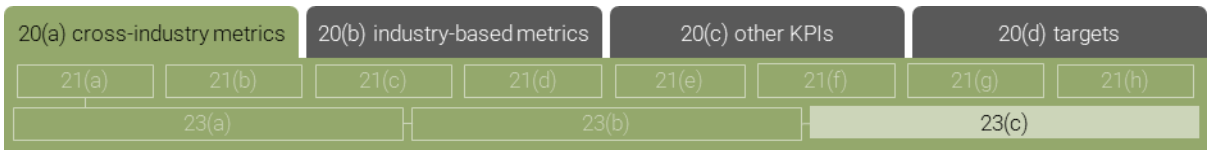
4.3.1(b) Cross-industry metrics: Disclosure 23(b)

Disclosure 23(b): *the consolidation approach for emissions: whether equity share, financial control, or operational control*

Primary users will expect transparency in how GHG emissions are consolidated. A sentence identifying which consolidation approach was used to calculate GHG emissions will serve this purpose.

Publisher	Year	Source	Pages
GHG Protocol	2015	Corporate Standard	**p.16-23**
ISO	2018	ISO 14064-1:2018. Greenhouse gases — Part 1	**p.7-8**

4.3.1(c) Cross-industry metrics: Disclosure 23(c)

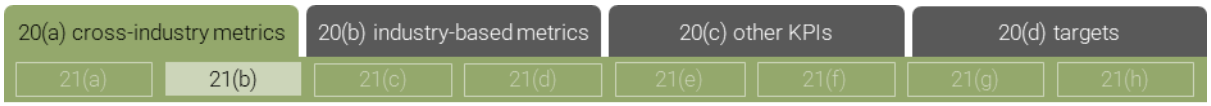


Disclosure 23(c): *a summary of specific exclusions of sources, facilities and/or operations*

Primary users will expect transparency regarding any exclusion of sources of GHG emissions. A concise summary of material exclusions of sources, facilities and/or operations will serve this purpose. An entity should consider providing a short explanation as to why these were excluded and any plans to include them in future.

Publisher	Year	Source	Pages
GHG Protocol	2015	Corporate Standard	**p.63, 40-47**
GHG Protocol	2013	Value Chain (Scope 3 standard)	**p.121, 59-63**
ISO	2018	ISO 14064-1:2018. Greenhouse gases — Part 1	**p.8-9, 15**

4.3.2 Cross-industry metrics: Disclosure 21(b)



Disclosure 21(b): *GHG emissions intensity*

Disclosing GHG emissions intensity information can provide a useful point of comparison for primary users between different managed investment schemes (where the same methodology for calculating the intensity is used).

This is a metric *category*. Emissions intensity metrics an MIS Manager could disclose include:

- Weighted average carbon intensity (WACI) for each scheme under their management
- Physical emissions intensity for each scheme under their management
- Economic emissions intensity for each scheme under their management

Intensity ratios express GHG emissions per unit of physical activity or unit of economic output. A physical intensity ratio is suitable when aggregating or comparing across entities that have similar products. An economic intensity ratio is suitable when aggregating or comparing across entities that produce different products. A declining intensity ratio reflects a positive performance improvement.

Intensity ratios are often called 'normalised' environmental impact data.

Examples of intensity ratios include:

- Weighted average carbon intensity (WACI) of investment portfolio
- Weighted average carbon intensity (WACI) of insurance premiums
- Physical emissions intensity for each investment portfolio
- Economic emissions intensity for each investment portfolio

Refer to [draft] **NZ CS 3** for required disclosures for:
- comparative information, consistency or reporting, and restatement of comparatives
- methodologies, assumptions and estimation uncertainty.

First-time adoption relief is available for comparatives for metrics and analysis of trends (see **NZ CS 2**).

Publisher	Year	Source	Pages
TCFD	2021	Guidance on Metrics, Targets and Transition Plans	**p.16, 61**
TCFD	2021	Implementing the Recommendations of the TCFD – Weighted average carbon intensity	**p.52**
PCAF	2021	The Global GHG Accounting and Reporting Standard for the Financial Industry	**p.102**
TCFD	2021	Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures	**p.49, 50, 52**

4.3.3 Cross-industry metrics: Disclosure 21(c)

Disclosure 21(c): *transition risks: amount or percentage of assets or business activities vulnerable to transition risks*

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

This is a metric category. An MIS Manager should use a metric which is commonly used in their sector.

