FAQ 11.2: Will climate change cause unprecedented extremes?

Yes, in a changing climate, extreme events may be unprecedented when they occur with...



Larger magnitude



Increased frequency



New locations



Different timing



New combinations (compound)

Submission

Aotearoa New Zealand Climate Standards Climate-related Disclosures: Exposure Drafts

27 September 2022 (Final)

About the McGuinness Institute

The McGuinness Institute was founded in 2004 as a non-partisan think tank working towards a sustainable future for Aotearoa New Zealand. *Project 2058* is the Institute's flagship project focusing on Aotearoa New Zealand's long-term future. Because of our observation that foresight drives strategy, strategy requires reporting, and reporting shapes foresight, the Institute developed three interlinking policy projects: *ForesightNZ, StrategyNZ* and *ReportingNZ*. Each of these policy tools must align if we want Aotearoa New Zealand to develop durable, robust and forward-looking public policies. The policy projects frame and feed into our research projects, which address a range of significant issues facing Aotearoa New Zealand. The eight research projects are: *CivicsNZ, ClimateChangeNZ*, *OneOceanNZ*, *PandemicNZ*, *PublicScienceNZ*, *TacklingPovertyNZ*, *TalentNZ* and *WaterFutureNZ*.

About the cover

The key shown in the Cover is an excerpt from an IPCC report (Sixth Assessment Report, Chapter 11, page 1610). It is highlighted on the cover to illustrate the new language that is necessary to discuss compound events (new combinations). These terms are discussed in Section A: Risk: Ways to improve risk identification (transparency and breadth) and the reference can be found in Endnote 10.

1.0 Introduction

The Institute welcomes the opportunity to offer feedback on the Aotearoa New Zealand Climate Standards Climate-related Disclosures Exposure Drafts. The upcoming standards will provide a further opportunity to improve climate-related disclosures and help society better respond to climate risks and opportunities.

The Institute would like to thank the External Reporting Board (XRB) for inviting feedback on their final consultation document. Two major areas of our work programme are climate change and reporting, hence our interest in climate-related reporting. We would welcome the opportunity to speak to the XRB on this submission.

This document

The submission has been broken down into two parts: Section 2.0: General observations and concerns, and Section 3.0: Answers to consultation questions. The Institute has also included a range of appendices to support and evidence points made in this submission. To help provide a reference point for the Institute's work in this area, Appendix 1 includes a full list of publications that relate to climate-change reporting.

The opportunity

Climate statements ensure the entity's governance team (the board and management) are informed and that they, in turn, inform a wide range of users about the specific climate risks the entity faces. A climate statement is the vehicle for the information to be collected, summarised, and presented to the public. To help clarify the high-level observations and ideas discussed in this submission, the Institute provides the following recommendations.

Seven recommendations

A: Ways to improve risk identification (transparency and breadth)

Recommendation 1: The standard should direct preparers to the latest National Climate Change Risk Assessment for New Zealand.

B: Ways to improve scenarios analysis

<u>Recommendation 2:</u> Suggest government requires a national climate change reference scenario to be published by the Climate Change Commission every six years, within 12 months of the *National Climate Change Risk Assessment for New Zealand being published.*

<u>Recommendation 3:</u> For the standard, where possible, to require preparers to use the IPCC information to underpin their scenarios (and to make this transparent).

<u>Recommendation 4:</u> For the standard to make clear the preparer must state what data they do not have confidence in and how they have treated this data when preparing their scenarios.

C: Ways to enable voluntary reporters to join the register

<u>Recommendation 5:</u> For the standard to make space for voluntary reporters to also use the standards (inclusive of public and private sectors)

D: Concerns over extent proposed provisions reduce climate report content

<u>Recommendation 6:</u> For the standard to require all reporters to report (rather than delay full reporting). Specifically, the Institute recommends removing first-time adoption provisions 1 through 4 from NZ CS2.

E: Concerns regarding use of 'Aotearoa New Zealand' in Climate Standard title

<u>Recommendation 7:</u> Given the standard is going to be a long-term and durable part of our history, we would recommend reverting to the New Zealand Climate Standards Climate-related Disclosures: Exposure Drafts and adding a separate te reo name (given te reo is an official language of New Zealand).

2.0 General observations and concerns

Section 2.0 contains insights that have been realised across the Institute's research, and raises observations and concerns that the Institute hopes can be addressed prior to the implementation of the proposed standards.

Latest report: Reviewing TCFD information in 2017–2021 annual reports of NZSX-listed companies (Working Paper 2022/14)¹

This working paper provides a quantitative assessment of the state of climate reporting through the lens of NZSX-listed companies that have published annual reports which mention the Task Force on Climaterelated Financial Disclosures (TCFD) between the years 2018 to 2021. This quantitative research is intended to show how the TCFD framework is being applied by different NZSX-listed companies in a voluntary manner. Benchmarking data sets over time to showcase emerging trends. Insights from this research have been used to evidence and substantiate the Institute's concerns made throughout this section. Importantly, to meet the Institute's definition of a complete TCFD report, the report must contain all four core elements as outlined in the Recommendations of the Task Force on Climate-related Financial Disclosures (2017).

Table 1: Part 1: Percentage of companies whose annual reports mention TCFD
Source: McGuinness Institute, Table 2, Working Paper 2021/14 Reviewing TCFD information in 2017–2021 annual reports of NZSX-listed companies²

Year	NZSX-listed companies whose annual reports were searched for mentions of TCFD		Percentage of companies' annual reports
2017	126	1	0.8%
2018	123	7	5.7%
2019	130	10	7.7%
2020	130	27	20.8%
2021	132	43	32.6%

Table 2: Part 2: Percentage of companies whose reports contain all four core TCFD elements Source: McGuinness Institute, Table 3, Working Paper 2021/14 Reviewing TCFD information in 2017–2021 annual reports of NZSX-listed companies³

Year	NZSX-listed companies whose published reports were reviewed for TCFD information	Number of companies who published reports that contained all four core elements of a TCFD report	Percentage of companies reporting on all four core TCFD elements
2017	126	0	0%
2018	123	2	1.6%
2019	130	6	4.6%
2020	130	14	10.8%
2021	132	19	14.4%

Table 2 illustrates that there is still a considerable journey for companies to move to full, four core TCFD element reporting.

Below the Institute shares a few key areas of concern relating to the proposed climate standards.

A: Ways to improve risk identification (transparency and breadth)

The standard (NZ CS 1) states on page 9.

Risk Management

Disclosure objective

16. 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.

Disclosures

- 17. To achieve the disclosure objective in paragraph 16, an entity must disclose the following information for both *transition risks* and *physical risks*:
 - (a) a description of its processes for identifying, assessing and managing climate-related risks (see paragraph 18); and
 - (b) a description of how its processes for identifying, assessing, and managing climaterelated risks are integrated into its overall risk management processes.
- 18. An entity must include the following information when describing its processes for identifying, assessing and managing climate-related risks (see paragraph 17(a)):
 - the tools and methods used to identify, and to assess the scope, size, and impact of, its identified climate-related risks;
 - (b) the short-term, medium-term, and long-term time horizons considered, including specifying the duration of each of these time horizons;
 - (c) whether any parts of the value chain are excluded;
 - (d) the frequency of assessment; and
 - (e) how it prioritises climate-related risks relative to other types of risks.

The Institute is aware of:

- 1. Climate Change Projections for New Zealand (MfE, 2018)⁴
- 2. Climate change scenarios for New Zealand (NIWA website page)⁵
- 3. National Climate Change Risk Assessment for New Zealand Arotakenga Tūraru mõ te Huringa Āhuarangi o Aotearoa: Method report – Pūrongo whakararangi (MfE, 2020)⁶
- 4. National Climate Change Risk Assessment for New Zealand: Snapshot (p. 5), (MfE, 2022)

In particular, the table found on page 5 of the *National Climate Change Risk Assessment for New Zealand* (copied below). All four of the above documents provide a good base for entities to assess their risk to climate change, but in particular the regular *National Climate Change Risk Assessment* should be mentioned in the standard. As you will be aware under the current legislation the risk assessment is required to be produced every six years by the Climate Change Commission (see 5ZQ (1) of the Climate Change Response Act 2002.

Table 3: National Climate Change Risk Assessment (2022)

Source: National Climate Change Risk Assessment for New Zealand – Arotakenga Türaru mõ te Huringa Ähuarangi o Aotearoa: Method report – Pürongo whakararangi (MfE, 2020)⁸

DOMAIN		RATING		
DOMAIN	RISK	Consequence	Urgency (44-94)	
Natural	Risks to coastal ecosystems, including the intertidal zone, estuaries, dunes, coastal lakes and wetlands, due to ongoing sea-level rise and extreme weather events.	Major	78	
environment	Risks to indigenous ecosystems and species from the enhanced spread, survival and establishment of invasive species due to climate change.	Major	73	
	Risks to social cohesion and community wellbeing from displacement of individuals, families and communities due to climate change impacts.	Extreme	88	
Human	Risks of exacerbating existing inequities and creating new and additional inequities due to differential distribution of climate change impacts.	Extreme	85	
Economy	Risks to governments from economic costs associated with lost productivity, disaster relief expenditure and unfunded contingent liabilities due to extreme events and ongoing, gradual changes.	Extreme	90	
	Risks to the financial system from instability due to extreme weather events and ongoing, gradual changes.	Major	83	
Built	Risk to potable water supplies (availability and quality) due to changes in rainfall, temperature, drought, extreme weather events and ongoing sea-level rise.	Extreme	93	
environment	Risks to buildings due to extreme weather events, drought, increased fire weather and ongoing sea-level rise.	Extreme	90	
	Risk of maladaptation ¹ across all domains due to practices, processes and tools that do not account for uncertainty and change over long timeframes.	Extreme	83	
Governance	Risk that climate change impacts across all domains will be exacerbated because current institutional arrangements are not fit for adaptation. Institutional arrangements include legislative and decision-making frameworks, coordination within and across levels	Extreme	80	

The *IPCC Sixth Assessment Report* also records a change in language that we think should be incorporated into the standard. Previously climate impacts were discussed in terms of hotter/colder/wetter/drier (see for example the map of New Zealand in Figure 1. However, in 2022, they discussed compounded events (combinations) in more detail and discussed climate impacts in terms of magnitude, frequency, locations, different timing and new combinations. The standard considers climate impacts in an unintegrated and siloed manner. When in reality, a large proportion of physical climate impacts (and how they relate) are poorly understood, often overlooked and carry high levels of uncertainty. Using the analogy of baking a cake, we too frequently focus on the ingredients (i.e., the hotter/colder/wetter/drier) without thinking about the cake that potentially could be baked (i.e., how extreme events are determined by climate change impacts, such as; magnitude, frequency, locations, different timing and new combinations).

Figures 3 and 4 have been adapted from information presented in Chapter 11 of the IPCC's Sixth Assessment Report (2021). Figure 3: Confidence in the quality of data concerned with the occurrence of extreme climate events illustrates that not all data is created equal. It shows that those preparing risk data should firstly analyse and explain the level of confidence they have in the data. Figure 4: Likelihood of an extreme climate event occurring where there is high confidence or very high confidence in the quality of data illustrates that preparers need to consider not only what to do with the data they have high or very high level of confidence in, but also what they do not have confidence in (i.e., have medium, low or very low confidence in).

