



# Submission

*25 August 2023*

TO

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**Ministry for the Environment and  
Ministries for Primary Industries**

ON THE

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**“THE REVIEW OF THE  
NEW ZEALAND EMISSIONS TRADING SCHEME” AND  
“A REDESIGNED NZ ETS  
PERMANENT FOREST CATEGORY” CONSULTATIONS**

BY

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**Beef + Lamb New Zealand Ltd**

**SUBMISSION ON “THE REVIEW OF THE NEW ZEALAND  
EMISSIONS TRADING SCHEME” AND “A REDESIGNED NZ  
ETS PERMANENT FOREST CATEGORY”  
CONSULTATIONS**

**To the:** Ministry for the Environment and Ministries for Primary Industries

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**Date:** 25<sup>th</sup> August 2023

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## Executive summary

Beef + Lamb New Zealand (B+LNZ) welcomes the Government's review of the New Zealand Emission Trading Scheme (NZ ETS), its treatment of forestry offsets, and the conditions for 'permanent' carbon forests.

B+LNZ firmly supports the need for these reviews. New Zealand's current use of offsets is catalysing negative social and economic impacts for our rural communities and national economy for the benefit of fossil fuel intensive industries and activities. Settings are not supporting New Zealand's effective transition to a low-emissions economy or increasing our resilience to a warmer world that comes with compounding challenges including food security.

The full inclusion of forestry offsets within the NZ ETS is almost unique internationally, with New Zealand's offsetting policies in stark contrast to other countries. We are one of only two nations (the other being Kazakhstan) globally that allow emitters to meet their emissions obligations in an Emissions Trading Scheme using 100% forestry offsets rather than actually having to reduce our greenhouse gases (GHG).<sup>1</sup>

Forestry offsets should not be used in the place of real cuts to long-lived gas emissions, especially when they impact food production, and have a negative impact on the social and economic wellbeing of the rural community and national economy. The current settings in the NZ ETS must change.

The NZ ETS is an instrument to be utilised based on the objectives the Government, and wider New Zealand, set for it. We believe that any changes to the treatment of forestry within the NZ ETS need to be underpinned by a clear direction for the future. Both on the intended use of forestry offsets to meet domestic and international emissions reductions targets as well as how these offsets are intended to provide co-benefits for our natural world and rural communities.

We support changes to the NZ ETS, along with other policy mechanisms and tools, to ensure emitters reduce their emissions first, and have access to offsets only for hard to reduce emissions. Additionally, any changes must support forest integration within farming systems that can allow for significant co-benefits. Our farmers are not getting fair recognition of their stewardship work supporting biodiversity, erosion control, or shade and shelter provision within integrated landscapes and farming systems. It's critical that the government move rapidly to put in place mechanisms to reward this work.

We support further analysis on Options 3 and 4 identified in the discussion document as these options can best control the use of forestry offsets and be leveraged to provide co-benefits. We do not believe that Options 1 or 2 will manage the problems we see, and are likely to make it more challenging to reduce emissions effectively. We support changes to the Permanent Forest Sink category to restrict the entrance of exotic forests, change the carbon accumulation method for 'transition' forests, and to set minimum management standards for all participants. We support the inclusion of alternative vegetation types in the NZ ETS but are unsure as to whether the NZ ETS is the best tool to recognise and reward alternative carbon removals, or the wider nature-based solutions, that on-farm vegetation can provide.

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<sup>1</sup> See here for further information: <https://beeflambnz.com/sites/default/files/news-docs/ETS-summary-report-2023.pdf>

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## 2. Our context:

B+LNZ is an industry-good body funded under the Commodity Levies Act 1990, through a levy paid on all cattle and sheep slaughtered in New Zealand (except bobby calves). B+LNZ represents sheep and beef levy-payers and has the mandate to submit on their behalf on matters that affect them. In all, we represent around 9,000 commercial farming businesses with red-meat interests located across the country.

B+LNZ is actively engaged in supporting farmers' environmental management, with a particular emphasis on building farmers' capability and capacity to support an ethos of environmental stewardship, as part of a vibrant, resilient, and profitable sector based around thriving communities. Protecting and enhancing New Zealand's natural capital and economic opportunities and the ecosystem services they provide is fundamental to the sustainability of the sector and to New Zealand's wellbeing for current and future generations.

The sheep and beef sector is essential to maintaining rural communities and their cultural, societal, and environmental wellbeing, as well as contributing to the country's economic wellbeing. For the year ending 31 December 2022 the red meat industry contributed \$11.4 billion to New Zealand's export revenue; making the sector New Zealand's second largest goods exporter. As New Zealand's largest manufacturing sector, it supports over 92,000 jobs (35,700 directly and an additional 56,700 indirectly employed).

Just under a third of New Zealand's total land area is used for sheep and beef (mixed agriculture), comprising about three quarters of pastoral lands. Sheep and beef farmers are significant stewards of native vegetation, managing approximately 2.8 million hectares of native habitat, including 1.4 million hectares of native forest. This is the second largest holding of native forest and native biodiversity in the country and represents almost 25 percent of New Zealand's remaining native vegetation.

Additionally, an estimated 180,000 hectares of exotic forest rests on sheep and beef farms. This mix of native and exotic woody vegetation sequesters a significant amount of carbon, with estimates varying from 5.5 Mt CO<sub>2</sub>-e (Ministry for the Environment) to 10.4 – 19.7 Mt CO<sub>2</sub>-e (AUT).<sup>2</sup>

The sheep and beef sector understands the importance of keeping global temperature rise within prescribed limits. It is critical to the wellbeing of New Zealand, our children, and the world as we currently know it. As stewards of the land and the natural resources, sheep and beef farmers are at the forefront of the impacts of climate change. Farmers are already seeing and experiencing these changes and are continually adapting their management practices and will continue to do so.

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<sup>2</sup> For context, the GHG inventory for 2021 estimated that the total removals across the country were 21.1 Mt CO<sub>2</sub>-e. <https://environment.govt.nz/assets/Publications/Files/Net-emissions-and-removals-from-vegetation-and-soils-on-sheep-and-beef-farmland.pdf> and <https://beeflambnz.com/net-carbon-report>

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Sheep and beef farmers are playing their part in the actions needed to achieve the Paris Agreement with our sector's gross methane emissions reducing by approximately 1 percent annually since 1990 with sheep meat being assessed as carbon negative.<sup>3</sup>

Most recently as part of our commitments to the He Waka Eke Noa Partnership, we developed a GHG calculator and ran over 300 extension events to help farmers understand their on-farm emissions. Over 95 percent of New Zealand's 9,165 commercial sheep and beef farmers now know their gross emissions numbers and 55 percent have a plan to manage them.

NZ ETS settings have been a significant catalyst in recent land use changes across the country. As a result, there has been a 9 percent decline in sheep stock units (su) since 2017-18.<sup>4</sup> Although this supports New Zealand to meet its domestic emissions reduction targets and Paris Agreement contributions, our farmers are feeling disproportionately impacted and in no way feel that recent land use change is part of a 'just' transition.

Recent government announcements to charge farmers for emissions regardless of progress towards emissions reductions targets (or considering the true warming impact of ruminant emissions) is disappointing. More recent research<sup>5</sup> using the latest climate change science indicates that the sheep and beef sector is very close to warming neutral. It is critical that government climate change policies and mechanisms do not work against those industries, communities and individuals that are working towards and delivering New Zealand's climate objective.

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<sup>3</sup> See summary of sheep and beef numbers since 1990 here: <https://www.stats.govt.nz/indicators/livestock-numbers> See summary of lifecycle analysis of sheep and beef meat here: <https://beeflambnz.com/knowledge-hub/PDF/summary-study-carbon-footprint-new-zealand-sheepmeat-and-beef.pdf> and See a peer reviewed report on the industry's carbon footprint here: [https://www.sciencedirect.com/science/article/pii/S0195925522002128?fbclid=IwAR2wnm9A\\_Uj-uHxq8cyW-Si\\_58GnuOtvhgpTGd4Vj0nI4hA4NNI6f54XepA](https://www.sciencedirect.com/science/article/pii/S0195925522002128?fbclid=IwAR2wnm9A_Uj-uHxq8cyW-Si_58GnuOtvhgpTGd4Vj0nI4hA4NNI6f54XepA)

<sup>4</sup> Note: In this period beef cattle su increased 8.3% offsetting much of the sheep decline.

<sup>5</sup> This research has been submitted to the Climate Change Commission as part of their evidence to inform a potential review of the emissions reduction targets. We will be releasing it more publicly in the coming months.

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## Submission structure:

Our submission is made in a number of parts.

1. Our views summarised in an Executive Summary
2. Some context about our industry (see above).
3. The current problems we see with the ETS settings (particularly offsetting) and how these are catalysing land use change with significant impacts on rural communities and New Zealand's economy.
4. A better approach for forestry offsets and what changes could be to deliver on this
5. Detailed responses to the consultation document questions for the NZ ETS review.
6. Feedback on the Permanent Forest Category changes.

Our submission is supported by a number of attached appendices including:

- Appendix 1: Analysis on the impact of afforestation on stock units and export returns.
  - Appendix 2: A summary of Sheep and Beef Farmers' responses to a range of questions posed at the beginning of the consultation period.
  - Appendix 3: A draft set of principles to inform policy setting changes.
  - Appendix 4: An external analysis and justification for change completed by Meredith Connell.
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### 3. Current problems we see:

- Our landscapes are changing:

There has been a rapid change in land use from sheep and beef pastoral farming to carbon forestry as a direct result of increasing carbon prices, which has impacted the short to - medium term profitability per hectare of different land uses. Additionally, exotic carbon forestry now outperforms many other land uses in the short-term, particularly sheep and beef production. This means that current sheep and beef farmers, landowners, and/or investors are either:

- a. Selling their land to forestry and/or carbon forestry investors,
- b. Choosing to change their land uses into forestry and/or carbon forestry or,
- c. Maintaining their current land uses (e.g. in sheep and beef farming).

Based on the incentives provided by high carbon prices, new tree planting is progressing at a rate that far exceeds what New Zealand would need to meet its domestic emissions reductions targets (as recommended by the Climate Change Commission (CCC)). Current policy settings are doing little to encourage actual emissions reduction for long-lived gases. We agree with officials that the core task as a result is to find a way to encourage emissions reductions and better manage the use of emissions removals.

Previously, preferential arrangements under New Zealand's overseas investment regime streamlined foreign investment through the 'special forestry test' and increased the amount of land bought by overseas investors who can benefit from the sale of wood products and carbon units. Although this pathway has been closed, impacts of this policy are continuing to be felt as significant land tracts are still being sold to overseas investors given earlier permissions. Based on our estimates, this special forestry test has allowed for over 77,000ha of sheep and beef land to be bought to date by foreign interests, representing 37% of conversions from sheep and beef to forestry between 2017 and 2022.<sup>6</sup>

The current rate and pace of land use change is driven by short-term profitability drivers with potentially long-term consequences. Based on analysis by the B+LNZ economic service, the potential return on a per hectare basis over a 30yr period is nearly 2.6x greater for carbon forestry than sheep and beef and 4.7x greater than forestry alone.<sup>7</sup> This has led to over 210,000ha of sheep and beef land being bought and then converted into some form of forestry (plantation, manuka, carbon etc.) since 2017 with carbon units as a key driver for investment.<sup>8</sup> Although carbon offsets and forests undoubtedly have a role to play in our transition to a low-emissions nation, the current policy settings are driving unmanaged land use change with

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<sup>6</sup> See: <https://beeflambnz.com/sites/default/files/2023-08/Afforestation-Review-2023.pdf>

<sup>7</sup> Note that MPI indications are slightly different but still indicate significant differences between the NPV of traditional forestry, sheep and beef farming, and business models that have carbon included.

<sup>8</sup> See most recent Orme and Associates summary of land bought and sold here: <https://beeflambnz.com/sites/default/files/2023-08/Afforestation-Review-2023.pdf> and MPI's corresponding analysis of afforestation intentions here: <https://www.mpi.govt.nz/dmsdocument/57130-Afforestation-and-Deforestation-Intentions-Survey-2022> . Note that the relationship between hectares bought for afforestation, and then subsequently planted, is strong between the two research reports.

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limited long-term benefits and sustained risks to our natural environment, rural community resilience, and the health of New Zealand's economy.

- Carbon forestry offsetting has negative consequences:

We support emissions reductions occurring within New Zealand for industries where viable technologies and solutions are available. If we do not change the way we do things, New Zealand's ability to perform on the world stage will come under threat. This is evidenced by the recent EU Trade agreement where a condition of market access is the compliance with our Paris Agreement goals. As a small exporting nation, we are reliant on the demand for our goods and services from others and this must be maintained in a warming world.

The full inclusion of forests within the NZ ETS is almost unique internationally, with New Zealand's offsetting policies in stark contrast to other countries<sup>9</sup> The result of current settings means there is a greater incentive for emitters to offset their emissions rather than reduce their emissions. Instead, emitters must be encouraged to reduce their emissions first, and have access to offsets only for hard to reduce emissions. The purpose of emissions offsetting is to soften the negative social, cultural, and economic consequences of meeting gross emissions reduction targets. They should not be treated as the 'low hanging fruit' in our policy toolbox, and instead be consciously considered, and be in addition to, real emissions reductions.

Carbon removal from exotic trees can last anywhere from 50-200 years while warming to the atmosphere caused by fossil fuel emissions lasts 100-1000 years. All practical options to reduce emissions at the source must be tried before relying on trees to offset fossil-based emissions.<sup>10</sup> Allowing for non-permanent forestry offsets, which are part of a biological not fossil carbon cycle, to offset continued emissions from fossil fuels does not ensure that our climate change policy approaches are supporting the changes required to truly reduce our emissions.<sup>11</sup>

B+LNZ does not believe that the full costs and impacts of large-scale farm to forestry conversions, or their limited management, is adequately considered at present. Although carbon forestry is incentivised to occur in the NZ ETS at a lower 'cost' than the uptake of novel emissions reductions technologies, the negative externalities associated with this land use change are not considered. Examples of these externalities include increased fire risk, reduced community resilience, reduced economic income to the region, and reduced export revenue into New Zealand. We note the irony that a market made the manage the externalities of fossil fuel emitting activities is creating its own set of externalities for our rural communities.

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<sup>9</sup> Note that the only other ETS in the world that allows 100% offsetting is Kazakhstan's. See here for further information: <https://beeflambnz.com/sites/default/files/news-docs/ETS-summary-report-2023.pdf>

<sup>10</sup> This approach is strongly aligned with the most recent guidance from the Science Based Targets Initiative, the world's leading authority on private business's alignment with the Paris Agreement on Climate Change. For further information see here: <https://sciencebasedtargets.org/sectors/forest-land-and-agriculture#:~:text=Key%20requirements%20of%20the%20SBTi%20FLAG%20Guidance&text=Set%20long%2Dterm%20FLAG%20science,term%20FLAG%20science%2Dbased%20targets> .

<sup>11</sup> See report from the Parliamentary Commissioner for the Environment here:

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

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Over-relying on the use of forestry offsets to meet our targets, especially with using unmanaged exotics in a ‘plant and walk away’ style, is not a viable option for our land given the management requirements needed to prevent erosion, wilding pest species, pest incursion, and/or fire. This is especially the case for Permanent exotic forestry, which is still a relatively recent new land-use and its implications will only be properly understood with time and greater experience.

The result of whole scale forest planting on the resilience of rural communities is also substantial. Large areas of planting reduces the quantity of people living and working permanently within an area and reduces the flow of goods and services on a continuous basis.<sup>12</sup> This can be especially pronounced for regional economies that have a strong reliance on the red meat sector. B+LNZ acknowledges the potential role that forests can play in helping our landscapes retain their soils in the face of increased storm and flood events. We believe that diverse landscapes are required in order to support thriving rural communities and rural landscapes.

New Zealand’s current use of offsets is contributing to unnecessary negative social and economic consequences for our rural communities and national economy for the benefit of fossil fuel intensive industries and activities. A continued heavy reliance on forestry offsets will not support ‘just transition’ for Aotearoa’s rural communities and the current settings in the NZ ETS must change.

- **Quantifying the impact:**

Based on analysis from the B+LNZ Economic Service, the CCC’s recommended planting rates (Table 3 Scenario 2 Afforestation 50,000 ha per year) there would be a 29% reduction of the grassland area by 2050. Assuming a conservative stocking rate of this land was 8.0 su per ha, the cumulative NPV loss would be \$16.3 billion by 2050, or on average \$562m per year over 29 years. Please see Appendix 1 for further information and additional scenarios.

Just under a third of New Zealand’s total land area is used for sheep and beef (mixed agriculture), comprising about three quarters of pastoral lands. Previously, Te Uru Rākau – New Zealand Forest Service has identified 2.8 million hectares of farmland suited to afforestation.<sup>13</sup> Although estimates of the sheep and beef estate highlight that 8.9 million hectares are currently being managed by sheep and beef farmers, this does not differentiate between the area of this land that is currently used for production. We estimate that there is currently just over 5 million hectares of grassland used for sheep, beef, and deer production.

Based on different assumptions of carbon price and associated change in land use, we could see a total of ~463,000ha to ~798,000ha converted from sheep and beef land to forestry (including carbon) from 2017-2018 to 2030-2031. If these projections are realised, 8-15% of the total productive grassland sheep and beef land in 2021 would go into trees by 2030. This

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<sup>12</sup> See link to the full report here:

[https://beeflambnz.com/sites/default/files/Wairoa%20Afforestation\\_FINAL.pdf](https://beeflambnz.com/sites/default/files/Wairoa%20Afforestation_FINAL.pdf)

<sup>13</sup> Hon. Stuart Nash and Hon. James Shaw. New rules proposed for carbon farming of exotic forests in future. 3 March 2022. Accessed: August 2023. <https://www.beehive.govt.nz/release/new-rules-proposed-carbon-farming-exotic-forests-future>

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afforestation would displace between \$2.6 billion and \$4.8 billion worth of export receipts over 8 years. The respective NPV of these dollar amounts at a discount rate of 5% would be \$2.1 billion and \$3.8 billion.<sup>14</sup>

We acknowledge the likely costs of meeting New Zealand's emissions reductions targets will also be substantial. However, this is not just an economic argument about how emissions are 'paid for'.

## 4. A better approach

- **Integrated forests within farms:**

We believe there is a better way to utilise offsetting, whilst maintaining food production, vibrant rural communities, strong export revenue, and achieve social, cultural, and environmental outcomes. Integrated and alternative plantings and native forest management integrated within farming systems can help support the resilience of farming businesses and diversify income streams. Many of our farmers are eager to establish and manage more trees on their land and want to use the NZ ETS to do so.<sup>15</sup>

New forest planting would have a more positive impact if it was done in an integrated way within existing farms. Additionally, there is an opportunity to recognise, incentivise, and reward the work many farmers are doing to support additional carbon removal capacity of older native forests.

B+LNZ supports the use of forestry offsets that can be integrated within farming operations and provide co-benefits for our farmers, their land, and their communities and that can support the aspirations and unique needs of Māori landowners. Facing the impacts of climate change will be challenging, as many of our farmers recently affected by Cyclones Gabriel and Hale can attest to. We must think carefully about how best our farmers can be supported to manage the impacts of a warming world along with changing market expectations and prices.

B+LNZ believes that forest planting and management should occur in ways that are not detrimental to rural communities. B+LNZ does not wish to constrain the positive opportunities that forest carbon offsetting provides for our farmers but are concerned about the short and long-term effects of unmanaged and uncontrolled land use change in parts of New Zealand. Changes are required to both the NZ ETS as well as wider resource management policy settings.

Given the clear benefits of integrated forests within farming systems, and the significant risks associated with whole-scale farm conversion, there is also a need for clearly balanced emissions removals and reductions. Without this balance clearly stated, it is hard to know what changes to the NZ ETS would best fulfil expectations.

- **The need for a clear direction:**

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<sup>14</sup> See further detail in Appendix 1.

<sup>15</sup> For a summary of Sheep and Beef Farmers' responses to a range of questions posed at the beginning of the consultation period, please see Appendix 2.

