Wise Response Society Inc.

Hearing Oral Submission on SRMR, Interpretation, Integrated Management and Air chapters of the Proposed Regional Policy Statement

7 February, 2023

Presented by Dr Stephen Knight-Lenihan[1] and Dugald MacTavish[2] on behalf of the Society.

Wise Response Society

1. The Wise Response Society is a broad coalition of scientists, engineers, planners, artists and sportspeople who are urging New Zealand to face up to the question *"As demand for growth exceeds earth's physical limits, causing unprecedented risks, what knowledge and changes do we need to secure New Zealand's future wellbeing?"* Chair and secretary respectively are Emeritus Professors Liz Slooten and Thomas Neitzert and our Patrons are Sir Alan Mark and Sir Geoffrey Palmer.

Scope of this Oral Submission

2. -We have had representatives attend many of the ORC-facilitated liaison sessions in late 2022 but have not provided evidence or cross submissions. We have found the whole process very disjointed and confusing. Nevertheless, we have been participating in the RPS review process since 2015, attempting to get our Society's perspective expressed in RPS provisions with very limited success.

3. In our submission we have asked for some rather fundamental changes to the pRPS that have not been picked up sufficiently in the revised version. Therefore, we feel the most useful contribution we can make today is to reinforce two main themes in our original submission and which are core concerns to our Society. They are:

    i. A biophysical limits perspective
    ii. A nature-positive perspective

4. Those themes are inherent throughout our submission and so will be relevant in any further appearances. I will cover the first and Stephen the second.

5. And in case it is of assistance to the panel, we have updated our position on specific Integrated management and air provisions in Appendix B. Those are in line with the perspective requested in our submission.

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[1] Environment consultant. Research projects include climate change impacts and transition planning, catchment management, urban biodiversity, and resilience theory and practice.

[2] Retired geohydrologist and water resources engineering consultant. Under contract to local bodies Dugald has undertaken groundwater investigations in most of the alluvial basins in Otago and for the rural community numerous on farm irrigation designs. He has also been heavily involved in the RMA processes around plan development for the Lower Waitaki River. Former Secretary of Wise Response. QSM

A Biophysical Limits Perspective

The Basis for the Society Concerns

6. Example charts in Appendix A illustrate clearly global trends which indicate both the need for deep change at all scales and their urgency. Because they act at a global scale, they demand our attention at every level, including regional New Zealand.

7. And because these trends act at a global scale and are constantly evolving, local-level planning risks being inappropriate, out of step or even counterproductive. In other words, policy is only sustainable if it is so at all scales. The obvious example of this is climate change.

8. Because of the direct relationship between fossil fuel use and emissions, responding effectively to climate change can contribute to mitigating many of these other material and pollution risks. According to the Intergovernmental Panel on Climate Change (IPCC), there is a need to halve global emissions by 2030 and more or less achieving zero emissions by the same date for energy-intensive countries like NZ.

9. Key to this is reducing energy dependence, particularly on fossil energy, and directing it to activities and forms of activity/production that are going to be useful and relevant in a more resource-constrained world.

10. We are heartened that the recent IPCC and the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) support this strategy.

Sufficient and Timely Action

11. As Johan Rockstrom, Director of the Potsdam Institute for Climate Impact Research puts it "The moment that the Earth system flips over from being self-cooling - which it still is - to self-warming, that is the moment that we lose control"

12. Given these points, an RPS must be framed within these energy and atmospheric limits.

13. The needed “step change” in how we live is subject to considerable inertia. We feel the right place to overcome this inertia, explain the cost of inaction, and establish the right levels of aspiration and direction for Otago, is through the RPS. That is what our submission intends to facilitate.

A Nature-Positive Perspective

14. For this part of the submission, we will focus on the concept of “net ecological gain” and “biophysical capacity”. Refer pp 12-13 of our submission.

15. To have a healthy and flourishing environment as per the pRPS vision, it is necessary to identify ways to live both within the biophysical limits of the region, and increase the biophysical capacity of the region. This includes compensating for cumulative losses of terrestrial and aquatic habitat.

16. To clarify the original submission: to realise net ecological gain and increasing biophysical capacity, all policies and plans must provide mechanisms to ensure development links to overall (net) improvements to ecological functioning across priority environmental domains.

17. While environmental limits and targets can contribute to this process, these only establish what is required at minimum.

18. There is a need to clearly link all development with enhancing and restoring ecosystems. Therefore, while the effects management hierarchy can be applied for direct development impacts, there needs to be in addition and separately, a proportional contribution to priority enhancement and restoration programmes across the region.