Figure 1: How climate change is projected to change

Source: MfE, 20209

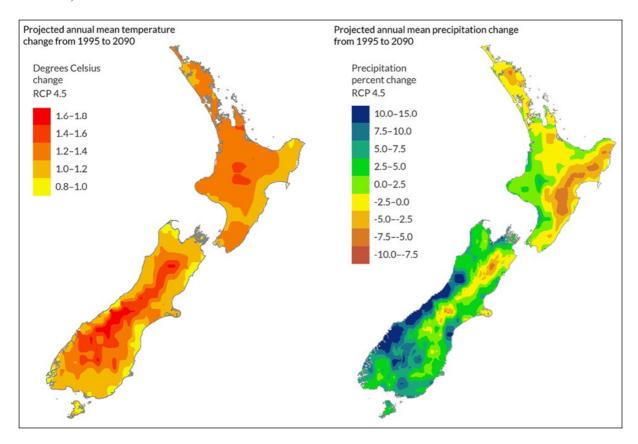


Figure 2: IPCC characteristics that shape extremes

Source: IPCC, 2021¹⁰

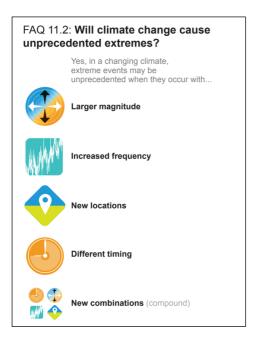


Figure 3: Confidence in the quality of data concerned with the occurrence of extreme climate events

Source: McGuinness Institute, Figure 2, Working Paper 2021/14 Reviewing TCFD information in 2017-2021 annual reports of NZSX-listed companies11

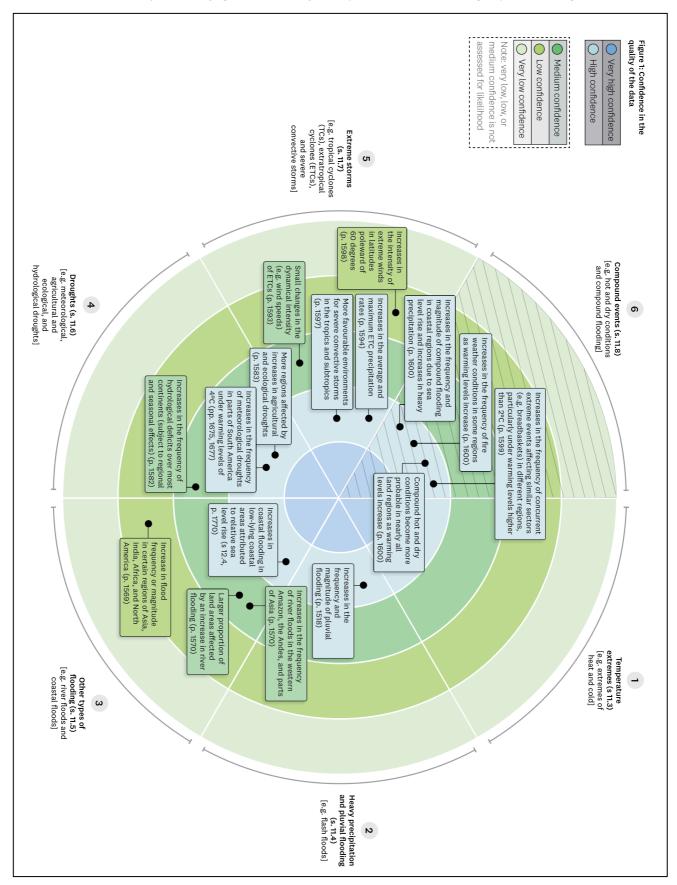


Figure 4: Likelihood of an extreme climate event occurring where there is high confidence or very high confidence in the quality of data

Source: McGuinness Institute, Figure 3, Working Paper 2021/14 Reviewing TCFD information in 2017–2021 annual reports of NZSX-listed companies12

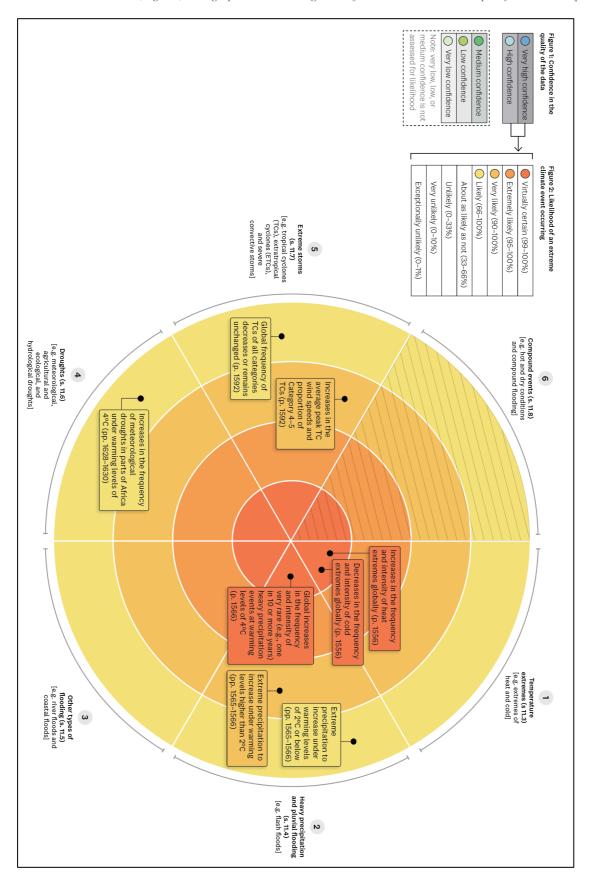


Figure 5: Types of IPCC weather and climate extremes mentioned in TCFD reporting of 19 NZSX-listed companies, 2021

Source: McGuinness Institute, Figure 4, Working Paper 2021/14 Reviewing TCFD information in 2017–2021 annual reports of NZSX-listed companies¹³

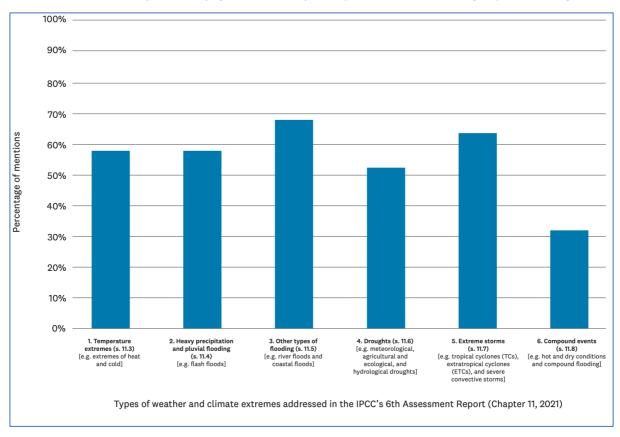
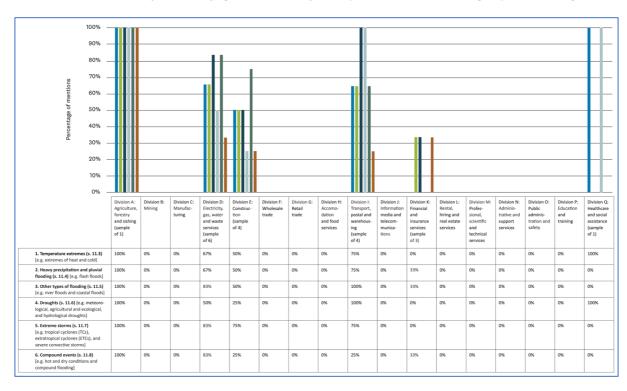


Figure 6: Types of IPCC weather and climate extremes mentioned in TCFD reporting of 19 NZSX-listed companies by industry type (ANZSIC 2006 divisions), 2021

Source: McGuinness Institute, Figure 5, Working Paper 2021/14 Reviewing TCFD information in 2017–2021 annual reports of NZSX-listed companies¹⁴



Further, we consider there should be a national climate change reference scenario building on the risk assessment (ideally by the Climate Change Commission). The Institute is not in support of the XRB suggesting industry scenarios or getting involved in this. As a standard preparer it is important to set the standard and let the FMA monitor/police the reporting results. We also consider it is extremely important to ensure preparers fully explore, understand and report on compound events (combinations of extreme events). It will be an important to include compound events in any discussion regarding the development of national climate change reference scenarios. Moving to an industry scenario approach is too narrow given the impacts we are likely to see. The recent example of compounded events is Pakistan, where almost 30 percent of the country is now under water due to the monsoon rains falling in a different place and instead of water draining out to sea, it pooled in the agriculture basin.¹⁵

Recommendation 1: The standard should direct preparers to the latest *National Climate Change Risk Assessment for New Zealand.*

B: Ways to improve lessons from scenario analysis

The standard (NZ CS 1) states on page 8.

Scenario analysis undertaken

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 an entity 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 (see paragraph 10(b)).

The Institute is concerned that the proposed climate standards lack solid alignment with and understanding of the six types of IPCC weather and climate extreme events outlined in Chapter 11 IPCC's Sixth Assessment Report (2021) (see Figures 3-6 above). The Institute believes that the information which underpins the scenario analysis component (disclosure 10(b)) of the proposed standard has followed a typical format (i.e., it considers climate impacts in an unintegrated and siloed manner). When in reality, a large proportion of physical climate impacts (and how they relate) are poorly understood, often overlooked and carry high levels of uncertainty. This holds especially true with compound events (mentioned above). While the notion might usually be to disregard such complex and uncertain information, as it either is not on 'the radar', or, simply falls into the 'too hard basket', the Institute argues that focus and energy into this space is critically important and much needed.

As far as the Institute is aware, the scenario analysis component of the standard does not deal with low confidence data, or 'what we know we don't know' and 'what we don't know we don't know' (see the outer circles of Figure 3. We need to raise the awareness on the importance of including such information into scenario analysis, and in doing so, create feedback loops to learn, build knowledge and strengthen understanding.

The Institute is also concerned with the decision for entity's to prepare their own scenarios. The Institute believes that this approach is subject to instability, levels of incomparability and places a lot of responsibility on CREs. It is granted that the scenario comparability will come through CREs developing scenarios in accordance with their respective sectors, however this entirely depends on high levels of engagement and collaboration that have not been stipulated or enforced by the standard and therefore can not be guaranteed. The Institute advocates for a 'fast and furious' approach regarding scenario analysis. In the short term, it is arguably more important for CREs to channel energy into practicing and exploring scenario analysis as a reporting tool. This ensures that, as the scenario reporting infrastructure becomes robust, CREs are already well practiced and prepared. We need to ensure scenarios do not become long, detailed and irrelevant. They are only as good as the data that is put into them and the knowledge and expertise of the person reading them. It would be better to see many short and fast scenarios be developed, rather than one or two detailed scenarios being prepared.

The link between uncertain data and scenarios should be clearer and the distinction between strategy (and the resulting plans that they create) should be made very clear. We need to raise the awareness on the importance of including such information into scenario analysis, and in doing so, create feedback loops to learn, build knowledge and strengthen understanding.

