

Catherine Wedd
Chair
Environment Committee
PARLIAMENT

6 October 2025

Tēnā koe Catherine Wedd

Thank you for your request to He Pou a Rangi Climate Change Commission to respond to the issues raised in The Parliamentary Commissioner for the Environment's Alt-F report. Our response is attached.

The role of forestry in meeting Aotearoa New Zealand's emissions targets and how forests are managed are important issues in climate change policy. The Commission has provided a range of advice on forestry issues as they relate to climate change. This document responds to the issues raised by the Parliamentary Commissioner for the Environment by drawing on the findings of our previous reports.

If it would be helpful, we would be happy to join you at a future Select Committee meeting to discuss the contents.

Nāku noa, nā



Jo Hendy
Chief Executive – He Pou a Rangi Climate Change Commission

Introduction

The PCE's report *Alt-F reset: examining the drivers of forestry in New Zealand* (the Alt-F report) raised several issues arising from how forests are managed and new forests are incentivised in Aotearoa New Zealand. Several of these issues relate to how forestry contributes to climate targets and the way forestry incentives operate within the New Zealand Emissions Trading Scheme (the NZ ETS). The Commission has also commented on similar issues in previous advice reports. This submission summarises the advice the Commission has provided on those points.

The role of forestry and rural communities

Forests play a significant role in the history, culture, economy, and biodiversity of Aotearoa New Zealand. Forests will play an important part in helping Aotearoa to meet emissions budgets and the net zero component of the 2050 emissions reduction target, because they are currently the only way to remove carbon dioxide from the atmosphere ('emissions removal') at scale.

Different types of forest can play different roles. New exotic production forests will be important to help meet emissions budgets and targets and to help sustain a thriving, low-emissions bioeconomy. Establishing new native forests will be key to maintaining net zero long-lived greenhouse gases in the long term, balancing emissions from hard-to-abate sectors while providing multiple co-benefits.

In the development of our 2024 advice on the fourth emissions budget we heard a lot of concern about the effects of changes in land use from livestock farming to exotic forests. This included impacts on rural communities and regional and local economies as well as impacts on natural systems, including from forestry operations and large-scale monoculture.

The Commission noted in our 2024 advice on the fourth emissions budget that incentives to reduce net emissions will continue to affect present and future land use, given the large contribution of the land sector to the New Zealand's emissions profile. The relative profitability of forestry compared to pastoral sheep and beef has led to changes in land use. Exotic and native forests are also likely to be established on parts of sheep and beef land, particularly areas with low economic viability (for example, erodible areas). Given all these dynamics, we set out:

The impact of this land-use change on communities is difficult to predict and likely to affect different communities in different ways. Wholesale conversion of sheep and beef farmland to forestry would affect communities in the immediate area. More land converting from dairy to horticulture would also affect the nature of work in different regions, as horticulture requires more seasonal workers. More permanent or native afforestation may also generate fewer jobs than exotic production forestry, particularly if the land is left to revert rather than being planted.

Some changes in land use could in turn impact the population of rural communities and reduce expenditure in other businesses that rely on these sectors. Land-use change could also disproportionately impact iwi/Māori given Māori assets are predominantly in land and a higher proportion live in rural areas.

Less reliance on exotic forestry to offset emissions will be important to reduce these impacts. Capacity-building and advisory services for landowners focused on integrating trees or forestry onto farms rather than wholesale land-use change could also limit the impacts of afforestation.

The role that carbon dioxide removals by forests play in meeting budgets and targets must be considered alongside the need to make gross emissions reductions, and address potential impacts of land conversion on rural communities and the broader food and fibre sector.

Commission findings in common with the PCE's Alt-F report

The PCE's Alt-F report raises a number of concerns about how forests are managed. Several of these issues are beyond the Commission's remit; however, several relate directly to the work of the Commission.

