



Submission to the
Finance and Expenditure
Select Committee on the
Inquiry into climate
adaptation.



16 June 2024

Key points:

1. Public health must be a key objective in climate adaptation planning and decisions.
2. Ecosystem health must be a foundational principle of climate adaptation planning and decisions.
3. Equity must be a foundational principle of climate adaptation planning and decisions.

The Public Health Communication Centre (PHCC) thanks the Committee for the opportunity to make a submission on the Inquiry into climate adaptation.

Public health focuses on the prevention of health impacts (illness, death) and promotion of health and well-being, rather than the health services that treat illness (i.e. medical services). Adaptation policy to date has tended to focus on the resilience of health care, to the exclusion of wider preventive measures. Public health recognises that the environments in which we live are the foundation of our health and well-being (or, equally, can impact our health) and seeks interventions at a population rather than an individual scale.

We note the purpose of the Inquiry is “to develop and recommend high-level objectives and principles for the design of a climate change adaptation model for New Zealand, to support the development of policy and legislation to address climate adaptation.”

Our submission emphasises the importance of public health as an essential objective in climate adaptation and planning, and highlights ecosystem health and equity as essential principles to achieve this (and other) objectives.

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

About the Public Health Communication Centre

The Public Health Communication Centre (PHCC) 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. Public health must be a key objective in climate adaptation planning and decisions.

Climate change poses a serious risk to people's health and well-being, through direct and direct impacts (see Table 1). In most cases individuals have limited ability to reduce their risk

so interventions must be made at a population or community level. One of the key objectives of this Inquiry must be to reduce risks to people’s health and well-being and promote improved health and well-being.

Establishing public health and well-being as a key objective is important to ensure adaptation measures provide multiple benefits. Adaption will be most successful where measures reduce health and financial risks, improves health, well-being and provides climate mitigation benefits (eg, reduces emissions). It is possible and preferable that adaptation measures achieve such co-benefits.

Table 1: Examples of direct and indirect impacts on public health from increased global greenhouse gas emissions

<p>Examples of <u>direct impacts</u> on public health from increased global greenhouse gas emissions</p>	<ul style="list-style-type: none"> • Increased climate extremes (storm severity and flooding, droughts, fires, and related infrastructure damage) causing illness, injury, or death. • Loss of livelihoods and displacement from climate-related disasters • Extreme temperatures eg, causing deaths in heat waves
<p>Examples of <u>indirect impacts</u> on public health from increased global greenhouse gas emissions</p>	<ul style="list-style-type: none"> • Poorer outdoor air quality from fires • Crop damage with impacts on food availability, quality, and safety • Harmful algal blooms impacting drinking water safety and quality, recreational use of waterways, and food gathered from waterways • Microbial contamination (of drinking water and food) • Other impacts on infectious disease risk (eg, vector-borne diseases) • Mental health and well-being impacts from climate-change disasters and other disruptions • Increased health inequalities, since vulnerable communities are most affected via all the above pathways

Example: Drinking water provision

Climate change threatens communities’ access to sufficient and good quality drinking water through changes in weather patterns (including changes in precipitation and temperatures that can amplify effects of pollution), extreme events impacting infrastructure (eg, broken or

overwhelmed treatment plants/pipes), and competing pressures such as commercial uses (eg, irrigation) where water may be scarce.

Adapting to climate change means prioritising drinking water over commercial uses (to ensure that people's drinking water needs are provided for, especially in periods of low water availability) and ensuring infrastructure is resilient to climate impacts (eg, drinking water sources are protected from inundation of sediment that can overwhelm treatment facilities, or pipe networks are upgraded to be less vulnerable to landslips etc.). If public health is not a key objective, the adaptation of drinking water provision could be undermined. For example, irrigation in drought-prone regions could become the only approach to farm-scale resilience (rather than seeking to slow water in a catchment through measures like wetlands, etc.), degrading communities' access to safe drinking water, or pine plantations being used to sequester carbon could be in part of the landscape where harvesting leads to drinking water infrastructure damage (ie, sediment and other debris damaging equipment).