An MIS Manager's investments can be vulnerable to several types of climate-related transition risks:

- policy, regulation and legal risks reflecting changes in policy and litigation action
- technology risk as emerging technologies impact the competitiveness of certain organisations
- market risk from changes to supply and demand, and
- reputational risks tied to changing customer or community perceptions.

Example metrics:

- Concentration of credit exposure to fossil-fuel-related assets
- Percent of investments in fossil fuel sector
- Percent of investments subject to direct ETS liabilities

Where an MIS Manager invests in an index, or otherwise has limited visibility of the degree of vulnerability to transition risk present within their scheme(s), this should be made explicit to primary users, with some explanation of the steps the MIS Manager has taken to manage the scheme(s) vulnerability to transition risk.

Refer to [draft] **NZ CS 3** for required disclosures for:

- comparative information, consistency or reporting, and restatement of comparatives
- methodologies, assumptions and estimation uncertainty.

First-time adoption relief is available for comparatives for metrics and analysis of trends (see **NZ CS 2**).

Publisher	Year	Source	Pages
TCFD	2021	Guidance on Metrics, Targets and Transition Plans	**p.21, 61**

4.3.4 Cross-industry metrics: Disclosure 21(d)

Disclosure 21(d): *physical risks: amount or percentage of assets or business activities vulnerable to physical risks*

Disclosure of the amount or extent of an MIS Manager's assets vulnerable to material climate-related physical risks allows primary users to better understand potential financial vulnerability regarding such issues as impairment or stranding of assets, effects on the value of assets and liabilities resulting from climate-related physical impacts.

This is a metric category. An MIS Manager should use a metric which is commonly used in their sector.

When considering the types of climate-related physical risks that an MIS Manager's investments might be vulnerable to, preparers should consider both:

- acute risks, such as storms, floods, and wildfires, that are event-driven and
- chronic risks, such as higher temperatures and sea-level rise, that refer to longer-term shifts in climate patterns.

In determining levels of vulnerability to physical risks within their scheme(s), MIS Managers should consider the climate-related hazards and exposures to those hazards facing their investees.

Physical risks will be specific to the geography where an investee is located, and partially determined by their likely exposure and degree of sensitivity to hazards. For example, certain assets may be most vulnerable to acute risks from storms or wildfires, while others are more at risk from chronic changes in average temperature, sea-level, or drought.

Example metrics:

- Number and value of mortgage loans in 100-year flood zones
- Investments in wastewater treatment capacity located in 100-year flood zones
- Investments associated with water withdrawn and consumed in regions of high or extremely high baseline water stress
- Proportion of property, infrastructure, or other alternative asset portfolios in an geography subject to flooding, heat stress, or water stress
- Proportion of real assets invested in which are exposed to 1:100 or 1:200 climate-related hazards

Where an MIS Manager invests in an index, or otherwise has limited visibility of the degree of vulnerability to physical risk present within their scheme(s), this should be made explicit to primary users, with some explanation of the steps the MIS Manager has taken to manage the scheme(s) vulnerability to physical risk.

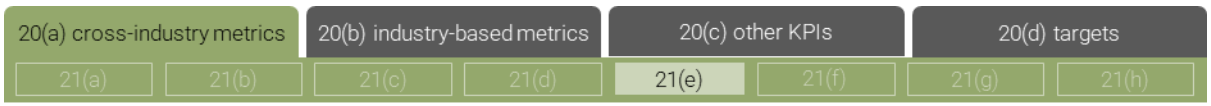
Refer to [draft] **NZ CS 3** for required disclosures for:

- comparative information, consistency or reporting, and restatement of comparatives
- methodologies, assumptions and estimation uncertainty.

First-time adoption relief is available for comparatives for metrics and analysis of trends (see **NZ CS 2**).