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The history of vast fluctuations in market supply and demand (and thus price) is not sustainable if the NZ ETS is to be the 'core tool' to achieve New Zealand's climate change aspirations. If the goal of the NZ ETS is to reduce emissions, it must be set up to do this effectively. Whether or not this is done at 'least cost' amongst the economy or amongst emitters is a different question.

Although there can be a stated preference for the NZ ETS to encourage emissions reductions as compared to removals, it is hard to know which option to choose if there is no clarity on the long-term trajectory of carbon offsets and their use by emitters or the nation. Without this direction, the price of carbon in the NZ ETS will be more strongly linked to the confidence in the market as compared to the real costs of emissions reductions.

Deciding on the direction of emissions reductions vs. removals on the path to net zero will be challenging but the conversation must be had. We request further engagement and analysis with officials on the objectives to be achieved and how the NZ ETS, as one of many tools, could be best utilised to achieve these.

Farmers support a 'fundamental' change to the NZ ETS but also want to utilise carbon forestry opportunities to achieve multiple business and environmental objectives.<sup>16</sup> It is challenging to land on a single option presented in the discussion document given the limited information on impacts on emissions prices and how the options presented can be further expanded, refined, or combined. Additionally, it is challenging to understand how the preferred option will best balance multiple objectives, including support for climate resilience, provision of co-benefits, rural land use flexibility, certainty for the NZ ETS market, and achievement of emissions reduction targets.

The Government should do more to articulate the problem or problems clearly, which it is trying to solve. Just as a diverse range of policy interventions has created a range of problems articulated in the discussion paper, it is likely that more than one policy solution is needed to address some or all of the problems. For example, the fire risks associated with inappropriate permanent exotic afforestation will need a different policy solution to perceived low levels of indigenous afforestation.

A wider set of objectives than the achievement of climate change targets or commitments is needed. These changes must be guided by a set of core principles ideally included with a national sequestration strategy or carbon removals strategy.<sup>17</sup> The development of this strategy should be done in partnership with a variety of stakeholders, especially red meat producers and land stewards, and informed by a set of guiding principles<sup>18</sup>. There also needs to be a standalone analysis of how the government intends to make decisions around the gross-net balance, and this should underpin the decision-making around NZ ETS reform options.

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<sup>16</sup> See Appendix 2 with further detail on Farmer views.

<sup>17</sup> RT Hon Jacinda Ardern, Hon Damien O'Connor, and Hon James Shaw. *Government sets out next steps for on-farm sequestration strategy*. 30 November 2022. Accessed: August 2023.

<https://www.beehive.govt.nz/release/government-sets-out-next-steps-farm-sequestration-strategy#:~:text=%E2%80%9CThe%20Government%20has%20already%20committed,%2Deffective%2C%20and%20scientifically%20robust.>

<sup>18</sup> See Appendix 3 for a draft set of principles to inform policy setting changes.

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- The changes we think are needed:

Urgent changes are needed to numerous policy schemes providing both short-term and long-term policy solutions.<sup>19</sup> The core focus of these changes will be to ensure trees (permanent or rotation, exotic or native) can best ‘fit’ within our rural landscapes to provide resilience to our rural communities and nation. We see urgent changes to the NZ ETS as the most effective approach but in the short-term the government should explore a range of possible tools such as further limits on foreign investment; limits on some exotics being put into the permanent category of the NZ ETS (to address “carbon only” farming); and support for regional and/or district councils to better manage the impacts of land use change at the community level.

We would encourage particular engagement and refinement of Options 3 and 4 and do not support further work on Options 1 and 2. Under either Option 3 or Option 4, ETS-driven afforestation signals could remain the same or even grow stronger relative to emissions reduction incentives. The policy change would ensure that such an outcome is the result of intentional government policy, and not an unintended result of crude policy settings (as is currently the case).

The implementation of Option 3 or 4 would give the government additional tools for climate action, but not determine how much these tools are to be used (if at all). We strongly support the implementation of limits within the scheme to the use of forestry offsets. This would better align the NZ ETS settings with how other schemes internationally manage the use of forestry offsets (if they allow them at all).

We do not have any strong views however on what level these limits should be placed at. We would appreciate further engagement with officials on these details. In addition to the structural changes to how forestry is treated in the NZ ETS, novel vegetation categories should be entered into the NZ ETS; especially those in line with the He Waka Eke Noa Partnership recommendations. Work completed as part of the Max Carbon Programme<sup>20</sup> will be key to providing the evidence base required to include recognition for additional vegetation types, especially pre-1990 forests.

We are more uncertain about the inclusion of alternative carbon removal categories given the limited understanding of their scientific rigour and ability to be permanent and additional. We are also unclear what their ‘onboarding’ pathways and requirements would be. However, we encourage co-development so that potential suppliers of alternative carbon removals have certainty on the conditions under which their actions can be rewarded in the NZ ETS.

We agree that incentives should be strengthened for emissions removal activities with broader environmental outcomes and co-benefits beyond sequestration (e.g. indigenous forest biodiversity). The tool to deliver this however does not have to be the NZ ETS.

We also agree with better management of extensive planting of permanent forests (especially exotics) which carry significant risks when meeting our climate, adaptation, and biodiversity objectives. Monoculture exotic forest species will become increasingly exposed to risk, from

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<sup>19</sup> For an external analysis and justification for change, please see an independent report by Meredith Connell attached as Appendix 4.

<sup>20</sup> For further information see here: <https://www.mpi.govt.nz/dmsdocument/54544/direct>

pests, disease, and extreme weather amongst other threats. Planning for the future now is required to manage the inevitable risks for future generations.

This includes placing limitations on the inclusion of exotics in the Permanent Forest Category, changing the accumulation of carbon overtime for 'transition forests', increased requirements for forest management systems that are less proven as well as minimum requirements for all participants (native or exotic species initially established).

We believe that the proposed exclusions will suit many of our farmers but still have concerns about what requirements there will be for the land after the contract for the PFSI has ended and how the PFSI conditions relate to potential changes to the conditions for forests/carbon forests under the NES-PF or forthcoming guidance under the novel Spatial Planning Act. We are also concerned by the potential disincentive to establish native forests if minimum management requirements are put in place. Thus, we strongly support further analysis and options analysis on tools or mechanisms that can better support the establishment and management of native forests integrated within farming systems.

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## 5. Detailed responses to “Review of the New Zealand Emissions Trading Scheme” consultation questions:

### *2.1 Do you agree with the assessment of reductions and removals that the NZ ETS is expected to drive in the short, medium and long term?*

Yes, based on what we have seen recently, high carbon prices are likely to drive exotic forest plantings rather than emissions reductions and indigenous afforestation. We are unsure if the supply of units in the scheme will be too great to meet demand in the mid-2030s, however.

### *2.2 Do you have any evidence you can share about gross emitter behaviour (sector specific, if possible) in response to NZU prices?*

No, we do not have any evidence to share about gross emitter behaviour (sector specific, if possible) in response to NZU prices.

### *2.3 Do you have any evidence you can share about land owner and forest investment behaviour in response to NZU prices?*

Yes, based on our assessment of land purchases and intentions since 2017, there is a strong relationship between increasing carbon price and the scale and pace of land use change from sheep and beef farming to exotic forestry. B+LNZ does not track the change in tree planting rates/areas integrated into existing sheep and beef farms but intends to do this in future.

See our most recent report, covering the rate and scale of land use change in response to increasing carbon prices here:

<https://beeflambnz.com/sites/default/files/2023-08/Afforestation-Review-2023.pdf>

Additionally, please see MPI's most recent Afforestation and Deforestation Intention's survey findings indicating that close to 88,000ha of plantings are intended to be planted in winter 2023:

<https://www.mpi.govt.nz/dmsdocument/57130-Afforestation-and-Deforestation-Intentions-Survey-2022>

Note that for our analysis in Appendix 1 we have assumed 60,000ha has been planted in winter 2023 based on indications in the forestry sector that this review has negatively impacted investor confidence, and thus planting intentions for this winter.

### *2.4 Do you agree with the summary of the impacts of exotic afforestation?*

Yes, in-part. The summary concisely outlines the challenges posed, however the risks posed to New Zealand's reputation from relying on monocultural forestry offsets to meet climate targets is not mentioned, and the negative impacts on social, economic, and climate resilience outcomes in rural communities caused by blanket afforestation are minimised and not highlighted enough. The loss in export revenue as a result of land use change, the

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limited permanent presence of people in rural communities, and increased risks to the impacts of climate change requires further focus.

See Appendix 1 for further detail on the export revenue impacts of land use change from sheep and beef. Additionally, the jobs provided by forestry and carbon forestry are not as permanent or consistent as those provided by sheep and beef farming. A study focusing on the Wairoa District in Hawke's Bay found a decline in local expenditure as a result of conversion from sheep and beef farming to forestry and that this expenditure was not spread as evenly over time due to increased expenditure at forest harvest. Additionally, forest industry jobs are less diverse and consistent and sheep and beef farming generates a greater mix of job types both in terms of labour and services in comparison.<sup>21</sup>

We also note that we are very unclear of what the Government's 'right tree, right place, right purpose' strategy actually is and how this would manage the identified challenges. We request further engagement with officials on this strategy and its plan for implementation.

### *3.1 Do you agree with the case for driving gross emissions reductions through the NZ ETS?*

*Why/why not? In your answer, please provide information on the costs of emissions reductions.*

Yes, the primary purpose of the NZ ETS should be to encourage least cost abatement among emitters. However, this must also consider additional 'costs' in addition to monetary costs of emissions reductions. Note that we agree that no one policy instrument, including emissions pricing, can achieve the necessary emissions reductions and removals that are needed.

The government should be clear and transparent about where emissions reductions are expected to come from within our economy and at what costs (environmental, economic, social and cultural) and clear about what part the ETS is intended to play.

We agree that the NZ ETS should be used to create a preferred price pathway for emitters to provide them with strong signals to reduce their emissions and that a different price pathway or mechanisms may be required to encourage the desired amount of afforestation to meet our international commitments and domestic targets.

We do not have additional information on the costs of emissions reductions for sectors currently in the NZ ETS.

The NZ ETS is not the right tool to encourage emissions reductions within the agricultural sectors. As included within legislation currently, pricing emissions at the processor level will not encourage effective emissions reductions to occur across the supply chain. Rather, the setting will operate as a tax on meat production, rather than an incentive for farmers to better manage and reduce their emissions within the farm system. We are committed to a collaborative process to ensure effective farm-level reporting and emissions pricing if and when it is appropriate. To be clear, we will not accept any system that puts the viability of sheep and beef farmers at risk. However, we are eager to work together to resolve the outstanding issues of recognition for sequestration, equity, pricing, and timing of implementation.

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<sup>21</sup> Case Study: Socio-economic impacts of large-scale afforestation on rural communities in the Wairoa District. Link to the full report: [https://beeflambnz.com/sites/default/files/Wairoa%20Afforestation\\_FINAL.pdf](https://beeflambnz.com/sites/default/files/Wairoa%20Afforestation_FINAL.pdf)

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We are eager to work with the Government and officials to address our concerns further. We also believe that ongoing investment in research and development, education, extension, and technology uptake is needed and support this fully.

### *3.2 Do you agree with our assessment of the cost impacts of a higher emissions price?*

#### *Why/why not?*

We do not have strong expertise in this area but note that if emissions are 'leaked' to less emissions-efficient international competitors this does not support domestic or international aspirations for a just transition. We particularly agree with the discussion document when it notes that emissions leakage is a risk for not only industries included in the NZ ETS but also a risk for the agriculture sector. This is because the NZU price leads to the blanket afforestation of emissions-efficient sheep and beef farms that supply sought after food to global markets.

Additionally, we agree that a higher emissions price could disproportionately and aggressively impact lower socio-economic households and those segments of society with fewer low emissions alternatives available.

### *3.3 How important do you think it is that we maintain incentives for removals? Why?*

We think it is very important to retain incentives for integrated plantings and carbon removals. Many of our farmers are eager to establish a variety of plantings within their farm systems.<sup>22</sup>

It is important for government to work with external stakeholders to strongly consider how forestry offsets should be used. This is in-line with the most recent guidance by the Science Based Targets Initiative which strongly recommends that offsets should be used as a 'last resort' rather than a first port of call. Additionally, that the use of forestry offsets should be extremely limited for fossil fuel emitters and rather only provided for those in the land-based sectors.<sup>23</sup> For example, we believe that the ability for fossil fuel emitters to utilise forest removals should be reduced overtime while emitters of biogenic nitrous oxide or methane should be provided with a greater ability to use these units to meet their potential emissions reduction requirements.

### *4.1.- 4.4 Do you agree with the description of the different interests Māori have in the NZ ETS review? What other interests do you think are important? What has been missed? How should these interests be balanced against one another or prioritised, or both? What opportunities for Māori do you see in the NZ ETS review? If any, how could these be realised?*

We are unable to speak on behalf of Iwi or Hapu and thus are unable to say whether the description, breadth, and balance of the interests expressed in the discussion document

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<sup>22</sup> For a summary of a recent survey we completed of our farmers and their views on some of the consultation matters, please see Appendix 2.

<sup>23</sup> Science Based Targets. *Carbon removals in Forest, Land and Agriculture (FLAG) Pathways*. 12 September 2022. Accessed August 2023: <https://sciencebasedtargets.org/blog/carbon-removals-in-forest-land-and-agriculture-flag-pathways>

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is appropriate. We do see some opportunities that exist as part of the NZ ETS review and have limited views on how these could potentially be realised.

We agree that there will be significant effects of the review and outcomes on Māori Agribusiness interests in forestry and carbon farming. As noted in the discussion document the interests of Māori in this issue are complex, diverse and heterogeneous. This is especially the case given the legal status and characteristics of Māori owned land. It will be important that any potential changes to the NZ ETS, are done in partnership with Iwi/Māori. Changes need to recognise the unique characteristics, issues, aims, challenges and opportunities of Māori landowners.

B+LNZ supports the Crown upholding the principles of te Tiriti o Waitangi. We recognise that the Government has a legal responsibility to honour the principles of the te Tiriti o Waitangi and this responsibility equally applies to New Zealand's climate change and forestry policies. The NZ ETS review provides an opportunity for the Crown to better clarify how breaches of te Tiriti can be rectified as part of our sustainable land use decisions and framework and the obligations there are on the Crown as Tiriti partners. This can support a just transition for Māori when managing our impacts on global climate change and adapting to changing climate conditions.

B+LNZ also acknowledges that there remains a large amount of work to address historical injustices incurred by Māori and to improve socio-economic outcomes. Such issues should be addressed directly and appropriately, and a broken forestry settings policy within the NZ ETS should not be used to attempt to compensate for inaction in other areas because of the potential for some Māori landowners to make large amounts of money under current NZ ETS settings.

There are specific opportunities as part of this review to provide confidence and clarity on the use of forestry offsets, which can be a key source of income on Māori land. The review can also ensure better recognition and reward for a broader range of vegetation types within the NZ ETS as well as provide accommodations within the permanent forest category for Māori land to establish forests that suit their aspirations and recognise their constraints e.g. ownership structures.

Despite Māori and farmers' important role in addressing climate change, they are not currently receiving recognition for all their sequestration efforts. Māori landowners and farmers must be able to access opportunities from exotic and native trees on their farms and receive full financial recognition for the real sequestration occurring.

*5.1 Do you agree with the Government's primary objective for the NZ ETS review to consider whether to prioritise gross emissions reductions in the NZ ETS, while maintaining support for removals? Why/why not?*

Yes, but this must be done as part of a wider conversation on the role of the NZ ETS, or other policy mechanisms, to achieve the desired balance between emissions reductions and removals.

The preferred mix will need to be informed not just by New Zealand's domestic short and long-lived gas targets but also by our international commitments under the Paris agreement, or future agreements. It will also need to be informed by the tangible and ongoing financial, cultural, social, and environmental impacts being felt by rural

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communities as a result of current NZ ETS policy settings in addition to impacts on current investments.

Decisions on what the 'correct' balance between net and gross emissions will be challenging to make but the longer this conversation is delayed, the more challenging it will be to change the status quo.

Additional and alternative policy mechanisms or measures to the NZ ETS are likely needed to deliver a preferred ratio of emissions reductions vs. removals. This is not something to avoid, but to accept and address.

*5.2 Do you agree that the NZ ETS should support more gross emissions reductions by incentivising the uptake of low-emissions technology, energy efficiency measures, and other abatement opportunities as quickly as real-world supply constraints allow? Why/why not?*

Yes. The NZ ETS needs to drive gross emissions reductions by incentivising the uptake of low-emissions technology, energy efficiency measures, and other abatement opportunities. This issue is complex and will impact all segments of New Zealand both now and into the future.

A policy lens that exclusively focuses on achieving gross emissions reductions 'as quickly as real-world supply constraints allow', is likely to lead to overly simplistic solutions that cause perverse policy outcomes. Other critical factors need to be considered, such as:

- Avoiding emissions leakage,
- The well-being of rural communities,
- New Zealand's commitment towards achieving all 17 Sustainable Development Goals, and
- Consistency with a climate resilient future New Zealand.

It is important to note that other Emissions Trading Schemes operate solely with the aim of incentivising the uptake of low-emissions technology, energy efficiency measures, and other abatement opportunities. New Zealand's settings are out of line with the international community in incentivizing forest offset planting over emissions reductions.

*5.3 Do you agree that the NZ ETS should drive levels of emissions removals that are sufficient to help meet Aotearoa New Zealand's climate change goals in the short to medium term and provide a sink for hard- to-abate emissions in the longer term? Why/why not?*

Yes. However, the NZ ETS may not be the best tool for the job depending on the context of the policy problem, and the type of incentive required to achieve the desired behaviour change. It is also important to differentiate between our domestic and international commitments.

*5.4 Do you agree with the primary assessment criteria and key considerations used to assess options in this consultation? Are there any you consider more important and why? Please provide any evidence you have.*

Yes. Of these criteria we consider the support for co-benefits, mitigation of distributional impacts, and functionality of the NZ ETS market to be the most important. However, we consider that as part of the functionality of the system, clear direction and confidence needs to be given to NZ ETS participants. The extreme fluctuations in price and confidence in the market are not sustainable (albeit not new given the history of the scheme and its implementation).

#### *5.5. Are there any additional criteria or considerations that should be taken into account?*

Yes. We believe that there should be additional criteria that allows evaluation of New Zealand's settings relative to our trading partners and counterparts. Many other nations and firms are moving away from a policy of simply meeting climate targets, towards a framework that promotes a just transition towards achieving not only climate targets but also other targets, such as those that improve biodiversity, food security and equity outcomes. Large companies such as Nestle and large jurisdictions such as the European Union have both recently banned the use of offsets to reach climate goals. New Zealand policymakers should not ignore this trend.

We also believe there should be further expansion of the criteria to 'mitigate distributional impacts' to ensure effective management of a current asset (carbon forestry units within a permanent forest for example) that changes to a liability (requirement to maintain the land in forest with no carbon unit income to support this). Currently, an investor who has a mature carbon forest that has become a liability can theoretically sell those assets to a company that is willing to structure their operations in such a way that they can declare bankruptcy and walk away from the asset. Without strong consideration of this risk, local communities will be left having to maintain aging carbon forests (potentially paying to transition these forests into native plantings).

#### *6.1. and 6.3 Which option do you believe aligns the best with the primary objectives to prioritise gross emissions reductions while maintaining support for removals outlined in chapter 5? Of the four options proposed, which one do you prefer?*

B+LNZ believes Options 3 or 4 represent the best options to achieve climate goals sustainably for farmers and rural communities if adequately implemented. They both have the potential to achieve the primary objective to prioritise gross emissions reductions while maintaining support for removals.