19. An example would be at a policy level requiring consents to consider priority restoration goals for both ecological health (which includes introduced and native biodiversity) and integrity (which focuses more on indigenous biodiversity). Development should contribute to enhancing and restoring these values, in addition to avoiding, remedying and mitigating immediate on-site impacts.

20. We note since our submission the tabling of the Natural and Built Environment Bill and Spatial Planning Bill in Parliament. The NBEB refers to management units, which in effect are bioregions. Bioregions contain one large or several nested ecosystems, characterised by landforms, vegetative cover, human culture, and history, as identified by local communities, government, and scientists.[3] We recommend using this concept in the context of operating within biophysical limits, and increasing biophysical capacity.

21. We also note since our submission the Kuniming-Montreal Global Biodiversity Framework has been agreed to.[4] This incorporates elements of the nature positive movement,[5] committing signatories to the United Nations Convention on Biological Diversity (CBD) to halting and reducing continuing net global biodiversity loss. The nature positive movement calls for biodiversity loss not just to be halted, but reversed and biodiversity to be increasing by 2030. Realising these goals requires enhancement and restoration at a regional level.

Summary recommendations for specific provisions

These are the common themes that run through our submission points and we feel are important. Does the pRPS:

1. Clearly signal **current risk levels** and that incremental change is no longer sufficient, especially given the growing probability of exceeding tipping points

2. Have **policy wording** that is unequivocal to facilitate measurement and enforcement (eg emissions budgets)

3. Enable all activity to remain **in step with evolving national goals** and international emissions agreements

4. Allow for **non-compliance to be prohibited** and highly unlikely

5. Ensure all biophysical **limits, including those imposed by climate change**, shape development

6. Deliver **progressive environmental and ecosystem gain** across all domains and activities

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[3] Miller, D.L., R.M. Hughes, J.R. Karr, P.M. Leonard, P.B. Moyle, L.H. Schrader, B.A. Thompson, et al. 1988. "Regional Applications of an Index of Biotic Integrity for use in Water Resource Management" *Fisheries* 13(5):12-20.

[4] See https://www.cbd.int/article/cop15-final-text-kunming-montreal-gbf-221222.

[5] See https://www.naturepositive.org/

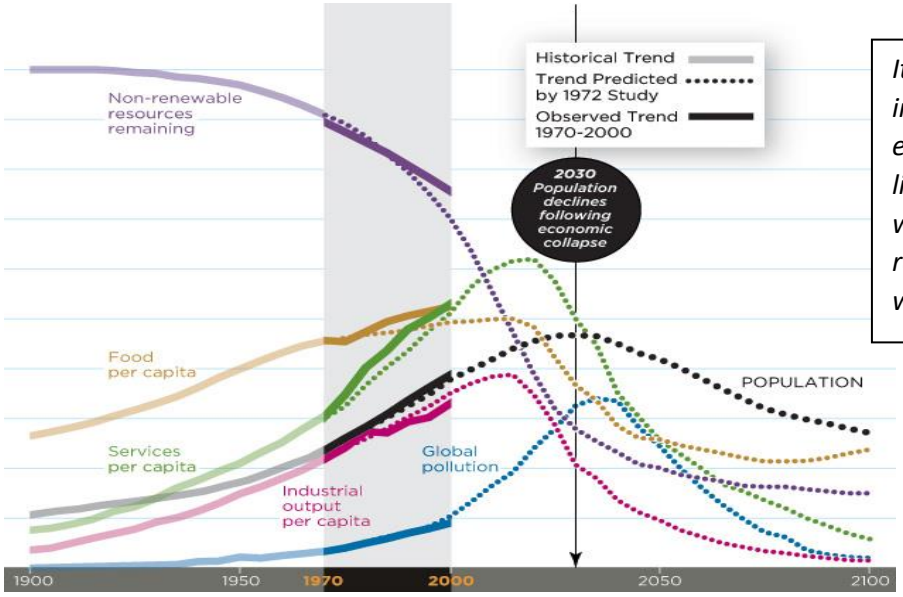
7. Ensure adjudicating authorities as well as developers can be held **accountable for outcome** delivery
8. Adopt precautionary **timeframes and milestones set for key outcomes** that can be monitored and enforced according to action plans

Appendix A: Rationale for Wise Response Society

These are selected examples of trends that our Society is trying to bring to wider public attention.