Publisher	Year	Source	Pages
TCFD	2021	Guidance on Metrics, Targets and Transition Plans	**p.21, 61**

4.3.5 Cross-industry metrics: Disclosure 21(e)



Disclosure 21(e): *climate-related opportunities: amount or percentage of assets, or business activities aligned with climate-related opportunities*

Disclosure of the proportion of investments aligned with climate-related opportunities provides insight into the climate-related position of an MIS Manager relative to their peers, and allows primary users to understand the extent to which the scheme(s) may be in a position to exploit likely climate transition pathways, and the potential changes in revenue and profitability these may carry over time.

This is a metric category. An MIS Manager should use a metric which is commonly used in their sector.

There are several categories of climate-related opportunities that an entity can capture.

There are several categories of climate-related opportunities that an MIS Manager can capture.

Examples include:

- Improved resource efficiency from reducing energy, water, and waste
- Energy sources that emit low or no GHG emissions
- New climate-resilient or low-emissions products and services
- The emergence of new markets

Example metrics:

- Percentage of investments related to energy efficiency and low-emissions technology
- Percentage of investments in products or services that support the transition to a low-emissions economy
- Percentage of investments in climate-resilient geographies or sectors

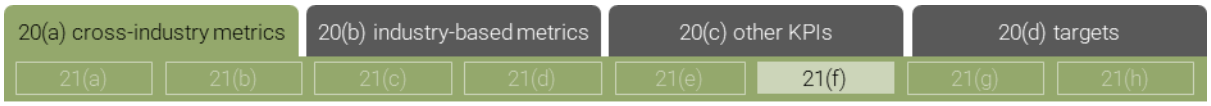
Refer to [draft] **NZ CS 3** for required disclosures for:

- comparative information, consistency or reporting, and restatement of comparatives
- methodologies, assumptions and estimation uncertainty.

First-time adoption relief is available for comparatives for metrics and analysis of trends (see **NZ CS 2**).

Publisher	Year	Source	Pages
TCFD	2021	Guidance on Metrics, Targets and Transition Plans	**p.21, 62**

4.3.6 Cross-industry metrics: Disclosure 21(f)



Disclosure 21(f): *capital deployment: amount of capital expenditure, financing, or investment deployed toward climate-related risks and opportunities*

Primary users may want to identify an MIS Manager who has demonstrated, via the deployment of capital, a commitment to developing low-emissions and/or climate-resilient investment products. This could demonstrate for primary users that an MIS Manager is adapting its business model to account for climate-related risks and opportunities.

This is a metric category. An MIS Manager should use a metric which is commonly used in their sector.

In addition to having different climate-related risks and opportunities, MIS Managers differ in the extent to which they deploy capital to actively manage their climate-related risks and increase their capacity to exploit climate-related opportunities.

For example, an MIS Manager that has developed an investment product offering specific climate-resilience credentials (for instance in regard to its WACI, alignment with a net-zero transition target, and exposure to physical risk), will have deployed capital in researching, resourcing and marketing the new offering.

Capital expenditures, capital investments, or the amount of financing for new technologies, infrastructure, or products can be reported.

It can be helpful for an MIS Manager to present traditional disclosures alongside climate-related disclosures to allow users to understand the scale of investment in different types of activities. For examples investments in fossil fuels compared to investments in alternative energy sources.

Example metrics:

- Percentage of annual revenue invested in R&D of climate-resilient products/services
- Percentage of annual revenue invested in implementing and delivering climate-resilient products/services

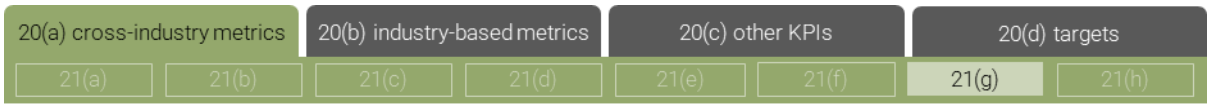
Refer to [draft] **NZ CS 3** for required disclosures for:

- comparative information, consistency or reporting, and restatement of comparatives
- methodologies, assumptions and estimation uncertainty.

