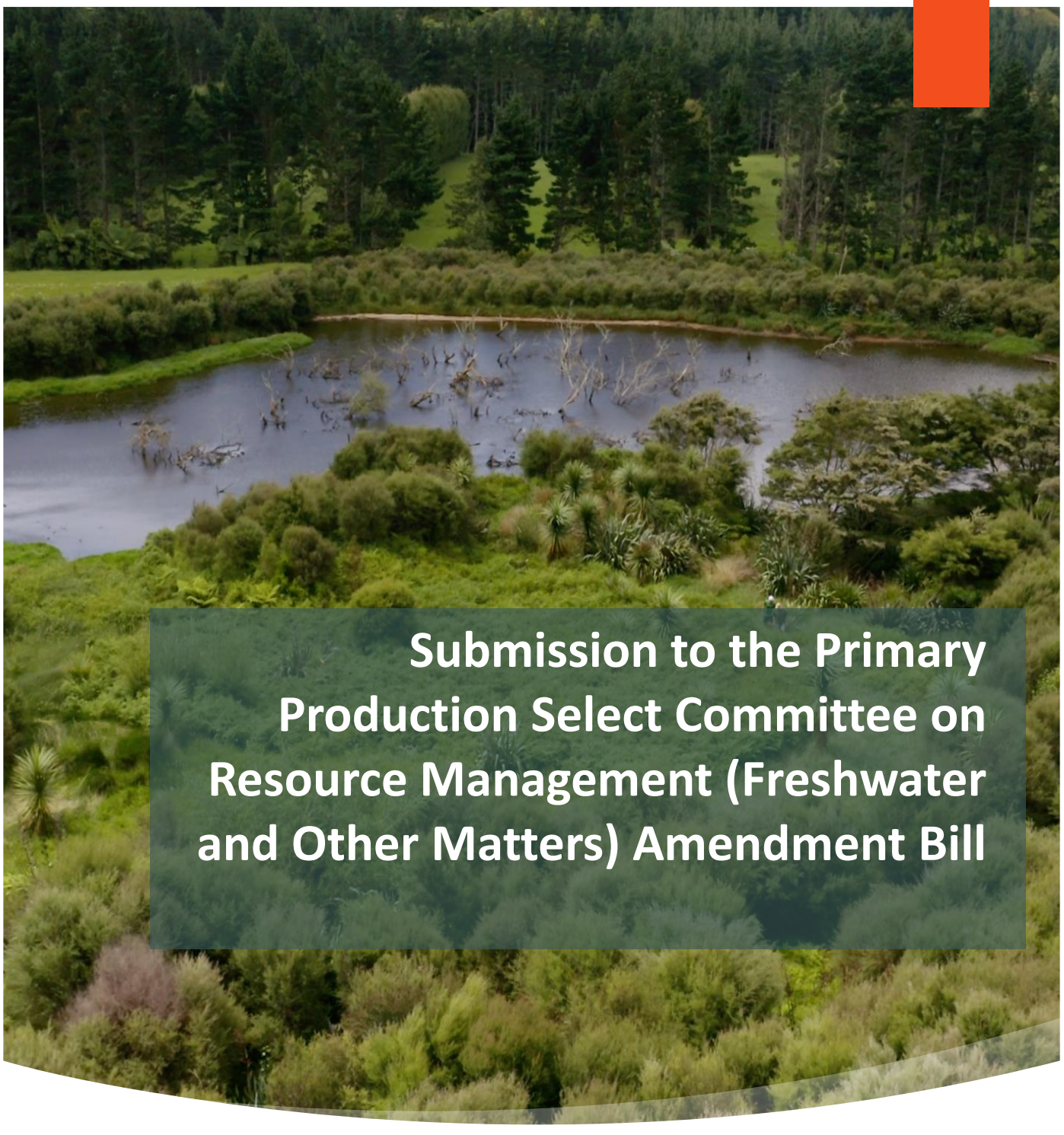

Submission to the Primary Production Select Committee on Resource Management (Freshwater and Other Matters) Amendment Bill

PUBLIC HEALTH COMMUNICATION CENTRE AOTEAROA

30 June 2024

Photo: Reid, G. On farm wetland restoration, Bay of Plenty.

Introduction

The Public Health Communication Centre (PHCC) thanks the Committee for the opportunity to make a submission on the Resource Management (Freshwater and Other Matters) Amendment Bill (henceforth 'the Bill').

