He Pou a Rangi Climate Change Commission 2024 Consultation Questions

Climate Justice Taranaki submission

2050 target review

Chapter 2

7. **Do you agree with our approach to assessing how the current 2050 target contributes to global efforts to limit warming to 1.5°C? Why or why not**?
   Are there any other approaches or pieces of evidence you think we should include in our final assessment?

Yes we agree that the current 2050 target fails to reflect our responsibility to limiting warming to 1.5^0C.

Aotearoa New Zealand's contribution to global efforts is, and has been, grossly inadequate as our per capita emissions show. Our efforts in reducing biogenic methane emissions are way below expectation.

8. **What role do you think Aotearoa New Zealand's national circumstances should play in how the country contributes to global efforts to limit warming, as defined by the 2050 target?**
   Do you think Aotearoa New Zealand's national circumstances justify departing from the IPCC's international burden sharing perspectives? If so, why? If not, why not?

Based on NZ's oversized per capita emissions, capacity to pay and responsibility for warming, the 2050 target clearly does not represent an equitable contribution.

As a reference, Nestlé, a major buyer of NZ dairy ingredients, has targets to reach absolute emissions reduction of 20% by 2025, 50% by 2030 and net zero by 2050. Whether this is corporate greenwashing, virtue signalling, or not, having targets weaker than those is an embarrassment and set poor examples for other nations. https://www.nestle.com/sustainability/climate-change/zero-environmental-impact

9. **Do you have any other feedback about this chapter**?

NZ should work much harder and contribute a great deal more to reduce our own emissions and to support other nations in their climate mitigation and adaptation efforts.

We should also put much greater emphasis on reducing gross emissions rather than net emissions.

Forests, being our main carbon removal and storage, are at risks of unprecedented climate impacts (e.g. forest fires, riparian plantings removed by floods, pests). The Emissions Trading Scheme (ETS) is at risk of accounting flaws and fraud. The allocation of free carbon credits to emissions intensive industries makes a mockery of the system and renders it useless.

Chapter 3

10. **Do you agree with our approach to looking for significant change? Why or why not?**
    Are there any other approaches or pieces of evidence you think we should include in our final review?

Yes

11. Do you agree with our initial findings related to significant change? Why or why not? Is there any other important information or evidence you think we should include in our final review?

We support the Commission's finding that there is evidence of significant change, notably in the scientific understanding of climate change and the risks and uncertainties associated with emissions reductions and removals.

"*Since 2019, the likelihood that global warming will exceed 1.5^{0}C has increased, while the time available for the world to act has decreased*…" At least one recent study (McCulloch et al. 2023) indicated that global warming was already 1.7+/-0.1^{0}C above pre-industrial levels by 2020, and projected a 2^{0}C global warming by the late 2020s, nearly two decades earlier than expected.

https://www.nature.com/articles/s41558-023-01919-7

There are indeed principal risks and uncertainties associated with emissions reductions and removals. The over reliance on forestry for carbon removal and offsets is problematic because of the risk of reversal (Galik and Jackson, 2009; PCE, 2019). The Parliamentary Commissioner for the Environment - PCE's recent paper on landuse change highlighted "*the reality that climate change itself is already and will increasingly become a driver of land use change as adaptation to a shifting climate becomes unavoidable*" (PCE, May 2024). Such changes affect the efficacy of a range of emissions reductions and removals opportunities.

https://www.sciencedirect.com/science/article/abs/pii/S0378112709001960

https://pce.parliament.nz/publications/farms-forests-and-fossil-fuels-the-next-great-landscape-transformation

https://pce.parliament.nz/media/cuadpvw5/going-with-the-grain-summary-document.pdf

In Nov 2021, NZ joined with over 105 countries in the Global Methane Pledge at COP26, committing ourselves to a collective global target to reduce global methane emissions by at least 30 percent from 2020 levels by 2030. This represents heightened obligations on NZ to reduce emissions more quickly.

https://www.beehive.govt.nz/release/nz-joins-global-initiative-tackle-methane

In 2023, Danone announced a 30% absolute reduction target in methane emissions from its fresh milk supply chain by 2030, becoming the first to align with the Global Methane Pledge. https://www.danone.com/media/press-releases-list/danone-announces-an-ambitious-plan-to-reduce-its-methane-emissions.html