First-time adoption relief is available for comparatives for metrics and analysis of trends (see **NZ CS 2**).

Publisher	Year	Source	Pages
TCFD	2021	Guidance on Metrics, Targets and Transition Plans	**p.24, 62**

4.3.7 Cross-industry metrics: Disclosure 21(g)



Disclosure 21(g): *internal emissions price: price per metric tonne of CO_2^e used internally by an entity*

The disclosure of internal emissions prices can help primary users to identify which MIS Managers have business models that are vulnerable to future policy responses to climate change, and which are adapting their business models to ensure resilience to transition risks.

Internal emissions prices also provide users with an understanding of the reasonableness of an entity's climate-related risk and opportunity assessment and strategy resilience.

Non-financial entities may use an internal emissions price to understand the anticipated future costs associated with developing new emissions related assets. An MIS Manager may use an internal emissions price to inform their decision making; for example, by considering the impact of a given emissions price on an entity's profitability as part of the investment decision making.

Increasingly, entities are setting an internal notional or actual price on GHGs emitted from assets and investment projects so they can see how, where, and when these GHG emissions could affect their strategy, financial performance, and investment choices.

There are two types of internal emissions prices commonly used by entities.

- A shadow price, which is a theoretical cost or notional amount that the entity does not charge but that can be used in assessing the economic implications or trade-offs for such things as risk impacts, new investments, net present value of projects, and the cost—benefit of various initiatives.
- An internal tax or fee, which is an emissions price charged to a business activity, product line, or other business unit based on its greenhouse gas emissions (these internal taxes or fees like intracompany transfer pricing).

An MIS Manager may wish to provide an explanation of how, if at all, they are applying an internal emissions price in decision making (for example, investment decisions, transfer pricing and scenario analysis).

Example metrics:

- Internal emissions price
- Shadow emissions price, by geography

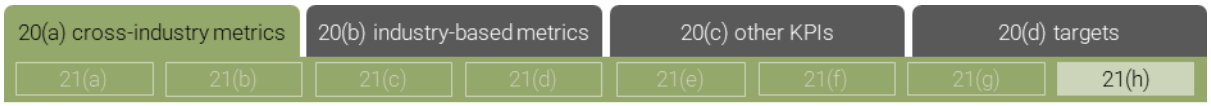
Refer to [draft] **NZ CS 3** for required disclosures for:

- comparative information, consistency or reporting, and restatement of comparatives
- methodologies, assumptions and estimation uncertainty.

First-time adoption relief is available for comparatives for metrics and analysis of trends (see **NZ CS 2**).

Publisher	Year	Source	Pages
TCFD	2021	Guidance on Metrics, Targets and Transition Plans	**p.25, 59-60, 62**

4.3.8 Cross-industry metrics: Disclosure 21(h)



Disclosure 21(h): *remuneration: management remuneration linked to climate-related risks and opportunities in the current period, expressed as a percentage, weighting, description or amount (see also paragraph 7(d)).*

This disclosure provides information to primary users regarding management's incentivisation to achieve climate-related KPIs. Incentivising management to meet climate-related targets and policies is a means of fostering ownership of performance, and disclosing such arrangements is a means of communicating that commitment to primary users.

Remuneration policies are important incentives for achieving an entity's goals and objectives and may provide insight on an entity's governance, oversight, and accountability for managing climate-related risks and opportunities.

The ways in which an MIS Manager link executive compensation to performance on issues related to climate change will be specific to them and their governance structure.

Some entities choose to report the percentage of the executive's pay linked to climate considerations, while others discuss weighting factors or total amount of compensation that could be impacted.

An MIS Manager should consider disclosing the link between targets and remuneration policies (if any).

Example metrics:

- Portion of employee's annual discretionary bonus linked to investments in climate-related products
- Weighting of climate targets on long-term incentive scorecards for Executive Directors
- Weighting of performance against operational emissions' targets for remuneration scorecard

Refer to [draft] **NZ CS 3** for required disclosures for:

- comparative information, consistency or reporting, and restatement of comparatives
- methodologies, assumptions and estimation uncertainty.

First-time adoption relief is available for comparatives for metrics and analysis of trends (see **NZ CS 2**).