We wish to make an oral presentation in support of this submission.

Public health focuses on the prevention of negative health outcomes (eg, illness, disability, premature death) and the promotion of good and well-being at a population level. It recognises that the quality and sustainability of the environments in which we live, and an equitable social and economic system are critical determinants for good public health.

Authors of this submission have researched and published extensively on Aotearoa New Zealand's (NZ) freshwater problems and policy, including our drinking water supply systems and the influence of climate change on waterborne disease.

Our submission outlines three main points and recommendations.

1. The Resource Management Act is a vital tool in the protection of people's health and any amendments to the Act must recognise this.

Recommendation: We strongly recommend the Committee review amendments proposed by the Bill for their impact on public health, include findings in its report to the House, and reflect the review in its advice on the Bill.

2. The 'hierarchy of obligations' is essential to reduce risks to people's health.

Recommendation: We strongly recommend the Committee advise in its report to the House that the hierarchy of obligations in consenting is retained.

3. We are concerned the Government (through this and other Bills) is not recognising the extent to which ecosystem health supports communities' health, and our adaptation to and mitigation of climate change impacts.

Recommendation: We strongly recommend the Committee review the Bill's impact on ecosystem health and how this would influence NZ's mitigation of and adaptation to climate change impacts, and include findings in its report to the House and reflect the review in its advice on the Bill.

About the Public Health Communication Centre

The Public Health Communication Centre is an independently funded organisation dedicated to increasing the reach and impact of public health research in Aotearoa New Zealand (NZ). The Centre has a range of public health and science communication experts.

We are hosted by the Department of Public Health at the University of Otago, Wellington.

Authors and contact details

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1. The Resource Management Act is a vital tool in the protection of people's health and any amendments must recognise this.

It is essential that decision makers understand the Resource Management Act 1991 (RMA) as a public health act as well as an environmental act. Among other things, the Act provides for restrictions on the pollution of water. In NZ, it has been estimated that at least 30,000 New Zealanders experience illness as a result of contaminated drinking water each year.[1] The Inquiry into the Havelock North campylobacteriosis outbreak found this number may be higher.

Importantly, the consequences of contaminated drinking water on an individual can be more than an upset stomach. Four people died as a result of the Havelock North outbreak. Three people who became ill as a result of the outbreak developed the serious long-term health condition, Guillain-Barré syndrome.[2] The Havelock North outbreak was the largest recorded campylobacteriosis outbreak in the world.[3] On a community level, contaminated drinking water can lead to schools and businesses closing, as well as other human and financial impacts. The Havelock North outbreak was estimated to have cost the town $21 million.[4] As the Inquiry wrote,

> "Unsafe drinking water can cause illness, injury or death on a large-scale. All those involved in supplying drinking water (from operators to politically elected representatives) must therefore embrace a high standard of care akin to that applied in the fields of medicine and aviation where the consequences of a failure are

[1] Government Inquiry into Havelock North Drinking Water. 2017. Report of the Havelock North Drinking Water Inquiry: Stage 2. Auckland, New Zealand. Retrieved from https://www.dia.govt.nz/Report-of-the-Havelock-North-Drinking-Water-Inquiry---Stage-2

[2] Gilpin BJ, Walker T, Paine S, Sherwood J, Mackereth G, Wood T, Hambling T, Hewison C, Brounts A, Wilson M et al. 2020. A large scale waterborne Campylobacteriosis outbreak, Havelock North, New Zealand. Journal of Infection. 81(3):390-395.

[3] As above.

[4] Moore D, Drew R, Davies P, Rippon R. 2017. The Economic Costs of the Havelock North August 2016 Waterborne Disease Outbreak. Wellington, NZ.

similarly detrimental to public health and safety. Vigilance, diligence, and competence are minimum requirements and complacency has no place." [5]

The current health burden on New Zealanders from water pollution means the country needs strengthened policies to restrict the extent and impact of water pollution on people's health. However, the Bill proposes – with insufficient explanation or rationale provided by the Government – to weaken protections for drinking water under the RMA.

We strongly recommend the Committee review amendments proposed by the Bill for their impact on public health, include findings in its report to the House, and reflect the review in its advice on the Bill.