On the structure and functioning of the NZ ETS, the Commission raised similar issues prior to the PCE's report, as a result of analysing future risks regarding the NZ ETS and forestry. In particular, like the PCE the Commission has identified that:

- The NZ ETS net emissions cap will go to zero in the mid-late 2030s. Once this occurs:
 - Forestry will dominate supply in the NZ ETS and the Government will have no volume to auction.
 - Government will then lose influence over the price in the scheme.
 - The NZ ETS will no longer be able to incentivise further removals or reductions in emissions overall.
 - Further removals will still be needed to meet the 2050 target that the NZ ETS will not be able to incentivise.
- Relying heavily on forestry to meet emission targets by balancing out gross emissions increases the risks and negative impacts of the transition because it:
 - Requires ongoing planting of more and more land in forest and keeping that land in forest forever.
 - Limits the options future generations have in managing that land.
 - Foregoes the significant economic opportunities and benefits of reducing fossil fuel use.
 - Increases the risk that the carbon sequestered is released through natural hazards such as wildfire, windthrow or pests. These risks are increasing due to the effects of climate change.

We cover each of these points in our submission.

The Commission has set out multiple possible ways to address these issues but notes that a full policy process is needed to develop awareness of the issues among NZ ETS participants, to test alternative options, and to seek input from the those affected. This is beyond the Commission's role of advising on high level direction of policy.

The NZ ETS emissions cap is on track to go to zero

The NZ ETS 'cap' represents the targeted level of emissions to be achieved by sectors covered by the scheme. It is based on Government decisions about how the necessary efforts to meet emissions targets is to be shared across sectors inside and outside the NZ ETS. The cap is not formally defined in legislation but is an essential component of aligning unit supply in the scheme with emission targets. The emissions cap currently used for the NZ ETS is determined on a net basis, reflecting the inclusion of forestry in the scheme.

As the trajectory towards emission targets increases the constraint on emissions over time, and the removals of carbon by forests in the scheme increases, the net emissions cap declines towards zero.

The Commission's 2025 emissions reduction monitoring report described this issue:

Without changes to the scheme, the net emissions cap will continue to decline and reach zero soon after 2035.¹ In the years leading up to the cap reaching zero industrial free allocation will exceed the cap and there will no longer be volume under the cap to be auctioned. As auction volumes decrease, unit supply from forestry is expected to start dominating the scheme. The influence and relevance of the price control settings will diminish, and the NZ ETS price would likely tend towards the relatively low marginal cost of forestry. This leads to three issues for meeting emissions goals.

First, after the emissions cap reaches zero, additional removals will still be needed to meet the 2050 target that the NZ ETS will not incentivise. Once the emissions cap reaches zero all gross emissions in the scheme will be balanced by forestry removals. However, additional removals will still be needed to balance emissions under the 2050 target that are outside the NZ ETS – principally agricultural nitrous oxide. The Government has announced a policy of partnering with the private sector to plant trees on Crown-owned land which could deliver these additional removals; however, there are risks to the proposal. See *Chapter 11: Removals*.

The second issue is that if in the 2030s or beyond Aotearoa New Zealand needs to further decarbonise, other tools or policies may need to be used as the NZ ETS may not be capable of driving material gross emissions reductions. While the Government is currently pursuing emissions reductions on a net basis (i.e. it is agnostic as to whether emissions under the net-zero target are reduced or balanced with forestry removals), the current trajectory of the scheme means the Government will lose a key policy tool if in the future it decides to change course.