B+LNZ has been asking for 'limits to forestry offsets in the NZ ETS' for some time. Both Options 3 and 4 could deliver this but the provision of confidence to NZ ETS participants will be key. Option 3 would enable the government to place a limit on the proportion of an NZ ETS surrender obligation that can be met with forestry offsets (as is the case for all other jurisdictions with a meaningful carbon price). A separate limit could be enabled for sequestration activities that generate NZUs from exotic forest activities as compared to native forest activities. We do not think it is wise to adjust the relative 'value' of forestry offsets as compared to NZUs by discounting the NZUs received. This is neither grounded in the reality of forest carbon removals from different sources or science-based.

We do not support Options 1 and 2. We firmly believe that Options 1 and 2 would make the status quo situation even worse and leave New Zealand further out of step with international schemes. Further increasing the demand for forestry offsets will likely significantly harm food production, increase global emissions via emissions leakage and likely undermine political support for the NZ ETS overall.

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No matter the option chosen (or how they are combined), we request the Government consult further with external stakeholder groups, such as B+LNZ, to ensure that the unique characteristics of farmers and rural New Zealanders are adequately considered. We also request government to work as quickly as possible while also taking the time (and resources) necessary to complete analysis and options implementation that is long-lasting.

*6.2 Do you agree with how the options have been assessed with respect to the key considerations outlined in Chapter 5? Why/why not? Please provide any evidence you have.*

Yes, as much as we are able given our scope of expertise. It is not clear how many other options were considered or how many distinct sub-options there are within each high-level option.

Please see attached report from Meredith Connell in Appendix 4 outlining similar options (but with different assessment criteria). We request officials to consider potential changes to the Permanent Forestry Sink Initiative (PFSI) settings to be made in light of potential changes to the wider NZ ETS forestry settings.

*6.4. Are there any additional options that you believe the review should consider? Why?*

We request further analysis on the permutations of Options 3 and 4 to better inform submitters responses as well as additional analysis on the impact of speculation on the market and its influence (or lack thereof) on the achievement of the core purpose of the NZ ETS.

We also request further analysis on how the establishment of integrated native plantings can best be supported. One option is to 'front load' the amount of units received for native forest plantings so they are more comparable with the carbon units received for exotic forest. However, this could come with significant risks for both the Crown and participants in their ability to meet their future obligations.

Lastly, we encourage officials to assess the impact of speculative investment, or lack thereof, on emissions reductions and removals. It is not clear from our perspective what benefit, other than to investor returns, that having a speculative market for carbon units has.

*6.5 Based on your preferred option(s), what other policies do you believe are required to manage any impacts of the proposal?*

It is hard to know what impacts are likely to occur given the limited detail on the options and their implementation. However, we encourage further assessment on how a consistent split-gas (short vs. long lived as well as biological vs. fossil) approach can be taken. This could better articulate what is being 'asked' of different types of GHG emissions and how their respective reductions would reduce New Zealand's contribution to global warming

*6.6 Do you agree with the assessment of how the different options might impact Māori? Have any impacts have been missed, and which are most important?*

Unsure, we are unable to speak on how the options will affect Māori. However, we have outlined some considerations unique to Māori farmers and we note that many of the impacts that apply to sheep and beef farmers equally apply to Māori farmers as a segment of the sheep and beef sector.

*7.1. Should the incentives in the NZ ETS be changed to prioritise removals with environmental co-benefits such as indigenous afforestation?*

Depending on the settings and their implementation, it could be more beneficial to include recognition and reward of the co-benefits of planting via a separate mechanism than the NZ ETS. Arguably, providing additional carbon units as recognition for other benefits would risk the integrity of NZUs as only representing 1 tonne of carbon per unit. However, any ETS scheme can tailor settings to what is desired and consider how the rewards provided to one kind of 'ecosystem service', such as carbon removals, is done in partnership with other nature-based solution recognition and reward.

Acknowledging any recognition of other benefits provided by vegetation is significant change from status quo. How this is done in practice still needs to be further investigated. At the core however, are questions about whether or not the ETS is the best way for this happen. Although it is an existing tool, without knowing the aim of any additional market or scheme, it is hard to say that the ETS would be suitable.

*7.2. If the NZ ETS is used to support wider co-benefits, which of the options outlined in chapter 6 do you think would provide the greatest opportunity to achieve this?*

We believe that options 3 or 4 are best able to support wider co-benefits if this is chosen to be done via the NZ ETS. This is because these options could encourage increased utilisation/value of native forest carbon removals as compared to exotic forest removals. It is unclear however whether and how the NZ ETS settings could best encourage integrated, as opposed to whole-scale, forest plantings.

*7.3. Should a wider range of removals be included in the NZ ETS?*

Yes, our farmers should receive recognition and reward for protecting existing native flora and fauna, and the additional carbon storage benefits that this work provides. We strongly believe that additional categories of on-farm vegetation should be recognized and rewarded in the NZ ETS. This includes carbon captured by pre-90 forests, riparian plantings, shelter belts, scattered trees, and smaller (.25-1ha) areas of plantings. The Max Carbon Programme will go some way in highlighting how these removals are removing additional carbon from the atmosphere and could be rewarded.

Whether and how non-vegetation forms of carbon removals are recognised is a separate matter. For example, many of our farmers support the recognition and reward of soil carbon. Based on our understanding of the most recent science, it can be challenging to ensure that carbon removed by New Zealand soils is stable in the short-medium term however.

*7.4. What other mechanisms do you consider could be effective in rewarding co-benefits or recognising other sources of removals? Why?*

We strongly believe that the wide variety of benefits provided by on-farm vegetation (especially from native species) should be recognised and rewarded.

There are many examples to choose from when rewarding or incentivising benefits associated with vegetation; a 'market' is not the only effective approach. Other options could include lump-sum payments for actions such as pest and weed control or payments in set rates for scalable actions, such as land area established in native vegetation.

Rewards can also be provided through an allocation mechanism such as a reverse auctioning or done indirectly, through a system of differential use taxes such that tax rates are lower for landholders who engage in desired land management activities or uses. Lastly, biodiversity assessment activities could be recognised and supported to confirm the success of different conservation approaches within the landscape.

To recognise other sources of removals, the ETS could be a suitable scheme but only if the incentive/reward provided by the scheme is aligned with climate change, or wider, objectives for Government. Additionally, care should be taken when assessing the 'cost' of administrative burden for the participant to ensure it is less than the 'benefit' received as part of participation.

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## 6. Detailed feedback on proposed changes to the Permanent Forest Sink Category

- Introduction

The settings within the Permanent Forest Category of the NZ ETS encourage decisions that have long-term and profound consequences for our land and rural communities. They are also intricately connected with the wider proposed changes to the forestry settings in the NZ ETS but have the potential for faster implementation. We believe it is very important to enact the proposed changes to this category as quickly as possible for existing and new participants.

We note our disappointment in the Government's previous decision to not exclude exotics from the category from 1 January 2023. We are still concerned that the proposed changes to this category will be insufficient to manage the profound risks to rural communities, and their natural environments.

We are also concerned by the potential misalignment between the conditions proposed in this category and conditions that can, and should, be enacted under provisions in the Resource Management Act or forthcoming Spatial Planning Act. It is important for the government to be clear on the objectives, intent, and desired outcomes and to adjust a range of policy settings to deliver these. Although potentially beneficial for Government, it is bad policy making to operate without clear long-term expected outcomes for policies that have profound impacts on land uses and users, and that has limited support or engagement with rural communities.

It is still unclear if the ETS, or wider resource management framework, will be able to deliver on stated objectives for permanent forests within this consultation. We broadly support the potential changes to the National Environmental Standard for Plantation Forests (NES-PF), as well as potential guidance for Regional Councils on how best to manage the impacts of land use change in their communities. Note that we are very concerned however by the lack of detail that has been released about these changes.

We do appreciate the Ministerial inquiry into land use as prompted by the devastation in Gisborne and Wairoa by forestry slash and debris in early 2023. The prompt implementation of the forestry related recommendations from this Inquiry, and proposed changes to the Permanent Forest Category, will go some way to managing the significant concerns we have about the rapid expansion of unmanaged carbon forestry our farmers have experienced.

We do not agree however with the panel's recommendation to require permanent forest on 'highly erodible land' areas. Although these forests can help reduce erosion on highly erodible land, this requirement is not appropriate without significant public engagement and further scientific investigation. We note the recent results from a study commissioned by the Ministry for the Environment, a Rapid Assessment of Land Damage – Cyclone Gabrielle<sup>24</sup>, which found a range of effectiveness of vegetation cover at preventing landslips and slopes. Thus, a blanket rule requiring permanent forests on highly erodible lands is not suitable and we would strongly recommend this is not pursued by central or regional governments as a 'fix all' approach. This requirement would be a significant shift for many of our hill country farmers and we are concerned by the implications of this recommendation. There is a strong need to consider the costs and ongoing management requirements of these lands and how this burden will be shared.

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<sup>24</sup> Manaaki Whenua – Landcare Research. *Rapid assessment of land damage – Cyclone Gabrielle*. July 2023. Prepared for Ministry for the Environment. Accessed August 2023: <https://environment.govt.nz/assets/Rapid-assessment-of-land-damage-Cyclone-Gabrielle-Manaaki-Whenua-Landcare-Research-report.pdf>

- **Size and species conditions**

We appreciate officials further refining the presented options since their previous consultation on the Permanent Forest Category in April 2022.

We support allowing exotic species to enter the NZ ETS under the permanent category (with no plan to transition to indigenous species) if the areas established are below a certain size threshold and/or have low-wilding characteristics. This could include small plantings of pine trees as well as exotic poplar and willow tree species which can be excellent tools to prevent stream bank and soil slip erosion, they have a lifespan of less than 100 years, and can be well integrated into farming systems.

Long-lived<sup>25</sup> species, such as redwoods, should be allowed to enter the category as well as long as they have low wilding characteristics and are managed for-harvest.

We do not support the allowance of wilding species (such as douglas fir) to be established on any land, regardless of its ownership characteristics.

- **Conditions for permanent forests on Māori lands**

We are unable to speak on behalf of Iwi or Hapu and thus have limited views on what conditions should or should not be placed on Māori lands and how these are in line, or not, with the Crown's obligations under te Tiriti o Waitangi.

Based on a recent survey we completed of our farmers however, more than half of those who responded did not support the provision of different conditions for the establishment of exotic forests on Māori land in the permanent forest category.<sup>26</sup>

We note that our farmers have diverse views on the potential inclusion of exotic forests in the Permanent Forest Category on Māori land. However, we recognise the need for consideration of allowing different conditions for permanent forests established on Māori land; this could include the allowance for non-long-lived species established in larger areas. Any limited conditions on species and size of planting area on Māori land should be accompanied by rigorous management conditions, requirements, and support.

- **Carbon accounting for 'transition' forests**

We are very concerned by whether established exotic tree species will be able to effectively 'transition' to indigenous forest. Given this concern and the risks of exotic forests not transiting there will be ongoing liabilities to whoever is left with the land and/or trees after 50 years. We strongly support changes to how carbon is accumulated and received by participants intending to 'transition' from exotics to natives.

We believe 'transition' forests should be required to have an alternative carbon accounting system (long-term averaging as outlined in Option 2.2). As highlighted in the discussion document:

*“Under the current carbon accounting approach, transition forests risk incurring significant surrender liabilities within the NZ ETS as large exotic trees are replaced by smaller, slower growing indigenous species...When the predominant forest type has switched from exotic to indigenous – the forest will switch from earning units on the higher exotic forest yield table to a much lower*

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<sup>25</sup> 'Long-lived' can be defined as the ability to grow and thrive within a given location for at least 100yrs (if not longer).

<sup>26</sup> See Appendix 2 for further information on farmer feedback we have received.

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*indigenous forest yield table. This will create a large surrender obligation, and could impact the long-term financial sustainability of the forest model due to units needing to be surrendered as carbon stocks reduce.”*

In addition to participants having to return units when their forest transitions, this accounting approach also risks providing carbon units to forest areas that are unlikely to hold that carbon in the long-term. Under the current rules, there is a strong incentive for participants to establish exotics in the permanent category, receive carbon units for the 50 years that the forest is registered in the permanent forest category, and then to leave the land to its own devices, with very limited, if any, management after their conditions in the Permanent Forest Category have ended. Changing the way that carbon is credited by these forests will go some way in reducing this risk and help prevent windfall gains and future liabilities for participants or the Crown.

We support further investigation into better incentives for native forest establishment by potentially ‘frontloading’ carbon credits for these forests as well as updates to native forest carbon look-up tables. We also support including recognition and reward for carbon protected and accumulating in pre-1990 forests.

- **Conditions for participants in the Permanent Forest Category**

We believe that all forests in the scheme should be required to be continuously monitored under a Forest Carbon Management plan that suits its current and intended management<sup>27</sup>. These plans should be appropriate for the forestry type, location, and purpose.

Condition and content examples should include (at a minimum) the risk of, and plans to mitigate:

- fire,
- water access in case of fire,
- biodiversity loss or impact,
- soil erosion,
- wilding conifer spread,
- biosecurity,
- weed and pest species,
- and infrastructure impacts such as maintenance of fences, sheds and roads.

Conditions would apply to the land as well as the participant registered. Participants should not be able to abandon land in forestry once the Government has distributed all the allocated NZUs. Owners must maintain a responsibility to undertake tasks such as; wilding conifer control, fire management and pest management. If these conditions are not met, the NZUs should be repaid with a penalty. Reasonable allowances should be made for extreme force majeure events.

A focused management plan for transition forest should be distinct from a management plan for forestry without the intention of transitioning. As part of this, potential transition forests, especially at larger scales, should face stricter conditions.

As indicated by a report commissioned by MPI in 2022:

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<sup>27</sup> Consideration should be made for continuous canopy cover forest management systems that maintains 30% canopy cover during harvest and thus is able to be entered into this category. If the forest is intended to transition and harvest will compromise the ability of the land to regenerate, ensure effective management actions are undertaken to ensure effective transitions.

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*“Transitions would be most appropriate in areas of higher rainfall with good amounts of native seed sources, healthy native forest bird populations, low numbers of browsing animals and manageable plant pest issues. Transitional forestry is only appropriate where there is committed/guaranteed long-term funding and a robust plan for ongoing forest management (including good infrastructure within the forest to support this)...Given the current state of knowledge, transitions should only be attempted at scales which are reasonably manageable.”<sup>28</sup>*

Conditions to include would be the same as other forest types as well as an additional focus on timebound milestones to ensure establishment and management of indigenous species suitable to the site and site conditions. Conditions, transition forest or not, should apply to existing participants as well as new entrants and be outcomes focused.

Although not included in the consultation materials, we strongly encourage officials to investigate the management requirements of forests beyond the 50 year timeframe of the Permanent Forest Category. This is because many exotic forests may not be at the start of their ‘transition’ to native forests within a 50 year timeframe. We note that management requirements beyond 50 years may not be within the scope of the NZ ETS but could be within the scope of District, Regional, and Territorial authorities. We strongly encourage officials to further assess what requirements could or should be placed on the participants in the Permanent Forest Category after their 50 year accumulation of carbon units has ended.

- **Compliance in the Permanent Forest Category**

In terms of ensuring compliance, we are unsure who, when, and how management plans should be audited and verified. We believe it is the Government’s responsibility to ensure there are sufficient expertise and experience within the workforce to ensure these plans are able to be completed at a fair cost and to a high standard.

It is also the Government’s responsibility to create new or expanded compliance tools for permanent forests entered in the NZ ETS. We are concerned that current policy settings risk forest owners accruing NZUs and potentially abandoning the forest and the associated management and rating responsibilities.

Existing participants should receive support from Te Uru Rakau to ensure their compliance and reduce the costs of this on participants who have been in the scheme prior to 2019.

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<sup>28</sup> Forbes Ecology. *Transitioning exotic plantations to native forest: A report on the state of knowledge*. Pg 6. August 2021. Prepared for Te Uru Rākau – New Zealand Forestry Service. Accessed August 2023: <https://www.mpi.govt.nz/dmsdocument/47521-Transitioning-Exotic-Plantations-to-Native-Forest-A-Report-on-the-State-of-Knowledge-2021-22>

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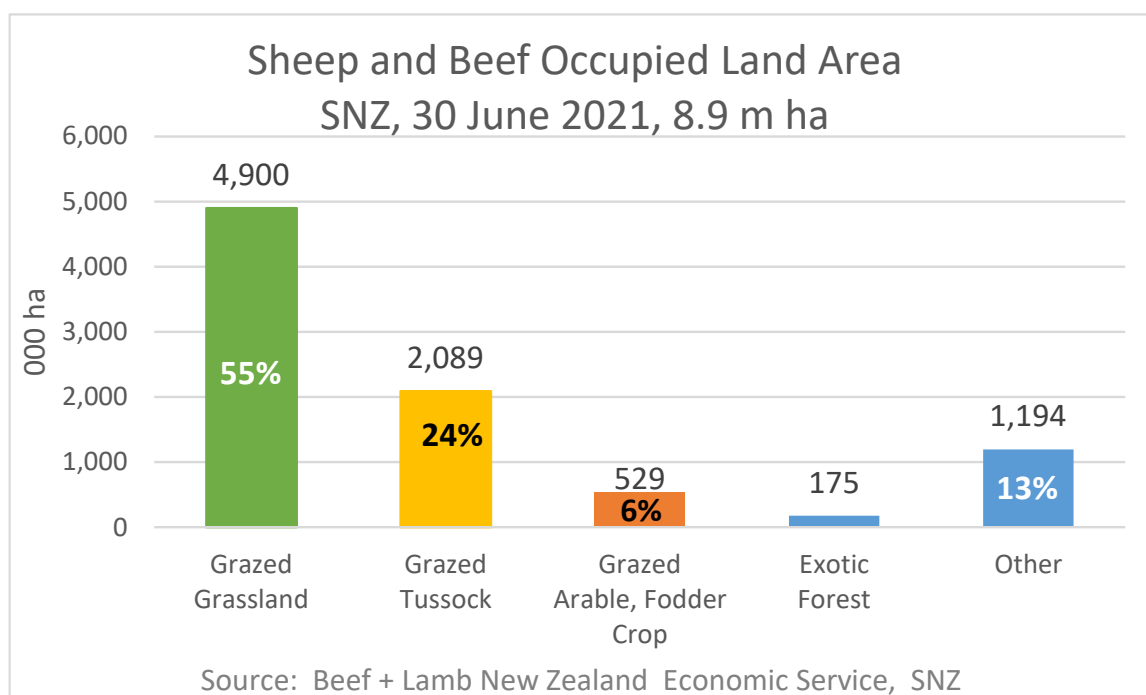
## Appendices

### Appendix 1: Change in export revenue as a result of Afforestation from Sheep and Beef to Forestry

#### Background:

Figure 1 below shows StatsNZ data on land areas assigned to sheep, beef and deer farming split into Grassland, Tussock grazed land, Arable and Forage crop land, Plantation forestry land and non-farmed land areas mainly in native forest and scrub-woody vegetation.

Figure 1 Sheep and Beef Occupied Farmland area.



Tussock grassland will not be available for afforestation as much of this will be pastoral lease land along with RMA restrictions. This leaves the grassland area for afforestation.

Comment by policy makers refer to marginal farmland for afforestation often referenced as carrying around 4.0 stock units per hectare. This ignores the critical question as “marginal” to whom?

South Island High Country Farms as businesses are “economic businesses” and are the largest farms by farmed area to be “economic” to the farm family owners.

Hard Hill Country sheep and beef farms as businesses are larger in area than Hill Country farms to be “economic” to the farm family owners.

Hill Country farms as businesses are larger in area than downland finishing and dairy farms to be “economic” to the farm family owners.

Downland farms are the smallest by area and are “economic” to the farm family owners.

All are different land uses and management systems. All farm entities are usually a mix of Land Use Capabilities (LUCs) and are connected in some manner with a flow of livestock between farming types dictated altitude, regional location climate variability, and livestock needs. There is a flow from larger hill country breeding farms of stock destined for market to downland farms who add further added value by fattening them faster. Also, there is a flow of livestock towards the hills from dairy born calves to hill country farms to rear as beef animals or replacement dairy animals.

Different classes of farms tend to have different stocking rates based on a number of factors predominantly determined by the physical limitations of the land or climate.