2. The 'hierarchy of obligations' is essential to reduce risks to people's health and must be retained.

Delivering safe and good quality drinking water requires a cohesive and connected system across agencies and policies to ensure multiple barriers are in place to prevent contamination. These multiple barriers can be thought of like the 'Swiss cheese model' used to explain interventions to stop the spread of Covid-19. The 'Swiss cheese model' demonstrates that no one barrier or intervention is sufficient alone. Multiple barriers are required to reduce risks across a system to protect people's health. Barriers for reducing risks related to drinking water include monitoring, secure pipes, adequate treatment, and emergency response systems. Importantly, as the Government Inquiry into the Havelock North outbreak emphatically states, the protection of drinking water sources (ie, the waterbodies from which communities draw their water – rivers, lakes, aquifers, etc.) "provides the first, and most significant, barrier against drinking water contamination and

[5] Government Inquiry into Havelock North Drinking Water. 2017. Report of the Havelock North Drinking Water Inquiry: Stage 2. Auckland, New Zealand. Retrieved from https://www.dia.govt.nz/Report-of-the-Havelock-North-Drinking-Water-Inquiry---Stage-2

illness" and that resource management law should be "amended to expressly recognise the protection and management of drinking water sources as a matter of national importance".[6]

The 'hierarchy of obligations' establishes the protection of drinking water sources as a priority in freshwater management. The hierarchy prioritises:

> "(a) first, the health and well-being of water bodies and freshwater ecosystems
>
> (b) second, the health needs of people (such as drinking water)
>
> (c) third, the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future."[7]

The hierarchy is essential to reduce the risks of contaminated water on people and communities. It gives the legal weight needed to protect drinking water sources from competing interests, such as commercial interests. Importantly, the hierarchy does not preclude economic or other activities. Instead, it holds that unless the health of a waterbody is prioritised it will be compromised by competing pressures. And, if the health of a waterbody is allowed to continue to degrade, it will undermine people's drinking water needs. And, if the health of a waterbody and people's drinking water is maintained, it will be possible to continue to provide for social, economic, and cultural well-being, now and into the future. The health of freshwater ecosystems is defined through the policy and its National Objectives Framework. The policy allows for impact from land use but requires "bottom lines" for ecosystem health to be maintained or improved to be achieved over time (with 30 years given as an example).[8] As Taumata Arowai recently stated, Te Mana o te Wai (of which the hierarchy is a part),

[6] Government Inquiry into Havelock North Drinking Water. 2017. Report of the Havelock North Drinking Water Inquiry: Stage 2. Auckland, New Zealand. Retrieved from https://www.dia.govt.nz/Report-of-the-Havelock-North-Drinking-Water-Inquiry---Stage-2

[7] Ministry for the Environment. 2023. National Policy Statement for Freshwater Management 2020.Retrieved from https://environment.govt.nz/assets/publications/National-Policy-Statement-for-Freshwater-Management-2020.pdf

[8] As above.

> "requires us to make intergenerational decisions that moves New Zealand towards taking a whole of water source approach, which will support the health needs of people, and provide for other uses."[9]

Previous iterations of the National Policy Statement for Freshwater Management (those before the National Policy Statement for Freshwater Management 2020 [NPS-FM 2020]) did not give sufficiently explicit priority to drinking water source protection. The Inquiry provides evidence of this as does a more recent consenting decision in which a hearing panel declined a water take application which would have had severe impacts on the catchment (including drinking water). The Hearing Panel for the consent noted that the NPS-FM 2020's hierarchy of obligations differed from previous iterations of the policy that had given "no strong weighting … to the protection of freshwater versus its use and development". [10]

As a result, regional councils have previously been either unclear or remiss about their responsibility to protect people's drinking water, and communities have been experiencing contaminated water and illness. Regional councils have the most important role to play in source water protection as it can only be achieved by catchment-scale management and the regulation of land use and activities to manage risks. The quality of the source water (ie, untreated water) drawn from a waterbody matters because too much sediment (for example) can make water undrinkable and damage treatment facilities, or high loads of other contaminants may make the water either difficult or prohibitively expensive to treat meaning the risks to people's health increase. It is not possible to address all health risks through source water protection but, as stated, it is the "first, and most significant, barrier against drinking water contamination and illness".