Publisher	Year	Source	Pages
TCFD	2021	Guidance on Metrics, Targets and Transition Plans	**p.25, 63**

4.2. Industry-based metrics: Disclosure 20(b)

Disclosure 20(b): *industry-based metrics relevant to its industry or business model used to measure and manage climate-related risks and opportunities*

An MIS Manager should report those industry-based metrics which it uses for management purposes. These might include metrics on climate-related risks associated with water, energy, land use, and waste management where relevant and applicable. Using common metrics within an industry increases comparability across entities for primary users.

An MIS Manager should consider, where possible, using an industry-based metric for cross-industry metric categories in disclosures 21(b), (c), (d), (e) and (f).

For a list of possible industry-specific metrics entities should consider:

- industry-specific metrics proposed by the ISSB in Appendix B of the exposure draft of the climate related disclosures standard. The industry-based requirements are organised according to the Sustainable Industry Classification System® (SICS®) and have been drawn from the SASB Standards.
- sector specific metrics suggested by the TCFD (summarised in Table 6)
- The Global Reporting Initiative is also developing sector standards which may contain metrics an entity would find useful. These standards cover a wider range of topics than climate-related risks and opportunities and also consider the impact on the economy, environment and people rather than the impact on enterprise value creation.

Table 6: Summary of potential sector-specific metrics identified by the TCFD

Sector	Potential metrics
Asset managers	• Describe metrics used to assess climate-related risks and opportunities in each product or investment strategy • Provide metrics considered in investment decisions and monitoring • Weighted average carbon intensity for assets under management • Other carbon footprinting metrics that might be useful for decision making • Describe the extent to which their assets under management and products and investment strategies are aligned with a 1.5°C scenario • Proxy voting and investee engagement policies and procedures

Refer to [draft] **NZ CS 3** for required disclosures for:

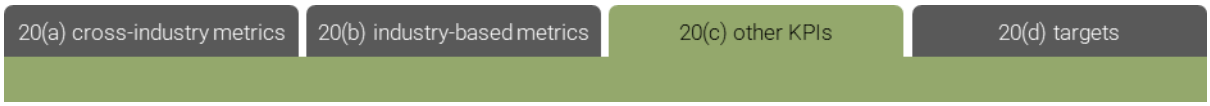
- comparative information, consistency or reporting, and restatement of comparatives
- methodologies, assumptions and estimation uncertainty.

First-time adoption relief is available for comparatives for metrics and analysis of trends (see **NZ CS 2**).

Publisher	Year	Source	Pages
TCFD	2021	Implementing the Recommendations of the TCFD – Supplemental Guidance	**p.24-68**
ISSB	2022	Appendix B—Industry-based disclosure requirements[3]	
GRI		GRI Standards Sector Program	

[3] Note that this is an exposure draft. This content may change in the final standard. Links may change.

4.3. Other key performance indicators: Disclosure 20(c)



Disclosure 20(c): *any other key performance indicators used to measure and manage climate-related risks and opportunities*

This disclosure informs primary users of any additional metrics and key performance indictors which an entity is using to manage their climate-related risks and opportunities.

If an MIS Manager is using key performance indicators to measure and manage their climate-related risks and opportunities which are not cross-industry or industry-based metrics, then these should be disclosed.

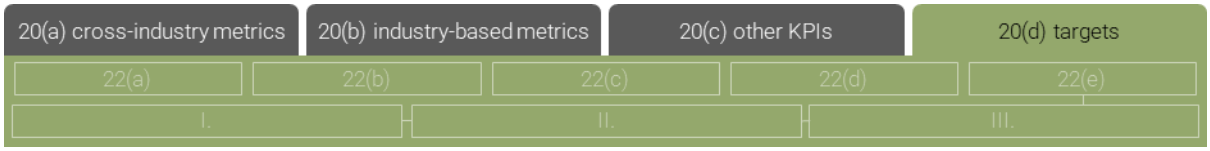
Refer to [draft] **NZ CS 3** for required disclosures for:

- comparative information, consistency or reporting, and restatement of comparatives
- methodologies, assumptions and estimation uncertainty.