Four su per hectare country is largely found in B+LNZ farm management Class 2 South Island Hill Country, largely foothill range country and Banks Peninsula. This is estimated to occupy 930,000ha of grazed land. Some of this will be tussock country and pastoral lease meaning not all would be available for afforestation as a land use option. This leaves afforestation options to hill country grassland-grazing around 8.0 su per ha per farm or more. Recent years have seen whole farm sales for afforestation clearly grazing 9 su or more per ha.

Whole farm sales for afforestation have the greatest impact on land use change and is in contrast where an existing farm business carries out some afforestation most likely on poorer performing grassland areas of a farm.

This latter mosaic of farmland use is likely to have a lower impact on farm production and lower impact on its rural community (as well as downstream processors that add value to farm production for export).

### Afforestation Scenarios (Set 1):

1.1 Afforestation of 16,000 hectares per year for 29 years to 2050. A total grassland area land use change to forestry of 464,000 hectares, 9.3% of the sheep and beef farm grassland area.

1.2 Afforestation of 50,000 hectares per year for 29 years to 2050. A total grassland area land use change to forestry of 1,450,000 hectares, 29% of the sheep and beef farm grassland area.

Each of these two afforestation scenarios are evaluated for impact on three stocking rates per hectare and the consequent monetary loss from Farm Gate Sales, downstream Added Value loss, and Export Receipt loss. Note that as 90% plus of Sheep and Beef production is exported it is reasonable to infer that all sheep and beef production removed by afforestation reduces export receipts. This is summarised in the following tables for:

- 4.0 stock units per ha; monetary loss in year 1 and year 29, 2050, + the cumulative loss.
- 8.0 stock units per ha; monetary loss in year 1 and year 29, 2050, + the cumulative loss.
- 12.0 stock units per ha; monetary loss in year 1 and year 29, 2050, + the cumulative loss.

In the summary tables the percentage changes are measured against the base year.

The base year is defined as the mean of three years aggregate receipts<sup>29</sup>, at the farm gate, downstream added value and export receipts for wool, sheep meat and beef including coproducts of hides and skins, edible offal, inedible offal, tallow, meat meal, part processed wool and processed wool products.

Export receipts from dairy cattle processed ex-dairy farm, including bobby veal and co-products have been excluded.

*Table1 Base Year Reference data*

<b>Sheep and Beef Sector Base Year (3-year mean)</b>		
<b>On-Farm Receipts</b>	<b>Added Value Receipts</b>	<b>Export Receipts</b>
\$5,218,024,907	\$4,015,130,093	\$9,233,155,000
57%	43%	100%

<sup>29</sup> 2019-20, 2020-21, 2021-22

<b>Sheep su</b>	<b>Beef Cattle su</b>	<b>Sheep &amp; Beef su</b>
23,310,364	18,858,610	42,168,973
<b>\$ per Sheep su</b>	<b>\$ per Beef su</b>	<b>\$ per Combined su</b>
\$223.85	\$212.91	\$218.96

While the annual planting afforestation area may not seem that significant, there is a forestry creep over the landscape to 2050 whose cumulative total is significant to New Zealand.

### Scenario 1: 16,000 ha afforested per year to 2050, totaling 464,000 ha.

Table 2 Scenario 1 Afforestation 16,000 ha per year summarises for year 1 the on-farm Sheep and Beef Farm revenue value loss that would have been used to fund on-farm activities and meet the farm owner(s) living expenses. Production at the farm gate is worth nothing to a consumer until there is processing and handling added value downstream from the farm gate. Export demand provides the market value and export receipts measured Free On-Board ship (FoB). The percentage changes shown in Table 2 measure the percentage loss relative to the base year data.

The middle block of data shows the same as above but for the year 2050 in nominal dollar terms. In 2050 the first 16,000 ha of trees will be 29 years old. And in 2050 the last 16,000 block of trees will have been planted. Overall, the average age of trees on 464,000 ha would be 15 years.

The right-hand block of data in Table 2 shows the cumulative loss in Export receipts in nominal dollars to 2050. The far right-hand column shows the Net Present Value (NPV), at a discount rate of 5%, the export receipt loss due to 464,000 ha of afforestation by 2050. At 8.0 su per ha the cumulative NPV loss would be \$5.2 billion, or on average \$180m per year over 29 years. Note too in the table heading that 464,000 ha equates to 9% of the 2021 grassland area.

### Scenario 2: 50,000 ha afforested per year to 2050, totaling 1,450,000 ha.

Table 3 Scenario 2 Afforestation 50,000 ha per year notes that at year 2050 1,450,000 ha equates to a 29% reduction of the grassland area. At 8.0 su per ha the cumulative NPV loss would be \$16.3 billion by 2050, or on average \$562m per year over 29 years. However, note this significant, afforested area, that the stocking rate per ha would be well above described 8.0 su per ha in this example.

The 4.0, 8.0 and 12.0 su per ha analysis gives insight into the impacts of afforestation as it creeps onto more and more sheep and beef grassland as a land use change.

Table 2 Scenario 1 Afforestation 16,000 ha per year

Summary - Sheep and Beef Economic Activity \$ loss from Afforestation to 2050								
	Afforestation rate per year 16,000 ha			Total Afforestation 464,000 ha (-9% <sup>1</sup> )			Cumulative to 2050	
	Year 1 Activity On-farm loss \$	Year 1 Activity Added-vlaue loss \$	Year 1 Activity Export \$ loss \$	at yr 2050 Activity On-farm loss \$	at yr 2050 Activity Added-vlaue loss \$	at yr 2050 Activity Export \$ loss \$	Export \$ & su <sup>2</sup> loss	Net Present Value 5% discount rate Export \$ loss
<b>4.0 stock units per ha</b>								
Monetary loss	\$8,146,560	\$5,871,360	\$14,017,920	\$236,250,240	\$170,269,440	\$406,519,680	\$6,097,795,200	\$2,482,592,000
% of industry activity	0.2%	0.1%	0.2%	4.5%	4.2%	4.4%	-	-
su loss	64,000			1,856,000			27,840,000	
% of stock units	0.2%			4.4%			-	
<b>8.0 su per ha</b>								
Monetary loss	\$16,293,120	\$11,742,720	\$28,035,840	\$472,500,480	\$340,538,880	\$813,039,360	\$12,195,590,400	\$5,212,041,000
% of base yr	0.3%	0.3%	0.3%	8.8%	8.8%	8.8%	-	-
su loss	128,000			3,712,000			55,680,000	
% of base yr	0.3%			8.8%			-	
<b>12.0 su per ha</b>								
Monetary loss	\$24,439,680	\$17,614,080	\$42,053,760	\$708,750,720	\$510,808,320	\$1,219,559,040	\$18,293,385,600	\$7,818,062,000
% of base yr	0.5%	0.5%	0.5%	13.2%	13.2%	13.2%	-	-
su loss	192,000			5,568,000			83,520,000	
% of base yr	0.5%			13.2%			-	
1 grassland area -9.3%								
2 cumulative annual productive su loss to 2050								
Source: Beef + Lamb New Zealand Economic Service & Insights								

Table 3 Scenario 2 Afforestation 50,000 ha per year

Summary - Sheep and Beef Economic Activity \$ loss from Afforestation to 2050								
	Afforestation rate per year 50,000 ha			Total Afforestation 1,450,000 ha (-29% <sup>1</sup> )			Cumulative to 2050	
	Year 1 Activity On-farm loss \$	Year 1 Added-value loss \$	Year 1 Export \$ loss \$	at yr 2050 Activity On-farm loss \$	at yr 2050 Added-value loss \$	at yr 2050 Activity Export \$ loss \$	Export \$ & su <sup>2</sup> loss	Net Present Value 5% discount rate Export \$ loss
<b>4.0 stock units per ha</b>								
Monetary loss	\$25,458,000	\$18,348,000	\$43,806,000	\$738,282,000	\$532,092,000	\$1,270,374,000	\$19,055,610,000	\$7,758,099,000
% of industry activity	0.5%	0.5%	0.5%	14.1%	13.3%	13.8%	-	-
su loss	200,000			5,800,000			87,000,000	
% of stock units	0.5%			13.8%			-	
<b>8.0 su per ha</b>								
Monetary loss	\$50,916,000	\$36,696,000	\$87,612,000	\$1,476,564,000	\$1,064,184,000	\$2,540,748,000	\$38,111,220,000	\$16,287,628,000
% of base yr	0.9%	0.9%	0.9%	27.5%	27.5%	27.5%	-	-
su loss	400,000			11,600,000			174,000,000	
% of base yr	0.9%			27.5%			-	
<b>12.0 su per ha</b>								
Monetary loss	\$76,374,000	\$55,044,000	\$131,418,000	\$2,214,846,000	\$1,596,276,000	\$3,811,122,000	\$57,166,830,000	\$24,431,442,000
% of base yr	1.4%	1.4%	1.4%	41.3%	41.3%	41.3%	-	-
su loss	600,000			17,400,000			261,000,000	
% of base yr	1.4%			41.3%			-	
1 grassland area -29.2%								
2 cumulative annual productive su loss to 2050								
Source: Beef + Lamb New Zealand Economic Service & Insights								

## Afforestation Scenarios (Set 2):

2.1 Real afforestation of 238,600ha from 2017-2023 with estimated afforestation of 50k hectares per year in 2023-24 and 2024-25 and then 25k hectares per year to 2030-31.

2.2 Real afforestation of 238,600ha from 2017-2023 estimated afforestation of 50k hectares per year in 2023-24 to 2030-31.

2.3 Real afforestation of 238,600ha from 2017-2023 with estimated afforestation of 80k hectares per year in 2023-24 to 2030-31.

This analysis highlights the short-term impacts associated with land use change from sheep and beef to forest operations. Different ranges of estimated afforestation have been used to indicate the impact associated decreased (or increased) confidence in the carbon/forest sector as a result of decisions made in this review.

Based on different assumptions of carbon price and associated change in land use, we could see a total of ~463,000ha to ~798,000ha converted from sheep and beef land to forestry (including carbon) from 2017-2018 to 2030-31. If these projections are realised, 8% to 15% of the total productive grassland sheep and beef land in 2021 would go into trees by 2030. This afforestation would displace between \$2.6 billion and \$4.8 billion worth of export receipts over 8 years. The respective NPV of these dollar amounts at a discount rate of 5% would be \$2.1 billion and \$3.8 billion.

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**Scenario 2.1: Real afforestation rates until 2022-2023 and estimates of change from 50kha to 25kha until 2030-2031**

	Stock units per ha displaced by afforestation (modelled)	New afforestation annual ha actual, & modelled from 2023-24	Cumulative new afforestation ha	Sheep & Beef <sup>1</sup> annual Export Receipts \$m	Sheep & Beef FoB Receipts annual chg actual, & modelled \$m	Sheep & Beef FoB Receipts modelled <u>Cumulative chg</u> \$m
2017-18		6,000	6,000	7,859		
2018-19		7,000	13,000	8,351	\$492	
2019-20		26,300	39,300	8,817	\$465	
2020-21		33,600	72,900	8,599	-\$218	
2021-22		41,500	114,400	10,284	\$1,685	
2022-23		64,200	178,600	9,981	-\$303	
<b>Actual Totals to 2022-23</b>		<b>178,600</b>	-	-	<b>\$2,122</b>	-
2023-24	8.0	60,000 <sup>4</sup>	238,600		-\$105	-\$105
2024-25	8.0	50,000	288,600		-\$88	-\$193
2025-26	8.0	50,000	338,600		-\$88	-\$280
2026-27	8.0	25,000	363,600		-\$44	-\$324
2027-28	8.0	25,000	388,600		-\$44	-\$368
2028-29	8.0	25,000	413,600		-\$44	-\$412
2029-30	8.0	25,000	438,600		-\$44	-\$455
2030-31	8.0	25,000	<b>463,600</b>		-\$44	-\$499
<b>Modelled Totals</b>		<b>285,000</b>	-	-	<b>-\$499<sup>2</sup></b>	<b>-\$2,636<sup>3</sup></b>
<b>NPV at 5% discount rate</b>						<b>-\$2,143</b>

1 actual FoB receipts to 2022-23, modelled change due to afforestation from 2023-24 at 3 year average of prices to 2021-22

2 modelled FoB receipt decrease in year 2030-31

3 modelled cumulative Sheep and Beef FoB receipt deficit from afforestation from 2023-24 to 2030-31

4 Manley (2023) estimated figure was 88,000 ha of afforestation in 2023. This was revised down to account for increased uncertainty in the market (based on advice from MPI officials).

**Scenario 2.2: Real afforestation rates until 2022-2023 and estimates of 50kha until 2030-2031**

	Stock units per ha displaced by afforestation (modelled)	New afforestation annual ha actual, & modelled from 2023-24	Cumulative new afforestation ha	Sheep & Beef <sup>1</sup> annual Export Receipts \$m	Sheep & Beef FoB Receipts <u>annual chg</u> actual, & modelled \$m	Sheep & Beef FoB Receipts modelled <u>Cumulative chg</u> \$m
2017-18		6,000	6,000	7,859		
2018-19		7,000	13,000	8,351	\$492	
2019-20		26,300	39,300	8,817	\$465	
2020-21		33,600	72,900	8,599	-\$218	
2021-22		41,500	114,400	10,284	\$1,685	
2022-23		64,200	178,600	9,981	-\$303	
<b>Actual Totals to 2022-23</b>		<b>178,600</b>	-	-	<b>\$2,122</b>	-
2023-24	8.0	60,000 <sup>4</sup>	238,600		-\$105	-\$105
2024-25	8.0	50,000	288,600		-\$88	-\$193
2025-26	8.0	50,000	338,600		-\$88	-\$280
2026-27	8.0	50,000	388,600		-\$88	-\$368
2027-28	8.0	50,000	438,600		-\$88	-\$455
2028-29	8.0	50,000	488,600		-\$88	-\$543
2029-30	8.0	50,000	538,600		-\$88	-\$631
2030-31	8.0	50,000	<b>588,600</b>		-\$88	-\$718
<b>Modelled Totals</b>		<b>410,000</b>	-	-	<b>-\$718<sup>2</sup></b>	<b>-\$3,293<sup>3</sup></b>
<b>NPV at 5% discount rate</b>						<b>-\$2,642</b>

1 actual FoB receipts to 2022-23, modelled change due to afforestation from 2023-24 at 3 year average of prices to 2021-22

2 modelled FoB receipt decrease in year 2030-31

3 modelled cumulative Sheep and Beef FoB receipt deficit from afforestation from 2023-24 to 2030-31

4 Manley (2023) estimated figure was 88,000 ha of afforestation in 2023. This was revised down to account for increased uncertainty in the market (based on advice from MPI officials).

## Scenario 2.3: Real afforestation rates until 2022-2023 and estimates of 80kha until 2030-2031

	Stock units per ha displaced by afforestation (modelled)	New new afforestation annual ha actual, & modelled from 2023-24	Cumulative new afforestation ha	Sheep & Beef <sup>1</sup> annual Export Receipts \$m	Sheep & Beef FoB Receipts annual chg actual, & modelled \$m	Sheep & Beef FoB Receipts modelled <u>Cumulative chg</u> \$m
2017-18		6,000	6,000	7,859		
2018-19		7,000	13,000	8,351	\$492	
2019-20		26,300	39,300	8,817	\$465	
2020-21		33,600	72,900	8,599	-\$218	
2021-22		41,500	114,400	10,284	\$1,685	
2022-23		64,200	178,600	9,981	-\$303	
<b>Actual Totals to 2022-23</b>		<b>178,600</b>	-	-	<b>\$2,122</b>	-
2023-24	8.0	60,000 <sup>4</sup>	238,600		-\$105	-\$105
2024-25	8.0	80,000	318,600		-\$140	-\$245
2025-26	8.0	80,000	398,600		-\$140	-\$385
2026-27	8.0	80,000	478,600		-\$140	-\$525
2027-28	8.0	80,000	558,600		-\$140	-\$666
2028-29	8.0	80,000	638,600		-\$140	-\$806
2029-30	8.0	80,000	718,600		-\$140	-\$946
2030-31	8.0	80,000	<b>798,600</b>		-\$140	-\$1,086
<b>Modelled Totals</b>		<b>620,000</b>	-	-	<b>-\$1,086<sup>2</sup></b>	<b>-\$4,764<sup>3</sup></b>
<b>NPV at 5% discount rate</b>						<b>-\$3,799</b>

1 actual FoB receipts to 2022-23, modelled change due to afforestation from 2023-24 at 3 year average of prices to 2021-22

2 modelled FoB receipt decrease in year 2030-31

3 modelled cumulative Sheep and Beef FoB receipt deficit from afforestation from 2023-24 to 2030-31

4 Manley (2023) estimated figure was 88,000 ha of afforestation in 2023. This was revised down to account for increased uncertainty in the market (based on advice from MPI officials).

## Appendix 2: Beef + Lamb New Zealand, Farmer Survey summary

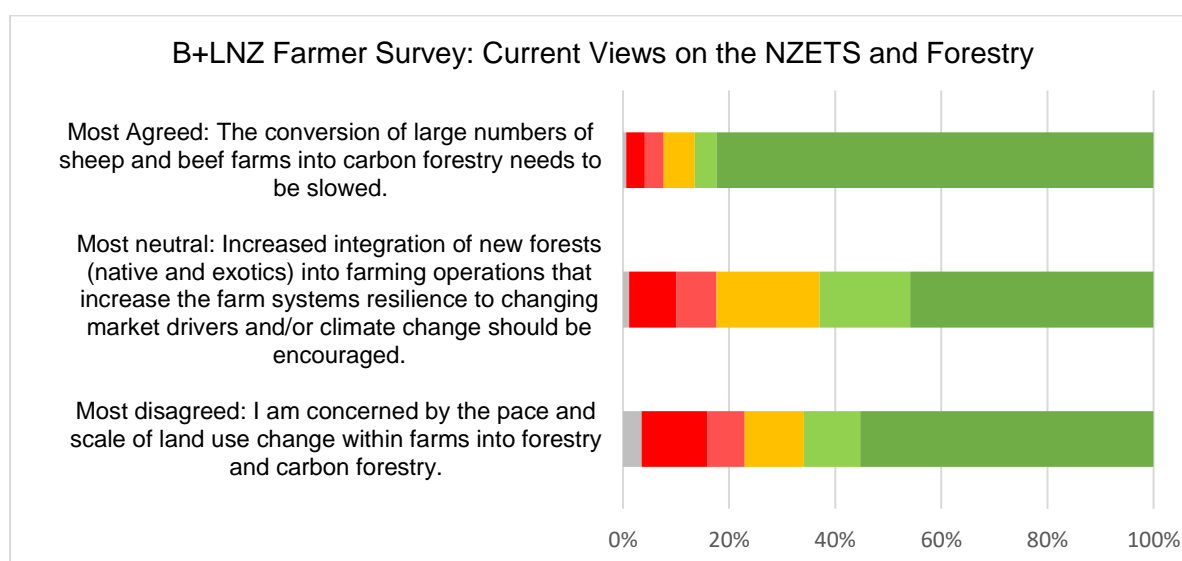
Beef + Lamb New Zealand completed an online survey between the 5<sup>th</sup> and 27<sup>th</sup> July 2023. The survey returned 171 responses from sheep and beef farmers across New Zealand which was used to generate the following graphs and inform our submission. The questions were separated across four key categories:

1. Current views on the NZETS
2. Views surrounding changes needed to the NZETS
3. Views on the Permanent Forestry Category
4. And any other potential changes

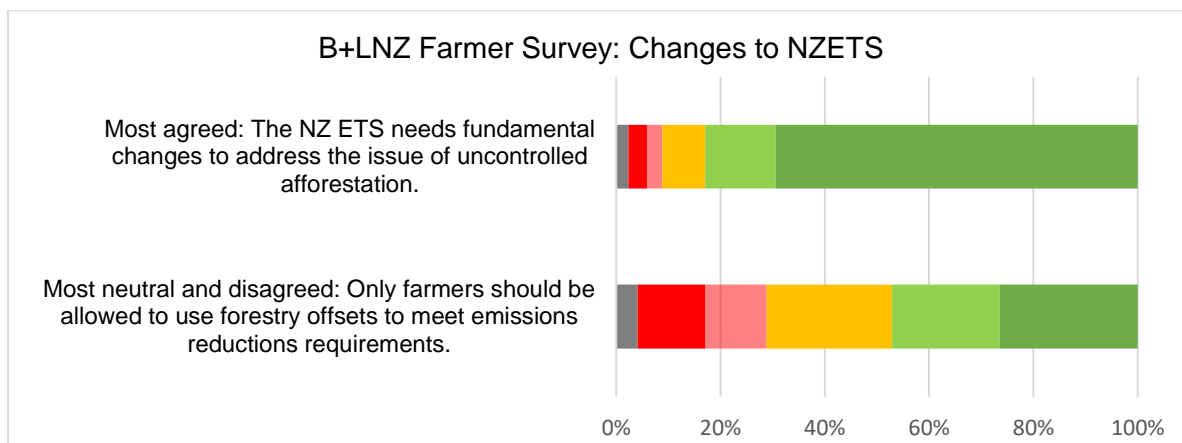
The graphs below highlight the questions that returned the most agreed, most neutral, and most disagreed statements. Table 1 highlights all survey questions that returned a 1 – 5 response.