In a more specific context, the Institute is concerned that the proposed climate standards are putting too much focus, resource and emphasis on what is well understood (i.e., what we know we know). The proposed standard has not gone further in exploring the more tricky and uncertain areas (i.e., 'what we know we don't know' and 'what we don't know we don't know') and thus, has not built in the ability for entities to seek out accurate, holistic and timely climate-related information to guide their disclosures. In the Institute's opinion, such a direction is too prescriptive, too siloed and not future focussed. Ultimately, the wider reporting framework (and climate standards) exists to improve the accuracy, accessibility and quality of information available in the public arena. It is of key importance to ensure that the reporting framework (including climate standards) are designed to incorporate effective feedback loops and create learning systems in order to be responsive and adaptive.

With regard to the disclosures that relate to physical climate-related risks, a further concern is that the standard places the onus on climate reporting entities to independently identify all such risks that apply to their business model. While this is seemingly not a big deal, it implies that the standard is either; (i) overly presumptuous that entities have the necessary information available to develop an in depth understanding of such risks; or (ii) not concerned/aware with the scale and likelihoods of physical climate-related risks (as mentioned in Figures 3 and 4). This could simply be alleviated by providing sound IPCC guidance and support documents as part of the standards.

Of the 43 companies that mentioned TCFD in their 2021 reports, 19 produced a complete TCFD report (that was publicly available). As a way of stress testing the application of information presented in Figures 1 and 2, Section 5.2 of Working Paper 2021/14 analysed the level of alignment between the content of the 19 complete TCFD reports with the six types of IPCC weather and climate extremes. See the results of this analysis in Figures 5 and 6 (see above). Applying this lens to the analysis of the 19 complete TCFD reports, the Institute observed that there was a lack of disclosures that identified physical climate risks which aligned with those presented in Figures 3 and 4.

Recommendation 2: Suggest government requires a national climate change reference scenario to be published by the Climate Change Commission every six years, within 12 months of the *National Climate Change Risk Assessment for New Zealand* being published.

Recommendation 3: For the standard, where possible, to require preparers to use the IPCC information to underpin their scenarios (and to make this transparent).

Recommendation 4: For the standard to make clear the preparer must state what data they do not have confidence in and how they have treated this data when preparing their scenarios.

Furthermore, the Institute would like to reiterate concerns raised in our previous submission regrading development and implementation of scenarios.¹⁶

(i) The need for a New Zealand specific reference climate scenario

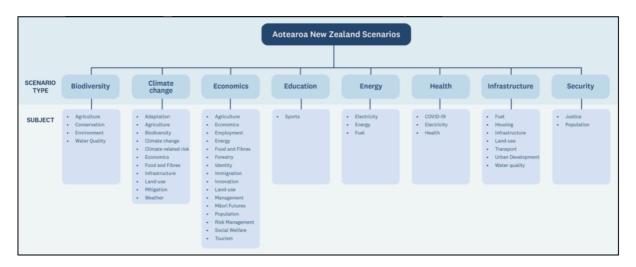
Reference climate scenarios are important for three main reasons:

- 1. Regarding the NZ CS1 disclosure, it is key to ensure that preparers have useful, relevant and comparable scenarios for assessing their business strategy (and therefore its resilience to climate change).
- 2. It is crucial to ensure that users (citizens, councils, iwi, departments and businesses) have the best scenarios available to inform decision-making. The ownership, accessibility and reliability of climate data/information are areas of concern that would ideally be made more robust via the development of

reference climate scenarios specific to Aotearoa New Zealand, which in addition to the IPCC scenarios, should both be assessed by the organisation.

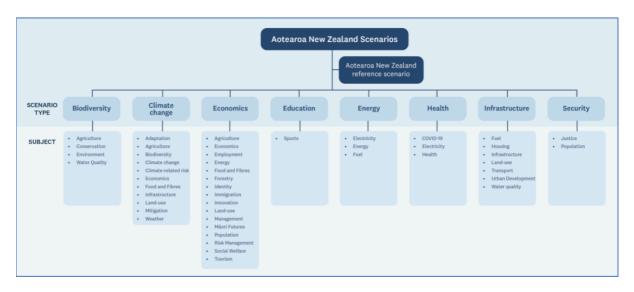
3. The establishment of reference climate scenarios would help develop and push the idea of an integrated climate scenario framework for Aotearoa New Zealand. Figures 7 and 8 (below) illustrates an overview of what the existing framework looks like today (a loose set of scenarios) verses an integrated scenario framework where the government endorses and highlights a unique reference climate scenario specific to New Zealand. The Institute believes NIWA and/or the Climate Change Commission to be the best organisation(s) to develop regular Aotearoa New Zealand reference climate scenarios. Such an approach would successfully embed foresight and strengthen risk management across Aotearoa New Zealand's public and private sectors.

Figure 7: Aotearoa New Zealand reference climate scenario framework (the current framework) Source: McGuinness Institute, Discussion Paper 2021/05 – Establishing reference climate scenarios for Aotearoa New Zealand (in press)¹⁷



The Institute found 183 national scenarios were published on or before 4 November 2021; this was more than we expected. View the table on our website. The scenarios are analysed in Working Paper: 2021/10: Analysis of Existing Scenarios in Aotearoa New Zealand. Together they illustrate the nature and breadth of scenarios that currently exist and indicate the number of potential bespoke scenarios available to preparers.

Figure 8: Aotearoa New Zealand reference climate scenario framework (the Institute's proposed framework)



(ii) The need for a global scenario

In order to have legitimacy globally, the Institute believes an IPCC scenario (2°C scenario is our preference) must be included. There are also benefits from comparing the insights globally for importers and exporters, and of course the broader insights for directors more generally.

(iii) Risks of bespoke scenarios

The Institute holds concerns that the development and implementation of bespoke entity-specific scenarios would not enable meaningful comparison, and therefore would dilute the benefits of effective reporting and further reduce the availability of climate-related data that currently exists within the public arena – further adding to the research gap. However, if an Aotearoa New Zealand reference climate scenario and an IPCC scenario are provided, we consider such risks are managed and that there exists real benefits from entities preparing their own bespoke scenarios.

C: Ways to enable voluntary reporters to join the register

The standard (NZ CS 1) states on page 6.

Objective

In providing a consistent framework for entities to consider the climate-related risks and climate-related opportunities that climate change presents for their activities over the short, medium and long term, the objective of this [draft] Standard is to enable primary users to assess the merits of how entities are considering those risks and opportunities, and then make decisions based on these assessments. The ultimate aim is to support the allocation of capital towards activities that are consistent with a transition to a low-emissions, climate-resilient future.

As highlighted in the main objective of NZ CS1, the Institute believes that the general scope and direction of the proposed standard is prematurely too narrow and too fixed. This opinion is founded on how much weight the proposed standards place on 'primary users', which the Institute believes to be the fundamental issue at play. For clarity, this discussion (of the standard being 'too narrow and too fixed') does not only refer to the proposed target audience (primary users), it also refers to the consequences of inaccurate and incomplete risk identification (mentioned above), as well as the risk of a standard that is not future fit to shifting demands and requirements over time.

To expand on the Institute's key concern – the narrow definition of 'primary users' – little room is left in the standard for expansion (meaning other types of entities that may wish to report against the standard) and exploration (meaning how entities report against the standard). There is a risk that in proceeding with the scope and direction the proposed standards takes, the XRB creates a standard that is not able to be used by both the public and private sectors, and both mandatory and voluntary preparers. An unintegrated approach, in this regard, may ultimately (and unnecessarily) result in a non-futureproofed climate standard. This would prove to be costly, not only in terms of finance and resource, but also in terms of delays in obtaining useful information that is needed to "support the allocation of capital towards activities that are consistent with a transition to a low-emissions, climate-resilient future".

Recommendation 5: For the standard to make space for voluntary reporters to also use the standards (inclusive of public and private sectors)

D: Concerns over extent proposed provisions reduce climate report content

The standard (NZ CS 2) states on page 6.

Scope

- This [draft] Standard applies to entities which are required by the Financial Markets Conduct
 Act 2013 to prepare climate statements or group climate statements that comply with the
 climate-related disclosure framework.
- Any entity that elects to or is otherwise directed to prepare climate statements or group climate statements is encouraged to apply all the requirements of Aotearoa New Zealand Climate Standards 1
- 4. An entity may apply this [draft] Standard when it prepares and presents its climate statements or group climate statements on the first-time adoption of Aotearoa New Zealand Climate Standards. This means that:
 - (a) the first time that an entity makes an explicit and unreserved statement of compliance with Aotearoa New Zealand Climate Standards, it may apply the first reporting period adoption provisions.
 - (b) The second time that an entity makes an explicit and unreserved statement of compliance with Aotearoa New Zealand Climate Standards, it may apply the second reporting period adoption provisions.
- 5. This [draft] Standard does not apply to an interim period.

First-time adoption provisions

 An entity may elect to use one or more of the adoption provisions contained in this [draft] Standard. Some of the adoption provisions exempt certain disclosures whereas other adoption provisions require alternative information to be disclosed.

The 'ultimate aim' of the standard is to "support the allocation of capital towards activities that are consistent with a transition to a low-emissions, climate-resilient future". This aim, in combination with (i) a declared climate emergency, (ii) legally enshrined domestic climate commitments and targets and (iii) broader international climate commitments means that any delays in obtaining accessible, reliable and comparable climate-related data (namely financial impacts, transition and adaptation plans) represents a lack of ambition and urgency. Which, unfortunately, would likely further reduce the availability of data that currently exists within the public arena. Adding to the research gap would likely result in broader risks to the financial system as well as impede Aotearoa New Zealand's response to domestic and international climate targets and commitments. For more information, see our answer to question 4.

Recommendation 6: For the standard to require all reporters to report (rather than delay full reporting). Specifically, the Institute recommends removing first-time adoption provisions 1 through 4 from NZ CS2.

E: Concerns regarding use of 'Aotearoa New Zealand' in Climate Standard title

The Institute uses the term 'Aotearoa New Zealand' as a protocol for all our work because we like what it says about our country but we are aware it is not an official term and the history of the term is problematic. The only exception is when we are referring to something legal, in which case we refer to the country's official legal name, and use the term 'New Zealand' only. We note, for example, the Cabinet Manual (2017) has 242 mentions of New Zealand whereas there are zero mentions of Aotearoa. The Prime Minister recognises 'Aotearoa New Zealand' is commonly used, but she has also indicated that it is not something she will lead. ²⁰ A September 2021 1News poll revealed '9% of people wanted to replace the name New Zealand completely with Aotearoa. A further 31% wanted to see a double-barrelled name - Aotearoa New Zealand – meaning 41% opted for Aotearoa to be in the mix. This means that a large number of New Zealanders prefer the status quo (58%). ²¹ The Prime Minister says she prefers to use both names and hopes the country follows suit – "For me, I'd like to continue to see it used interchangeably and therefore whether or not there needs to be an official name change really becomes a bit of a moot point, because it just becomes part of the way we refer to our country".

Given the XRB is using this term as part of the title for a standard, our understanding is that it is a form of secondary legislation. Notably, the term 'Aotearoa' is not used in the Financial Reporting Act 2013 and

the framework is described as the 'climate-related disclosure framework'. Perhaps a te reo title would be more effective and less pragmatic. Using our foresight hat, we appreciate the official name of New Zealand will evolve but we are unsure where that will land.