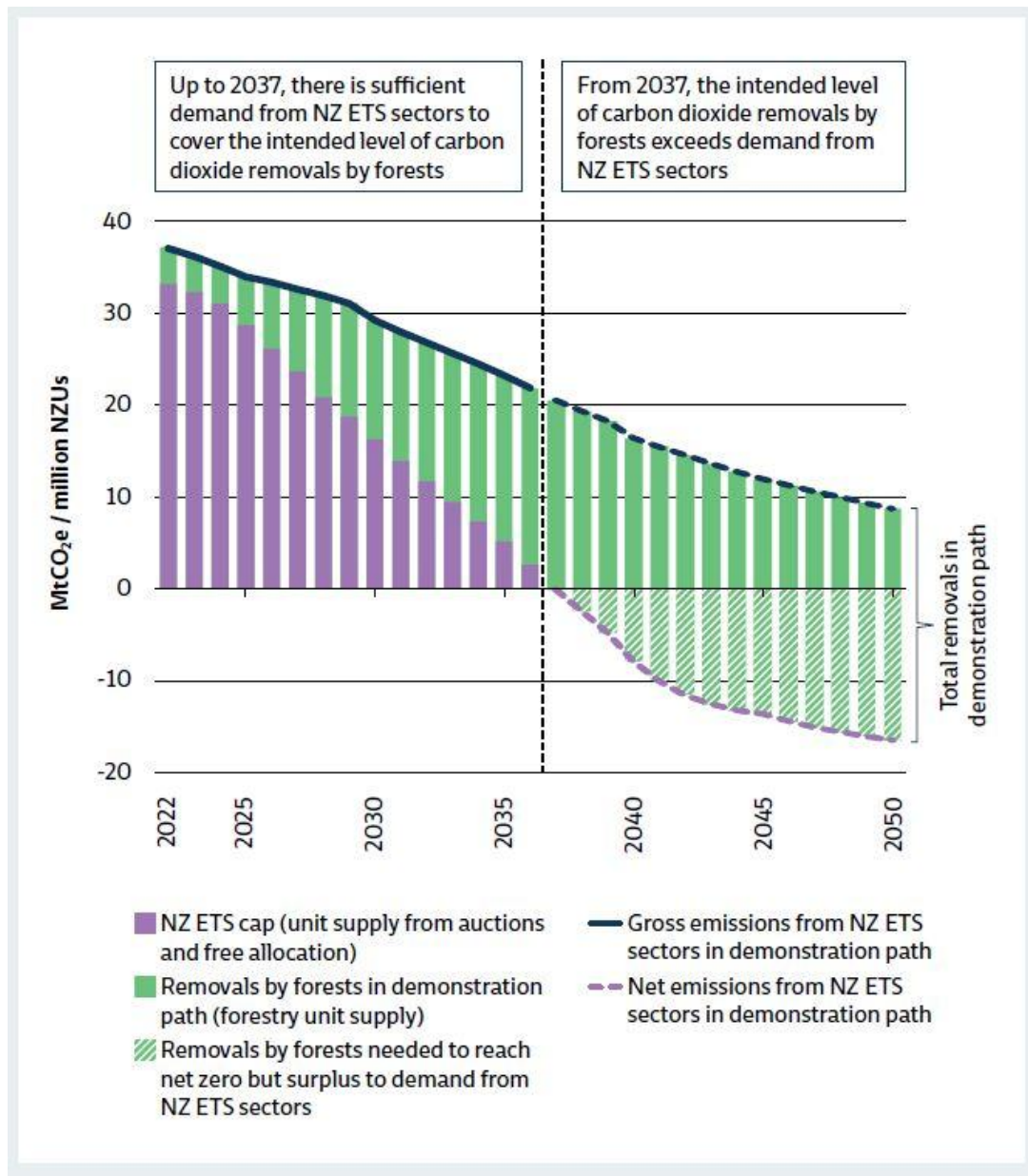
The third issue is that this approach could also leave the NZ ETS in an unstable state, with the unit supply from forests not well matched to demand from emitters. This risks the NZU price falling below the marginal cost of forestry, enabling deforestation and increasing net emissions. This could lead to boom-and bust cycles of forestry, and large swings in net emissions that could put meeting emissions budgets and the 2050 target at risk. If the Government is to maintain the ability of the NZ ETS as an effective tool to reduce emissions, the scheme will need to be amended.