Aside from the questions below we asked verbal questions to expand on farmer thoughts. We have not included the data from those questions below.

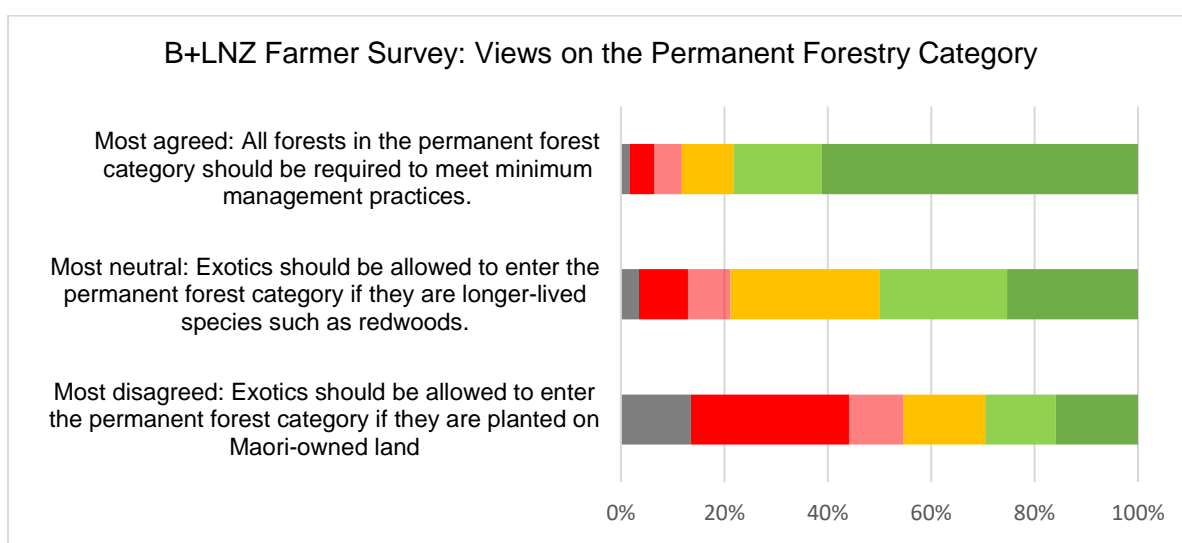
Graph 1: B+LNZ Farmer Survey: Current Views on the NZETS and Forestry



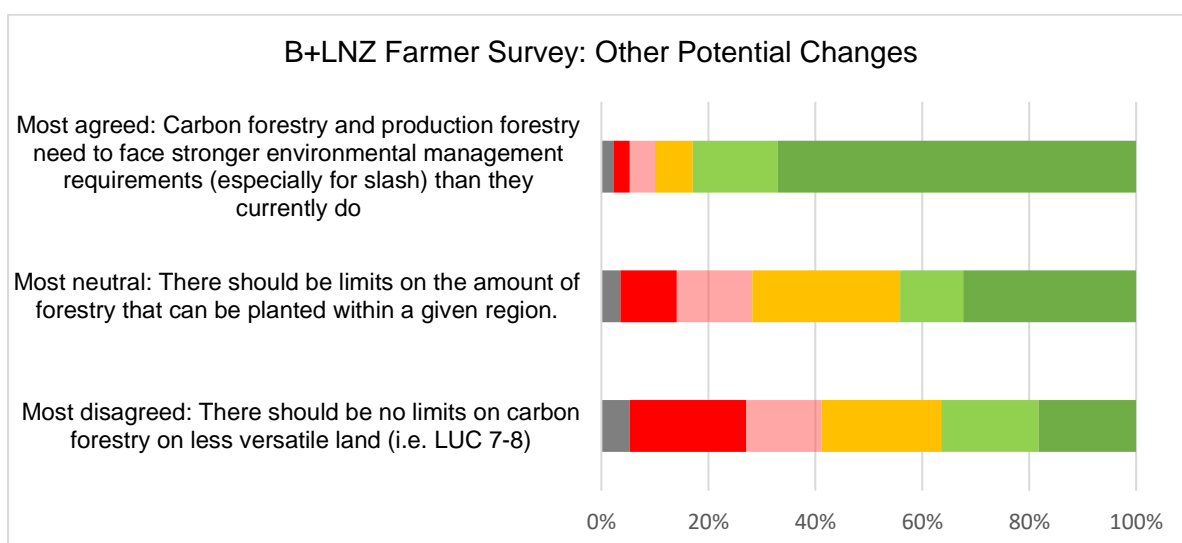
Graph 2: B+LNZ Farmer Survey: Changes to NZETS



Graph 3: B+LNZ Farmer Survey: Views on the Permanent Forestry Category



Graph 4: B+LNZ Farmer Survey: Other Potential Changes



**Table 1: B+LNZ NZ ETS Farmer Survey Questions. Listed in order from most strongly disagreed/disagreed to most strongly agreed/agreed.**

Question	No opinion	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Exotics should be allowed to enter the permanent forest category if they are planted on Maori-owned land.	13	30	11	16	13	16
There should be no limits on carbon forestry on less versatile land (i.e. LUC 7-8).	5	22	14	22	18	18
Exotics should be allowed to enter the permanent forest category if they are smaller areas of planting (50ha).	4	19	12	25	15	25
There should be limits on how much forestry can be planted within a farm system (i.e. limit of 25% of productive area).	5	21	10	20	12	30
There should be limits on the amount of forestry that can be planted within a given region.	4	11	14	27	12	32
Exotics should be allowed to enter the permanent forest category if they meet management requirements to ensure they transition to natives over time.	4	18	6	27	20	25
Exotics should be allowed to enter the permanent forest category if they are smaller areas of planting (50ha) within farms.	3	17	11	24	16	29
Only farmers should be allowed to use forestry offsets to meet emissions reductions requirements.	4	13	12	24	20	26
Exotics should be allowed to enter the permanent forest category if they are longer-lived species such as redwoods.	4	9	8	29	25	25
The amount of total forestry should be limited across the country.	4	13	13	20	13	36
I am concerned by the pace and scale of land use change within farms into forestry and carbon forestry.	3	12	7	10	10	52
Increased integration of new forests (native and exotics) into farming operations that increase the farm systems resilience to changing market drivers and/or climate change should be encouraged.	1	9	8	19	17	46

The NZ ETS needs to align with how other countries treat forestry in their ETSs (i.e. very limited amounts).	4	7	4	18	18	49
Fossil fuel emitters should not be allowed to use forestry offsets to meet emissions reduction requirements.	3	7	6	13	17	53
There should be limits on carbon forestry on more versatile land (i.e. LUC 6 and below).	3	4	8	14	18	53
Alongside incentivizing emissions reductions and offsets the NZ ETS should be used to support other environmental objectives e.g. encouraging biodiversity and/or erosion control.	1	7	5	15	26	45
Carbon forestry should be facing the same requirements as production forestry.	6	4	4	13	17	55
The amount of forest planting incentivised by the NZ ETS needs to be limited and reduced.	2	6	5	13	17	56
The ETS should drive emissions reductions, not large-scale tree planting.	4	5	5	12	16	57
NZ should prioritise reducing emissions at home, rather than buying international credits.	4	2	5	13	13	63
I am concerned by the pace and scale of land use change of whole pastoral farms into forestry and carbon forestry.	3	5	4	5	4	71
All forests in the permanent forest category should be required to meet minimum management practices.	2	5	5	10	17	61
I believe farmers are not getting enough recognition for the carbon stored in their on-farm vegetation (especially native bush).	1	3	3	5	4	77
The conversion of large numbers of sheep and beef farms into carbon forestry needs to be slowed.	5	4	4	6	4	77
Carbon forestry and production forestry need to face stronger environmental management requirements (especially for slash) than they currently do.	2	3	5	7	16	67
The NZ ETS needs fundamental changes to address the issue of uncontrolled afforestation.	2	4	3	8	13	69



## Appendix 3: Principles to inform changes to policy settings guiding climate action in the land based sectors

**Warming based approach:** to emissions reductions and targets which considers the way different GHG emissions and offsets impacts on global climate change in the short and long term.

**Prioritise emissions reductions:** Long lived gas emissions reductions need to take greater priority than forest carbon emissions removals. Different drivers should be used achieve the preferred mix as required (i.e. differential prices)

**Clear direction of travel:** Policy driving land use change needs clear direction on the intended outcomes (especially reductions vs. offsets) and provisions for achieving environmental co-benefits. Farmers need a level of certainty to invest.

**Integrated:** sustainable land use ('right activity, right place'), resilient and thriving rural communities, maintaining, and growing food and fibre exports, are prioritised and are linked with the essential freshwater and indigenous biodiversity policy initiatives.

**Targeted:** the objective for different policy mechanisms and tools are clearly articulated and acted upon. A variety of policy mechanisms to address the diverse range of problems is likely required, meaning that the ETS is not the sole tool or solution.

**Responsible:** landowners, business entities, and the government are accountable for actions, impacts, and ongoing effects

**Equitable:** the distributional impacts of policy settings provide equitable outcomes

**Credible:** sound science is used, provided transparently, and includes mātauranga Māori.

**Effective:** Activities rewarded lead to real impact on the ground and for our climate in line with emissions reductions targets and commitments. This means the necessary rules and standards are in place to affirm the quality of new sequestration activities, while considering international developments with respect to the fungibility and quality of offsets.

**Coordinated:** decisions on mitigation and adaptation are made in partnership with a particular consideration of nature-based solutions that aligns with wider sector and government objectives and activities.

**Collaborative:** provide fair opportunity for all stakeholders to be involved and consulted with as part of the policy development and analysis, as well as options testing.

**Appendix 4: Planting out our rural communities? What is wrong with forestry offsets in the ETS and what needs to be done. Report produced by Meredith Connell.**

# Planting out our rural communities?

What is wrong with forestry offsets in the ETS  
and what needs to be done

## CONTENTS

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Introduction	3
What is the problem?	4
Why is unrestricted permanent exotic forestry a problem?	12
What can be done about it?	16
Implementation	21
Next steps	22
Bibliography	23
Appendix	24

# Introduction

The face of provincial New Zealand is set to change, perhaps for ever. This change is being driven not by shifts in the balance between rural and urban land use, as might be expected. Rather, it is the result of unbridled growth in exotic forestry.

In response to the current settings of New Zealand's Emissions Trading Scheme (ETS), farmland across the country is increasingly being planted in pine and other exotic species to generate carbon credits that can be traded for value in the ETS. This trend will increase rapidly from this year if policy changes are not made with urgency.

The widespread establishment of exotic forests and in particular, permanent exotic forests, is problematic because it:

- i. **Displaces productive land use.** The increasing financial incentive of exotic forests is displacing the productive land uses that rural economies depend on, and that contribute so much to both the cultural fabric of New Zealand and the national economy.
- ii. **Undermines long-term climate objectives.** High levels of exotic forestry planting each year delays steps to reduce gross global warming-inducing carbon emissions because these forests provide emitters with a relatively cheap way to offset their liabilities without taking action to reduce their emissions for the long-term.
- iii. **Raises questions about the equity and integrity of the ETS.** Rather than confronting the emissions-reduction challenge faced by the global community, New Zealand's ETS settings allow this generation to 'plant, offset and forget', leaving the challenge to the future generations. ETS forestry settings create a weak link between who pays for emissions reductions, and who benefits from them.
- iv. **Puts the ETS out of sync with offshore schemes.** In its zero-restrictions approach to the use of forestry offsets, New Zealand is an outlier, and this will limit our country's ability to participate in the global carbon-trading market.
- v. **Increases environmental risks.** Permanent exotic forests present additional environmental risks, such as debris, fire, disease, pests, and the spread of wilding pines.

Forestry offsets are a key component of a scheme designed to enable our country to meet emissions-reduction targets set in legislation.<sup>1</sup> But they are a tool that must be managed in a way that enables sustainable and equitable social, economic, and environmental outcomes, for generations to come.

This report proposes policy options that will allow strategic management of forestry offsets within the ETS, and that provide a pathway to achieving New Zealand's wider climate goals, while ensuring land is put to best use, for the long-term benefit of all New Zealanders.

The focus of the report is on addressing permanent exotic forestry through changes to the permanent forestry category of the ETS, as the area with the most skewed incentives and therefore the greatest need for reform. Though it is stressed that, in the future, further changes to the ETS that target other categories are likely to be required.

The report has been prepared for Beef + Lamb New Zealand (B+LNZ) by MC and is designed to act as the starting point for a national discussion on the role forestry offsets play in our country's climate strategy.

## About MC

With over 100 years' experience working with both the public and private sectors, MC is a large national law firm with preeminent expertise in public interest litigation, public policy, as well as local government and regulatory law. MC knows how to help both the public and private sectors reach and understand one another.

1. To be net zero for non-biogenic emissions by 2050, and 10% less by 2030 and 24-47% less by 2050 for biogenic emissions relative to 2017 emissions.

# What is the problem?

The way incentives for forestry offsets in the ETS are structured and managed can only lead to excessive afforestation, particularly in the form of permanent exotic forestry. The level of afforestation likely to occur based on current settings is not a sustainable means for New Zealand to reach its emissions-reduction goals nor to provide for resilient rural communities and physical environments.

## Role of forestry in the ETS

Under New Zealand's current climate strategy, the establishment of trees that can remove carbon from the atmosphere as they grow is a key tool for achieving emissions-reductions targets.<sup>2</sup> These trees can help offset continued carbon emissions in other parts of the economy. The strategy relies on these forestry offsets, as a low-cost emissions-reduction option, to bring down New Zealand's net emissions through to 2050.

### Box 1: Gross versus Net emissions

#### Definitions

##### *Gross emissions*

The term "gross emissions" refers to New Zealand's total emissions from the agriculture, energy, industrial processes and product use, and waste sectors.

##### *Net emissions*

"Net emissions" means gross emissions (including all activities above), minus any emissions removal activities from forestry, or other carbon sinks.

New Zealand Units (NZUs) are a transferable asset which represents a right to emit one tonne of carbon dioxide equivalent (CO<sub>2</sub>-e). NZUs are issued by the Government for removal activities, including the removal of carbon from the atmosphere by foresters. The scheme allows forestry owners to generate revenue by selling their NZUs to emitters throughout the economy.

Establishing and growing exotic forests, such as *Pinus radiata* forest, delivers removals at relatively low cost: estimated to be between \$25-\$50 per tonne of CO<sub>2</sub>-e. Whereas opportunities to reduce long-lived gas emissions in other sectors cost \$100 per tonne of CO<sub>2</sub>-e or more.<sup>3</sup>

The market price of NZUs peaked at \$88.50 per NZU<sup>4</sup> in November 2022; a level which provides financial returns to foresters, but not quite at the level to incentivise gross emission reductions. This means that the ETS is structured to incentivise rapid afforestation and offsetting before incentivising any gross emission reductions.

The strong orientation of the ETS towards one sector means that careful management is required to maintain balance with the rest of the economy. This is where current ETS settings have come unstuck. Recent policy changes – namely, the removal of the 'stock change accounting' and revitalisation of the Permanent Forestry Category within the ETS – have created excessive incentives for afforestation and seem certain to result in negative consequences and perverse outcomes, many of which have been brought to the Government's attention by advisors.

2. CCC (2023).

3. Estimated taken from CCC (2023).

4. See [CommTrade \(2023\)](#). NZU price history, as of 14 November 2022.

## An international outlier

The absence of any qualitative or quantitative restrictions on the use of forestry offsets is a defining characteristic of the New Zealand ETS and makes our scheme an outlier in international terms. As shown by **Table 1**, other than Kazakhstan, no other ETS in the world allows such unfettered use of tradable units derived from forestry to offset carbon emissions. Even Kazakhstan, however, has control measures in place, whereby offsetting projects must be approved by the Ministry of Ecology, Geology and Natural Resources before being awarded tradable units.<sup>5</sup>

**Table 1: National and regional emissions trading schemes and their offset limits<sup>6</sup>**

Offset or Credit limit	ETS Name or Jurisdiction (Alphabetical)
0%	European Union ETS; Germany; Massachusetts (USA); Switzerland; United Kingdom ETS;
5% or less	Beijing (CN); California (USA); China ETS; North Carolina (USA); Republic of Korea; Regional Greenhouse Gas Initiative (USA); Shanghai (CN); Washington (USA);
10% or less	Chongqing (CN); Fujian (CN); Guangdong (CN); Hubei (CN); Oregon (USA); Mexico; Taiwan (CN); Tianjin (CN); Quebec (CAN)
33% or less	Saitama (JPN); Tokyo (JPN);
100%	Kazakhstan; New Zealand
Limits under consideration or development	Chile; Colombia (USA); Finland; Indonesia; Japan ETS; Malaysia; Montenegro; New Mexico (USA); Pakistan; Philippines; New York (USA); Nova Scotia (CAN); Pennsylvania (USA); Sakhalin (RUS); Transportation & Climate Initiative Program; Thailand; Ukraine; Vietnam.

Further, most national, and regional ETSs include a strong focus on gross emissions reduction. Typically, participants are restricted to offsetting no more than 10% of their gross emissions surrender obligations. In contrast, the primary purpose of the New Zealand ETS is to achieve net emissions reductions, allowing unlimited use of forestry units to meet surrender obligations.

## New Zealand's Permanent Forestry category

New Zealand introduced the Permanent Forestry category in 2020, as a replacement for the Permanent Forest Sinks Initiative (PFSI) and came into effect from 1 January 2023. The PFSI was established in 2006, prior to the ETS' inception, and required landowners to sign a covenant agreement with the Crown which included restricted harvest and other forest management conditions on forested land established after 1989. Participants had the right to terminate at any time after 50 years (with surrender of emissions units received while in the scheme). Both natives and exotic plantings were able to be entered.

The Permanent Forestry category in the ETS allows landowners to establish any eligible forest with the expectation that the trees will not be harvested prior to age 50. Additionally, if the forest is initially established with exotic species, the expectation is that native vegetation will grow up within the exotic plantings and, over the long term, give way to a permanent indigenous forest.

This category allows a pine tree owner to enter and for landowners to benefit from the very high carbon credits for pines for 50 years until it transitions to native vegetation (this compares to the 'averaging accounting' category which only pays carbon credits for 16 years).

5. ICAP (2022).

6. ICAP (2022).

## Super-charged benefits

The introduction of the Permanent Forestry Category takes the potential benefits for forest owners under the ETS and super-charges them.

For foresters, the appeal of exotic species lies in rapid growth and low establishment costs – they capture carbon (generating NZUs) more quickly than indigenous species, at less cost.

With permanent exotic forestry, NZUs are earned for as long as the forest continues to capture carbon (for upwards of 70-100 years).

