PCE Submission on the Climate Change Response (Emissions Trading Scheme—Forestry Conversion) Amendment Bill

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To the Environment Committee

Submitter details

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I wish to appear before the Committee to present my submission.

Parliamentary Commissioner for the Environment

The Parliamentary Commissioner for the Environment was established under the Environment Act 1986. As an independent Officer of Parliament, the Commissioner has broad powers to investigate environmental concerns and is wholly independent of the government of the day. The current Parliamentary Commissioner for the Environment is Simon Upton.

Introduction

The Climate Change Response (Emissions Trading Scheme—Forestry Conversion) Amendment Bill aims to address the widespread conversion of farmland to forestry caused by the New Zealand Emissions Trading Scheme (NZ ETS) restricting whole-farm conversions. New Zealand is the only country in the world to permit the unlimited inclusion of forestry offsets in its ETS. The inclusion of forest units was never intended to be a long-term mitigation solution. Instead, it was a prudent and affordable transitional measure to buy the time needed for the maturing of technological developments that would enable gross emissions reductions in sectors that, a decade or more ago, appeared to be very costly to mitigate. However, the purchase of forestry units has become New Zealand's default emissions mitigation tool. This Bill is now trying to grapple with some of those consequences.

I recommend that this Bill should not proceed for a number of reasons:

- It does not deal with the fundamental issues of the use of unlimited forestry offsets in the NZ ETS. It addresses a symptom rather than the root cause.
- It will not enhance the credibility of the NZ ETS which needs much deeper reform.
- It is a complex bureaucratic solution that will have high administrative costs.
- Its regulation is based on very poor information and a land use classification tool that is not fit-for-purpose; and
- It could lead to perverse consequences.

I elaborate on these issues below.

Issues with the unlimited use of forestry offsets in the NZ ETS

The issues with unrestricted use of forestry sequestration to offset long lived greenhouse gas emission have been covered in previous PCE publications[1]. These include:

1. **An implicit Crown liability that cannot be responsibly shouldered:** The emissions from fossil fuel combustion stay in the atmosphere essentially forever. For forestry to provide a credible offset it must also stay there forever. If a forest is destroyed by fire, disease or an extreme weather event (all of which are more likely in a changing climate) and the landowner has no income to restore it, the carbon liability will ultimately lie with the Crown.
2. **Systemic uncertainty created by the inclusion of forestry units in the NZ ETS:** It is difficult to forecast net emissions with any precision due to the NZ ETS's registration and accounting rules, the lag times involved in creating forestry offsets if gross emissions forecasts change, and the inclusion of both production and permanent forestry (in particular stock change forestry which could be production OR permanent) . This makes it very difficult to hit specific emissions targets and budgets.
3. **Land that is used for forestry offsets will effectively be locked up forever:** Any value associated with alternative uses of that land will be destroyed.
4. **The loss of productive land and resulting impacts on rural communities**.
5. **The unlimited use of forestry offsets in the ETS prevents the price rising:** This disincentivises gross emissions reductions, even when alternative technologies exist. It also prevents the NZ ETS from raising revenue for the Crown. Such revenue could be used for a more targeted approach to afforestation in catchments where that makes sense.
6. **The NZ ETS is a dominant incentive in land use decisions**, making it difficult to ensure that the goal of putting 'the right tree in the right place for the right purpose' is achieved.

Although the Bill shares some common goals with point 4 (above), it does not deal with any of these other fundamental issues. It will not reduce the use of forestry as a carbon offset. Instead, it creates a bureaucratic mechanism that will simply smooth out rates of afforestation over

[1] https://pce.parliament.nz/publications/farms-forests-and-fossil-fuels-the-next-great-landscape-transformation/; https://pce.parliament.nz/publications/going-with-the-grain-changing-land-uses-to-fit-a-changing-landscape/; https://pce.parliament.nz/publications/submission-on-the-2nd-emissions-reduction-plan-consultation/; https://pce.parliament.nz/publications/alt-f-reset-examining-the-drivers-of-forestry-in-new-zealand/

time. This was confirmed in the second emissions reduction plan (ERP2), which stated that the Government's: "proposed policy for limiting whole-farm conversions to forestry on high-quality land is not expected to impact emissions, based on the baseline afforestation projections."[2] It can therefore be concluded that this policy will not meaningfully alter forestry activity[3]. It will just move it around the landscape.