We caution the reliance on methane inhibitors to adequately reduce NZ's biogenic methane emissions because of the uncertainty in its applicability and effectiveness in NZ pasture-based farming systems.

https://www.bbc.com/future/article/20231214-how-new-zealand-is-reducing-methane-emissions-from-farming?trk=public_post_comment-text

There is, however, significant advancement in the uptake and learnings from regenerative agriculture amongst NZ farmers. The transformation of industrial animal agriculture with intensive stocking rates

to low input, regenerative farming is key to addressing multiple other environmental, social and animal welfare issues while reducing NZ's agricultural and overall emissions.

https://www.landcareresearch.co.nz/discover-our-research/land/soil-and-ecosystem-health/regenerative-agriculture-in-new-zealand/

https://www.calmthefarm.nz/

https://www.taranakiregen.nz/

It is shameful for NZ not to keep up with countries with similarly high biogenic methane emissions like Argentina, Ireland and Brazil, amongst others, who have already set net zero emissions of all greenhouse gases by 2050.

It is our view that distributional impacts are increasing significantly as the effects of climate change and social inequity intensify, while the need for emissions reduction and climate adaptation becomes more prevalent.

We question the validity of the statement "*Changes to overall employment because of climate policy are expected to be minimal*". The World Resources Institute reported that green investments generally create more or signfiicantly more near-term jobs per US$1 million than unsustainable investments (WRI, 2021). For example, building efficiency and solar photovoltaic energy creates 2.8 and 1.5 times more jobs respectively than the fossil fuel industry. We expect that distributed renewable energy systems, diverse regenerative farming and localised food production would offer more jobs than centralised, fossil fuel reliant systems while contributing to climate goals and resilience.

https://files.wri.org/d8/s3fs-public/2021-10/the-green-jobs-advantage-how-climate-friendly-investments-are-better-job-creators.pdf

https://link.springer.com/chapter/10.1007/978-3-319-70223-0_2

https://www.communityenergy.org.nz/

12. **Do you have any other feedback on this chapter**?

We urge that the Commission takes a more holistic and integrated approach to analysing and formulating advice to the government, to avoid the negative effects of working in silos.

As an example, the PCE's landuse change paper (PCE, May 2024) identified a key problem – "*a fragmented policy landscape, where multiple streams of policy impact both directly and indirectly on decisions about land and water use. This fragmentation increases complexity and creates more uncertainty for landowners and kaitiaki... We must take an integrated approach to environmental management that focuses on the catchment rather than one-size-fits-all national regulation. This will make it easier to understand how environmental policies on water, climate, and biodiversity interact.*"

Chapter 4

13. **In our work reviewing the 2050 target we are required under section 5M of the Climate Change Response Act 2002 to consider matters including: current scientific knowledge; existing and anticipated technology; likely economic effects; social, cultural, environmental, and ecological circumstances; intergenerational distribution of benefits, costs, and risks; te ao Māori; and global**

action. We want to hear your thoughts on how a strengthened target could impact any of these, or other, factors.

Strengthening the 2050 target sends the right message as to where NZ needs to get to. We agree with the Commission that targets don't dictate the pathway and policies to meet them. Most impacts would come from the actual policies and how they are being developed, who are involved, who lead, where they are deployed, and the scale and pace. Any comparative impact analyses must also take into account the escalating climate impacts in the absence of those policies.

Crucially, with the polycrisis we face globally and in Aotearoa and the limited resources and time available, we need to work strategically to come up with solutions that create synergies and co-benefits across policies, rather than result in avoidable trade-offs and being counter-productive. No climate policies that would exacerbate social inequalities or ecological crises are acceptable.

14. **Do you have any other feedback on this chapter**?

We are concerned over the Commission's use of methane reduction technolgies for dairy/sheep/beef and low-methane genetics for sheep and dairy as 'high technology change' in developing scenario pathways for target changes. It is our view that the uncertainties and potential harm of these technologies and the risk of further locking in NZ's dependence on milk and meat export override the presumed benefits. Although not mentioned in the consultation paper, introducing genetically modified clover, ryegrass or others to our farming systems carry environmental, socio-economic and reputational risks that need careful considerations. https://www.agresearch.co.nz/news/hme-ryegrass-making-steady-progress/

https://www.theaotearoacircle.nz/reports-resources/modern-genetic-technology-applications-in-aotearoa-food-and-fibre-production

It is unclear what "*further reductions in nitrous oxide use, all urea coated with urease inhibitor*" in Table 4.2 mean. To be clear, we do not support the use of nitrogen inhibitors on urea or pasture due to potential risks on food safety from residues such as DCD (Dicyandiamide) and animal welfare, and the continued reliance on urea fertilisers (even coated with urease inhibitor) which drives industrial farming, especially dairying.