There are a range of potential solutions to these issues. We canvassed some of them in our advice on the second emissions reduction plan. While frequent or unpredictable changes to the scheme can inhibit emitters' confidence to invest in emissions reductions, a well-considered and clearly signalled process for addressing these issues early can minimise the disruption to the NZ ETS' effectiveness. Addressing these issues early will allow more time for the impact of any changes to work through the market causing less disruption.

Figure 1 below from the Commission's 2023 advice on the second emissions reduction plan illustrates this issue.

¹ The exact timing of the emissions cap reaching zero cannot be precisely forecast right now since the Government has not yet set emissions budgets past 2035. Previous analysis of this issue relied upon sector sub-targets the Government had set in the first emissions reduction plan.

Figure 1: The NZ ETS cap and intended forestry supply under the Commission's 2023 demonstration path.



Source: Climate Change Commission. 2023 Advice on the direction of policy for the Government's second emissions reduction plan, figure 5.4

In addition to forestry supply, ongoing industrial allocation exacerbates this issue, bringing forward by 1-2 years the point when there will be no more volume under the cap that can be auctioned. For more information on this, see our previous submission to the Committee of 2 December 2024 on the petition of Alex Johnston on phasing out industrial allocation.

Market stability and the emissions cap

The NZ ETS is a regulatory market created by the New Zealand Government. Maintaining the scheme as it is, without addressing these issues, will not provide the market with stability as participants have to form their own expectations of when and how they will be addressed. If the NZ ETS is to remain a key policy tool to reduce emissions, it needs to be amended to address the challenges of the 2030s. A considered evolution of the NZ ETS to address these issues in a predictable manner, alongside other

policies, will contribute to the credibility of the scheme and the confidence of the private sector to invest in reducing emissions. As there are a wide range of NZ ETS participants, who are likely to be more or less informed on these policy issues, beginning by laying out the issues to address and seeking input on possible solutions before putting forward preferred options would help to inform participants on the rationale for any changes, and develop their buy-in.

Heavy reliance on one sector to meet emission targets increases risks and forgoes opportunities

To meet the net zero component of the 2050 target requires some ongoing removals of carbon dioxide to balance out hard to abate emissions. At the present time, forestry is the only removal technology proven at scale that can remove carbon dioxide directly from the atmosphere.²

However, using forests to compensate for ongoing emissions of greenhouse gases requires a continual conversion of land into forestry. Heavy reliance on forests to meet emission targets monopolises land resources for the purposes of balancing gross emissions from sectors that have proven options to reduce emissions. It increases the overall amount of afforestation needed to meet targets and has consequences for rural communities.

Heavily relying on forests also forfeits the economic savings and wider benefits of reducing Aotearoa New Zealand's reliance on fossil fuels. The Commission's recent advice on the fourth emissions budget highlighted that action to reduce gross emissions unlocks economic and social gains. For many of the actions in the EB4 demonstration path, investments made in low emissions technologies will more than pay for themselves in the long term through fuel savings and lower maintenance costs. We estimated direct financial savings from actions that reduce gross emissions would grow to NZ\$1 billion per year by 2040. In addition, we found that cleaner air resulting from less fossil fuel burned for transport (due to a faster transition to electric vehicles and reducing private vehicle use) would lead to improvements in health valued at around NZ\$2.1 billion a year between 2036 and 2040.

A heavy reliance on forestry also increases the risks of missing emission targets by concentrating efforts in one sector – a portfolio approach across many sectors is more resilient to unexpected events including natural hazards like wildfires and storms.

In the Commission's second monitoring report, on the role of forestry we said:

Under the second emissions reduction plan, forest removals are expected to comprise 33% of net emissions reductions sought in the second emissions budget and 46% in the third emissions budget. The Government's ERP2 path employs an additional 800,000 hectares of exotic forests through 2070 compared to the Commission's EB4 demonstration path, which focuses on reducing gross emissions.³ This results in 700,000 fewer hectares of sheep and beef land and 100,000 fewer hectares of dairy land by 2070 under the ERP2 scenario.