First-time adoption relief is available for comparatives for metrics and analysis of trends (see **NZ CS 2**).

Publisher	Year	Source	Pages

4.4. Targets: Disclosure 20(d)



Disclosure 20(d): *the targets used to manage climate-related risks and opportunities and performance against those targets (see 22(a) – (e))*

Disclosure of targets provides a forward-looking orientation that is essential for primary users to assess the potential for strategies to succeed, and to give them a basis against which to assess future performance.

A climate-related target refers to a specific level, threshold, quantity, or qualitative goal that an MIS Manager wishes to meet over a defined time horizon to address their climate-related risks and opportunities. An MIS Manager's climate-related targets should inform, and be informed by, their investment strategies and risk management processes, and be linked to their climate-related metrics.

An MIS Manager should consider targets (in respect of their scheme(s)) such as those related to GHG emissions, water usage, energy usage, etc., in line with the cross-industry, climate-related metric categories, where relevant, and in line with anticipated regulatory requirements or market constraints or other targets.

Targets should be:

- Aligned with an MIS Manager's investment strategy and risk management goals
- Linked to relevant metrics
- Quantified and measurable
- Clearly specified over time
- Understandable and contextualised
- Periodically reviewed and updated
- Reported annually

Examples of targets (adapted from the TCFD, 2021) are illustrated in Table 7.

Disclosures of targets should be supported by contextual, narrative information on items such as scope, underlying data and assumptions, including those around the use of offsets.

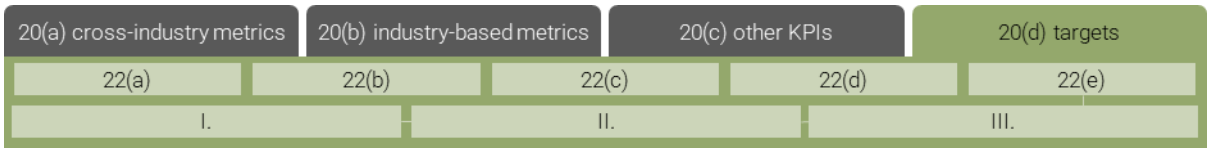
In addition to the required disclosures an MIS Manager may consider disclosing how their target compares with those created in the latest international agreement on climate change and whether the target was derived using a sectoral decarbonisation approach.

Publisher	Year	Source	Pages
TCFD	2021	Guidance on Metrics, Targets and Transition Plans	**p.30-37**

Table 7: Example targets for cross-industry metrics (adapted from TCFD, 2021).

Cross-industry metric category	Example climate-related metric target
Greenhouse gas emissions: Scope 1, 2 & 3 emissions	• Reduce net Scope 1, Scope 2, and Scope 3 GHG emissions to zero by 2050, with an interim target to cut emissions by 70% relative to a 2015 baseline by 2035
Greenhouse gas emissions intensity	• Reduce GHG emissions intensity of portfolio by 30% by 2035 relative to a 2020 baseline
Transition risks: assets or business activities vulnerable ($ or %)	• Reduce percentage of asset value exposed to transition risks by 30% by 2030, relative to a 2019 baseline
Physical risks: assets or business activities vulnerable ($ or %)	• Reduce percentage of asset value exposed to acute and chronic physical climate-related risks by 50% by 2050 • Ensure at least 60% of flood-exposed assets have risk mitigation in place in line with the 2060 projected 100-year floodplain
Climate-related opportunities: revenue, assets or business activities ($ or %)	• Increase net installed renewable capacity so that it comprises 85% of total capacity by 2035
Capital Deployment: capital expenditure, financing or investment ($)	• Invest at least 25% of annual capital expenditure into electric vehicle manufacturing • Lend at least 10% of portfolio to projects focused primarily on physical climate-related risk mitigation
Internal emissions price: ($ per tCO_2e)	• Increase internal carbon price to $150 by 2030 to reflect potential changes in policy
Remuneration: management remuneration linked (% or weighting or description or $)	• Increase amount of executive management remuneration impacted by climate considerations to 10% by 2025