"*Urease inhibitors slow the initial breakdown to ammonium. It's most useful under dry conditions because it reduces the amount of ammonium being lost as ammonia gas. However, by far the majority of agricultural N_2O emissions originate from animal urine patches, directly linked to the amount of nitrogen fertiliser applied to pasture. Even if the application of urease coated urea became universal, its effect on reducing N_2O emissions would be minor,"* explained Alan Thatcher, retired veterinary science lecturer (pers com. 26/05/24).

We would argue for much stronger emphasis on 'high system change' in terms of substantial reductions in stocking rates, rapid phase out of synthetic fertilisers, banning PKE and vast land-use change to diverse food production, horticulture, indigenous forests and wetland restoration. Such system change would create co-benefits in several areas. These include improved soil health and soil carbon sequestration, less compaction and erosion, increased biodiversity, food resilience and community wellbeing.

History shows us how colonisation and the conversion of forests, wetlands and other natural vegetation for animal farming built on export returns has transformed Aotearoa's natural environment and social fabric (Watch Prof Hugh Campbell's lecture on 16 May 2024 here: https://www.youtube.com/watch?v=lX1VnRz2XtM)

A shift from a predominantly export driven, high emitting meat and milk industry to one that is diverse and focussing more on local markets would also lower the exposure to volatile international markets

and costs. The latter includes costs on fossil fuels needed for farm operations, processing, transporting and exporting the products, irrigation, imported feeds, synthetic fertilisers and pesticides, alongwith rising insurance costs.

Such a shift will require a major change in NZ's macro-economics, and in societal expectations that have been built on false premises. Hence clear, consistent policy and messaging that counteracts the predatory delay campaigns of vested interests will be crucial. As climate disruption intensifies further, such changes will become unavoidable, so it is better to plan and adopt them at the earliest opportunity.

We are disappointed to see the Commission's advocacy for economic and GDP growth. The statement, "*While this [GDP] is often interpreted as a measure of wellbeing or economic welfare, there are limits to what is included in GDP*", is vague and potentially misleading. The Commission needs to be absolutely clear about the problems of GDP in any advice to government or refrain from discussing it altogether. Figure 4.1 with the projected GDP impacts of the chosen scenario serves no good purpose because it says nothing about social and environmental wellbeing.

It would be far more meaningful and enlightening to refer to the Living Standards Framework (2022) developed by the NZ Treasury or Doughnut economics framed around ecological ceiling (or planetary boundaries) and social foundations.

https://lsfdashboard.treasury.govt.nz/wellbeing/

https://doughnuteconomics.org/about-doughnut-economics

https://www.resilience.org/stories/2020-10-08/an-indigenous-maori-view-of-doughnut-economics/

https://environment.govt.nz/publications/a-safe-operating-space-for-new-zealandaotearoa-translating-the-planetary-boundaries-framework/

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Fourth emissions budget draft advice

Chapter 2

8. **Do you agree with our assessment of the considerations that have informed our proposed budget level, including key judgements**?

We accept the proposed total net emissions budget of 134 $MtCO_2e$ for 2036-40 or lower. However, the biogenic methane reduction proposed in the budget period is far too little, considering the huge potential that agriculture can be transformed to low emissions, even carbon sequestrating, systems.

We note that in recommending the 4th budget level, the Commission has made a key judgement to incorporate new biogenic methane technologies, including uncertainties on the timing of their availability, cost and effectiveness. Our concerns over the reliance on such technologies have been expressed in our submission on the Commission's 2050 target consultation (Q.14). We urge the Commission to also make a judgement to incorporate regenerative farming involving significant stock reduction, and landuse change to inform the 4th budget level.