Recommendation 7: Given the standard is going to be a long-term and durable part of our history, we would recommend reverting to the New Zealand Climate Standards Climate-related Disclosures: Exposure Drafts and adding a separate te reo name (given te reo is an official language of New Zealand).

Box 1: Financial Reporting Act 2013 (Interpretation)

climate-related disclosure framework has the meaning set out in section 9AA

climate reporting entity has the same meaning as in section 461O of the Financial Markets Conduct Act 2013

climate standard means a climate standard issued by the Board under section 12; and includes an amendment to a climate standard that is issued by the Board

climate statements, in relation to a reporting entity and a balance date, means the climate-related disclosures for the entity as at the balance date, or in relation to the accounting period ending at the balance date, that are required to be prepared in respect of the entity by an applicable climate standard

Box 2: Appearances of 'Aotearoa' in the Financial Reporting Act 2013



Box 3: Example of secondary legislation as shown on the legislation website



3.0 Answers to consultation questions

1) Do you think draft Aotearoa New Zealand Climate Standards will meet primary user needs?

a) Do you think that the proposed disclosure requirements will provide information that is useful to primary users for decision making? If not, please explain why not and identify any alternative proposals.

Primary users are defined in the proposed standard as: existing and potential investors, lenders and other creditors (see Appendix A: Defined terms)

Firstly, the Institute believes that the proposed Aotearoa New Zealand Climate Standards can be further improved in order to provide primary users with sufficient information for improving decision making – see in particular recommendations 1-7 above. In particular we would like to ensure the standard recognises compound (new combinations) of events and the need to draw a clear distinction between foresight and strategy.

Secondly, the Institute does not consider the user definition is useful (or even needed) given the climate emergency, and the subsequent supply-chain issues, that under the above definition, fall out of the scope of primary users. Although we acknowledge that the XRB may feel the need to align with international practice, in practice the standards are for New Zealand and we should design our framework for New Zealand users of climate information. Furthermore, the problem with defining who the primary users are, calls for non-primary users to be defined. This explains why the current definition is weak, you cannot define one group as a primary user, but not define a group of secondary users (other than everyone else). Our premise is that climate change is of interest and concern to all citizens, and in practice, all citizens have an interest in climate information.

Thirdly, the Institute wonders whether NZX might consider expanding the primary user to include suppliers and consumers, and employees.

Lastly, the current framework should be designed to cater for both mandatory and voluntary preparers, so that non-mandatory preparers are able to also report against the New Zealand standard/s. The Institute would like the XRB to reconsider the opportunity that currently exists – to design a climate-related disclosure framework and public register for all preparers and all users.

To support this view, the Institute draws the XRBs attention to s 19B(c) of the Financial Reporting Act 2013, where the purpose is not just to 'provide', but to 'promote' climate-related disclosures for the public good and in particular, refers specifically to stakeholders. This means, in our view, not just the promotion of mandatory reporting (which arguably does not need promotion as it is a requirement), but more broadly promoting climate-related disclosures to non-mandatory reporters.

The Institute understands why standard setters may prefer to keep the 'user' definition narrow (as it may help the preparer to focus on the information needs of a select number of users, and as a consequence apply the existing 'financial statement lens of materiality' to those users (e.g. what is material to say shareholders may be easier to articulate than stakeholders). However, in practice, the Institute would argue that a mandatory regime puts in place higher expectations not just on 'reporters' but also on 'standard setters' (i.e. XRB), and those responsible for ensuring financial markets are fair, efficient and transparent (i.e. the Financial Markets Authority [FMA] and NZX). Furthermore, as noted earlier, while the financial-disclosures framework was designed to meet the needs of the capital market, the climate related disclosures framework has been put in place by government to enable all users to reduce emissions and adapt to climate change.

This view is best understood in recent developments by Patagonia, who changed their business model to separate purpose from operations, because the existing reporting framework failed to deliver a durable solution.²²

b) Do you consider that draft Aotearoa New Zealand Climate Standards are clear and unambiguous in terms of the information to be disclosed? If not, how could clarity be improved?

Generally, yes. The proposed standards are clear, concise and unambiguous but in our view not complete. More work is needed to be undertaken in regards to risk and scenario analysis. See discussion in Section B.

c) Do you consider that draft Aotearoa New Zealand Climate Standards are comprehensive enough and achieve the right balance between prescriptiveness and principles-based disclosures? If not, what should be removed or added to achieve a better balance? Please consider your answer to question 5 when responding to this question.

Climate-related information must be able to flow smoothly between preparers, users and assurers. In practice, the standard should be comprehensive and specific enough to ensure that information is accurate, meaningful, reliable, and useful. The standard, then, must prioritise aligning the needs and demands of both preparers and users.

The Institute is concerned that the use of the word 'prescriptiveness' adds unnecessary tension as it is rooted in regulation. Instead, the Institute believes that 'specificity' is clearer and should be used instead.

The Institute believes that the standards should be sufficiently specific for preparers, users and assurers. This means: (i) specific in order for preparers to gather, collate and report against, (ii) specific in order for users to read, understand and make decisions and (iii) specific in order for assurers to provided verifiable information (so that the content of the statements can be trusted and relied upon).

The proposed standard is not prescriptive enough to prevent entities from undertaking business practices and decision making that are intentionally designed not be in the best needs of the wider public and future generations. A recent minute (14 Sep 2022) by the US *House Committee on Oversight and Reform*²³ illustrates the challenges faced by users when preparers try to influence information. The committee specifically found that 'rather than outright deny global warming, the fossil fuel industry has "green washed" its record through advertising and pledges – without reducing emissions.' The committee noted (see Box 4 below):

Box 4: US House Committee on Oversight and Reform: Fossil fuel companies minute

Fossil fuel companies have known since the late 1970s that their products contribute to climate change. From 1979 to 1983, fossil fuel companies and the American Petroleum Institute (API) participated in a task force that privately shared climate science research and discussed possible ways to reduce emissions.¹ Despite knowing the truth about climate change, fossil fuel companies continued to contradict prevailing scientific knowledge and inject confusion into the public debate over climate change. During the 1990s, ExxonMobil, Chevron, BP, Shell, API, and the U.S. Chamber of Commerce joined the Global Climate Coalition, which vigorously fought potential climate change regulations and lobbied the U.S. government to derail international climate action to reduce carbon pollution emissions.²

At the Committee's historic hearing in October 2021, fossil fuel executives finally admitted under oath that climate change is real, that burning fossil fuels contributes to it, and that this is an existential threat to the planet. Yet none of them would pledge to end their financial support for efforts to block meaningful action on climate change.

The XRB should continue to work hard on ways to minimise the 'washing' of financial statements. The Institute believes science has matured and specifics are now required. To pivot to a more stable and durable business model, more precise information is now required on items such as stranded assets, material risks, material changes in targets, and new business strategies. It is going to be important that boards and management do not blame their company's financial results on the broad issue of climate change alone. Instead, a successful climate statement will be one that explains in a comprehensive and

accurate manner all relevant events that occurred during the financial year, as well as any events that might occur shortly after balance date (but before the statement is published). In the Institute's view, the goal should be for boards and management to work hard to be climate-intelligent, and engage early with climate risks and opportunities. Boards and management will inevitably make mistakes, and therefore the system must be designed to invite transparency and accountability. For example, we might see statements like: 'the Board underestimated the impact of sea-level rise', or 'the risk assessment failed to appreciate the impact of air turbulence on freight costs and the need to write-off expired stock'. Impacts and assumptions need to be specific, quantifiable, understandable and verifiable. See for example, the NZKS case study (e.g. the tonnes of dead fish that were not made public immediately after year end).²⁴

Lastly, it is critically important to ensure the starting points for CREs are as comparable as possible. This means that the standard should establish and use consistent terminology and IPCC aligned risk and scenario disclosures, and domestic-aligned 2050 emissions targets.

2) Do you have any views on the defined terms in draft Aotearoa New Zealand Climate Standards?

Generally, the aim of the terminology and language (as used in the standard) is to consistently communicate the disclosure requirements to a range of entities. Therefore, in the Institute's view, terminology and language must be common, future-proofed (e.g. avoids currently fashionable terms), broad and inclusive. The Institute is concerned that the proposed terms may not be entirely appropriate given the narrow scope of what constitutes a 'primary user'. For example, we are not sure if the concept of a 'primary user' exists in the public sector.

The Institute is concerned that the phrasing of the language, terminology and certain disclosures implies they are solely for for-profit entitles, rather than sufficiently broad to cover both private and public sector entities (including those that are not for-profit). The standards should be stress-tested against entities in both the public and private sector. The Institute is concerned that public sector entities may have unintentionally been excluded from the scope of the standard (see strikethrough red text removing the word 'company').

Observations across domestic and international climate literature indicate that climate-related terms are defined and used in many different ways. It can be difficult to compare climate-related information for many reasons, including inconsistent definitions of climate-related terms. For more information on this see *Working Paper 2021/07 – Scoping the use of the term 'climate scenarios' and other climate-related terms in Aotearoa New Zealand and International literature*²⁵ which contains the Institute's defined glossary of terms in an attempt at consistent terminology.

The Institute believes that this standard is one of the main tools moving Aotearoa New Zealand toward meeting domestic aligned targets as set out by the Climate Change Response (Zero Carbon) Amendment Act 2019. Therefore, it should signal integration and relevance for the public sector to be included, especially regarding transition and adaptation plans.

Specifically, the Institute suggests that, in line with our discussion in response to question 1(a), the term 'primary user' should be removed, or if not, reduced to just 'user'. The Institute believes the ISSB has been required to define 'user' narrowly given its constitution. The XRB is not constrained, and if anything our legislation demands a broader definition. See discussion in 1(a). This would then result in the term being able to be much more widely (and more appropriately) applied.

3) Do you have any practical concerns about the feasibility of preparing the required disclosures in draft Aotearoa New Zealand Climate Standards? In responding to this question, please consider the proposed first-time adoption provisions in NZ CS 2 and your answer to question 4. Please also clearly explain what would make the specific disclosure unfeasible to disclose against either in the immediate term or the longer term.

Concerns are with disclosures generally – not related feasibility

• Risk Management: paragraph 18 (b)

The lack of defined time horizons could result in the potential incomparability of the identification, assessment and management of climate-related risks. Though entities will be using the same broad horizons ('short-term', 'medium-term' and 'long-term'), the specific time-frames associated with each horizon could be drastically different. The Institute is concerned that this could lead to incomparable disclosures and could be improved by developing consistent time horizons across sectors.

Metrics and Targets: paragraph 20 (d)

This disclosure, while aligning to the target relating to achieving the entity's "overall climate-related ambition and strategy", it should also relate to and align with domestic targets enshrined in legislation.

Assurance of GHG emissions: paragraph 24

The Institute disagrees with the level of assurance across all emission types being set at 'limited'. In our opinion, scope 1 and 2 emissions can be assured by additional evidence, are not subject to high estimation uncertainty and therefore should be assured at a 'reasonable' level.

4) Do you agree with the proposed first-time adoption provisions in NZ CS 2? Why or why not?