In contrast, owners of production exotic forests earn NZUs only until the average carbon storage rates of their trees (at around 16 years for *Pinus radiata*) but do not need to pay for the carbon released at harvest (as long as the forest is replanted).<sup>7</sup>

Further, permanent forests are far more profitable as they require none of the infrastructure and costs required for pruning and harvesting – in particular, roads – that production forestry requires.

Other forms of forestry therefore cannot compete with the economics of permanent exotic forestry: over a 50-year timeframe, an average permanent pine forest in the New Zealand ETS will earn 7.5 times more NZUs than an equivalent area of indigenous forest.<sup>8</sup>

As Figure 1 illustrates, at recent NZU prices of around \$70, MPI estimates an economic return of over \$35,000 per hectare (ha) for permanent exotic forests, compared with \$20,000 per ha for production forestry with integrated carbon forestry.

**Figure 1: comparison of economic returns for permanent exotic forestry, production forestry, and sheep and beef farming over 50 years**

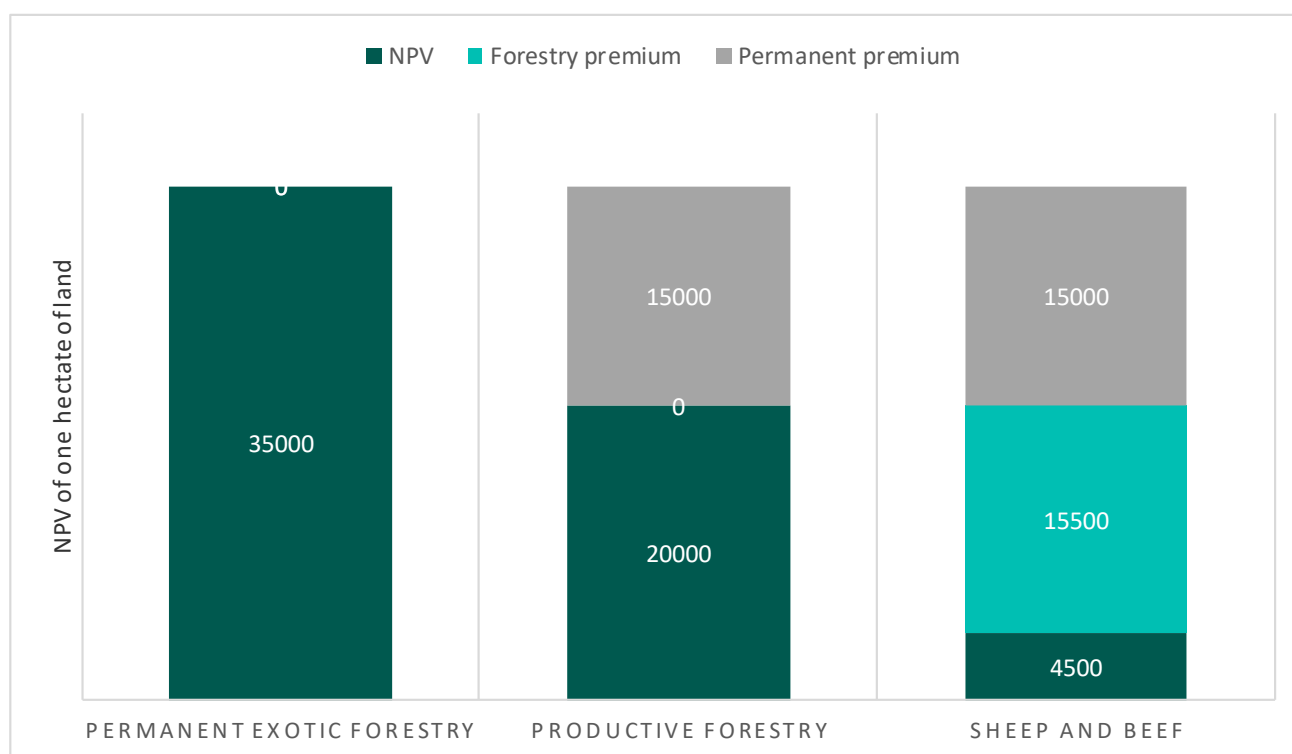


Figure 1 also shows that the gap in economic return is even more marked in the case of sheep and beef farming (forestry's main competing land use), with a 'modelled' extensive sheep and beef farm generating around \$4,500 per ha.<sup>9</sup>

Beef + Lamb New Zealand analysis shows similar differences between the different land uses but not to the same extent as the MPI analysis (see Table 2 below).

7. MPI (2022C).

8. MPI (2022B).

9. MPI (2022B).



Table 2: B+LNZ estimates of returns per hectare over 30 years for different land uses

	Sheep Beef Farm	Production Forestry	Production Forestry + ETS (av)	Permanent Forest + ETS
NPV 30 years per ha	\$8,700	\$4,900	\$21,300	\$23,100

Note that in B+LNZ analysis, Production forestry NPV is valued at \$4,900 per ha and is below the Hill Country Sheep and Beef Farm NPV of \$8,700 per ha.

## Surge in afforestation

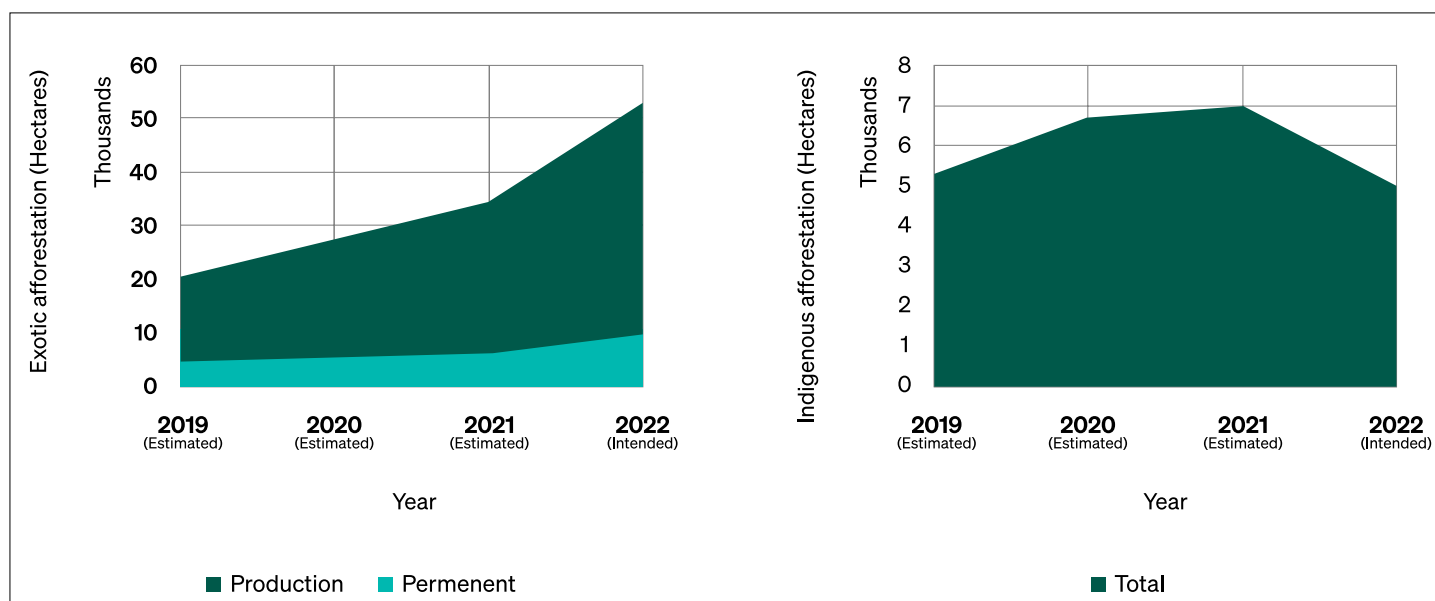
Since 2009, the New Zealand ETS had a fixed price option which acted as a de facto carbon price ceiling. This allowed emitters to pay \$35 to the Government, instead of purchasing NZUs from the secondary market.

In 2019 the fixed-price option was removed to allow the carbon price to increase. The expectation was that this would start to drive a decrease in emissions, but what it has generated instead is a surge in supply to offset emissions.

Most of the initial afforestation activity has been in production exotic forests. In 2022, MPI estimates that over 50,000 ha of production exotic forests was established, up from 20,000 in 2019.

For now, the increase in establishment of permanent exotic forests has been more modest, but it is still significant. In 2021, almost 35% of farm sales occurring were intended to be used for permanent forest purposes.<sup>10</sup> This direction aligns with MPI's 2021 Survey of Afforestation Intentions (see Figure 2), which indicated that in 2022 10,200 ha of new permanent exotic forests were established, an increase from 5,300 ha in 2019.

Figure 2 Afforestation intentions, 2021



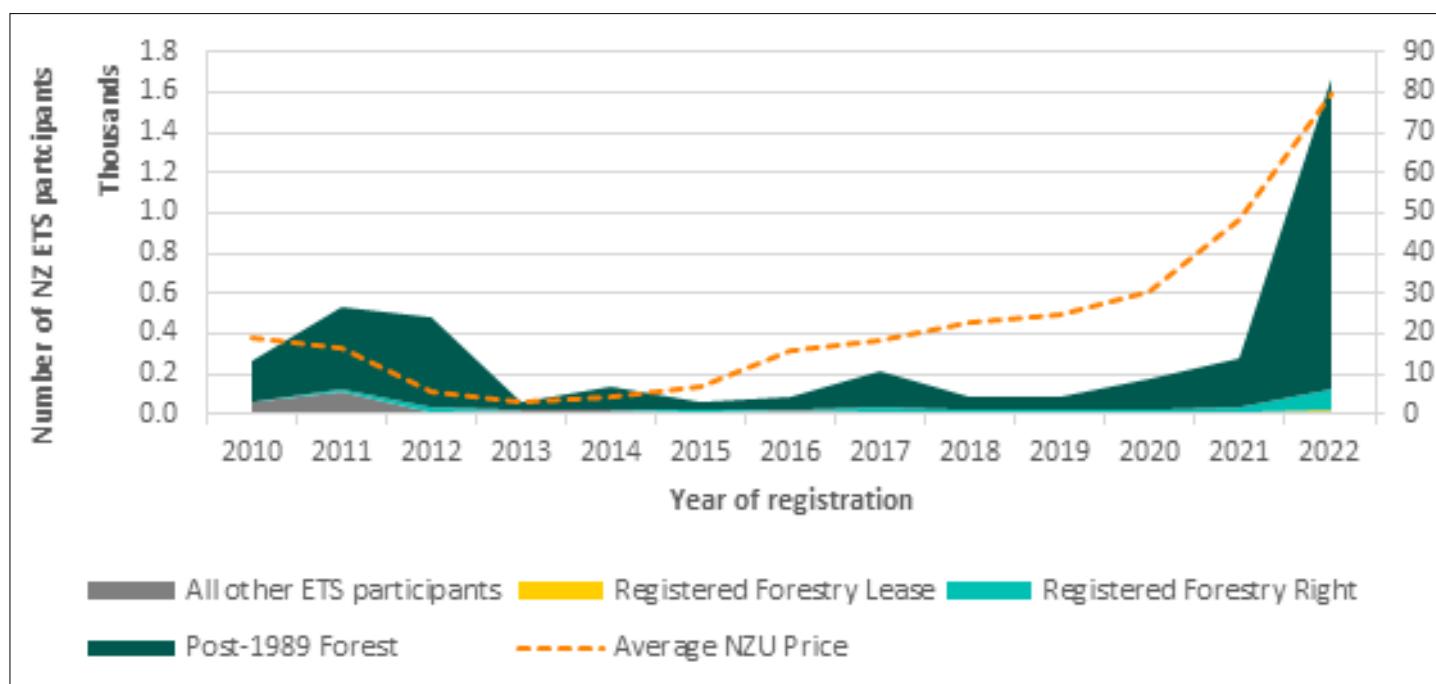
The same survey points to much lower volumes of indigenous afforestation – only around 5,000 ha in 2022, having fallen from around 6,500 ha in 2020, and 7,000 ha in 2021.<sup>11</sup>

Meanwhile, over the same period, the number of registrations in the ETS has increased dramatically, as landowners responded to the change in policy settings. Figure 3 shows that, from 2021-2022, there was a more than five-fold increase in registrations, doubling the total number since the inception of the ETS. This increase coincides with rapid increases in NZU prices.

10. Beef + Lamb New Zealand (2022).

11. MPI (2022A).

Figure 3: ETS registrations and average NZU prices



Critically, while the number of new plantings in production exotic forestry has exceeded those from permanent exotic forestry in recent years, the trend is expected to reverse in future.

In a 2022 Cabinet paper, MPI estimates that the ETS could drive upwards of 645,000 ha of new exotic afforestation between 2021 and 2030. Permanent exotic forestry is expected to account for over half of this new afforestation.<sup>12</sup> To put this in context, growth in permanent exotic afforestation of 350,000 ha over the decade would represent an average annual afforestation rate of 35,000 ha per year; more than three times higher than the indicative rate in 2022 (which, as noted above, was already a significant jump on previous years).

This potential annual rate of afforestation is also much higher than the 25,000 ha of exotic afforestation that the Climate Change Commission estimates is needed to meet New Zealand’s net zero targets.<sup>13</sup>

12. MPI (2022A).

13. CCC (2021).

## An increase in overseas investment in forests

Increasing overseas investment in forests for carbon removal activities can be beneficial in terms of addressing climate change and conserving natural ecosystems. However, there are also several associated problems and concerns with overseas investments in New Zealand forestry. Most notably:

- **Land tenure and rights.** The acquisition of large tracts of land for forestation may conflict with local communities' land rights. Communities could become displaced or lose access to land that they have traditionally used for livelihood.
- **Monoculture plantations:** the skewed incentives for permanent exotic forestry can incentivise projects that focus on monoculture tree plantations rather than re-establishing natural forests.

Beef + Lamb New Zealand has conducted further analysis on the OIO approvals for farmland purchases for afforestation. This is summarised in **Table 3**. Note that OIO approvals for existing forest purchases were excluded from this analysis.

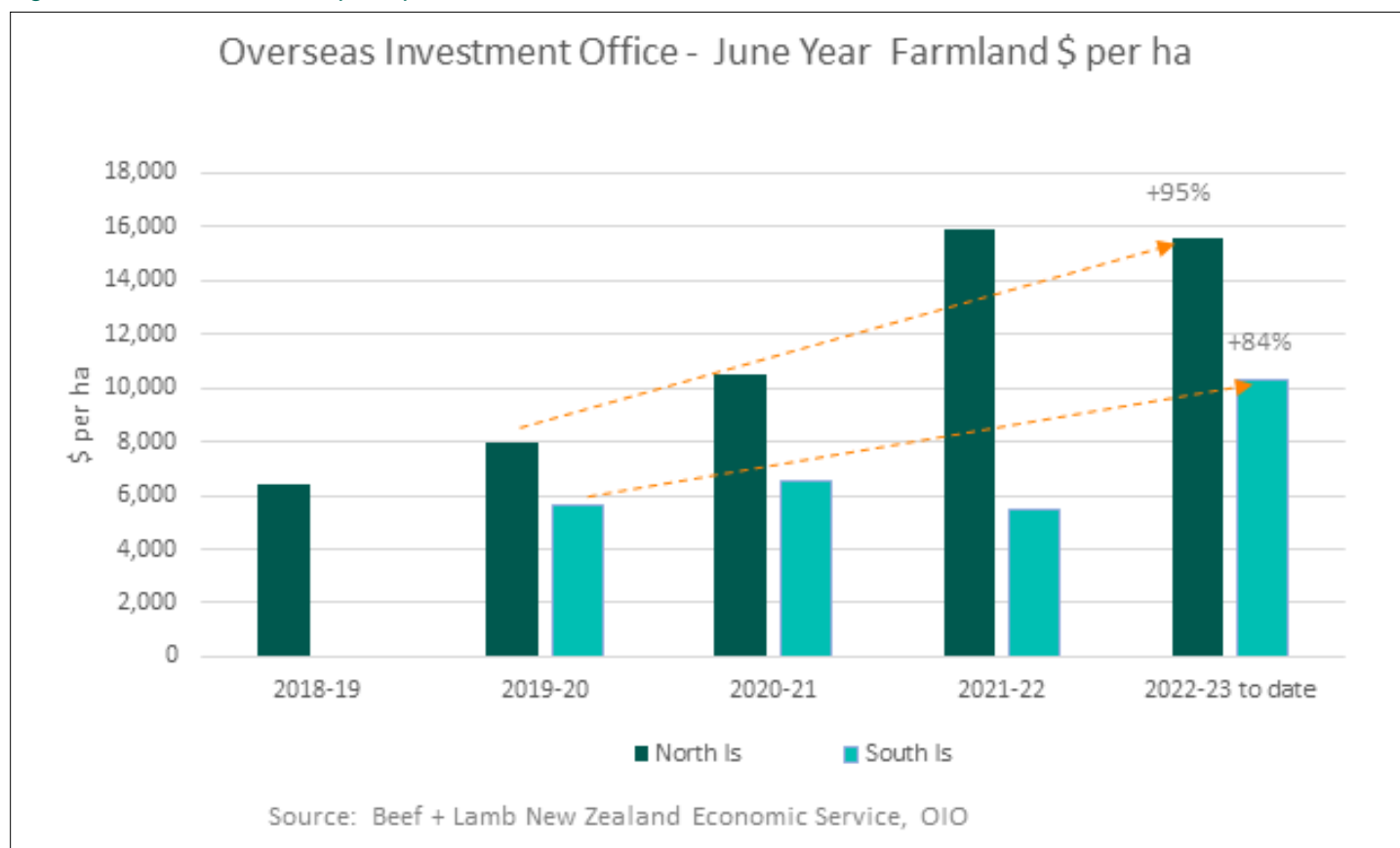
*Table 3: Summary of OIO farmland purchases for afforestation.*

Summary of Area Approved by Overseas Investment Office for New Forest					
Survey Region	June Year hectares				to date
	2018-19	2019-20	2020-21	2021-22	2022-23
Northland	1,175	235	809	1,017	413
Waikato-BoP	650	500	3,711	963	580
Gisborne	0	680	0	2,539	5,669
Hawkes Bay	1,185	3,753	6,076	1,345	2,023
Wairarapa	1,573	2,076	517	2,288	1,631
Taranaki/Manawatu	1,000	3,500	0	0	0
<b>North Island</b>	<b>5,583</b>	<b>10,744</b>	<b>11,113</b>	<b>8,152</b>	<b>10,316</b>
Nelson-West Coast	0	0	0	0	0
Marlborough	0	1,690	5,300	0	0
Canterbury	0	0	0	1,560	413
Otago	0	1,074	0	3,858	310
Southland	0	0	2,145	1,275	1,988
<b>South Island</b>	<b>0</b>	<b>2,764</b>	<b>7,445</b>	<b>6,696</b>	<b>2,711</b>
Confidential/unassigned				859	
<b>New Zealand</b>	<b>5,583</b>	<b>13,508</b>	<b>18,558</b>	<b>14,848</b>	<b>13,027</b>
Cumulative North Island	5,583	16,327	27,440	35,592	45,908
Cumulative South Island	0	2,764	10,209	16,905	19,616
Cumulative Confidential/unassigned	0	0	0	859	859
Cumulative New Zealand	5,583	19,091	37,649	53,356	66,383

Source Beef + Lamb New Zealand Economic Service & Insights, Overseas Investment Office (OIO)

Some of the OIO approvals state delayed planting times of up to two years until tree seedling stock is available. Further analysis of OIO whole farm sales for afforestation that disclosed the purchase price is summarised in Figure 4 on a purchase price per hectare basis.

Figure 4 Farmland Purchase price per hectare



Note for the North Island from 2019-20 to 2022-23 (April 2023) OIO farmland purchase prices per hectare increased 95% from \$8,000 per hectare to \$15,600 per hectare. Likewise South Island OIO farmland purchase prices have increased 84% from \$5,600 per hectare to \$10,300 per hectare.