Notably, at the *Mooving on Methane* conference this week organized by Venture Taranaki (28 May 2024, New Plymouth), presenter from Nestlé Oceania listed regenerative agriculture as the number one tool to drive emissions reduction, followed by "*low hanging fruit…*" and then methane reduction technologies. Nestlé "*collaborate with suppliers, farmers and communities to increase use of regenerative agricultural practices… Natural climate solutions within our supply chain will form a significant part of our decarbonization pathway, removing greenhouse gases from the atmosphere. These removal projects take place in the landscapes where we source our raw materials and help restore forests, wetlands and peatlands. Our projects can also help generate additional benefits for communities and protect biodiversity and natural ecosystems*."
https://www.nestle.com/sustainability/climate-change/zero-environmental-impact

Clearly regenerative agriculture warrants consideration by the Commission in development of emissions budgets.

9. **Are you aware of any further evidence that the Commission should consider in making its assessment of feasibility, cost, and implications of potential abatement options in the fourth emissions budget period**?

Regenerative agriculture with much lower stocking rates and inputs, and landuse change from intensive animal agriculture to mosaics of horticulture, local food production and ecosystem restoration would drive biogenic methane reduction quickly. These also offer a wide range of co-benefits to people and the environment, including a more resilient economy that is less exposed to volatile international markets.

Numerous case studies and data sets are being collected from regenerative livestock to viticulture and arable transitions and how they mitigate climate change, improve soil health, animal welfare, farmers wellbeing and economic performance: https://www.quorumsense.org.nz/case-studies

https://www.calmthefarm.nz/science

https://vimeo.com/948143094

https://www.landcareresearch.co.nz/discover-our-research/land/soil-and-ecosystem-health/regenerative-agriculture-in-new-zealand/

https://www.mpi.govt.nz/news/media-releases/new-project-to-help-farmers-gain-regenerative-agriculture-certification/

10. **Do you have any other feedback on this chapter**?

There is still too much reliance on carbon removal with forestry and carbon capture and storage. The latter is a 'pipe dream' promoted by industry for decades in their predatory delay, but without a snowball's chance in hell of making a meaningful dent in emissions. Greater push for gross emissions reduction is much needed.

Focus by the industry on GHG emissions reduction per ton of milk solid or meat produced means potentially no overall reduction because of the Jevon's Paradox. Greater emphasis ought to be placed on absolute emissions reduction. https://www.greenchoices.org/news/blog-posts/the-jevons-paradox-when-efficiency-leads-to-increased-consumption

Chapter 3

11. **Do you agree with the approach we have taken to developing our EB4 demonstration path**?

It is concerning that even based on previous government policies (as of 1 July 2023), the level of biogenic methane emissions would merely be a 13% reduction compared to 2017 by 2050. With the regressive, anti-environment policies coming into play by the current government, emission reduction would likely be even less. It is critical that the Commission gives the strongest advice in terms of reduction targets and budgets which future governments can lean on when developing more progressive policies.

12. **Is there anything we haven't considered that you think we should include in our approach**?

In terms of electricity generation, distributed renewable energy systems integrating electric transport and smart demand management and sharing capability have huge roles to play in reducing emissions and increasing resilience. Electricity affordability and equity would require transformation of the much rorted electricity market and pricing systems. "*The breakdown of a pre-existing regulatory constellation lets loose familiar pathologies: abuse of monopoly power to price-gouge consumers and eliminate competitors; unbridled pursuit of self-interest degrading the quality of services and products; reduced health, safety and wages in workplaces; and unchecked environmental degradation*" (Geoff Bertram, 2022).

https://www.rewiring.nz/electric-homes-report

https://clever-energy-scenario.eu/

https://geoffbertram.com/wp-content/uploads/2022/07/short-paper-for-florence-2022.pdf

https://amp.theguardian.com/books/2024/feb/15/the-price-is-wrong-by-brett-christophers-review-why-capitalism-cant-save-the-planet

In terms of transport emissions, the new government's push for building new highways, some likely following fast-track approvals, would come with considerable added emissions, including the embedded emissions of roads, and continuing if not increased vehicle travels, even as EV sales increase. Greater emphasis is needed in supporting the expansion and electrification of rail for passengers and freight, more efficient and accessible public transport networks, as well as urban designs that enable safe active

transport. "*An ever-growing body of science underpins the gains society can reap from active travel in terms of transport, health and environmental benefits. Planning practice has accumulated a rich portfolio of measures ready to be considered for inspiration, adaptation and possible application in every city*" (WHO, 2022).