4.6.1 Targets: Disclosures 22(a) – (h)



An MIS Manager must include the following information when describing the targets used to manage climate-related risks and opportunities and performance against those targets:

Disclosure 22:	Guidance
a) the time frame over which the target applies;	Defined time horizon by which targets are intended to be achieved. Short-, medium-, and long-term time horizons should be consistent across an entity's targets and, if feasible, consistent with key dates tracked by key national and international organisations, such as the IPCC, or regulators.
b) the associated *interim targets*;	An interim target is a checkpoint between the current period and the target end date in which an entity assesses its progress and makes any adjustments to its plans and targets. Any medium- and long-term targets should have interim targets set at appropriate intervals (e.g., 5–10 years) covering the full medium or long-term target time horizon.
c) the *base year* from which progress is measured; and	Clear definition of baseline time period against which progress will be tracked, with a consistent base year across GHG emissions targets.
d) a description of performance against targets	A concise description of how an entity is performing against each target. This should include where an entity has met/not met its target and the reason.
e) For each GHG emission target	An entity should prioritise GHG emission reductions over offsetting and compensation practices.
I. whether the target is an *absolute target* or *intensity target* ;	An absolute target is defined by a change in absolute emissions over time, for example, reducing CO_2e emissions by 47% below 2020 levels by 2030. An intensity target is a target defined by a change in the ratio of emissions to a metric over time, for example, reduce CO_2e per tonne of product by 50% from 2020 levels by 2030.
II. whether the target is aligned with science, and if so, whether it has been validated by a third party;	An entity should describe which global emissions reduction pathway their GHG emission target is aligned with and if this target has been validated by a third party. The Science Based Targets initiative (SBTi) provides guidance and workbooks to help entities set targets aligned with science. An entity whose targets have been validated by a third party (endorsed by SBTi or another third party) must disclose this.
III. The extent to which the target relies of offsets, whether the offsets are verified or certified, and if so, under which scheme or schemes.	Where entity is relying on the use of offsets to achieve emission reduction targets it must disclose this as it is important to be transparent. It must also disclose the minimum quality or certification thresholds that it is using for these. MFE periodically release guidance on voluntary mitigation (offsetting) claims in New Zealand.

Refer to [draft] **NZ CS 3** for required disclosures for:

- comparative information, consistency or reporting, and restatement of comparatives
- methodologies, assumptions and estimation uncertainty.

First-time adoption relief is available for comparatives for metrics and analysis of trends (see **NZ CS 2**).

Publisher	Year	Source
MFE	2022	Interim guidance for voluntary climate change mitigation
SBTi		Science-based targets initiative sector guidance

5. Glossary

BEIS	UK Department for Business, Energy and Industrial Strategy
CDSB	Climate Disclosure Standards Board: The CDSB was an international consortium of business and environmental NGOs which developed the framework that formed the basis for the TCFD recommendations. CDSB has now been consolidated into the IFRS Foundation, but its guidelines and good practice resources are still relevant and useful.
CFRF	Climate Financial Risk Forum: The CFRF is jointly chaired by the UK Prudential Regulation Authority and Financial Conduct Authority. It aims to advance the UK financial sector's responses to the financial risks from climate change by supporting the development of climate capacity across UK financial regulators and the financial industry.
COSO	Committee of Sponsoring Organisations of the Treadway Commission
EFRAG	European Financial Reporting Advisory Group: EFRAG is a private association of European stakeholders and national organisations with expertise and interest in the development of accounting and sustainability standards. EFRAG's mission is to serve the European public's interest by developing and promoting European views in the field of corporate reporting and by developing draft EU Sustainability Reporting Standards.
Emissions reduction pathway	The trajectory of emissions reduction taking place in the economy, often characterised by the timing of peak emissions, and the angle of the downward slope of the curve. Emissions reduction pathways with later peak emissions typically involve steeper angles of decline if the most dangerous risks of climate change are to be avoided. For example, an early peak followed by relatively steady emissions reductions is described as an 'orderly' transition pathway, while a later peak and steeper emissions reduction slope is described as a 'disorderly' transition pathway. Emissions pathways which don't keep climate change within 'safe' temperatures involve emissions pathways which do not decline toward net zero emissions, known as a 'hothouse world' pathway, or fail to reach peak emissions in a timeframe that allow net zero emissions to be achieved, known as 'too little too late' emissions pathways. See also NGFS climate scenarios.
Exposure	"The presence of people; livelihoods; species or ecosystems; environmental functions, services, and resources; infrastructure; or economic, social, or cultural assets in places and settings that could be adversely affected" (IPCC, 2022, p.18).
GRI	Global Reporting Initiative: the Global Sustainability Standards Board (GSSB) under the auspices of the GRI develops and issues the GRI Standards.
Hazard	"The potential occurrence of a natural or human-induced physical event or trend that may cause loss of life, injury, or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, ecosystems, and environmental resources." (IPCC, 2022, p.22).