On the basis of these trends along, as a matter of national security, all nations, including New Zealand, should take the fact that we are massively in biophysical overshoot and the high probability of these global trends into account in their local planning instruments.

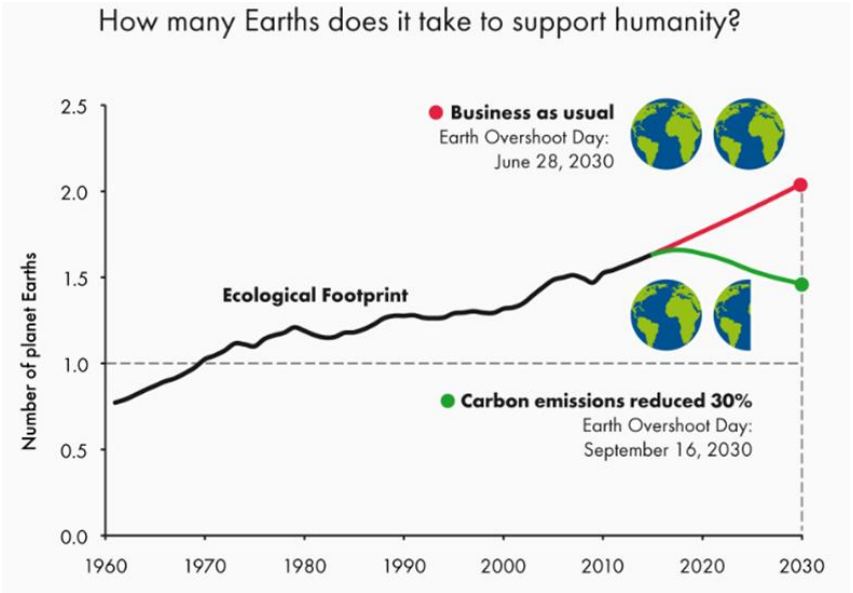
Example 1: The original "Limits to Growth" Study revisited



It forecasts the impact of encountering limits to growth which subsequent researchers agree with.

The above graphic depicts global Limits to Growth based on modelling by Meadows et al 1972 (subsequently also Turner 2014 via Smithsonian, Gaya Herrington, KPMG Director, Harvard/2020). Note the timing of the inflections; Food, Services and Industrial output, all per-capita. Note too, the trajectory of the non-renewable resources, over the current period.

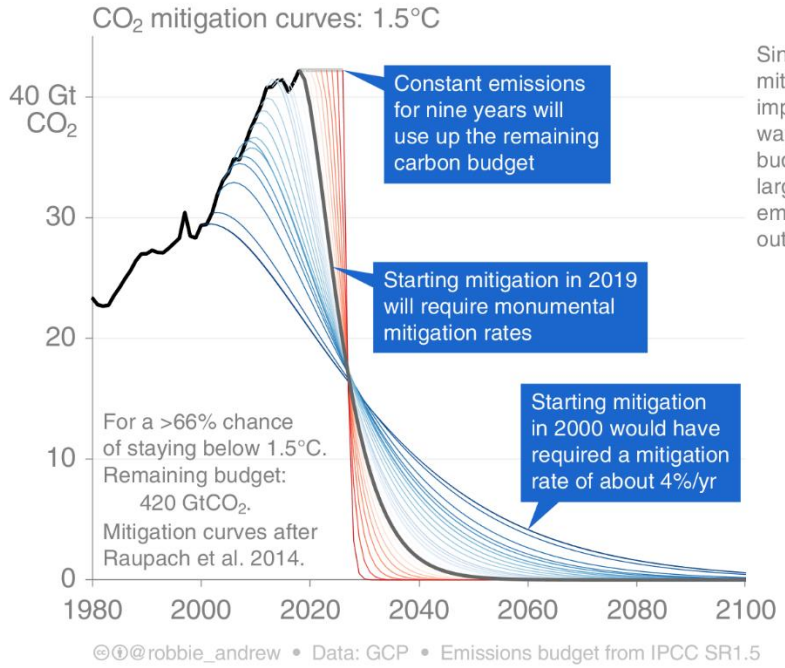
Example 2: Current State of Global Overshoot



Overshoot began about 1970 and with BAU, is expected to reach "two planets worth" by 2030 which is totally unsustainable.