To a large extent, the Institute disagrees with the proposed adoption provisions as presented in exposure draft of NZ CS 2. While the Institute appreciates that first-time adoption provisions may strengthen the quality of disclosed information in the mid-term, it is arguably more important for CREs to begin reporting against the entire standard as soon as possible.

The 'ultimate aim' of the standard is to "support the allocation of capital towards activities that are consistent with a transition to a low-emissions, climate-resilient future". This aim, in combination with (i) a declared climate emergency, (ii) legally enshrined domestic climate commitments and targets and (iii) broader international climate commitments means that any delays in obtaining accessible, reliable and comparable climate-related data (namely financial impacts, transition and adaptation plans) represents a lack of ambition and urgency. Which unfortunately would likely further reduce the availability of data that currently exists within the public arena. Adding to the research gap would likely result in broader risks to the financial system as well as impede Aotearoa New Zealand's response to domestic and international climate targets and commitments.

CREs are large organisations that will have qualified staff fully aware of recent political and legislative developments regarding climate reporting requirements. There is no time to provide provisions for first-time adopters, entities cannot and should not use a lack of skills or capabilities as a reason not to comply. This is not to their benefit, nor to society as a whole. Furthermore, the eligibility to apply provisions being solely based on whether the entity is a first time adopter of the standard is not a strong enough reason. The Institute cautions that provisions may be taken advantage of because of such ease of entry. The XRB has limited resources and needs to focus on the outcome, not the process (there are many consultants available to provide support if required). This is also reinforced by the extensive guidance provided by XRB.

For the reasons mentioned above, the Institute strongly opposes adoption provisions. However, if provisions are to remain in the standard, we encourage that they all follow the comply-or-explain notion of adoption provision 4. In this example, if the entity opts to adopt the provision it must provide a

description of progress made towards the disclosure that it has opted out of. This still provides users with insight and useful quantitative information, rather than nothing.

The Institute provides more specific comments relating to each adoption provision below.

First time adoption provision 1: Current financial impacts [Regarding the exemption of paragraph 11(b)]

'the current financial impacts of its physical and transition impacts identified in paragraph 11(a)'

The Institute disagrees with the need for this provision. Paragraph 11(c) of NZ CS1 already provides the option for entities that are "unable to disclose quantitative information for paragraph 11(b)" to opt out of the disclosure (given the entity explains why). The Institute therefore considers that there is no effective use for this provision.

First time adoption provision 2: Time horizons associated with financial impacts [Regarding the exemption of paragraph 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'

The Institute disagrees with the need for this provision. In relation to the general discussion of "climaterelated risks and opportunities", paragraph 13(a) stipulates that the entity must comment on how its' definitions of the short, medium and long term is linked to its' strategic planning horizons and capital deployment plans". The Institute argues that if entities are required to report against paragraph 13(a), the same should apply for 13(b). Strategic planning consists of being aware of where risks and opportunities fall in relation to operations – which is not dissimilar from 13(b). Because of this, the Institute believes that there is no effective use for this provision.

First time adoption provision 3: Anticipated financial impacts [Regarding the exemption of paragraph 14(b)]

'the anticipated financial impacts of climate-related risks and opportunities reasonably expected by the entity'

The Institute disagrees with the need for this provision. Similar to Provision 1, Paragraph 14(c) already provides the option for an entity that is 'unable to disclose quantitative information for paragraph 14(b)' to opt out of the disclosure (given the entity explains why). The standard should encourage and support entities into the habit of reporting across all disclosures – and for entities to articulate why the entity is unable to disclose said material is still productive and useful. This considered, the Institute believes that there is no effective use for this provision.

First time adoption provision 4: Transition plan aspects of an entity's strategy [Regarding the exemption of paragraph 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

The extent to which transition plan aspects of its strategy are aligned with its financial planning processes, including for capital deployment and funding'

Generally, the Institute disagrees with the need for this provision. The Institute is of the view that it is completely necessary for entities to start to consider (if they have not already) how best to reposition as the global and domestic economy transitions towards a 'low emissions, climate-resilient future state'. Furthermore, the disclosure is non-binding – it merely asks how the business model and strategy 'might' change. As mentioned previously, the Institute is encouraged by the more detailed requirements of the

provision – being that if an entity adopts the provision it must "provide a description of its progress towards developing the transition plan aspects of its strategy".

The Institute question why a similar approach was not considered across all provisions. At least this still, in the absence of disclosure, provides substance.

First time adoption provision 5: Scope 3 GHG emissions [Regarding the exemption of paragraph 21(a)(iii)]

'greenhouse gas (GHG) emissions: gross emissions in metric tonnes of carbon dioxide equivalent (CO2e) classified as scope 3.'

Agree.

First time adoption provision 6: Comparatives for metrics [Regarding the exemption of paragraph 39]

'For each metric disclosed in the current reporting period an entity must disclose at least two years of comparative information'

Agree.

First time adoption provision 7: Analysis of trends [Regarding the exemption of paragraph 40]

'An entity must disclose an analysis of the main trends evident from a comparison of each metric from previous reporting periods to the current reporting period'

Agree.

a) Are any additional first-time adoption provisions required? If so, please provide specific details regarding the adoption provision and the disclosure requirement to which it would apply, and the period of time it would apply for.

No.

- 5) Do you think the draft staff guidance documents will support CREs when making their disclosures and support consistent application of the disclosure requirements? Why or why not?
- a) Do you think the guidance is under, adequately or overly specific and granular?

Yes. The Institute would like to see the inclusion of the *National Climate Change Risk Assessment for New Zealand* and the IPCC's *Assessment Reports* into the guidance document. The Institute believes that this information is extremely valuable and would aid CREs disclosures relating to risk analysis and scenario analysis.

b) Do you consider that anything in the guidance should be elevated into the standard? Should anything be demoted from the standard into guidance?

No comment at this stage. The difference between the standard and guidance is important.

6) Paragraphs 13 to 19 of draft NZ CS 3 are the proposed location of disclosures requirements. Paragraphs BC14 to BC20 of the basis for conclusions on draft NZ CS 3 explain the XRB Board's intent regarding these proposed requirements. Do you agree with the proposed location of disclosures requirements? Why or why not?

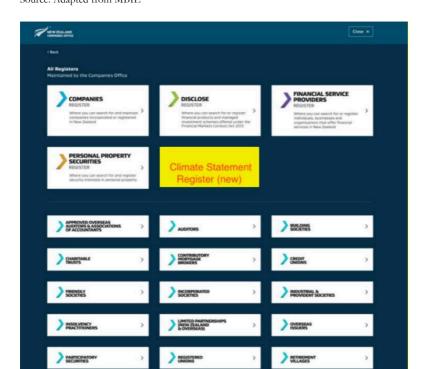
- **13**. An entity may provide its climate-related disclosures in a standalone document or within another document (for example, its annual report or a sustainability or integrated report)
- **14.** Where the climate-related disclosures are provided within another document, an entity must include a table within that other document, clearly identifying the location of the disclosures requires by Aotearoa New Zealand Climate Standards.
- **BC14**. ...[the Act] also requires that a copy of these climate statements or group climate statements must either be included in an entity's annual report (where an entity is required to prepare an annual report), or the annual report must include the address of (or link to) the internet site where a copy of those statements can be accessed.

Require climate statements to be published in annual reports of mandatory preparers

Generally agree. The Institute considers mandatory preparers of climate statements should be required to publish their climate statements in the entity's annual report. The current requirements (see BC14 above) provide a solid starting point, however still leave CREs with the option to only include a link directing users to the statement. The Institute suggests that the XRB could provide stronger guidance, making it a requirement for preparers to include their climate statement in their annual report or even an opt-out requirement (to explain why they are not following best practice).

If we wish Aotearoa New Zealand to become a climate-intelligent country, we need to not only create climate-intelligent markets, but also enable all to become climate-intelligent. Ensuring equality and ease of access to climate-related information (through annual report disclosures) is one way we can facilitate the early identification of stranded assets, and contribute to a just transition.

Furthermore, the Institute suggests that the Companies Office (with support from the XRB) could create a centralised and publicly available Climate Statement Register for preparers (both mandatory and voluntary) to lodge climate statements, and for users to access climate statements. Banks, customers, insurers, investors and other entities will be strategically reviewing the climate statements of clients, suppliers, and customers to improve their own systems and manage their own climate risks. The Institute considers Aotearoa New Zealand needs to design a new Register of Climate Statements that is easy to find and access, and can be extended to include voluntary reporters and other mandatory reporters over time. Figure 9 illustrates the existing Register, where a new Climate Statement Register could easily be added.



) UNIT

Figure 9 : Registers currently managed by MBIE (including the proposed new register)
Source: Adapted from MBIE²⁶

Background

SUPERANNI

The Institute and others argued before the committee that it was better to leave it to the Registrar of Companies to decide where it should be lodged (rather than denote a specific existing register, see our submission: Financial Sector (Climate-related Disclosures and Other Matters) Amendment Bill (28 May 2021).²⁷

This is the situation today:

- Box 5 defines the meaning of 'Registrar'.
- Box 6 sets out the solution; for statements to be lodged 'within four months after the balance date' and sets out a range of penalties for contraventions under this part of the Act.
- Box 7 illustrates that the Registrar of Financial Service Providers could be different from the Registrar of Companies (although the initial Registrar of Companies was legally required to become the first Registrar of Financial Service Providers). We understand the legislation implies the authority to appoint the Registrar for the Financial Service Providers is determined by the chief executive of the Public Service Commission, meaning that the Registrar could be different.
- Box 8 illustrates what the current Financial Service Providers register looks like. The screenshot is from Financial Service Providers register managed by the Companies Office (using Westpac as an example).

The Institute's view is that the Financial Service Providers Register could be adapted in the following way:

- 1. The Financial Service Providers Register recognises a new item by adding a new filing: 'Filing name: Climate Statement, and the Registered date: xx/xx/xxxx.
- 2. When a user selects Climate Statement with their cursor, the user is taken directly to the new Climate Statements Register (hence the climate statements is only uploaded once).

3. The new Climate Statements Register (an addition to Figure xx) should then be searchable by term, by entity legal name and by Business Industry Classification Code (BICC). Note: Unlike the financial statements, that include the annual report, we recommend only the Climate Statement is uploaded. Otherwise it will create confusion over what is a climate statement and what is not. This is particularly relevant for assurance purposes, to clarify what is being assured under the new regime (as distinct from an auditor's report attached at the end of the financial statements).

Box 5: Financial Markets Conduct Act 2013 [Registrar]

Registrar means the Registrar of Financial Service Providers appointed under section 35 of the Financial Service Providers (Registration and Dispute Resolution) Act 2008

Box 6: Financial Sector (Climate-related Disclosures and Other Matters) Amendment Act 2021

Note: This is from the version as at as at 28 October 2021. The amendments from the Financial Sector (Climate-related Disclosures and Other Matters) Amendment Act 2021 are yet to be incorporated into the Financial Markets Conduct Act 2013, hence the image below is indicative only.

