



Briefing: The use of high-end climate scenarios in New Zealand's regulatory framework

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Sub Security level: Classification

MfE priority: Non-Urgent

Actions sought from Ministers		
Name and position	Action sought	Response by
To Hon Chris BISHOP Minister Responsible for RMA Reform	Note the contents of this briefing	11 July 2024
CC Hon Simon WATTS Minister of Climate Change	Note this briefing	N/A

Actions for Minister's office staff
<p>Forward this briefing to: RMA Reform - Parliamentary Under-Secretary Simon Court</p> <p>Return the signed briefing to the Ministry for the Environment (RM.Reform@mfe.govt.nz and ministerials@mfe.govt.nz).</p>

Appendices and attachments
Nil

Key contacts at Ministry for the Environment			
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Minister's comments

The use of high-end climate scenarios within New Zealand's regulatory framework

Key messages


1. There has been recent interest from the media and Ministers in the use of climate scenarios within local government decision-making. Concerns relate to decisions being made based on high-end climate scenarios, and the impacts of these decisions on resource consents and the availability of insurance for properties identified as being at potential risk.
2. The Resource Management Act 1991 (RMA) requires that local authorities have regard to the national adaptation plan (NAP) when making and changing regional policy statements, and regional and district plans. Local authorities must give climate scenarios genuine attention and thought before deciding whether, or how, to reflect climate scenarios in planning decisions. This consideration flows down into regional climate plans, codes of practice, and design standards that subsequently influence resource consenting.
3. The NAP recommends the use of Shared Socio-economic Pathway (SSP) scenarios for the purpose of risk assessment and stress testing resource management approaches. SSP scenarios are global emissions-based narratives that span a wide range of plausible societal and climatic futures and were developed for the Intergovernmental Panel on Climate Change (IPCC) in 2021. Warming under these scenarios ranges from 1.5°C global temperature increase under a 'low-end climate scenario' (SSP1-1.9), to 4°C warming under a 'high-end climate scenario' (SSP5-8.5).
4. New Zealand's use of future climate scenarios within regulatory frameworks is consistent with international practice. Scenarios play a vital role in identifying potential climate change risk and informing decision-making.
5. The Ministry for the Environment (MfE) is currently undertaking a stocktake of regional policy statements, and regional and district plans for our national direction work programme, which will include some information on which scenarios are informing local government decision-making. Following on from this, there will be an opportunity to standardise the use of climate scenarios through national direction or other means (eg, guidance) as appropriate.

Recommendations

We recommend that you:

1. **note** the contents of this briefing. Yes / No
2. **agree** to proactively release this briefing. Yes / No
3. **forward** the briefing to Undersecretary Court and Minister Watts. Yes / No

Signatures



Sara Clarke
General Manager – Adaptation
Environmental Management and Adaptation unit
26 June 2024

Hon Chris BISHOP
Minister Responsible for RMA Reform
Date

The use of high-end climate scenarios within New Zealand's regulatory framework

Purpose

1. The purpose of this briefing is to provide you with information to support a possible meeting between you and Undersecretary Court on the use of climate scenarios in New Zealand's planning system. Undersecretary Court has raised the matter of councils planning to 'extreme' climate scenarios twice, once at the Housing Ministers meeting on 28 May 2024, and again at the ECO Committee on 19 June 2024.
2. The briefing includes information on climate scenarios within our regulatory frameworks, our current understanding around the use of high-end climate scenarios by local government plus details on when you can expect to see further advice on climate scenarios within our future work programme.

Background

3. Undersecretary Court raised the matter of councils planning to 'extreme' climate scenarios at the Housing Ministers meeting on 28 May 2024, and again at the ECO Committee on the 19 June 2024. His concern surrounds the use of high-end climate scenarios such as Shared Socio-economic Pathway 5-8.5 (SSP5-8.5) by councils and the impact this is having on development opportunities and future insurance.
4. SSP scenarios are global emissions-based narratives that are used to produce model derived projections of future climate change. These scenarios create a range of plausible societal and climatic futures and have been developed by the Intergovernmental Panel on Climate Change (IPCC) to address uncertainty in future greenhouse gas (GHG) emissions. Under SSP scenarios, global temperatures are projected to range from 1.5°C as a low-end climate scenario (SSP1-1.9) to potentially 4°C warming under a high-end climate scenario (SSP5-8.5) by 2100.
5. The high-end climate scenario (SSP5-8.5), from an emissions perspective, reflects limited mitigation measures and an active reversal of current global climate policy. It is designed to account for 'unforeseen discontinuities in development pathways or the uncertainties underlying long term projections of economic drivers'.
6. The IPCC is often incorrectly referenced as saying SSP5-8.5 is implausible, which has led to confusion around how this scenario should be used in adaptation planning. The IPCC explicitly acknowledges the extreme difficulty in assigning likelihoods to scenarios due to 'the deep uncertainty and direct relationship with human choice' and suggests 'high-end scenarios can be very useful to explore the high-end risks of climate change'.
7. The rapid development of renewable energy technologies and emerging climate policy have made it considerably less likely that emissions could end up as high as these scenarios. While the emissions associated with SSP5-8.5 are now less likely, the IPCC

states that high emissions cannot be ruled out for many reasons, including political factors, and for example, higher than anticipated population and economic growth.