Table 3 in conjunction with Figure 4 shows the correlated impact that the increasing NZU price has had on farmland purchase prices for afforestation. While the OIO approved purchases were not the whole market, the OIO approved purchases of farmland to afforest had to compete with the domestic market and vice versa. Hence the OIO data source reflects the farmland purchase price trend for afforestation land.

What is significant is that these increased afforestation land prices also will increase the rateable value of surrounding sheep and beef farms. Rateable land values are revised every three years by District Councils reflecting land price sale trends. Depending on how District Councils set their rural rates charge, afforestation land prices have the potential to increase rates for sheep and beef farms on similar country. For some farm businesses, the increase in rates will make businesses less likely to be profitable. This further increases the incentive and likelihood of sale and conversion of sheep and beef land into permanent carbon forestry.

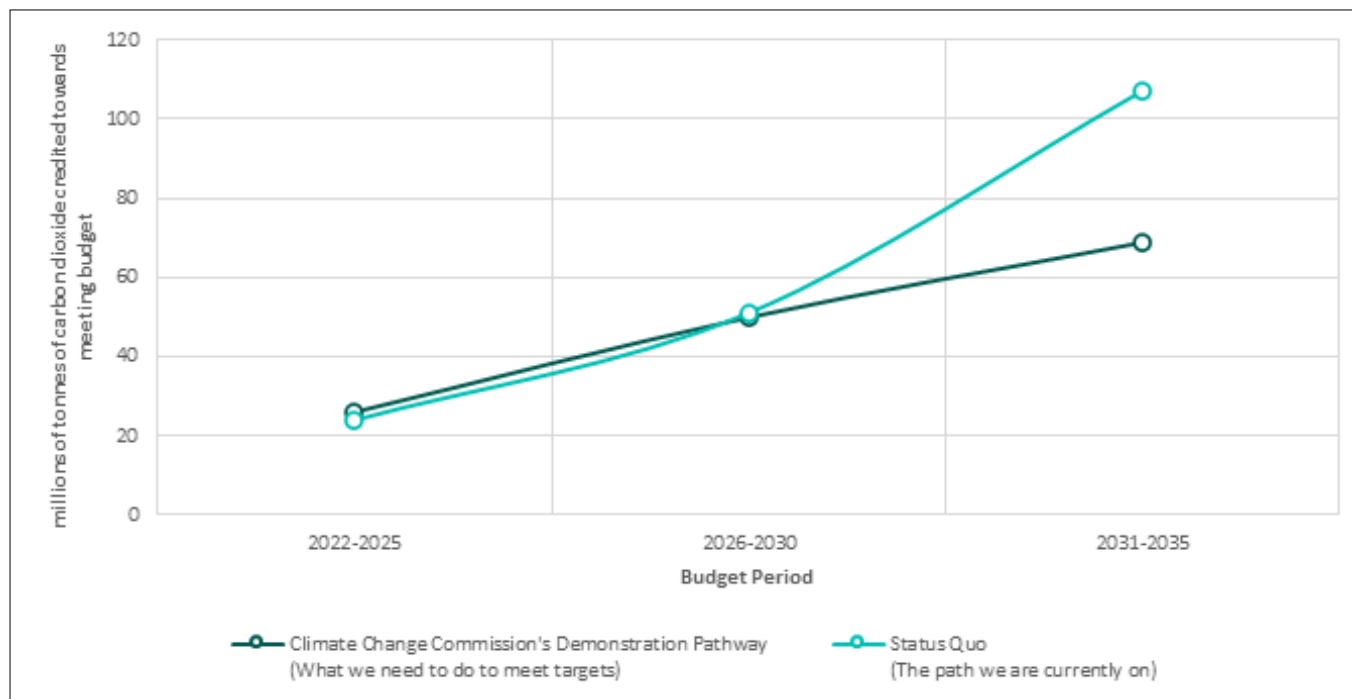
## Overshooting on emissions reduction

The evidence suggests that all this afforestation will result in greater emissions reduction than is required, to the point where New Zealand will significantly overshoot short-term targets for gross emissions reduction.

As highlighted in Figure 5, the Climate Change Commission estimates that around 70 million tonnes of carbon dioxide will need to be removed in the third budget period (2031-2035), whereas under the current regime, New Zealand is on course to reduce emissions by well over 100 million tonnes in that period due to exotic planting.

Overshooting targets is likely to create additional negative social, economic, and environmental outcomes, all of which are unnecessary.<sup>14</sup> It also prevents forests from being used to meet future emissions reductions budgets, when it will likely be more challenging to achieve emissions reductions targets in other sectors of the economy.

Figure 5: Comparison of different emissions-reduction pathways



14. CCC (2021).

# Why is unrestricted permanent exotic forestry a problem?

Sustained, widespread growth in permanent exotic forestry will generate significant social, economic, and environmental harm, and in many respects goes against the objectives of the ETS.

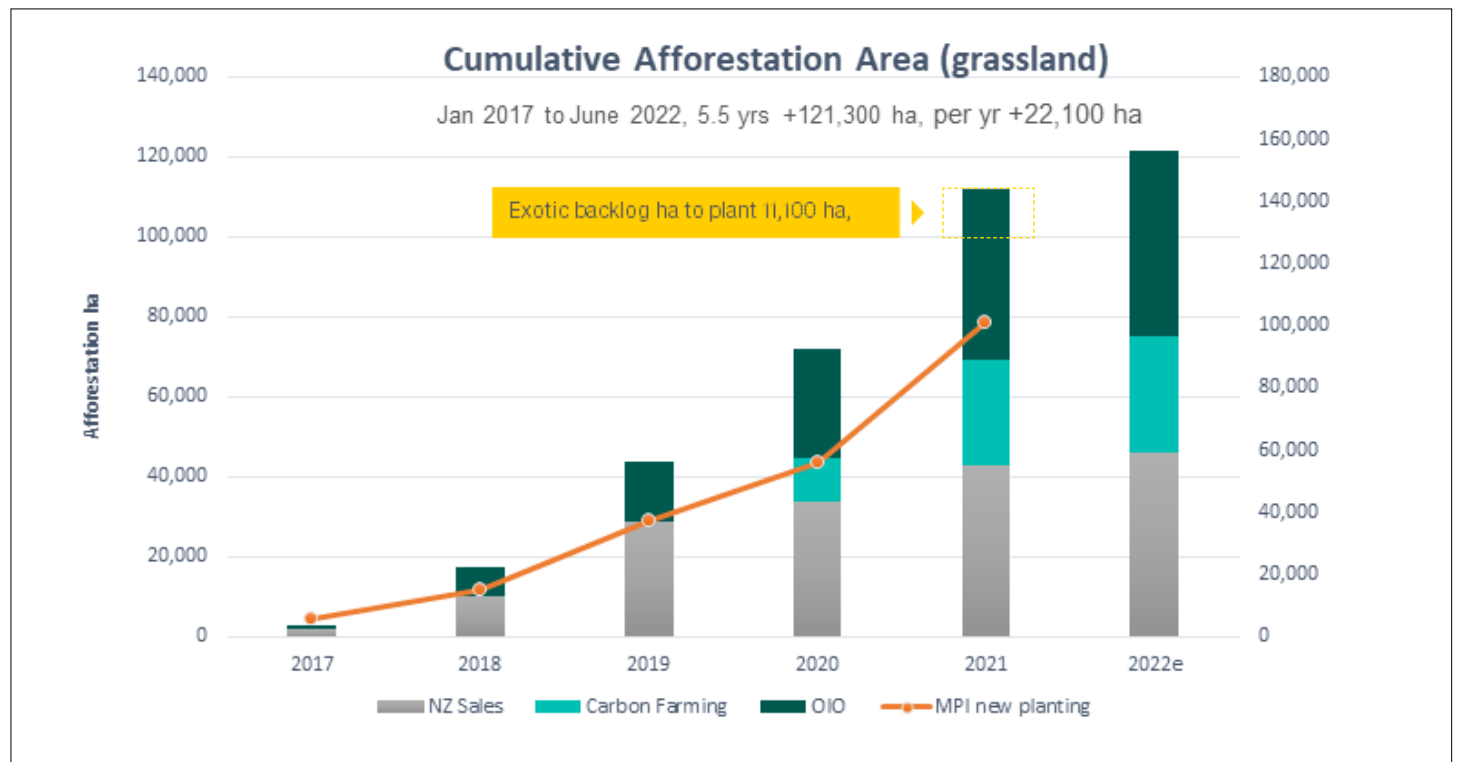
## Displacement of productive land uses

As landowners capitalise on current ETS incentives, there is already evidence of a sharp increase in conversions from sheep and beef farms and production forestry to permanent exotic forests.<sup>15</sup>

Research from Orme & Associates identifies the purchases of more than 175,000 ha of whole-farm sheep and beef farmland since 2017 for the purposes of conversion into forestry.<sup>16</sup> Of this area 121,300 ha will be new afforestation on farmland. Most of the remainder of this occupied land area is in existing scrub and woody vegetation. In 2021, more than 52,000 ha sheep and beef land were purchased by forestry interests, a 36% increase on the previous two years, and up from 7,000 ha in 2017. Of the farm area sold to forestry in 2020 and 2021, close to 40% involved was intended for carbon-only farming (i.e., permanent exotic forestry). Incidentally, about the same proportion involved purchases through the Overseas Investment Office.<sup>17</sup>

The line on the chart indicated the estimated area of plantings from tree seedling sales. The area between the line and the top of the bar is indicative of the land area awaiting to be planted.

Figure 6 Afforestation Trend



Source: Beef + Lamb New Zealand Economic Service & Insights, Orme & Associates Limited, Overseas Investment Office, MPI.

15. MPI (2022C).

16. This is a conservative estimate based on analysis of land sale titles and identification of known forestry interests as a purchaser. More farms could have been sold to forestry interests that were not easily identifiable.

17. See Beef + Lamb New Zealand. (2022). *Afforestation report shows whole farms are being converted into carbon forests at alarming rates.*

Growth in conversions will continue in line with the afforestation trend described above and, where those conversions are concentrated, they will have a profound impact on local communities.<sup>18</sup>

Forestry provides sporadic employment from planting to harvest. Permanent carbon farm forestry employs labour for planting with little else from then on. In contrast sheep and beef production provides ongoing farm employment and downstream processing to export or domestic market employment.

Table 4 shows that, for each 100 ha of sheep and beef farmland converted to forestry, an estimated 52 FTE jobs would be removed from the red meat industry over 30 years.

**Table 4: Employment FTE: Land use change to forestry<sup>19</sup>**

Average FTE per 100 hectares (30 years)	With Harvest	Without Harvest
Forestry FTE	17	7
Red meat industry FTE displaced by forestry	-52	-52
New Zealand net FTE change	-35	-45

Scaling the calculation up to match the levels of exotic afforestation anticipated over the next decade shows that 500,000 ha of new afforestation on sheep and beef farmland would remove over the following 30 years 175,000 FTE jobs if the area was used for production forestry, or 225,000 FTE jobs if used for carbon farming.

This analysis is based on input-output tables and takes account of flow-on employment that support the production from forestry or farm to the local market or export.

For the provincial communities where permanent exotic forestry takes hold, this can only mean a future of de-population, economic decline, and identity loss, as economic and social structures built up over 200 years or more are undone. Together with certain tangata whenua groups, farmers and production foresters have made their concerns about local economic and social impacts very clear during consultation on government proposals to change ETS settings.<sup>20</sup>

Under current settings, once land is converted to permanent exotic forestry, the economics make any future land-use change very difficult. Because of the rate at which permanent exotic forests capture carbon, and the fact that the rules of the Permanent Forestry category require them to remain unharvested for at least 50 years, any landowner looking to convert back to productive land uses faces significant economic consequences as a result of deforestation and foregoing the future allocation of NZUs.<sup>21</sup> Land converted to permanent exotic forestry is, essentially, locked in that land use.

18. BakerAg (2019).

19. Beef + Lamb New Zealand (2020). The economic impacts of converting red meat industry production to forestry.

20. MPI (2022A)

21. MPI (2022B).

What is bad for local economies is, of course, bad for the national economy.

Wholesale conversion to permanent exotic forestry will come at a cost to national employment. Sheep and beef farming indirectly employs an estimated 92,000 people nationally, while production forestry employs around 35,000 people. It will also reduce New Zealand's export earnings: sheep and beef farming and processing generate in the order of \$11 billion in export revenue each year, and production forestry about half that amount.<sup>22</sup> In contrast, permanent exotic forestry generates no export revenue.

Reduced land-use flexibility and reduced availability of productive land limits scope for diversification of the primary sector, and this undermines the resilience of the New Zealand economy. A diversified primary sector is better equipped to respond to global and local economic fluctuations and to changing patterns in consumer demand offshore.

### Box 2: Māori and forestry

Māori have a very strong connection to forestry – as rangatira, kaitiaki, landowners, forestry owners, forestry workers and business owners.<sup>23</sup> Approximately 30% of New Zealand's 1.7 million ha of plantation forestry is estimated to be on Māori land, with the total expected to grow to 40% as Treaty settlements are completed.<sup>24</sup> Meanwhile, Māori hold a proportionally high level of investment across the primary sector, with the largest concentration of assets in sheep and beef farming.<sup>25</sup>

The issues identified in this report are therefore of particular relevance to Māori. Acknowledging their position as partners of Te Tiriti, the response to these issues must be developed in partnership with Māori.

Feedback from Māori in consultations on potential ETS changes and engagement with Māori forestry sector experts has highlighted a range of views on the role of forestry offsets in the ETS – some echoing the concerns raised in this document about the expansion of exotic forestry, and others voicing strong support for the role of exotics in the permanent forestry category, now and in the future.<sup>26</sup>

## Undermines long-term climate objectives

Exotic forests planted now and in the next few years will lead to an abundance of supply of NZUs from the 2030s, lasting for several decades.<sup>27,28</sup> This will flow through into lower carbon prices, which will in turn reduce the incentive for gross emissions reduction.

With less incentive to invest in improvements in energy efficiency, low-carbon technologies, and other initiatives to reduce emissions, the likelihood is that emitters will simply rely on the option of relatively low-price forestry offsets to meet their surrender obligations. This will delay action and increase cumulative emissions.<sup>29</sup>

## Equity and integrity

Moreover, it raises important intergenerational equity questions, because it creates a situation where the current generation passes on to future generations responsibility for the difficult and economically painful adjustments that climate change requires. While the benefits of offsetting are often realised in the short-term (i.e., the first 50 years of the forest), the costs and risks are spread over the long-term.

The equity issues are not just intergenerational – the current model undermines the link between those who pay for emissions reduction and those who benefit from it. Wider society bears the cost of the ETS, and many would find it fundamentally unfair that their contributions support a scheme that avoids directly addressing the underlying problem, and that enables rapid wealth accumulation for a relatively small group.

The absence of any constraints on the use of forestry offsets means the volume of NZUs entering the market is determined by the capacity of landowners and foresters to plant trees (and therefore make profit), rather than the need for abatement. Again, wider society may well question the integrity of the scheme, and the fairness of being asked to pay for it.

22. MPI (2022C).

23. MP (2022A).

24. MPI (2022A).

25. MPI (2022A).

26. See [Te Taumata \(2023\) Technical Forestry Report](#).

27. MPI (2022A); CCC (2023).

28. MfE (2023B).

29. CCC (2021).



## Prevents New Zealand from linking with international schemes

As discussed above, the lack of restrictions on forestry offsets in the ETS, and the focus on net emissions, put New Zealand out of alignment with other schemes around the world. This is likely to prevent the ability for New Zealand to link its ETS with others, and to draw on the benefits that come from access to larger carbon-trading markets and liquidity.<sup>30</sup> As well as generally higher costs in the national emissions-reduction effort, this could mean New Zealand may struggle to attract foreign investment into low-carbon technologies (because it cannot participate in a global carbon market), and that New Zealand businesses that operate in multiple jurisdictions face regulatory barriers and higher compliance costs.

## Potential environmental harm

Exotic forestry has the potential to cause harm to the surrounding ecosystem in a number of ways. The potential impacts apply to both plantation and permanent forestry, though the impacts are likely to be greater from permanent exotic forestry, as that has not been subject to any national policy standards to date.

Most notably, there are concerns that permanent pine forestry may increase the risk of fire, erosion, disease, pests, and the spread of wilding pines.<sup>31</sup>

Cyclones Hale and Gabrielle have highlighted just how vulnerable fast-growing, heavy exotic species can be during extreme weather events, especially when planted on steep, erosion-prone land. A report commissioned by the Hawkes Bay Regional Council found almost half (48%), of the large wood debris volume measured originated from pine plantation forests, and 38% of the volume was from flood-protection willow or poplars. In total, at least 86% of the large wood debris volume measured originated from unstable, erosion-prone landscapes that vegetation was planted to protect.<sup>32</sup>

Trees brought down by wind and rain are an extreme risk to people, property and infrastructure.

Permanent exotic forestry is still a relatively recent new land-use option and its implications will only be properly understood with time and greater experience.<sup>33</sup> As noted above, the model is based on an expectation that the exotic pines (which have an average lifespan of 80-90 years) will degrade over time and, in the meantime, native forest will naturally grow up underneath and become a self-sustaining forest.<sup>34</sup> Scientists are divided, however, on whether this will in fact happen, with a number of them highlighting that pines typically suppress undergrowth. If regeneration does not take place, permanent exotic forestry would leave New Zealand's countryside scattered with degenerating and decaying exotic pines.

Without careful management, exotic forests can harm biodiversity if they are planted at the expense of indigenous habitats for flora and fauna. During the last decade, for instance, exotic afforestation is understood to have caused a 4,000 ha reduction in indigenous scrub and shrubland.<sup>35</sup> Indigenous forests support thousands of native species, many of which are endangered – exotic forests do not come remotely close to matching this scale of biodiversity.

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30. Diaz-Rainey and Tulloch (2018)

35. MPI (2022A)

31. MPI (2022B).

32. Interpine Innovation (2023). Cyclone Gabrielle: Post Event Wood Debris Assessment – Hawke's Bay.

33. MPI (2022B).

34. MPI (2022C).

# What can be done about it?

If left unchecked, the current structure of the ETS will set New Zealand back economically, socially, and environmentally, and the time for policy change is now.

Today's choices will shape New Zealand's land use patterns long into the future, and action must be taken as soon as practicable, before the economic and environmental costs are too great to remedy. Decisions made today are locked in for the lifespan of the forest because of the nature of the sector, and the life-cycle of trees.<sup>36,37</sup>

## Policy options – longlist

There are a number of policy options at the Government's disposal to drive the change that is required, many of which have been put forward in previous advice from officials and stakeholders.

First, we considered wider changes to the New Zealand ETS and forestry settings. There are many options to limit the supply of forestry units into the scheme as well as the demand for (or use of) these units by emitters. Setting changes will need to ensure that incentives in the New Zealand ETS align with emissions reduction targets. Ideally, settings would also support adoption of planting types and rates as recommended by the Climate Change Commission. Making these setting changes in practice could be challenging to complete given the technical and political nature of many of the options. Broader ETS forestry settings we considered included:

- Limiting the supply of forestry units in the scheme;
- Restricting demand by altering the exchange rate for Forestry NZUs or requiring additional levies for forest units;
- Limiting the proportion of forestry units that emitters can surrender; and
- Moving forestry out of the ETS into a separate project-based mechanism or a separate methane/tree offset market.

In addition to changing the 'supply' and 'demand' forestry related settings in the scheme, there are other levers in the ETS that could be used which could influence forest planting as driven by the New Zealand ETS. These changes aim to align incentives with emission reduction targets, but their implementation might be challenging due to technical and political factors. The options we considered included:

- Limiting the ability to bank forestry NZUs; and
- Opening forestry NZUs to other countries' ETSs. These options could further influence forest planting driven by the New Zealand ETS.