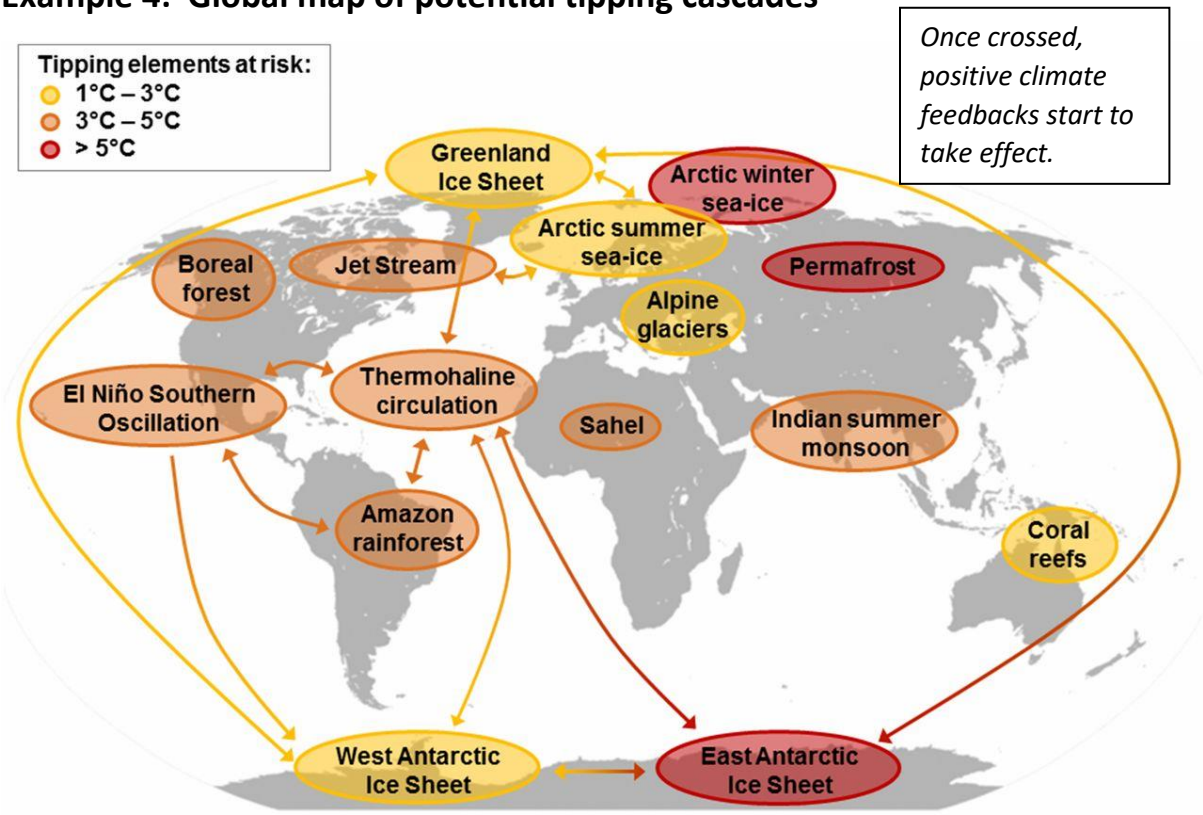
Source: https://www.footprintnetwork.org

Example 3: Out of time and out of emissions budget



Out of time and budget to achieve the IPCC recommendation to limit increased warming to 1.5 deg.

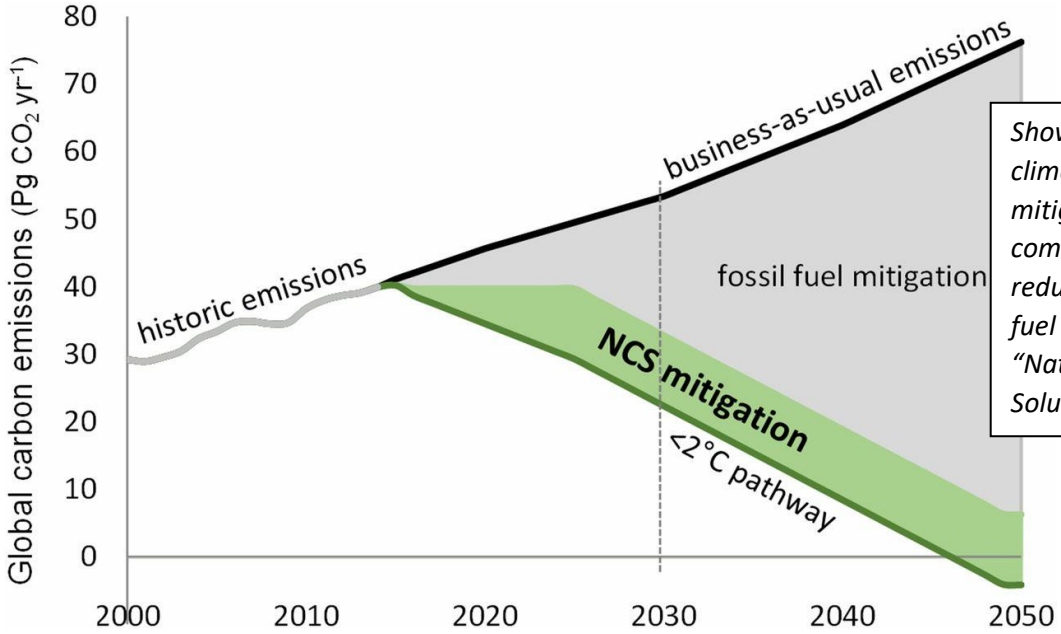
Example 4: Global map of potential tipping cascades