This heavy reliance on forests would require higher levels of planting past 2050 to counterbalance ongoing greenhouse gas emissions and impose a commitment to maintain the forests to ensure that emissions remain net zero in perpetuity. The effects of climate change

² Direct air capture of CO₂ has been demonstrated at a small scale, but only at very high cost. The IEA reports that currently installed DAC plants are sequestering <0.01Mt CO₂ pa globally.

³ Under the Commission's EB4 demonstration path there would be 2.5 million hectares of exotic forest in 2050 increasing to 2.6 million hectares in 2070. Under the ERP2 path there would be 2.9 million hectares of exotic forest in 2050 increasing to 3.4 million hectares in 2070.

(such as altered growing conditions, wildfire and drought) and human activity pose risks to the permanence of carbon storage in forests.

The Commission's previous reports showed how reducing emissions at source across all sectors would reduce the reliance on removals through the forests sector. This approach would reserve forest removals for emissions that are more difficult to address, provide greater resilience to emissions reduction efforts, and improve confidence in sufficiency of actions to meet emissions budgets. Reducing gross emissions often provides broader benefits to society than would be achieved by only increasing forest removals – such as improved air quality, warmer and drier homes, health benefits from active transport, and jobs in new and innovative sectors.

The PCE's recommendations

In the Alt-F report, among other things, the PCE recommended:

- Phasing out forestry from the NZ ETS.
- Creating a separate biogenic trading scheme.
- Reviewing the permanent forest category.

Phasing out forestry from the NZ ETS

To manage the risks from carbon forestry and alter the pattern of land use change, the PCE has recommended phasing forestry out of the NZ ETS and separately incentivising the necessary forestry to meet targets. It proposed that the increase in NZ ETS auction revenue from moving to a gross emissions cap be used by the Government to fund afforestation of a type and in the areas that need it most. This could include funding native forests planted on erosion prone land or on whenua Māori.

Phasing forestry out of the NZ ETS would be a major change to how the NZ ETS operates. It would require careful thought about how to treat existing participants who have made significant investments under the existing rules.

To address the identified issues with the NZ ETS, the Commission has recommended separating the incentives for gross reductions and removals by forests. We advised that removing forestry from the NZ ETS is one way to do that, but it is not the only way to address the issues identified. There are a range of other possible approaches, each with their own strengths and drawbacks. The approaches include (but are not limited to):

- **Putting a stronger focus on complementary policies alongside the NZ ETS** to reduce emissions and deliver additional removals. For example, an additional levy or fee on emitters could increase the incentive for gross emissions reductions. This and other options for complementary policies would reduce the amount of work required from the NZ ETS to meet targets.
- **Increasing demand for units by expanding coverage of the scheme.** Including other sources of long-lived gas emissions into the NZ ETS would delay the point at which the cap goes to zero, and if coverage was broad enough, could provide the demand needed to incentivise the remaining forests to meet the 2050 net zero target. The remaining long-lived emissions outside the NZ ETS are largely nitrous oxide emissions from agriculture and international shipping and aviation emissions (also currently excluded from the 2050 target).
- **Limit the area of forest that can register into the NZ ETS each year.** By setting a quota of allowed forest area that can register, this option offers direct control over the amount of afforestation driven by the NZ ETS each year. How the quota is allocated would need to be considered

thoughtfully. A first-in-first-served approach could be viewed as unfair. An auction system could create revenue but create barriers to participation. Iwi/Māori who have less access to capital to develop their land could be particularly disadvantaged by such an approach.

- **Introducing an exchange rate between forestry units and other NZUs.** This would reduce the imbalance between forestry supply and demand as well as change the incentive for forestry and reducing gross emissions. However, moving away from all NZUs representing 1 tonne of emissions would add considerable complexity to the scheme and make it harder to align the scheme with meeting emission targets. Setting the appropriate exchange rate would be difficult.