Enhancing NZ ETS credibility

The Bill aims to enhance NZ ETS market credibility and provide certainty for NZ ETS participants and forestry investment. However, as the proposed limits on LUC land classes 1 – 6 are unlikely to significantly reduce reliance on offsetting, the Bill offers limited reassurance about the long-term viability of the NZ ETS, whilst adding further complicated bureaucracy.

The regulatory impact statement (RIS) accompanying the Bill asserts that the current NZ ETS cannot effectively manage the volume and location of afforestation, risking adverse impacts. As the Bill allows up to 25% of a farm anywhere to convert to forestry and up to a further 15,000 hectares of randomly selected LUC 6 land to convert per year, it still does not restrict the use of forestry offsets or effectively control where forests are located. Rather it just creates a more confusing and fragmented regulatory approach to forestry.

The Bill does little to improve the credibility or stability of the NZ ETS long term, which is seriously at risk. The real threat to the stability and credibility of the NZ ETS in the long term is the unlimited use of forestry offsets. Recent modelling commissioned by my office indicates that current policy around forestry offsets is likely to lead to the following:

1. a modest rise in NZ ETS prices in the 2020s, incentivising further afforestation;
2. falling emissions due to technological advancements and policy measures (e.g., increased the incremental uptake of electric vehicles and renewable energy technologies, policy-induced coal phase-out)[4];
3. an oversupply of NZ Units (NZUs) by the early to mid-2030s, causing prices to fall; and
4. declining incentives for afforestation after 2050, making it impossible to maintain net zero emissions without further policy changes (such as NZ ETS reform).

In short, the modelling shows that ongoing access to unlimited forestry offsetting within the NZ ETS will create an unstable system that will create problems for decades to come. It is a requirement of our international commitments and the Climate Change Response Act that we **stay below** net zero after 2050. A key issue with planting trees instead of further reducing gross emissions, is that there will be a need to keep planting more and more trees each year. Once planted we must ensure the trees remain in perpetuity, despite declining NZU prices and in the face of rising risks to their impermanence from fire and storm events. Consequently, **significant**

[2] https://environment.govt.nz/assets/publications/climate-change/ERP2/New-Zealands-second-emissions-reduction-plan-2026-30-Technical-Annex.pdf - pp. 66

[3] The Bill's regulatory impact statement (RIS) cites estimates of annual exotic afforestation between 28,000 ha and 36,000 ha under the Bill's proposed limits. These numbers compare closely to a long-term average of 27,000 ha per year in MPI's most recent afforestation projections: https://www.mpi.govt.nz/dmsdocument/62023-LULUCF-Accounting-Projections-2023

[4] Technological advancements as opposed to the NZ ETS prices, which are too low to meaningfully alter gross emission reductions.

changes to the NZ ETS must occur for New Zealand to stay below net zero past 2050[5]. Only serious reform can ensure the stability of the NZ ETS long term.

A complex and bureaucratic system

The Bill introduces a complex system of approvals that requires large amounts of additional information on top of the already complex rules and information requirements for forestry in the NZ ETS. In short, it adds significant administrative costs and bureaucracy to the process.

Any landowner wanting to make use of the flexibility to afforest 25% of each farm's LUC 1 – 6 land has to provide detailed evidence about the property and its current land uses. The informational requirements are even higher if a landowner wants to use one of the proposed exceptions. Perversely, if landowners want to challenge the flawed LUC system that the Bill uses to classify land, they need to do so at their own cost, despite the Government knowing the LUC system is not fit-for-purpose (see below).