Weaknesses in freshwater policy and in regional councils' approach to their role in protecting drinking water sources was made clear during the Inquiry. The Inquiry reviewed the existing National Environment Standards for Human Sources of Drinking water (and other water policies) and found that they were not explicit enough to protect communities' source water. They found that regional councils were variably implementing or not

[9] Taumata Arowai. (2024). Drinking Water Regulation Report 2023. Retrieved from https://www.taumataarowai.govt.nz/assets/Water-services-insights-and-performance/Taumata-Arowai-Drinking-Water-Regulation-Report-2023_online.pdf

[10] Kirikiri R, Cussins T. 2023. Ruataniwha Tranche 2 Resource Consent Applications – Decision. Hawke's Bay, NZ. Retrieved from https://www.hbrc.govt.nz/assets/Uploads/Ruataniwha-Tranche-2-Decision-Final.pdf

implementing their responsibilities around the protection of drinking water and that there was a "'no responsibility' mindset".[11] In fact, during the Inquiry, the Hawke's Bay Regional Council initially stated that it did not have responsibility for drinking water sources and then later, after some questioning by the Inquiry, returned to the hearings and accepted that it did.

> "The Inquiry observes that the Regional Council changed position substantially from its initial written materials and evidence submitted to the Inquiry, in which it asserted it had no responsibility for the quality or safety of drinking water. Later materials received from Regional Council did acknowledge the role and responsibility of a regional council for drinking water quality at the first barrier [drinking water source protection] stage."[12]

In 2017, the Inquiry recommended as a matter of urgency that "the RMA should be amended to expressly recognise protection and management of drinking water sources as a matter of national importance and as a function of regional councils, respectively."[13] This recommendation was made only seven years ago and has been acted upon. The 'hierarchy of obligations' makes it explicit that regional councils must prioritise the protection of drinking water sources to ensure that activities granted through consents do not impact this fundamental human need. As the Inquiry wrote, "in the absence of specific recognition, the protection of drinking water sources could easily be overtaken by competing pressures".[14]

We highly recommend the Committee review the Havelock North Inquiry reports as part of its decision-making process on the Bill. The lessons it provides were hard-won. The Inquiry was exceptionally comprehensive (covering not only the outbreak itself but reviewing all aspects of drinking water provision) and its reports must be given serious consideration where decisions relate to drinking water policies, such as this Bill. We note that the recommendations made by the Inquiry to protect New Zealanders' drinking water were at

[11] Government Inquiry into Havelock North Drinking Water. 2017. Report of the Havelock North Drinking Water Inquiry: Stage 2. Auckland, New Zealand. Retrieved from https://www.dia.govt.nz/Report-of-the-Havelock-North-Drinking-Water-Inquiry---Stage-2
[12] As above.
[13] Government Inquiry into Havelock North Drinking Water. 2017. Report of the Havelock North Drinking Water Inquiry: Stage 2. Auckland, New Zealand. Retrieved from https://www.dia.govt.nz/Report-of-the-Havelock-North-Drinking-Water-Inquiry---Stage-2
[14] As above.

least as strong as the 'hierarchy of obligations' amendment to the NPS-FM 2020, if not stronger. They wrote,

> "The Inquiry anticipates that the clear national guidance would be driven through the cascading RMA structure such that drinking water sources would be afforded appropriate protection.
>
> However, if the recommended clarifications are not implemented, the Inquiry firmly considers that there would be a pressing need for other changes. The NES [Human Sources of Drinking Water 2008] Regulations alone do not provide adequate direction, particularly in their current form, as discussed in the next section. The Ministry for the Environment may need to consider stronger National Policy Statement-type guidance for regional and district council policy and decision makers."[15]

The NPS-2020 and its 'hierarchy of obligations' is the response to the recommended "stronger National Policy Statement-type guidance". However the Bill, as well as other changes signalled by the current Government, would reverse this protection for drinking water recommended by the Inquiry and established in law by the NPS-FM 2020.

There is additional evidence of councils making decisions that lead to contaminated drinking water not long before the NPS-2020. In our research, we documented a case in which Environment Canterbury's own modelling indicated that if a particular consent was granted it would lead to a town's water supply being contaminated to the point that it breached New Zealand's drinking water standards for nitrate (11.3mg/L).[16] Despite knowing this, in 2015, Environment Canterbury granted the consent regardless. Seven years later, the town's water supply breached the drinking water standard and the small district council (the community's drinking water supplier), that did not create the contamination issue, now has to find funding for a denitrification unit. These units are expensive and may be limited in their ability to remove nitrate from drinking water. As well as the financial cost the community now must bear, the health risk to the community will likely remain greater than before the

[15] As above.
[16] Prickett M, Chambers T, Hales S. 2023. When the first barrier fails: public health and policy implications of nitrate contamination of a municipal drinking water source in Aotearoa New Zealand. Australasian Journal of Water Resources.1-10.

consent was granted because the protection of their source water was not prioritised by their regional council.