8. In addition, the climate outcome associated with SSP5-8.5 could still occur while following a lower emissions path. Uncertainties about climate feedbacks (how exactly the climate responds to increased emissions) and tipping points, such as rapid Antarctic ice sheet melt and forest dieback, still exist and could lead to adverse climate impacts globally.
9. There has been media interest in the use of climate scenarios within local government decision-making, in particular requirements for developers to build to standards based on high-end climate scenarios. In addition, there have been concerns about impacts on insurance when high-end climate scenarios are applied at a local level. On 20 June 2024 about forty people protested the use of climate change modelling by Kāpiti Coast District Council, which they claim is based on implausible sea level rise projections.

Analysis and advice

How high-end scenarios are used within resource management processes

10. The national adaptation plan (NAP) was published in 2022 and sets out Government-led strategies, policies and proposals to help New Zealanders adapt to the changing climate and its effects. Under the Resource Management Act 1991 (RMA), sections 61, 66, and 74 require local authorities to 'have regard to' the NAP when making or changing regional policy statements, regional plans, and district plans. This is the regulatory requirement that directs local authorities to consider climate scenarios within plan-making.
11. The NAP recommends a middle of the road scenario (SSP2-4.5) and a fossil fuel intensive development scenario (SSP5-8.5) be used for detailed hazard and risk assessments, in both coastal and non-coastal areas. The NAP also recommends that risk assessments for coastal areas use SSP5-8.5 to 2130. This aligns with New Zealand Coastal Policy Statement (2010) direction to take a precautionary approach where there is higher uncertainty.
12. For local authorities 'to have regard to' the NAP, they must give climate scenarios genuine attention and thought before deciding whether, or how, to reflect climate scenarios in planning decisions. This usually means the decision-maker must give reasons for how they have considered climate scenarios.
13. Stress testing plays an important role in the planning system and is a requirement under the NAP for plans, policies and strategies. Stress testing aligns with a precautionary approach where, in the case of incomplete or uncertain information, a reasonable high-end climate scenario is tested. Using high-end climate scenarios like SSP5-8.5 to inform risk assessments enables planners and developers to identify when, and to what extent, areas could be affected by climate change impacts. The use of SSP5-8.5 for stress testing in New Zealand is consistent with the settings of many countries.
14. While there is no specific requirement for councils to have regard to the NAP in resource consent decision-making under the RMA, under (s104(1)(c)) councils can choose to consider the NAP as a 'relevant matter'. Additionally, some councils have regional climate plans and consider these under (s104(1)(c)).

15. Regional climate projections reflected in regional climate plans can in turn influence design standards contained in codes of practice. For example, requirements in the Auckland Council Stormwater Code of Practice¹ for designing infrastructure reflects climate projections for Auckland prepared by NIWA to account for the effects of climate change.
16. In practical terms, council initiated regional climate plans, codes of practice, and design standards are being considered at a consenting level and have the potential to influence both the outcomes of applications and conditions being put on consents.

Use of climate scenarios by financial institutions

17. The Climate-related Disclosures regime legislates requirements for approximately 200 of New Zealand's largest financial institutions to conduct scenario analysis with at least three climate-related scenarios. Scenario analysis is a key part of financial organisation's risk management processes for the resilience of their business model and strategy. These organisations are required to analyse a 1.5 degrees Celsius climate-related scenario, a 3 degrees Celsius or greater climate-related scenario, and a third climate-related scenario.
18. The climate-related disclosures regime does not specify a specific scenario archetype (e.g. specific SSP and / or RCP scenario), this allows climate reporting entities the flexibility to decide which climate-related scenario is most relevant for their situation and risk profile.

Opportunities to address climate scenarios through future work programmes

19. MfE recommends providing advice to councils to address the confusion associated with which SSP scenarios should be used under different circumstances.
20. MfE officials are currently working on national direction for natural hazards, scheduled for gazettal in mid-2025. This provides an opportunity to standardise the use of climate scenarios at a national level should Ministers wish to do so – either through the instrument itself or subsequent guidance.
21. A stocktake of regional policy statements, and regional and district plans is currently being undertaken. Among other things this will indicate which climate scenarios are being used to inform local government decision-making. Data on this will be available in July.
22. Given high interest in this issue we recommend proactively releasing this briefing.

Te Tiriti analysis

23. No Tiriti issues are associated with the proposals in this briefing.

¹ [Stormwater Code of Practice Version 4 \(aucklanddesignmanual.co.nz\)](https://www.aucklanddesignmanual.co.nz)

Other considerations

Risks and mitigations

24. No risks are associated with the proposals in this briefing.

Legal issues

25. This is an area which has high potential for legal risk. Given the challenges that councils have faced, we will work with our legal teams on future advice for the use of climate scenarios in decision-making and adaptive planning.

Financial, regulatory and legislative implications

26. No financial, regulatory, or legislative implications are associated with proposals in this briefing.

Next steps

27. Once information from MfEs stocktake on the use of scenarios by local government is received, officials will consider how best to provide guidance or policy direction on the use of climate scenarios, in particular high-end climate scenarios.
28. Ministerial agreement will be sought for any policy proposals.