Contrary to the assertion in the explanatory note that the Bill provides certainty, the use of a random ballot for allocating LUC 6 land does the opposite. Potential foresters must buy land before entering the ballot process but have little guarantee of an outcome. It will likely reduce the potential buyers for land, should the farmer want to sell. I note that the RIS did not recommend this ballot approach. Other methods to allocate the quota could have provided greater certainty.

The Bill constrains the freedom of landowners to deal with their properties as they see fit both by restricting conversion to 25% of a farm and by making conversion beyond this subject to the random ballot.

The use of LUC

The use of current LUC classification for specifying restrictions on land use has several well-known shortcomings. The most concerning ones stem from the fact that the New Zealand Land Resource Inventory (NZLRI) LUC dataset (which is proposed to be used as a default) is out-of-date and seriously lacking in granularity.

Mapping to inform the LUC dataset was mainly undertaken in the 1970s and has remained largely unchanged since, despite evolving landscapes. While rock types and soil types do not change quickly, changes to slope angles, erosion potential and erosion severity likely have occurred. These changes are particularly relevant in areas that sit on the cusp between classifications. Climatic zones used to determine land limitations, are also shifting. The mapping techniques employed in the 1970s are outdated by modern standards. Historically, a high degree of expert judgement was required, which introduced subjectivity. In contrast, modern mapping methods involve new technologies (e.g., remote sensing) coupled with powerful geospatial analytics and can offer much finer-scale objective assessment of the land's condition.

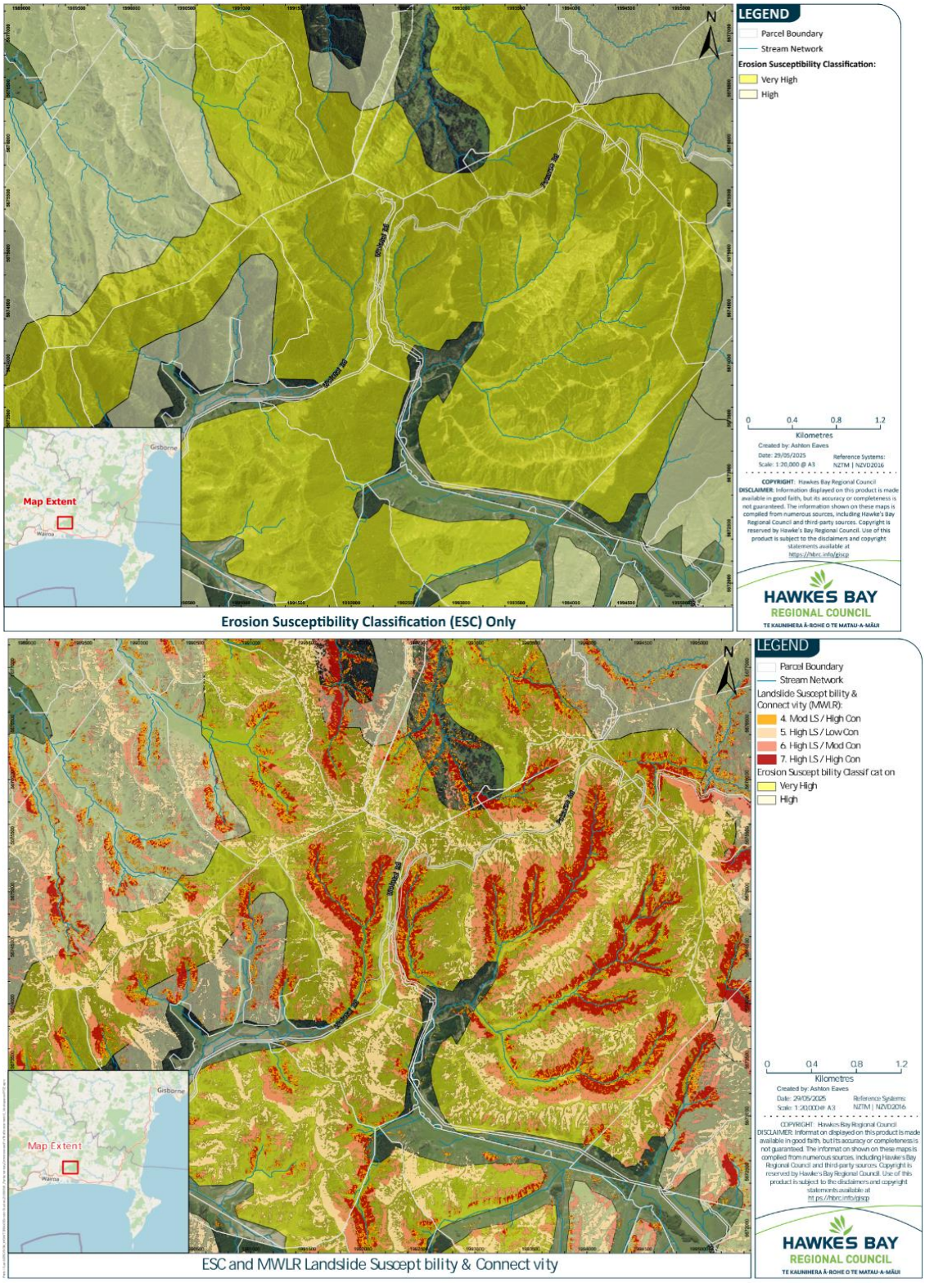
[5] In the regulatory impact statement accompanying the Bill it is stated that MPI projects that between 0.97 and 1.44 million hectares of afforestation between 2021 and 2050 are needed to meet New Zealand's climate change target. **There is a pressing need to also examine on going requirements post-2050**.