Subpart 5—Lodgement of climate statements

461ZI Lodgement of climate statements

- (1) Every climate reporting entity that is required to prepare climate statements or group climate statements under any of sections 461Z to 461ZB must ensure that, within 4 months after the balance date of the entity, copies of those statements are delivered to the Registrar for lodgement.
- (2) Every manager that is a climate reporting entity in respect of a registered scheme must ensure that, within 4 months after the balance date of the scheme, copies of the climate statements that are required to be prepared under section 461ZC are delivered to the Registrar for lodgement.
- (3) A climate reporting entity that contravenes this section commits an offence and is liable on conviction to a fine not exceeding \$50,000.
- (4) The offence in this section is an infringement offence (see subpart 5 of Part 8).

461ZJ Information about climate statements of climate reporting entities to be made available in annual report

- (1) This section applies to every climate reporting entity that is required to prepare—
 - (a) climate statements or group climate statements under any of sections 461Z to 461ZB; and
 - (b) an annual report under the Companies Act 1993 or any other enactment.
- (2) The climate reporting entity must include, in its annual report for the period ending on the balance date,—
 - (a) a statement that the entity is a climate reporting entity for the purposes of this Act; and
 - (b) a copy of the climate statements or group climate statements prepared by the entity under any of sections 461Z to 461ZB, or the address of (or a link to) the Internet site where a copy of those statements can be accessed.
- (3) A climate reporting entity that contravenes this section commits an offence and is liable on conviction to a fine not exceeding \$50,000.
- (4) The offence in this section is an infringement offence (see subpart 5 of Part 8).
- (5) In this section, annual report includes a concise annual report.

Subpart 6—Civil liability for certain contraventions of this Part

461ZK Part 7A climate-related disclosure provisions

- (1) All of the provisions specified in subsections (3) and (4) are Part 7A climate-related disclosure provisions.
- (2) A contravention of any of the provisions listed in subsection (3) may give rise to civil liability (see subpart 3 of Part 8), including a pecuniary penalty not exceeding \$1 million in the case of an individual or \$5 million in any other case.
- (3) For the purposes of subsection (2), the provisions are the following:
 - (a) section 461V (climate reporting entities must keep proper CRD records):
 - (b) sections 461Z to 461ZC (climate statements and group climate statements must be prepared):
 - (c) section 461ZI (climate statements must be lodged).
- (4) A contravention of section 461X (CRD records to be kept for 7 years) may give rise to civil liability (see subpart 3 of Part 8), including a pecuniary penalty not exceeding \$200,000 in the case of an individual or \$600,000 in any other case.

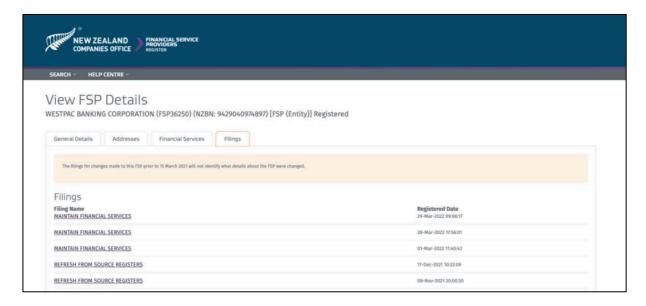
Box 7: Financial Service Providers (Registration and Dispute Resolution) Act 2008

Registrar of Financial Service Providers

35 Appointment of Registrar

- (1) The chief executive must appoint a Registrar of Financial Service Providers under the Public Service Act 2020.
- (2) The person holding office as Registrar of Companies under the Companies Act 1993, immediately before the commencement of this Act, is deemed to have been appointed as the first Registrar of Financial Service Providers in accordance with this section.

Box 8: Financial Service Providers register [Westpac Banking Corporation example]



Penalties and Contraventions under the Act

We believe the Climate Statement Register should:

- 1. Publish a list of all entities that contravened the Act (with penalties changed) annually in the public arena on their website (see for example, contraventions in Box 6).
- 2. Require any entity that is charged a penalty to disclose that penalty in the next five consecutive climate statements.

Content of a Climate Statement

A Climate Statement should not be lodged for public use unless it is verified as containing the following key information:

- That it is a climate statement and contains the appropriate assurance practitioner's report,
- The document is in one pdf (the statement and the assurance report are both included), is searchable and contains no other information (in other words it is only a climate statement),
- That the following key data is found on the front two pages, including:
- The name 'Climate Statement',
- The date (and period) to which the climate statement relates,
- The full legal name of the company/entity, o The nature of business statement (see discussion in Section 2.2 above),
- If listed on NZX, a short statement that it is listed on NZX and the relevant code (e.g. NZK for New Zealand King Salmon Investments Limited),
- Its business industry classification, ²⁸
- If a company, list its company number: (e.g. for NZKS it is 2161790),
- State its NZBN (e.g. for NZKS it is 9429032611540),

- The type of preparer: whether it is a voluntary or mandatory reporter. This is to future proof the register. For example, if it is a mandatory reporter, something like: 'The company is required under law [add law] to provide a climate statement',
- That the Climate Statement is prepared using the XRB standards and guidance documents (and list these), and
- That any penalty (under this part of the Act) be disclosed in the entity's climate statements for five consecutive reports (i.e., climate statements). See examples of contraventions in Box 6 above.

The XRB, could also include similar requirements in their standards and guidance, to provide preparers certainty and help verifiers (responsible for verifying and lodging climate statements) a faster and more effective streamlined experience. In other words setting the bar high at the front end, rather than rejecting climate statements just before they were expected to be lodged.

Require the 'nature of business' statement to be included in the climate statement

The 'nature of the business' statement is currently required to be included in all annual reports under s 211: Contents of annual report of the Companies Act 1993. It could become a requirement of the standards – for CREs to also include the 'nature of the business' statement in their climate statement. This would be a relatively easy step to help align climate statements with annual reports, building a natural bridge between the two.

Adding the 'nature of the business' statement to climate statements would help meet the purpose of climate statements, which is 'to enable investors and other stakeholders to assess the merits of how entities are considering those risks and opportunities' (see s 19B (c) of the Financial Reporting Act 2013). If users know the nature of the business, that will help then assess the 'merits'. Carrying over the nature of the business statement to the climate statements would provide real benefit to users, at no cost to preparers.

If the XRB was to require the nature of business statement to be repeated in a climate statement (limited to a maximum of 50 words), it would enable the ability to analyse and assess the merits of how industries are considering those risks and opportunities, which in turn, is likely to help Aotearoa New Zealand meet the domestic-aligned 2050 emissions targets (as stipulated in legislation).

Appendix 1: List of McGuinness Institute reports that discuss climate reporting

Year	Month	Type of Publication	Publication Title	Project	Link
2022	Final Draft	Working Paper	Working Paper 2022/06 – Strategy Maps: Copies of All Strategy Maps Found in Government Department Strategies in Operation as at 31 December 2021	StrategyNZ	https://www.mcguinnessinstitute.org/wp-content/uploads/2022/05
	Final Draft	Working Paper	Working Paper 2022/05 – Best Practice: Guidance for policy analysts preparing government department strategy documents	StrategyNZ	https://www.mcguinnessinstitute.org/wp-content/uploads/2022/07/20220711-0444pm-Best-Practice-black.pdf
	Final Draft	Working Paper	Working Paper 2022/03 – Scoring Tables Collating and Ranking Government Department Strategies in Operation as at 31 December 2021	StrategyNZ	https://www.mcguinnessinstitute.org/wp-content/uploads/2022/07/20220708-1113am-WP-2022-03-Scoring-Tablesconverted.pdf
	Final Draft	Working Paper	Working Paper 2022/02 – Complete Lists of Government Department Strategies Between 1 July 1994 and 31 December 2021	StrategyNZ	https://www.mcguinnessinstitute.org/wp- content/uploads/2022/08/20220819-3pm-WP-2022-02-Lists.pdf
	Aug	Submission	Reclassifying stewardship land on the West Coast	StrategyNZ	https://www.mcguinnessinstitute.org/wp- content/uploads/2022/08/20220823-McGuinness-Institute-Submission- Reclassifying-stewardship-land-on-the-West-Coast.pdf

Year	Month	Type of Publication	Publication Title	Project	Link
	Jul	Submission	Water Services Entities Bill – Three Waters Reform Programme	StrategyNZ, ReportingNZ ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp- content/uploads/2022/09/20220906-McGuinness-Submission-Water- Services-Entities-Bill.pdf
	Jun	Submission	Te mahere urutaunga ā motu (tuhinga hukihuki): Draft National Adaptation Plan and the Adapt and Thrive - Managed Retreat document	ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp-content/uploads/2022/06/20220616-McGuinness-NAP-submission-FINAL.pdf
	May	Submission	Submission in Response to People and place: Ensuring the wellbeing of every generation Consultation on the topic for the Ministry for the Environment's Long-term Insights Briefing 2022.	StrategyNZ, ReportingNZ	https://www.mcguinnessinstitute.org/wp-content/uploads/2022/05/20220523-0507pm-Submission-People-and-place.pdf
	May	Submission	Submission in Response to Strategy and Metrics and Targets Consultation Aotearoa New Zealand Climate Standard 1: Climate- related Disclosures (NZ CS 1)	StrategyNZ, ReportingNZ ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp-content/uploads/2022/05/20220531-2pm-XRB-submission-by-McGuinness-DRAFT.pdf
	May	Working Paper	Discussion Paper 2022/02 — New Zealand King Salmon Case Study: A financial reporting perspective	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp-content/uploads/2022/05/20220525-330pm-NZKSpdf
	Final Draft	Working Paper	Working Paper 2022/10 – New Zealand King Salmon key documents 2012–2022	OneOceanNZ, ReportingNZ ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp-content/uploads/2022/05/20220513-0353pm-WP-2022-10-NZKS.pdf

Year	Month	Type of Publication	Publication Title	Project	Link
	May	Discussion Paper	Discussion Paper 2022/01 – Future for Local Government Workshop	ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp-content/uploads/2022/06/20220601-5pm-Future-for-Local-Government-Workshop-paper.pdf
	Apr	Submission	Proposed changes to regulations for the New Zealand Emissions Trading Scheme 2022	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp-content/uploads/2022/05/202205503-Submission-Proposed-changes-to-regulations-for-the-New-Zealand-Emissions-Trading-Scheme-202210.pdf
	Mar	Submission	Improving Aotearoa New Zealand's environmental reporting system	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp- content/uploads/2022/03/20220230-McGuinness-MfE-Submission- Improving-Aotearoa-New-Zealand-FINAL-FOR-WEBSITE.pdf
	Mar	Submission	Te Ara Paerangi – Future Pathways Green Paper	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp- content/uploads/2022/03/20220225-4pm-McGuinness-Future- Pathways-Green-Paper-Submission-Final-For-website.pdf
2021	Dec	Working Paper	Working Paper 2021/04 – Reviewing Voluntary Reporting Frameworks mentioned in 2018 – 2020 Annual Reports (work in progress)	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp-content/uploads/2021/12/20211210-430pm-WP-2021-04.pdf
	Dec	Working Paper	Working Paper 2021/09 – Analysis of Climate Reporting in the Public and Private Sectors (work in progress)	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp-content/uploads/2021/12/20211210-445pm-WP-2021-09.pdf
	Nov	Working Paper	Working Paper 2021/15 – Looking for a taxonomy for Aotearoa New Zealand's oceans	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp-content/uploads/2022/02/20220201-0301pm-WP-2021-15-Interactive.pdf