Nitrate pollution of water may not only increase treatment costs to reduce health risks to communities, but it can also increase treatment costs due to its influence on the taste and acceptability of water. For example, the Branxholme Water Treatment Plant that services Invercargill, has had to upgrade its systems in part due to increased nutrient loss to the Oreti River. This increase in nutrients drove increased agal growth in the river, leading to unpleasant smelling water.[17]

Other types of pollution to waterbodies can also impact communities' drinking water. Sediment (the soil washed off the land into a waterbody) loss into the river or lake that a community sources its water from, for example, can overwhelm and/or damage treatment plants.[18]

Taumata Arowai's latest reporting shows evidence of microbiological contamination of deep (30m depth) bores being not uncommon.[19] As Taumata Arowai states, this is concerning, but it also speaks to the need to care for people's drinking water over the short and the long-term. It can take years for contamination to move through the landscape and into a community's water source. This means that it can also take a long-time to restore source water quality where it has been degraded and rendered unsafe to drink.

The hierarchy strengthens the requirement of regional councils to manage source waterbodies over the short and long-term, prioritising people's health. Consenting is a key tool for councils to manage land and water, and consent decisions can have years' long consequences. Reducing the requirement to prioritise people's drinking water in consenting puts people's health at risk.

We strongly recommend the Committee advise in its report to the House that the hierarchy of obligations in consenting is retained.

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[17] Moore, R. 2017. Smelly water has Invercargill residents concerned. Retrieved from https://www.stuff.co.nz/southland-times/news/90802270/smelly-water-has-invercargill-residents-concerned
[18] Gisborne District Council. N.d. City Water Pipeline. Retrieved from https://www.gdc.govt.nz/services/tairawhiti-road-to-recovery/City-water-pipeline
[19] Taumata Arowai. 2024. Drinking Water Regulation Report 2023. Retrieved from https://www.taumataarowai.govt.nz/assets/Water-services-insights-and-performance/Taumata-Arowai-Drinking-Water-Regulation-Report-2023_online.pdf

3. We are concerned the Government (through this Bill and others) is not recognising the extent to which ecosystem health supports communities' health, and our adaptation to and mitigation of climate change impacts.

The Bill seeks to weaken protection for the health of ecosystems, with no proposed alternative. This suggests that the Government is not recognising the value of ecosystem health in supporting New Zealanders health, and NZ communities' adaptation to and mitigation of climate change.

The link between ecosystem health and human health and well-being is well-established.[20] Additionally, ecosystem health is a key driver of our resilience to climate change. Healthy ecosystems sequester more carbon, can buffer communities against climate change impacts (eg, reduce flooding, heatwaves, and drought impacts), and provide "ecosystem services" (eg, filter and capture drinking water). Conversely, degraded ecosystems contribute to worsening climate change impacts, reduced resilience, and increased vulnerability. Figure 1 describes this dynamic between ecosystems and resilience/vulnerability.

[20] Corvalan CF, Corvalán C, Hales S, McMichael AJ. 2005. Ecosystems and human well-being a report of the millennium ecosystem assessment. 1st ed. Geneva: World Health Organization.