https://www.who.int/europe/publications/i/item/9789289057882

For substantial biogenic methane reduction, we support the Commission's suggestion that it would "*require significantly lower agricultural production from livestock and more land-use change away from ruminant livestock*". The assumed 23% and 12% stocking rate reductions respectively in dairy and sheep/beef farms by 2050 compared to 2021 are not ambitious enough. Increasingly farmers realize that focusing on animal and soil health, reducing inputs (fertilisers and feeds) and retiring less productive areas for indigenous vegetation and wetlands, actually contribute to business resilience and better lifestyle for farmers. The Commission ought not shy away from supporting such transitions. Silvopasture systems are also worth exploring further.

https://www.tandfonline.com/doi/full/10.1080/00288233.2023.2298922

In terms of methane-reducing technologies, there is yet no proof of concept for a vaccine, according to presentations at the recent *Mooving on Methane* conference in Taranaki (25 May 2024, New Plymouth. Effective delivery mechanisms for methane reducing feed additives like Bovaer (3-NOP) or *Asparagopsis* derived bioactives, and equipment for accurate measurements of biogenic methane from animals, are also not readily developed for NZ's pasture-based systems.

https://www.tandfonline.com/doi/full/10.1080/00288233.2023.2248948

13. Do you have any other feedback on this chapter?

Chapter 4

14. **Do you agree the changes we assume for each sector are plausible and achievable**?

We are concerned that the assumption for decarbonization of industrial process heat (e.g. eliminate coal use for food processing before 2037 and fossil gas phased out by 2050), weak as they are, might still be overly optimistic given the new government's push to keep fossil fuels burning and remove investments for decarbonization (e.g. GIDI fund). Once approved, fast-tracked or otherwise, new oil/gas exploration and coal mining could lock us in fossil fuel dependence for decades longer.

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International shipping and aviation review

We support the Commission's recommendation to include international shipping and aviation in the 2050 target.

We recommend having separate gross international shipping and aviation components of the target.

Moreover, emissions associated with the growing, largely unregulated space industry should also be accounted for and reduced.

On 21 May 2024, the International Tribunal for the Law of the Sea advised that greenhouse gas emissions and the heat generated by a warming climate meet the definition of "pollution". "*The obligation under article 194, paragraph 1, of the Convention to take all necessary measures to prevent, reduce and control marine pollution from anthropogenic GHG emissions is one of due diligence. The standard of due diligence is stringent, given the high risks of serious and irreversible harm to the marine environment from such emissions…*"

https://www.itlos.org/fileadmin/itlos/documents/press_releases_english/PR_350_EN.pdf

https://theconversation.com/a-new-ruling-says-countries-including-nz-must-take-action-on-climate-change-under-the-law-of-the-sea-230420

The tribunal advice reinforces the expectation and obligations of Aotearoa NZ to substantially reduce GHG emissions, from land-based activities, ocean shipping, aviation, and the space industry.

https://theicct.org/marine-cruising-flying-may22/ https://www.nature.com/articles/s41561-022-01001-5

https://www.scientificamerican.com/article/an-underappreciated-danger-of-the-new-space-age-global-air-pollution/

https://www.rnz.co.nz/news/national/474211/15-point-7m-for-space-initiatives-speedy-delivery-crucial-sector-leaders-say

There is a general lack of understanding or recognition amongst governments and the public that there are real biophysical limits which restrict how much natural resources we can extract, consume and pollute, for power generation, primary production, industrial manufacturing, transport, recreation and others. Our export-import economy is unsustainable environmentally and economically. Of the 9 planetary boundaries, 6 have been breached globally, notably climate change, biogeochemical flows (N & P), novel entities (plastics & forever chemicals) and loss of biodiversity. A holistic and integrated approach is needed, rather than tunnel vision on climate change even though efforts to reduce emissions are far from adequate.

The doctrine of economic growth ignores these boundaries and that's why we are in such a mess environmentally, ecologically and socially (poverty, injustice…). We challenge the Commission who surely understands biophysical overshoots and social shortfalls to communicate them and the alternatives to governments and the public, even if the alternatives may not be popular in mainstream politics.

https://doughnuteconomics.org/about-doughnut-economics

https://www.degrowth.nz/ https://www.thegreatsimplification.com/