Year	Month	Type of Publication	Publication Title	Project	Link
	Nov	Working Paper	Working Paper 2021/14 – The Role of Water Temperature in Climate Change Policy – A New Zealand King Salmon Case Study	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp-content/uploads/2022/02/20220201-0253pm-WP-2021-14-Interactive.pdf
	Oct	Discussion Paper	Discussion Paper 2021/04 – An Accounting Dilemma: Does a commitment to purchase offshore carbon credits create a requirement to disclose that obligation in the financial statements of the New Zealand Government?	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp-content/uploads/2022/02/20220202-0947am-DP-2021-04-Interactive.pdf
	Oct	Working Paper	Working Paper 2021/13 – Analysis of Priorities mentioned in Minister of Finance Budget speeches since 2006	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp- content/uploads/2022/02/20220201-0248pm-WP-2021-13- Interactive.pdf
	Sep	Working Paper	Working Paper 2021/11 – Analysis of Donations and Political Donations in 2020 Annual Reports by NZSX-listed companies	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp-content/uploads/2022/02/20220201-0245pm-WP-2021-11-Interactive-1.pdf
	Jul	Submission	Submission in response to the International Financial Reporting Standards Foundation (IFRS)	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp- content/uploads/2021/12/20210808-McGuinness-Institute-NZ- Submission-in-response-to-IFRS-FINAL.pdf

Year	Month	Type of Publication	Publication Title	Project	Link
	Jun	Working Paper	Working Paper 2021/06 – Reviewing TCFD information in 2017–2020 Annual Reports of NZSX-listed companies	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp-content/uploads/2021/12/20211214-1207pm-WP-2021-06-Interactive.pdf
	May	Submission	Submission on the Financial Sector (Climate-related Disclosures and Other Matters) Amendment Bill	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp-content/uploads/2021/10/20210528-FINAL-25-June-Financial-Sector-Amendment-Bill-Submission-McGuinness-Institute-5-Oct-1.pdf
	Mar	Submission on the He Pou a Rangi Climate Change Commission 2021 Draft Advice for Consultation		ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp-content/uploads/2021/06/20210328-McGuinness-CCC-Submission-updated-cover.pdf
2020	Jun	Working Paper	Working Paper 2020/05 – Reviewing Voluntary Reporting Frameworks mentioned in 2019 Annual Reports	ReportingNZ	https://www.mcguinnessinstitute.org/wp- content/uploads/2021/08/20210722-10.22am-WP-2020-05- Interactive-2.pdf
	Jun	Working Paper	Working Paper 2020/04 – Analysis of Climate Reporting in the Public and Private Sectors	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp-content/uploads/2021/08/20210729-9.01am-WP-2020-04-Interactive-2.pdf
	Jun	Working Paper	Working Paper 2020/03 – Reporting Requirements of Five Types of Entities	ReportingNZ	https://www.mcguinnessinstitute.org/wp-content/uploads/2021/09/20210914-2.55pm-WP-2020-03-Interactive.pdf
	May	Working Paper	orking Paper 2020/02 – The Role of a Directors' Report: An analysis of the legislative	ReportingNZ	https://www.mcguinnessinstitute.org/wp-content/uploads/2021/08/20200611-WP-2020-02-Interactive-3pdf

Year	Month	Type of Publication	Publication Title	Project	Link
			requirements of selected		
			Commonwealth countries		
2019	Dec	Submission	Submission on Climate-related financial disclosures: Understanding your business risks and opportunities related to climate change	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp-content/uploads/2020/02/20200226-FINAL-McGuinness-Institute-Climate-related-financial-disclosures-Submission.pdf
	Dec	Survey	Survey Insights: An analysis of the 2019 Task Force on Climate-related Financial Disclosures (TCFD) survey	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp-content/uploads/2019/12/20191218-Survey-Insights-An-analysis-of-the-2019-TCFD-survey.pdf
	Oct	Discussion Paper	Discussion Paper 2019/01 – The Climate Reporting Emergency: A New Zealand case study	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp-content/uploads/2019/11/20191114-Discussion-Paper-FINAL.pdf
	Oct	Blog	TCFD Workshops: Practical steps for implementation (Auckland and Wellington)	ReportingNZ	https://www.mcguinnessinstitute.org/reportingnz/tcfd-workshops- practical-steps-for-implementation/
	Sep	Think Piece	Think Piece 32 — Exploring Ways to Embed Climate Reporting in the Existing Framework	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp-content/uploads/2019/10/20191014-Think-Piece-32pdf
	Sep	Working Paper	Working Paper 2019/06 – Analysis of Climate Change Reporting in the Public and Private Sectors	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp- content/uploads/2019/10/20191003-Working-Paper-201906- FINAL.pdf
	Oct	Working Paper	Working paper 2019/05 – Reviewing Voluntary Reporting Frameworks Mentioned in 2017 and 2018 Annual Reports	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp- content/uploads/2020/06/20191003-Working-paper-2019.05- FINAL.pdf

Year	Month	Type of Publication	Publication Title	Project	Link
	Aug	Submission	Oral Submission to Select Committee on Climate Change Response (Zero Carbon) Amendment Bill	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp- content/uploads/2019/09/20190905-McGuinness-Institute-Oral- Submission-FINAL.pdf
	Jul	Submission	Submission to Ministry for the Environment on the Climate Change Response (Zero Carbon) Amendment Bill	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp- content/uploads/2019/09/20190912-Climate-Change-Response-Zero- Carbon-Amendment-Bill-Submission-FINAL.pdf
2018	Oct	Think Piece	Think Piece 30 – Package of Climate Change Reporting Recommendations	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp- content/uploads/2018/11/20181108-Think-Piece-30-%E2%80%93- Package-of-Climate-Change-Reporting-Recommendations.pdf
	Sep	Working Paper	Working Paper 2018/04 – Legislation Shaping the Reporting Framework: A compilation	ReportingNZ	https://www.mcguinnessinstitute.org/wp-content/uploads/2018/10/20181010-Working-Paper-2018%EF%80%A204-%E2%80%93-5.30-pm.pdf
	Jul	Submission	Submission to Ministry for the Environment on the Zero Carbon Bill	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp- content/uploads/2018/07/20180723-McGuinness-Institute- submission-on-the-Zero-Carbon-Bill.pdf
	Jul	Submission	Submission to Productivity Commission on a Low- emissions Economy	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp- content/uploads/2018/07/20180724-Submission-to-the-Productivity- Commission-on-Low-emissions-Economy.pdf
	Jul	Working Paper	Working Paper 2018/03 – Analysis of Climate Change Reporting in the Public and Private Sectors	ReportingNZ	https://www.mcguinnessinstitute.org/wp- content/uploads/2018/10/20181029-Working-Paper- 2018%EF%80%A203-cover-4.30-pm.pdf
	May	Submission	Submission to the Tax Working Group on the Future of Tax	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp- content/uploads/2018/05/20180510-Tax-Working-Group-Submission- McGuinness-Institute-FINAL.pdf
	Mar	Working Paper	Supporting Paper 2018/01 - Methodology for Working Paper 2018/01	ReportingNZ	https://www.mcguinnessinstitute.org/wp- content/uploads/2021/07/20210719-Supporting-Paper-2018-01- Methodology-FINAL.pdf

Year	Month	Type of Publication	Publication Title	Project	Link
	Mar	Working Paper	Working Paper 2018/01 – NZSX-listed Company Tables	ReportingNZ	https://www.mcguinnessinstitute.org/wp- content/uploads/2018/10/20181008-Working-Paper-201801- %E2%80%93-Final-WEB.pdf
	Mar	Survey	Users' Survey: Attitudes of interested parties towards Extended External Reporting (published in collaboration with the XRB) 29 May – 21 August 2017	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp-content/uploads/2018/03/20180312-Users-Survey-Results-Booklet-FINAL.pdf
	Mar	Survey	Preparers' Survey: Attitudes of the CFOs of significant companies towards Extended External Reporting (published in collaboration with the XRB) 10 April – 3 July 2017	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp- content/uploads/2018/03/20180312-Preparers-Survey-Results- Booklet-FINAL.pdf
	Mar	Survey	Survey Highlights: A summary of the 2017 Extended External Reporting Surveys	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp- content/uploads/2018/03/20180313-ReportingNZ-Project-Survey- Highlights-Final-3.50-pm.pdf
	Mar	Survey	Survey Insights: An analysis of the 2017 Extended External Reporting Surveys	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp- content/uploads/2018/10/20181008-Survey-Insights-FINAL-WEB.pdf
2017	Dec	Submission	Submission on NZX Listing Rule Review	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp- content/uploads/2017/12/20171220-NZX-Listing-Review-Submission- Final.pdf
	Apr	Submission	Submission on disclosing non- GAAP financial information	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp- content/uploads/2016/08/20170424-Submission-on-Disclosure-of- non-GAAP-financial-information-final-1.pdf
2016	Oct	Submission	Submission on the NZX Corporate Governance Best Practice Code	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp-content/uploads/2016/08/20161125-NZX-McGuinness-Insitute-Submission-FINAL.pdf

Year	Month	Type of Publication	Publication Title	Project	Link
2014	Apr	Submission	Submission on the Environmental Reporting Bill	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp- content/uploads/2020/01/20140424-McGuinness-Institute- Submission-on-the-Environmental-Reporting-Bill.pdf
2013	Jul	Submission	Submission to the International Integrated Reporting Councils' (IIRC) Consultation Draft of the International Framework	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp- content/uploads/2016/08/20130716-McGuinness-Institute- Submission-on-Consultation-Draft.pdf
	Feb	Submission	Submission on the Public Finance (Fiscal Responsibility) Amendment Bill 2012	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp- content/uploads/2016/08/20130218-Public-Finance-fiscal- responsibility-Ammendment-Bill-2012-McGuinness-Institute.pdf
2011	Dec	Submission	Submission on the International Integrated Reporting Committee Discussion Paper	ReportingNZ and ClimateChangeNZ	https://www.mcguinnessinstitute.org/wp-content/uploads/2016/08/SustainableFutureInstitute_IIRC_Submission.pdf
	Jan	Survey	Integrated Annual Report Survey of New Zealand's Top 200 Companies: Exploring Responses from Chief Financial Officers on Emerging Reporting Issues	ReportingNZ and ClimateChangeNZ	https://www.mcquinnessinstitute.org/wp- content/uploads/2018/11/20180410-One-integrated-report.pdf

Year	Month	Type of Publication	Publication Title	Project	Link

Endnotes

¹ See McGuinness Institute. (September 2022). Working Paper 2022/14— Reviewing TCFD information in 2017–2021 reports of NZSX-listed companies. Retrieved 27 September 2022 from https://www.mcguinnessinstitute.org/publications/working-papers

⁴ See Mullan B, Sood A, Stuart S, Carey-Smith T, National Institute of Water and Atmospheric Research (NIWA). (September 2018). Climate Change Projections for New Zealand: Atmosphere projections based on simulations form the IPCC Fifth Assessment, 2nd Edition. Ministry for the Environment. Retrieved 27 September 2022 from https://environment.govt.nz/assets/Publications/Files/Climate-change-projections-2nd-edition-final.pdf

⁵ See NIWA. (n.d.). *Climate change scenarios for New Zealand*. Retrieved 27 September 2022 from https://niwa.co.nz/our-science/climate/information-and-resources/clivar/scenarios

⁶ See Ministry for the Environment. (3 August 2022). First national climate change risk assessment for New Zealand. Retrieved 27 September 2022 from https://environment.govt.nz/what-government-is-doing/areas-of-work/climate-change/adapting-to-climate-change/first-national-climate-change-risk-assessment-for-new-zealand and Ministry for the Environment. (August 2020).