	In the context of climate-related risk, the concept of a 'hazard' may be extended to incorporate transition events or trends with a potential to cause loss or damage to livelihoods, service provision, or the achievement of an entity's strategic aims.
IPCC	Intergovernmental Panel on Climate Change: The primary source of global climate data, information and knowledge. The IPCC is the key reference point for all climate-related risk and resilience work undertaken globally,
ISSB	International Sustainability Standards Board: Independent standard-setting board governed and overseen by the IFRS Foundation Trustees. The intention of ISSB is to deliver a comprehensive global baseline of sustainability-related disclosure standards that provide investors and other capital market participants with information about companies' sustainability-related risks and opportunities to help them make informed decisions.
NGFS	Network for Greening the Financial System: A voluntary network of central banks and supervisors which has agreed to develop and share among central banks best practices in environmental and climate risk management.
NZ CS 1	Aotearoa New Zealand Climate Standard 1 –Climate-related Disclosures
NZ CS 2	Aotearoa New Zealand Climate Standard 2 – First-time Adoption of Aotearoa New Zealand Climate Standards
NZ CS 3	Aotearoa New Zealand Climate Standard 3 – General Requirements for Climate-related Disclosures
PRA	UK Prudential Regulation Authority: The Bank of England's prudential regulator, overseeing more than 1,500 banks, building societies, credit unions, insurers, and investment firms.
Resilience	"The capacity of interconnected social, economic and ecological systems to cope with a hazardous event, trend or disturbance, responding or reorganising in ways that maintain their essential function, identity and structure. Resilience is a positive attribute when it maintains capacity for adaptation, learning and/or transformation" (Arctic Council, 2016, cited in IPCC, 2022, p.37).
Risk receptor	The specific place, person, category or concept through which a vulnerability can be realised. For example, in the case of the climate-related hazard of flooding, a risk receptor may be a single storey dwelling, vulnerable to inundation, located within an exposed flood-plain.
TCFD	Taskforce on Climate-related Financial Disclosure: "The Financial Stability Board created the TCFD to develop recommendations on the types of information that companies should disclose to support investors, lenders, and insurance underwriters in appropriately assessing and pricing a specific set of risks—risks related to climate change" (TCFD, 2022)
Transition	"The process of changing from one state or condition to another in a given period of time. Transition can occur in individuals, firms, cities, regions and nations, and can be based on incremental or transformative change" (IPCC, 2022, p.45). In the context of climate-related risk, transition can refer to the process of reducing emissions and enhancing resilience in the face of uncertain future risk.
UNEP-FI	United Nations Environment Programme – Finance Initiative: "UNEP-FI is a partnership between UNEP and the global financial sector to mobilize private sector finance for sustainable development. UNEP FI works with more than 400 banks, insurers, and investors and over 100 supporting institutions – to help create a financial sector that serves people and planet while delivering positive impacts"

Vulnerability	"The propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements including sensitivity or susceptibility to harm and lack of capacity to cope and adapt" (IPCC, 2022, p.47).
WBCSD	World Business Council for Sustainable Development
WEF	World Economic Forum

[i] These include the International Sustainability Standards Board, the European Financial Reporting Advisory Group, the International Standards Organisation, the Network for Greening the Financial System, the United Nations Environment Programme Finance Initiative, United Nations Principles for Responsible Investment, and the Climate Financial Risk Forum.