The resolution of the current LUC national dataset is far too coarse (1:50,000 scale) to be used as a regulatory tool at the property scale. To put this into perspective, property-scale mapping needs to be made at between 1:5,000 and 1:15,000 depending on management intensity. Take a look at the difference in detail that is revealed in the figures below.

Figure 1.A shows zones of erosion susceptibility based on the Erosion Susceptibility Classification (ESC). The ESC is used in the NES-CF as a threshold test to determine whether forestry activities are permitted or require resource consents. The ESC is effectively a modified LUC classification, where susceptibility of land to erosion has been determined based on the NZLRI and LUC classes, sub-classes and units.[6] Given this, the resulting ESC zones have been mapped using expert judgement at coarse resolution. In other words, the information provided by the ESC is so broad that it does not support meaningful decision-making on actual erosion risk.

By comparison, the outputs from recent research by Manaaki Whenua – Landcare Research (MWLR), shown in figure 1.B are much more fine-grained compared with the ESC zones. MWLR research identified (and prioritised) areas of landslide susceptibility and landslide connectivity to waterways.[7] These include areas of low, moderate and high susceptibility and connectivity. Several councils across the country use this more detailed and finer-scale mapping of the erosion-prone areas in their regions to provide advice on targeted management.

[6] https://www.mpi.govt.nz/dmsdocument/19340-Plantation-Forestry-Erosion-Susceptibility-Classification-Risk-assessment-for-the-National-Environmental-Standards-for-Plantation-Forestry/
[7] https://experience.arcgis.com/experience/8fc839a4a41b4271b2e519c617a2f7a0



Source: Hawke's Bay Regional Council

Figure 1: The top map (figure 1.A) shows erosion susceptibility of the land in the Hawke's Bay according to the coarse Erosion Susceptibility Classification (ESC), which is effectively a modified LUC classification. The bottom map (figure 1.B) shows erosion susceptibility of the same land using the ESC and the more fine-grained outputs from MWLR's landslide susceptibility and connectivity research.

As the maps above clearly show, the ESC classification (which is based on the NZLRI LUC) is coarse – too coarse to effectively assess erosion risk and make meaningful property-scale decisions regarding ways to best manage that risk. The additional geospatial information from MWLR demonstrates in a more granular fashion where different types of erosion risks occur, enabling targeted management.