National Climate Change Risk Assessment for New Zealand: Snapshot. Retrieved 27 September 2022

from https://environment.govt.nz/assets/Publications/Files/national-climate-change-risk-assessment-new-zealand-snapshot.pdf

⁷ See Ministry for the Environment. (August 2020). *National Climate Change Risk Assessment for New Zealand: Snapshot*. Retrieved 27 September 2022 from https://environment.govt.nz/assets/Publications/Files/national-climate-change-risk-assessment-new-zealand-snapshot.pdf

⁸ See Ministry for the Environment. (3 August 2022). First national climate change risk assessment for New Zealand. Retrieved 27 September 2022 from https://environment.govt.nz/what-government-is-doing/areas-of-work/climate-change/adapting-to-climate-change/first-national-climate-change-risk-assessment for New Zealand: Snapshot. Retrieved 27 September 2022 from https://environment.govt.nz/assets/Publications/Files/national-climate-change-risk-assessment-new-zealand-snapshot.pdf

⁹ See Ministry for the Environment and Stats NZ. (October 2020). Our atmosphere and climate 2020, p. 64. Retrieved 27 September 2022 from https://environment.govt.nz/assets/Publications/Files/our-atmosphere-and-climate-2020.pdf

¹⁰ See IPCC. (2021). 'Frequently Asked Questions, Chapter 11: Weather and Climate Extreme Events in a Changing Climate' in *Climate Change 2021: The Physical Science Basis*. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, p. 64. Retrieved 27 September 2022

from https://www.ipcc.ch/report/ar6/wg1/downloads/faqs/IPCC AR6 WGI FAQ Chapter 11.pdf

See I Seneviratne, S.I., X. Zhang, M. Adnan, W. Badi, C. Dereczynski, A. Di Luca, S. Ghosh, I. Iskandar, J.Kossin, S. Lewis, F. Otto, I. Pinto, M. Satoh, S.M. Vicente-Serrano, M. Wehner, and B. Zhou. (2021). Weather and Climate Extreme Events in a

² See endnote 1 above.

³ See endnote 1 above.

Changing Climate'. In Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (Eds.), *Climate Change 2021: The Physical Science Basis*. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 1513–1766. Retrieved 15 September 2022 from https://www.ipcc.ch/report/sixth-assessment-report-working-group-i/

¹¹ Figures 1 and 2, discussed in Working Paper 2022/14— Reviewing TCFD information in 2017–2021 reports of NZSX-listed companies, contain information from the following report, in particular Chapter 11.

Full report

See IPCC. (2021). Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (Eds.), Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 2391. Retrieved 15 September 2022 from https://www.ipcc.ch/report/sixth-assessment-report-working-group-i/

Chapter 1

See Chen, D., M. Rojas, B.H. Samset, K. Cobb, A. Diongue Niang, P. Edwards, S. Emori, S.H. Faria, E. Hawkins, P. Hope, P. Huybrechts, M. Meinshausen, S.K. Mustafa, G.-K. Plattner, and A.-M. Tréguier. (2021). 'Framing, Context, and Methods'. In Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (Eds.), *Climate Change 2021: The Physical Science Basis.* Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change.mCambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 147–286. Retrieved 15 September 2022 from https://www.ipcc.ch/report/sixth-assessment-report-working-group-i/

Chapter 11

See I Seneviratne, S.I., X. Zhang, M. Adnan, W. Badi, C. Dereczynski, A. Di Luca, S. Ghosh, I. Iskandar, J.Kossin, S. Lewis, F. Otto, I. Pinto, M. Satoh, S.M. Vicente-Serrano, M. Wehner, and B. Zhou. (2021). Weather and Climate Extreme Events in a Changing Climate'. In Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (Eds.), Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 1513–1766. Retrieved 15 September 2022 from https://www.ipcc.ch/report/sixth-assessment-report-working-group-id

Chapter 12

See Ranasinghe, R., A.C. Ruane, R. Vautard, N. Arnell, E. Coppola, F.A. Cruz, S. Dessai, A.S. Islam, M. Rahimi, D. Ruiz Carrascal, J. Sillmann, M.B. Sylla, C. Tebaldi, W. Wang, and R. Zaaboul. (2021). 'Climate Change Information for Regional Impact and for Risk Assessment'. In Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (Eds.), *Climate Change 2021: The Physical Science Basis*. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 1767–1926. Retrieved 15 September 2022 from https://www.ipcc.ch/report/sixth-assessment-report-working-group-i/

Technical Summary

See Arias, P.A., N. Bellouin, E. Coppola, R.G. Jones, G. Krinner, J. Marotzke, V. Naik, M.D. Palmer, G.-K. Plattner, J. Rogelj, M. Rojas, J. Sillmann, T. Storelvmo, P.W. Thorne, B. Trewin, K. Achuta Rao, B. Adhikary, R.P. Allan, K. Armour, G. Bala, R. Barimalala, S. Berger, J.G. Canadell, C. Cassou, A. Cherchi, W. Collins, W.D. Collins, S.L. Connors, S. Corti,

F. Cruz, F.J. Dentener, C. Dereczynski, A. Di Luca, A. Diongue Niang, F.J. Doblas-Reyes, A. Dosio, H. Douville, F. Engelbrecht, V. Eyring, E. Fischer, P. Forster, B. Fox-Kemper, J.S. Fuglestvedt, J.C. Fyfe, N.P. Gillett, L. Goldfarb, I. Gorodetskaya, J.M. Gutierrez, R. Hamdi, E. Hawkins, H.T. Hewitt, P. Hope, A.S. Islam, C. Jones, D.S. Kaufman, R.E. Kopp, Y. Kosaka, J. Kossin, S. Krakovska, J.-Y. Lee, J. Li, T. Mauritsen, T.K. Maycock, M. Meinshausen, S.-K. Min, P.M.S. Monteiro, T. Ngo-Duc, F. Otto, I. Pinto, A. Pirani, K. Raghavan, R. Ranasinghe, A.C. Ruane, L. Ruiz, J.-B. Sallée, B.H. Samset, S. Sathyendranath, S.I. Seneviratne, A.A. Sörensson, S. Szopa, I. Takayabu, A.-M. Tréguier, B. van den Hurk, R. Vautard, K. von Schuckmann, S. Zaehle, X. Zhang, and K. Zickfeld. (2021). 'Technical Summary'. In MassonDelmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (Eds.), *Climate Change 2021: The Physical Science Basis*. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 33–144. Retrieved 15 September 2022 from https://www.ipcc.ch/report/sixth-assessment-report-working-group-i/

Glossary

See IPCC. (2021). Annex VII: Glossary. In Matthews, J.B.R., V. Möller, R. van Diemen, J.S. Fuglestvedt, V. Masson-Delmotte, C. Méndez, S. Semenov, A. Reisinger (Eds.), Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 2215–2256. Retrieved 15 September 2022 from www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC AR6 WGI AnnexVII.pdf.

¹² See Endnote 1 above.

¹³ See Endnote 1 above.

¹⁴ See Endnote1 above.

¹⁵ The Journal. (14 September 2022). Who Should Pay for Pakistan's Historic Flood?. WSJ. Retrieved 27 September 2022 from https://www.wsj.com/podcasts/the-journal/who-should-pay-for-pakistan-historic-flood/6475a50d-0f39-4328-9bd1-69ae10600e71

¹⁶ See McGuinness Institute. (May 2022). Strategy and Metrics and Targets Consultation Aotearoa New Zealand Climate Standard 1: Climate-related Disclosures (NZ CS 1). Retrieved 20 June 2022 from https://www.mcguinnessinstitute.org/wp-content/uploads/2022/05/20220531-2pm-XRB-submission-by-McGuinness-DRAFT.pdf

¹⁷ See McGuinness Institute. (December 2021). Discussion Paper 2021/05 – Establishing reference climate scenarios for Aotearoa New Zealand. (In press.) Retrieved 27 April 2022 from https://www.mcguinnessinstitute.org/publications/discussion-papers

¹⁸ See McGuinness Institute. (n.d.) *List of Aotearoa New Zealand Scenarios*. Retrieved 30 May 2022 from https://www.mcguinnessinstitute.org/list-of-aotearoa-new-zealand-scenarios

¹⁹ See McGuinness Institute. (2021). Working Paper: 2021/10: Analysis of Existing Scenarios in Aotearoa New Zealand. Retrieved 30 May 2022 from https://www.mcguinnessinstitute.org/wp-content/uploads/2022/06/20220602-0139pm-2021-10.pdf

²⁰ See Small, Z. (17 December 2017). Using 'Aotearoa' and 'New Zealand' together 'as it should be' - Jacinda Ardern. Newshub. Retrieved 27 September 2022 from https://www.newshub.co.nz/home/politics/2019/12/using-aotearoa-and-new-zealand-together-as-it-should-be-jacinda-ardern.html

²¹ See Sherman, M. (28 September 2021). 1News poll reveals what Kiwis think about changing NZ's name to Aotearoa. *1News*. Retrieved 27 September 2022 from https://www.1news.co.nz/2021/09/28/1news-poll-reveals-what-kiwis-think-about-changing-nzs-name-to-aotearoa

²² See Chouinard, Y. *Earth is now our only shareholder*. Patagonia. Retrieved 27 September 2022 from https://www.patagonia.com/ownership

²³ See House Committee on Oversight and Reform. (14 September 2022). *Memorandum*. Congress of the United States, House of Representatives. Retrieved 27 September 2022 from https://oversight.house.gov/sites/democrats.oversight.house.gov/files/2022.09.14%20FINAL%20COR%20Supplemental%20Memo.pdf

²⁴ See McGuinness Institute. (September 2022). *Discussion Paper 2022/02 – New Zealand King Salmon Case Study: A financial reporting perspective*. Retrieved 27 September 2022 from https://www.mcguinnessinstitute.org/publications/discussion-papers

²⁵ See McGuinness Institute. (May 2022). Working Paper 2021/07 – Scoping the use of the term 'climate scenarios' and other climate-related terms in Aotearoa New Zealand and international literature. Retrieved 11 May 2022 from https://www.mcguinnessinstitute.org/publications/working-papers

²⁶ See NZ Companies Office. (2021). *All Registers*. Retrieved 27 April 2022 from https://www.companiesoffice.govt.nz/all-registers

²⁷ See McGuinness Institute (May 2021). Financial Sector (Climate-related Disclosures and Other Matters) Amendment Bill. Retrieved 27 June 2022 from https://www.mcguinnessinstitute.org/wp-content/uploads/2021/10/20210528-FINAL-25-June-Financial-Sector-Amendment-Bill-Submission-McGuinness-Institute-5-Oct-1.pdf

²⁸ See Business Industry Classification Code. (n.d.). *Find your Business Industry Classification Code*. Retrieved 27 May 2022 from https://www.businessdescription.co.nz