There are further options discussed in the Commission's 2023 advice on the second emissions reduction plan. Our advice was that it is important for the Government to undertake a full policy assessment of different options for reform to address the issues, including consultation and partnership with iwi/Māori given their significant interests in forestry and stake in the future of the NZ ETS.

Creating a separate biogenic trading scheme

Another recommendation in the Alt-F report is to create a separate 'biogenic' trading scheme. PCE argued that the carbon stored in forests is inherently temporary over decades (due to increasing risks of reversal), so should only be used to offset warming that is similarly temporary such as that from biogenic methane emissions.

A question that arises with this proposal is how it would be practically compatible with Aotearoa New Zealand's 2050 target.

It is unclear how a biogenic trading scheme would align with the net zero component of the 2050 target. Under the existing 2050 target, forestry can offset all emissions *except* for biogenic methane. Having a trading scheme where forestry could *only* offset biogenic methane could create challenges in incentivising the area of forest that lines up with the afforestation needed to achieve the 2050 net zero target.

In terms of the biogenic methane component of the 2050 target, in the PCE's proposed biogenic trading scheme farmers could offset their emissions using forestry, but the 2050 target requires reductions in gross emissions of biogenic methane.

The PCE has recommended the biogenic trading scheme in addition to phasing forestry out of the NZ ETS and Government funding for afforestation mentioned in the previous section. As noted there, the Commission has advised on the need for analysis on a range of options for NZ ETS reform. This option could be part of that process, which could consider whether it would be desirable and practical to implement a biogenic trading scheme taking into account the nature of the 2050 target.

Reviewing the permanent forestry category

Forests in the NZ ETS can be registered under standard (production) forestry or under the permanent forests category. Forests in the permanent category can earn NZUs for longer but cannot be clear-felled for 50 years.⁴

The PCE recommended reforming the permanent forest category in the NZ ETS, if other recommendations relating to NZ ETS reform are not accepted. The PCE proposal includes requiring

⁴ At the end of the 50-year period the landowner has 3 options: commit to another 25 years permanent forest and continue receiving units, convert the forest to averaging accounting and repay the difference in units received, or withdraw from the NZ ETS and surrender units equivalent to all of the units received.

owners of permanent forests to have a realistic long-term management plan for the forest, and the creation of specific categories and associated rules for different types of permanent forests (exotic, native, and transition). PCE identified issues related to how carbon tables are applied to transition forests (where are forest is transitioned from exotic species to native species over time) and the potential for fiscal risks to the Crown if forest owners default on their obligations to maintain permanent forests in perpetuity.

The Commission has not investigated these specific issues in detail. However, in the course of our work we have heard concern from a range of stakeholders about the treatment of permanent forests in the NZ ETS. This includes concerns about permanent exotic forests being established at scale in a way that may cause environmental risks.

In our initial 2021 advice on emissions budgets and the first emissions reduction plan, *Ināia tonu nei*, the Commission recommended that the Government develop a clear position on the role and desirability of different permanent exotic forests as carbon sinks, and amend the NZ ETS and other policies accordingly. The issues that prompted this recommendation appear to still be current and cross over with some of the issues raised by the PCE.

Conclusion

On the key issues with forestry in the NZ ETS, the Commission has reached the same conclusion as the PCE. The current structure of the NZ ETS means the emissions cap is on track to reach zero in the mid-late 2030s. At this point the scheme will not be able to drive further reductions in net emissions needed to meet targets, and the market could become quite volatile. A heavy reliance on balancing ongoing gross emissions with higher levels of forestry exacerbates the risk of carbon storage reversal, increases the amount of forestry needed, forgoes the economic and social benefits of decarbonisation, and reduces the resilience of the plan to meet budgets.

There are a range of possible solutions to these problems, each with benefits and drawbacks. We recommend the Government consider carefully how it could evolve the NZ ETS in a predictable manner to address these issues.