Once crossed, positive climate feedbacks start to take effect.

https://www.pnas.org/content/115/33/8252

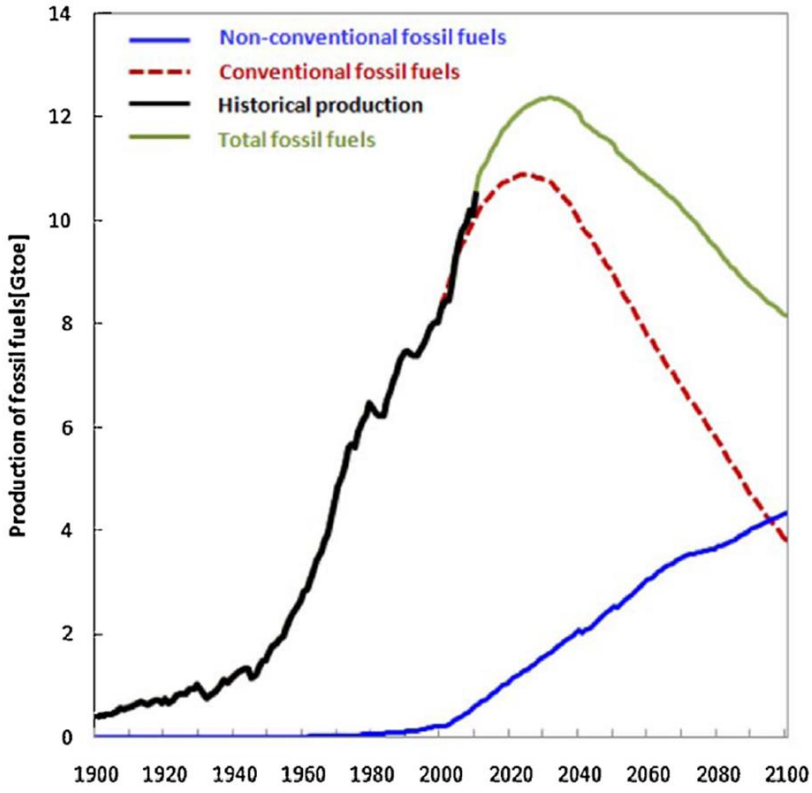
Example 5: Most mitigation must come from reducing fossil fuel dependence



Shows most climate mitigation must come from reduced fossil fuel use and not "Natural Climate Solutions"

Bronson W. Griscom et al. PNAS 2017;114:44:11645-11650

Example 6: Approaching fossil fuel supply constraints



Shows that we are approaching total fossil fuel/total energy constraints at a global level which will force economic contraction

https://www.sciencedirect.com/science/article/abs/pii/S0016328715300690

Appendix B: Update of the Society's position

Specific Provision	**Support/Oppose/ Amend**	**Reasons**	**Decision Requested**
IM-O1 – Long term vision	Amend	1) Original objection remains. Too lacking in aspiration and challenge 2) If the WR objective is not adopted then the purpose of the essence of the objective must be made clear. i.e., our children's' future is conditional on the achievement of those environmental attributes being delivered.	1) WR submission point sustained 2) If it is not accepted then make the following change to the proposed objective: "The management of natural and physical resources by and for the people of Otago, in partnership with Kāi Tahu, achieves a healthy, and resilient, and natural environment, the ecosystem services it provides, **to support** ~~and supports~~ the well-being of present and future generations, (mō tātou, ā, mō kā uri ā muri ake nei)"
IM-O2 Ki uta ki tai	Support		
IM-O3- Sustainable impact	Amend	Original objection remains. Need achieve net positive gains.	WR submission point sustained
IM- O4 – Climate change	Amend	Wording of conditions is too weak and not what our climate trend requires	(2) ~~**assist**~~ **aligns** with achieving the national target for emissions reduction, (3) are recognised as ~~**integral**~~ **requisite** to achieving the outcomes sought by this RPS.