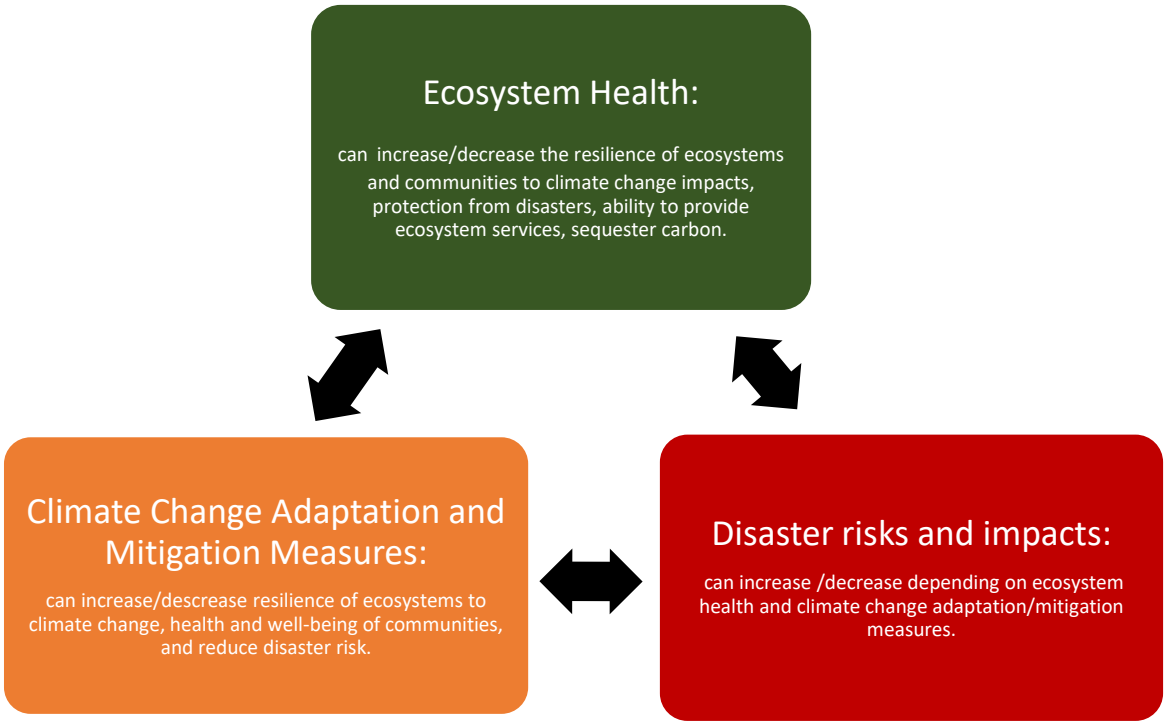

Figure 1: Simplified illustration of the dynamic between climate change mitigation and adaptation, ecosystem health and disaster risk (Modified from Munang, et al. 2013).[21]

Intensive Winter Grazing (IWG), for example, is a highly polluting activity. IWG results in bare soil and concentrated livestock, which frequently leads to high nutrient, sediment, and faecal matter pollution of nearby waterways. Research has found that nutrient losses to waterways from IWG can be 4 to 5 times higher than from pasture on equivalent soil types and land use,[22] and sediment losses 12 times higher than from grazing on pasture.[23] Impacts on waterbodies from activities like IWG can last for many decades as they are cumulative. An example of this is sediment that can build up in estuaries, degrading ecosystem health, and needing decades to recover.[24] However, despite the high risks of IWG, Bill proposes to remove IWG constraints without proposing a replacement to them. Highly polluting

[21] Munang, R., Thiaw, I., Alverson, K., Liu, J., & Han, Z. 2013. The role of ecosystem services in climate change adaptation and disaster risk reduction. Current Opinion in Environmental Sustainability, 5(1), 47-52.
[22] Monaghan, R M. 2012. The impacts of animal wintering on water and soil quality. Retrieved from https://envirolink.govt.nz/assets/Envirolink/1276-ESRC258-The-impacts-of-animal-wintering-on-water-and-soil-quality.pdf
[23] Donovan M, Monaghan R. 2021. Impacts of grazing on ground cover, soil physical properties and soil loss via surface erosion: A novel geospatial modelling approach. Journal of Environmental Management. 287:112206.
[24] Johari, S. 2024. Recovery of New River Estuary Could Take Decades, Study Finds. Retrieved from https://www.stuff.co.nz/environment/350285970/recovery-new-river-estuary-could-take-decades-study-finds

activities should be regulated to support ecosystem and human health. Additionally, along with other reduction in significant natural area work, the Bill proposes to allow new coal mines and ancillary activities in significant natural areas and wetlands, even where the mine would cause significant adverse effects on ecosystem health

It is hard to see how these proposals could be consistent with the Government's work on adaptation and mitigation of climate change or building resilience across communities in the face of climate change. The broad reductions in protection for biodiversity and freshwater proposed by the Bill are far more likely to increase our communities' vulnerability to climate change impacts (Figure 1).

We strongly recommend the Committee review the Bill's impact on ecosystem health and how this would influence NZ's mitigation of and adaptation to climate change impacts, and include findings in its report to the House and reflect the review in its advice on the Bill.

Thank you for this opportunity.

We look forward to speaking with you further on this important matter.