2. Ecosystem health must be a foundational principle of climate adaptation planning and decisions.

To support public health in the face of climate change and successful adaptation, protecting and restoring ecosystem health must be a foundational principle. 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), 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. Adaptation planning and decisions could contribute to increasing risk and vulnerability in the face of climate change if ecosystem health is not a foundational principle. Conversely, adaptation

measures can improve ecosystem health, provide climate change mitigation benefits, and reduce risks and impacts to communities if ecosystem health is a foundational principle.

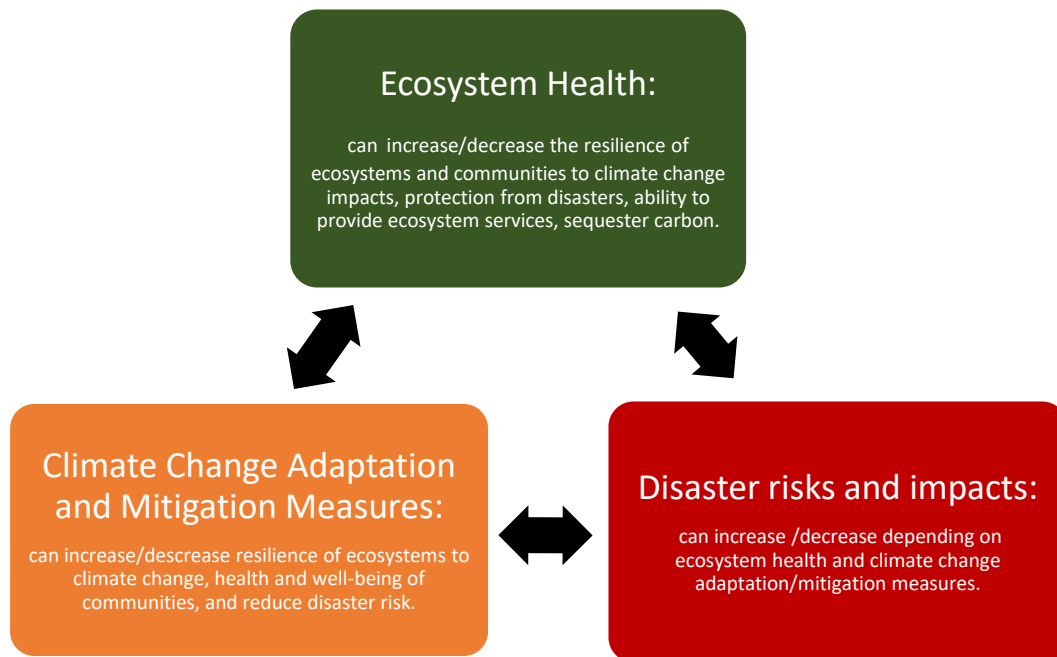


Figure 1: Simplified illustration of the dynamic between climate change mitigation and adaptation, ecosystem health and disaster risk (Modified from Munang, et al. 2013¹).

3. Equity must be a foundational principle of climate adaptation planning and decisions

The Ministry of Health explains equity in the following way, “In Aotearoa New Zealand, people have differences in health that are not only avoidable but unfair and unjust. Equity recognises different people with different levels of advantage require different approaches and resources to get equitable health outcomes.”²

¹ 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.)

² Ministry of Health. (2023). *Achieving equity*. Retrieved from <https://www.health.govt.nz/about-ministry/what-we-do/achieving-equity>

Climate measures (adaptation and mitigation) have the potential to address inequities between people and communities or to worsen them.³ All of our communities must be supported in achieving a just transition regardless of their access to resources, size, or remoteness. Furthermore, an equitable society is a more socially cohesive society, which supports national and community resilience in the face of climate change.

Final word.

Adaptation and mitigation policies can be mutually supporting across sectors. Achieving this requires intersectoral collaboration, which has so far been insufficient in Aotearoa.⁴

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



³ IPCC, 2023: Summary for Policymakers. In: *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [Core Writing Team, H. Lee, and J. Romero (eds.)]. IPCC, Geneva, Switzerland, pp. 1-34, doi: 10.59327/IPCC/AR6-9789291691647.001

⁴ Pourzand F, Bolton A, Salter C, Hales S, Woodward A. 2023. Health and climate change: adaptation policy in Aotearoa New Zealand. *The Lancet Regional Health – Western Pacific*. 40.