The Bill proposes to overcome this problem by allowing farmers to use the national LUC classification approach by default but provides an option for applicants to use more detailed farm-scale LUC surveys at their own expense if they wish to. This is quite simply unfair. The Crown is proposing to regulate on the basis of information that it knows is not fit for purpose. Detailed farm-scale surveys are expensive, and some landowners may be financially precluded from accessing information that could ultimately improve the use of their land. It depends where you live. Yet, as I have argued on numerous occasions, the Crown should invest in supplying this more granular data as a public good.

The LUC classification itself is also subject to limitations. Namely, it employs broad classes which do not properly communicate differences in land to property owners or decision makers who need more nuanced information to understand appropriate land use and management. It also focuses on traditional land uses, which does not work well in relation to modern land-based production. Modern production is often heavily dependent on the addition of inputs like water and nutrients, which may matter more than inherent land characteristics captured by the LUC classification.

Finally, and contributing further to the inequity created by this approach, there are inconsistencies in LUC mapping between regions. Regional classifications and descriptions were independently developed by various mapping teams, which created inconsistencies between regions and between the North and South Islands. Put simply, the type of land placed in a LUC unit in one region may not be the same in another. In other words, farmers in some regions will be more unduly restricted from converting their land than those in regions with better LUC mapping.

Unintended consequences?

Broadly speaking this Bill is likely to drive afforestation on land classed as LUC 7 & 8. This land is generally less suitable for commercial production forestry. As a result, the Bill is likely to lead to the creation of more permanent pine carbon forests. As set out in my recent report *Alt-F Reset*[8], I have serious concerns about these forests. Once the income from carbon runs out – either because the carbon price falls or because the trees stop growing – there will be no income to look after these forests. There will be no way to ensure that the carbon within them remains locked up in the face of fire, disease and extreme weather events. I need not point out that all this is more likely with climate change. If passed into law, this Bill – as well as the lack of regulation of permanent forests more broadly – will contribute to a liability left to future generations to resolve.

[8] https://pce.parliament.nz/publications/alt-f-reset-examining-the-drivers-of-forestry-in-new-zealand/

An alternative approach

The LUC restrictions on exotic afforestation proposed by this Bill are palliative, and unlikely to meaningfully alter present trajectories. To provide credibility to the NZ ETS more meaningful actions need to be taken. As I have argued previously, this should involve the transition away from allowing forestry units to be a legitimate offset for fossil fuel emissions.

But forestry could still make an important contribution to tackling climate change. New Zealand's biggest contribution by far to planetary warming is emissions from livestock. A credible and responsible alternative approach would be to allow forestry offsets for biogenic methane emissions. In 2022 I commissioned work examining '*How much forestry would be needed to offset warming from agricultural methane*?'[9] The inception of this approach was the understanding that there is a broad commensurability between the lifetime of the cooling effect of a pine production forest and the lifetime of the warming effect of the biogenic methane from a herd of ruminants.

The modelling showed that to offset the warming from one dairy cow, a one-off area of 0.6 hectares of new pine plantation forest could be planted. There would be no need for ongoing planting after an area of forest required to offset the warming from the herd had been established. If the herd size were reduced, then the forested area could also be reduced, maintaining the option value of the land.

An advantage of this approach is that it allows farmers to manage the balance between methane-emitting land uses and carbon sequestration. In other words, it puts land use decisions linked to climate action in the hands of the sector itself, not as a competition between agriculture and large fossil fuel emitters.

New Zealand is under no obligation to reduce its contribution from agricultural warming to zero. But we are obliged to do what we can. Any long-run target for methane emissions should legitimately draw on all the options available including those that current research efforts are targeting such as vaccines, food additives etc. Alongside the opportunities those efforts may unlock, tree planting **is** a legitimate response. But that is **not** the case with fossil emissions.

Rt Hon Simon Upton
Parliamentary Commissioner for the Environment
Te Kaitiaki Taiao a Te Whare Pāremata

[9] https://pce.parliament.nz/publications/how-much-forestry-would-be-needed-to-offset-warming-from-agricultural-methane