IM-05 – Environmental limits -	New Objective	Climate change is one resource limit but similar mitigation and adaption needs to be provided for other resource limits	WR submission point sustained
IM-P1 Integrated approach	Support as revised		
IM-P3 Mana whenua cultural values	Support as revised		
IM-P4 – Setting a strategic approach to ecosystem health	Support with one amendment	Protecting ecosystem function is a prerequisite for ecosystem health i	(3) recognise and provide for ecosystem complexity, ***function*** and interconnections, and (4) anticipate, ~~or~~ **and** respond swiftly to, changes in activities, pressures, and trends.
IM-P5 – Managing environmental connections	Support as revised		
IM-P6 – Acting on best available information	Support as revised		
IM-P7 – Cross boundary management	Support as revised		
IM-P8 – Effects of climate change	Support as revised		
IM-P9 – Community response to climate change impacts	Oppose deletion	To avoid dangerous climate change and to meet up to date national goals then we need a firm policy that requires this goal to be met.	WR submission point sustained 2) An alternative would be to include it as a condition in IM-P14 Human Impact

IM-P10 – Climate change adaptation and mitigation:	Support as revised		
IM-P11 – Enhancing environmental resilience to effects of climate change	Support relocation to IM-P10		
IM-P12 – Contravening environmental limits for climate change mitigation		Because of the degraded state of our environment compromises that are do not comply with environmental policy must be rare and difficult to secure.	Make non-compliance rare and be guided by the NPSFM approach for "setting limits on resource use" and exceptions.
IM-P13 – Managing cumulative effects	Support relocation to IM-P5(4)		
IM-P14 – Human impact	Support as revised		
IM-P15 – Precautionary approach	Support relocation to IM-P6		
IM – M0 New Method	Amend	This proposed now policy is intended to extend the mitigation and adaption provisions from climate change to energy but particularly fossil fuel dependence. We reconfirm the necessity for provisions so directed.	WR submission point sustained
IM-M1 – Regional and district plans	Amend	The small remaining window available for salvaging a liveable climate means timeframes must be set based on sound data and precautionary goals.	Reinstate timeframe and base actions on budgets

IM-M2 – Relationships	Support as revised		
IM-M3 – Identification and community guidance	Amend	Risk assessments need to be long term so that the manifestations and implications of inaction now become clear. For example, estimates of sea level rise are typically out to 2100 but it is recognised that it will continue long after that.	WR submission point sustained. If current policy is retained then change wording as follows: (1) identify the specific types and locations of the **potential** effects of climate change impacts in Otago by undertaking a climate change risk assessment…. (1B) identify vulnerable resources and communities and develop adaptation pathways for them ~~**where possible**~~, and (2) **commensurate with the level of risk and urgency**, develop guidance to support communities to be prepared and **more** resilient.
IM-M4 – Climate change response	Oppose deletion	The small remaining window available for salvaging a liveable climate means a method devoted to timely response to go with the identification or risk in M3 is essential. It should be clear that all responses must align with prevailing national policy and international agreements	WR submission point sustained
IM–M5 – Other methods	Amend	Largely platitudes without teeth	WR submission point sustained

IM-M6 Policy Compliance New provision	Amend	Need for ORC to ensure that District Councils fulfil their responsibilities under the RMA and that the public are advised of progress	WR submission point sustained
IM–E1 – Explanation and IM- PR1 Principal reasons	Amend	Some indication of the level of threat the RPS is attempting to respond to is needed. It is good that it acknowledges the primacy of ecosystem health and resilience to climate change. But also needs to emphasise the critical need to shift the current climate trajectory with deep mitigation. It may be that a response to our submission to IM E1 is better placed in IM-PR1 or IM-AER	WR submission point sustained
AIR–P2 – Improve poor ambient air quality	Amend		WR submission point sustained
AIR–M3 – Territorial authorities	Amend		WR submission point sustained
AIR–M5 – Incentives and other mechanisms	Amend		WR submission point sustained