Finally, we considered amendments to the Permanent Forestry Category to limit the entry or participation requirements of those entered in, or entering into, the permanent forest category of the New Zealand ETS. Changes to this category could be made faster than other wider changes to the New Zealand ETS but will not prevent further planting of production forests from displacing gross emissions reductions. The permanent forestry category, proposals we considered included:

- Limiting the entry or participation of certain entities;
- Implementing restrictions on exotic species, possibly with exceptions;
- Imposing bond requirements for those establishing exotic forests transitioning into natives;
- Limiting the amount of land eligible for this category; and
- Introducing a standards regime for all participants.

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36. MPI (2022B).

37. MPI (2022C).

## Policy design principles

The list of options was narrowed down to a shortlist by applying the following policy design principles:

- i. **There is no silver bullet – target the area of greatest need.** No single policy initiative will address every problematic aspect of forestry offsets in the ETS. The Government must prioritise initiatives that address the areas of greatest urgency, and that can have the greatest impact. Permanent exotic forestry is quickly emerging as the major driver of afforestation, and initial policy interventions must focus on rebalancing ETS incentives so they do not weigh so heavily in favour of permanent exotic forestry. While, as noted by the Climate Change Commission in its most recent draft advice, it is likely that more fundamental changes to the ETS will ultimately be required if we are to focus on gross emissions,<sup>38</sup> these changes will be more complex and will take longer to develop and implement. They should be approached as a ‘slow burn’, in the context of a wider conversation about the role of forestry in New Zealand’s climate change response.
- ii. **Avoid extremes.** In remedying the current system, we must not swing from one extreme to the other; that is to say, from a zero-restrictions framework to a complete ban on forestry in the ETS or exotics in the permanent category in the ETS. There is still a critical role for contained and controlled permanent exotic forestry to play if New Zealand is to achieve its emissions reduction targets – the trick is to make sure that role is part of a scheme that works in the best interests of local communities and the country as a whole.
- iii. **Recognise the need for nuance.** Getting the best possible outcomes for New Zealand will require a flexible framework, and practical, balanced solutions (including, among other elements, sensible exemptions).
- iv. **Listen to the experts.** The issues broached in this report have already been considered by government officials, in particular MPI and the Climate Change Commission, and the strong recommendation is that ETS incentives must be moved away from including exotics in the permanent category of the ETS.
- v. **Address both supply and demand.** The current situation involves two separate market failures in the ETS; one on the supply-side and one on the demand-side. No single intervention will suffice, and policy levers must be pulled that both limit the volume of NZUs that can be generated (supply-side interventions), and control how those NZUs can be used once in the system (demand-side interventions).

## Policy shortlist

Based on these principles, we propose a shortlist of six policy options which are examined in greater detail, consisting of four supply-side options and two demand-side options. Most of these options focus on changes to the permanent forest category of the NZ ETS, reflecting the fact that the permanent exotic forestry represents the area of greatest need for reforms.

### The supply-side options are:

#### **Option 1: Restrict exotic forestry in the New Zealand ETS**

This option proposes to remove the ability to register any new exotic forestry in the New Zealand ETS entirely. This would mean that new exotic forestry (such as *Pinus radiata*, other conifers, or exotic hardwoods) would not be eligible to be enrolled in the New Zealand ETS for afforestation of deforestation activities.

For the avoidance of doubt, new indigenous forestry could continue to enrol in the New Zealand ETS, because these species contribute to indigenous, restorative, and regenerative biodiversity for New Zealand.

#### **Option 2: Remove exotics from the Permanent Forestry Category (with exemptions)**

Under this option, exotic species would no longer be able to register in the Permanent Forestry Category, except under specific circumstances.

Those circumstances could include situations where controlled exotic planting will deliver environmental or economic benefits that would otherwise not be possible, such as on erosion-prone land or on marginal land where no productive activity is possible, or where it will help the Crown to achieve its Te Tiriti obligations (noting that Māori freehold land has

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38. CCC (2023).

different characteristics to general title land which can make it well-suited to permanent forestry).<sup>39</sup>

Exemptions could also include a 'grandparenting' approach to exotic forestry currently registered in the Permanent Forestry Sink Initiative, which would allow exotic forestry from that category to transition into the new Permanent Forestry Category.

### **Option 3: Reduce the rate at which exotic forestry earns NZUs**

This option would involve reducing the carbon stock rate for permanent exotic forestry – that is to say, the rate at which NZUs are earned for every tonne of carbon captured. The suggestion for further investigation to reduce the carbon stock rate was part of the Climate Change Commission's 2021 report.<sup>40</sup>

### **Option 4: Limit permanent exotic forestry by land area**

This option would see a limit placed on the overall area of permanent exotic forestry that could be registered in the ETS each year. While the Climate Change Commission suggested limiting the overall area of all types of forestry, this approach would maintain an incentive to plant permanent indigenous forests, which avoid many of the potential negative impacts of exotic forests, as discussed above.<sup>41</sup>

### **The demand-side options are:**

#### **Option 5: Permanent exotic forestry levy**

This option proposes to introduce an additional levy on ETS participants who surrender permanent exotic forestry units. The levy should be based on a nominal figure, rather than a proportion of the value of an NZU, given the likelihood of significant increases in the value of NZUs in the future (which may make the levy unworkable).

The levy on exotic forestry emissions serves three primary roles:

1. It provides a funding mechanism for alternative emission reduction activities, like nature-based or indigenous forestry methods, and research into innovative emission-reducing technologies.
2. It internalizes external costs of potential environmental events associated with exotic forestry, such as clean-ups post natural disasters. This inclusion of external costs gives a more accurate reflection of the true cost of exotic forestry activities.
3. With NZUs being fungible for New Zealand ETS surrender obligations, the levy could decrease demand for units from exotic forestry, thus encouraging the surrender of other types of NZUs, diversifying overall emission reduction efforts.

#### **Option 6: Limit permanent exotic forestry offsets, as a proportion of total NZUs surrendered**

This option would see a limit placed on the use of permanent exotic forestry offsets, as a proportion of the total units surrendered by ETS participants each year. As noted above, offset limits are a common feature of carbon-trading schemes around the world and are typically set in the 1-10% range. For reasons of consistency, we recommend that a similar range be considered in the ETS.

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39. MPI (2022A).

40. CCC (2021).

41. CCC (2021).

## Assessment criteria

In order to compare the options against each other, and to identify preferred options, a high-level assessment of the shortlisted options was conducted, based on an assessment criterion developed by MPI (to assess policy tools to manage exotic afforestation incentives).<sup>42</sup> The criteria include the following:

- Meets emission budgets and targets;
- Supports gross emissions reductions;
- Supports regional economies and jobs;
- Contributes to gross domestic product (GDP) and purchasing power parity (PPP);
- Enables Land flexibility;
- Preserves the integrity and operation of the ETS;
- Long-term strategic focus;
- Provides environmental benefits;
- Supports indigenous biodiversity;
- Fair and level playing field for all;
- Speed of implementation; and
- Alignment with international schemes

The full assessment for all six policy options is attached in [Appendix 1](#).

## Preferred Options

The assessment shows that, among the supply-side options, Option 2 performs most strongly against the criteria, while the same is true of Option 6 on the demand-side. Our two preferred options, therefore, are:

- **Option 2: Remove exotics from the Permanent Forestry Category (with exemptions); and**
- **Option 6: Limit permanent exotic forestry offsets, as a proportion of total NZUs surrendered**

## Impact analysis

Based on the high-level analysis, it is our view that the combination of Options 2 and 6 would address many of the problems generated by the current incentives for forestry offsets in the ETS and provide the basis for an approach that can bridge divergent stakeholder views and achieve consensus on the way forward. The most important impacts can be described as follows:

- Reduced displacement.** The current wave of conversions to permanent exotic forestry would be cut short. Relative to the status quo, more land would remain in sheep and beef farming and in production forestry, which would support growth, employment and social cohesion for local communities, and support GDP growth and export receipts at the national level.
- Emissions targets met, without overshooting.** New Zealand could achieve its net emissions reduction targets, over the next 15 years and through to 2050, without significantly overshooting the mark. Pathways with little or no overshoot are more likely to deliver the best overall social, economic, and environmental outcomes.<sup>43</sup>

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42. MPI (2022C).

43. CCC (2021).

- iii. **Flexibility.** Landowners would retain the ability to switch between land uses, whether production forestry, permanent indigenous forestry, farming of some kind, or otherwise. This would support primary sector diversification, and the economic resilience of the wider New Zealand economy. Allowing permanent exotic forests to be planted in situations where no other return was available would maximise the economic opportunity for rural communities, and for New Zealand.
- iv. **Better allocation of the cost of climate change.** By limiting the supply and demand for permanent exotic forestry offsets, the ETS would be geared more towards gross emissions reduction; a stronger link would be established between those who pay for emissions reduction, and those who benefit from it. However, other additional changes would likely be required to achieve the desired 'balance' between emissions reductions and removals.
- v. **Alignment with international schemes.** The structure of the ETS (in terms of the use of offsets) would be brought closer to that of other schemes around the world, noting some significant differences regarding the inclusion of forestry in the scheme generally would still remain. Linking would enable ETS participants to benefit from access to the global market for tradable units, which would have benefits to the economy.
- vi. **Environmental benefits.** New Zealand would avoid many of the negative environmental and resilience impacts associated with permanent exotic forestry (debris, fire, disease, pests, the spread of wilding pines). Meanwhile, the role of indigenous forestry would increase significantly (for carbon farming and, potentially, for harvest), bringing benefits in terms of the diversity of native flora and fauna.

As noted in policy design principle (i) above, these policy options should form the basis of the immediate response and should be rolled out while work is undertaken on more fundamental changes to the ETS.

More detailed research, including economic modelling, will be required to quantify the impacts, and we recommend that this form part of the next phase of analysis.

# Implementation

## Law changes

The two preferred policy options would require a number of changes to the domestic legal framework around climate change, and should be subject to a thorough cost-benefit analysis. Option 2 would require amendments to the Climate Change Response Act 2002 (Climate Act), to establish exemptions, update the definition of 'permanent forestry', and provide for treatment of future forest compositions (the Climate Act currently defines forests based on the predominant species in a hectare).

Following on from this, the Climate Change (Forestry) Regulations 2022 would need to be amended to reflect the requirement for evidence of forest species, and forests would need to be checked upon registration as well as on an on-going basis to ensure native transition.

Under Option 6, amendments to the Climate Act would be required to provide for the surrender of different types of NZUs, and to restrict the quantity of certain types of NZUs being surrendered (those relating to permanent forestry). The Environmental Protection Agency's existing categorisation of NZUs would provide a useful starting point for the development of this framework.

## International obligations

New Zealand's climate change obligations under international law are determined by our Nationally Determined Contribution (NDC), which sets our domestic emissions reduction target. Providing, as anticipated, those targets are met through to 2030, the two preferred policy options would not affect our commitments and obligations under the Paris Agreement 2016, and thus no amendments to the NDC would be required.

## Moratorium

We recommend that a moratorium be put in place to restrict the Permanent Forest Category to indigenous forests while the exemptions included in Option 2 are worked through. This would allow for the changes to become effective immediately, while giving the Government time to consider where and what types of exotic forests are desirable in the category.

The moratorium could be structured in a number of different ways. For instance, it could end automatically after a certain period; alternatively, it could require a decision to be made at the end of the period about whether to end or continue.<sup>44</sup>

## Timeframe

Following the cost-benefit analysis recommended above, we expect that the law changes could be drafted and enacted within 12 months. The Government has already consulted extensively on proposals like these.<sup>45</sup> Realistically, the time required to implement these changes is down to the will of the Government of the day.

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44. MPI (2022C).

45. See Cabinet Minute *New Zealand Emissions Trading Scheme: Next Steps on the Permanent Forest Category* (19 September 2022) CAB-22-MIN-0390.01.

# Next steps

Through the release of this report, B+LNZ seeks to set in motion a national discussion on the role of forestry offsets in the ETS. With that in mind, we recommend the following steps be taken.

## Stakeholder engagement

B+LNZ should seek to move as quickly as possible to socialise the report with key stakeholders, including:

- Relevant government agencies – MPI, Te Uru Rakau – New Zealand Forest Service, Climate Change Commission, Environmental Protection Agency;
- Māori (iwi forestry trusts, in particular);
- Production foresters;
- Carbon farming interests; and
- Rural communities where conversions to permanent exotic carbon farming have been concentrated

The purpose of the engagement will be to build awareness and understanding of the concerns raised in this report and obtain feedback on the proposed policy approach. Stakeholder insights will shed light on how the policy options will need to be refined to deliver the best possible outcomes and secure broad-based support for action.

The need for engagement of this kind is all-the-more pressing, given divergent and often strongly held stakeholder views on the matter.

## Further analysis

At the same time, we recommend that B+LNZ work closely with the officials (including MPI, MfE, and the Environmental Protection Agency) to further develop key aspects of the report, in particular the detail around the preferred policy options. As noted above, in-depth economic analysis is also required as soon as practicable, to better understand the impacts of the proposed policy options.

## Wider discussion

In presenting a solution to one of the most obvious and pressing shortcomings in the design of the ETS, this report points to, but does not seek to address, fundamental questions about our approach to reducing emissions: namely, **what is the role of emissions pricing as part of a climate change response, and how should New Zealand strike a balance between net and gross emissions reduction? The** Government is currently considering whether ETS changes are needed to provide a stronger incentive for businesses to transition away from fossil fuels, while also supporting greenhouse gas removals.<sup>46</sup>

Second, **what role should forests, and forestry offsets, play in emissions reduction? Is it appropriate to continue to rely on forestry in the way we have? What alternative models exist? Looking ahead, what is the optimal mix of forest types – permanent and harvest, indigenous and exotic? How can we ensure that those forests complement, rather than simply co-exist with, sheep and beef farming, and other productive land uses?**

B+LNZ should **use this report as the catalyst for a discussion on these underlying, strategic issues.**

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46. See MfE (2023A).



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# Appendix 1: Assessment of short-listed policy options

	Supply-side options				Demand-side options	
Criteria	Option 1 Restrict exotic forestry from the New Zealand ETS	Option 2 Remove exotics from the Permanent Forestry Category (with exemptions)	Option 3 Reduce the rate exotics forestry earn units	Option 4 Limit the overall area of forestry registered in the New Zealand ETS	Option 5 Exotic forestry levy	Option 6 Limit permanent exotic forestry offsets, as a proportion of total NZUs surrendered
Meets emission budgets and targets	-	+	+	+	+	+
	May undershoot emissions later budgets without more gross emission reductions	Can manage exemptions to optimally achieve emissions budgets	Can manage exemptions to optimally achieve emissions budgets	Can manage exemptions to optimally achieve emissions budgets	Forestry fee can be managed to optimally incentivise planting to meet emission reduction budgets	Limits can be managed to meet emission reduction budgets
Supports gross emissions reductions	+	+	0	0	+	+
	Limits oversupply of forestry units to incentivise gross emission reductions	Incentivises more gross emission reductions instead of net reductions	Incentivises net emissions, not gross emissions	Incentivises net emissions, not gross emissions	Increases incentives for gross emissions reductions	Increases incentives for gross emissions reductions
Supports regional economies and jobs	+	+	+	+	+	+
	Creates jobs by encouraging production forestry and/or sheep and beef farming	Creates jobs by encouraging production forestry and/or sheep and beef farming. Exemptions can tailor for regional characteristics	Reduces incentive both permanent and production forestry, but incentivises alternative, productive land uses that creates more jobs	Reduces land available for permanent and production forestry, but incentivises alternative, productive land uses that creates more jobs	Reduces incentive both permanent and production forestry, but incentivises alternative, productive land uses that creates more jobs	Indirectly incentivises alternative, productive land uses that creates more jobs
Contributes to GDP and PPP	++	+	+	+	+	+
	Improves GDP via increased production forestry and/or sheep and beef farming exports	Improves GDP via increased production forestry and/or sheep and beef farming exports	increased incentive for alternative land uses	Exotic forestry provides little GDP contribution per hectare on registered land. Increases land availability for other uses.	Reduces incentive both permanent and production forestry, but increases incentives for alternative land use which contribute to GDP	Lower demand for permanent exotic units incentivises alternative, productive land uses that contribute to GDP via exports
Land flexibility	++	+	+	-	+	+
	Encourages land used for most productive purposes, beyond ETS incentives.	Encourages productive use land where viable. Minimises the risk of future sunk costs. Exotics can be exempted where suited	Can increase land flexibility if NPV per hectare comparable with competing land uses	Limits land-use options where forestry may be of some benefits, such as preventing soil erosion. Existing forestry land might artificially increase in value given it's scarcity, reducing land flexibility further.	Encourages land to be used for most productive purposes beyond solely ETS price signals	Encourages land to be used for most productive purposes beyond solely permanent exotic planting
Preserves the integrity and operation of the New Zealand ETS	++	+	+	0	+	+
	Prevents oversupply of units and suppressed NZU prices from uncontrolled exotic forestry	Unit oversupply, stockpile and price suppression from uncontrolled exotic forestry can be managed.	Can limit unit oversupply and NZU price suppression	Does not affect the incentive to plant more exotics, but restricts the number of overall forestry units	Reduces the skewed incentives for permanent exotic forestry, which provides more efficient price signals for emissions	The ETS moves closer to a cap and trade system by reducing financial incentives to plant permanent exotic forestry. Other units for all participants can be procured via primary auctions and allocations

Long-term strategic focus	+	+	-	-	+	+
	Incentivises long-term, intergenerational, and native forestry carbon sinks	Incentivises long-term, intergenerational, and native forestry carbon sinks	Any exotics remains one-off, short-term solution with a shorter forest life than natives	Any exotics remains one-off, short-term solution with a shorter forest life than natives	Slightly reduces the incentives for short-term, exotic forestry plantation	Drives gross emissions reductions, but retains an incentive for productive and/or indigenous forestry
Provides environmental benefits	+	++	+	+	+	+
	Reduces pest, disease, fire, and wilding risks	Reduces pest, disease, fire, and wilding risks. Exotics can be planted in erosion prone regions	Could reduce the extent of exotic plantation and therefore pest, disease, fire, and wilding risk	Slows down the spread of pest, disease, fire, and wilding risk from exotic forests	Reduces exotic forestry incentives therefore associated risks	Reduces risks associated with permanent exotic forestry
Supports indigenous biodiversity	++	++	+	0	++	++
	Reduces incentive for monoculture forests. Native forests can be incentivised via the New Zealand ETS	Reduces incentive for monoculture forest. Native forests can be incentivised via the New Zealand ETS.	Could disincentive exotic forestry planting and therefore create space for indigenous forests	Does not affect the incentive to plant more exotics	Provides some financial incentive for indigenous forests and biodiversity. Exotics levy can be recycled to support indigenous biodiversity programmes	Reduces incentive for monoculture forest. Native forests can be incentivised via the New Zealand ETS.
Fair and level playing field for all	++	++	+	--	+	+
	Limits skewed incentives for permanent exotic forestry	Limits skewed incentives for permanent exotic forestry	Could be amended to make exotic forests comparable to other land uses	Does not address the skewed financial incentives for exotic forestry. Determining eligible land can create inequality among foresters	Can better align the incentives among exotic forestry with alternative land uses	Limits skewed incentives for permanent exotic forestry
Speed of implementation	--	+	--	--	-	-
	Likely challenging to implement due to blunt solution	Exemptions can be tailored to unique circumstances	Likely challenging to implement due to blunt solution	Likely to be challenging to implement due to displacing native forests	Likely to face strong challenges from New Zealand ETS market participants	Likely to face strong challenges from New Zealand ETS market participants
Alignment with international schemes	+	++	-	-	--	++
	Closer alignment to international ETS settings	More comparable with international ETS allow a small amount of forestry offsets.	Carbon stock accounting would not align with international measures	Most ETS limit the use of offsets, rather than issuance of offsets	Does not align with most ETS designs	More comparable with international ETS allow a small amount of forestry offsets.
Overall recommendation	+	<b>(Preferred)++</b>	-	-	+	<b>(Preferred)++</b>
	Improves ESG, but is a blunt solution	Improves ESG outcomes and can be tailored to unique circumstances. Continues to incentivise native afforestation.	Could reduce the incentives to plant exotics but does not support long-term emission reductions	Does not address the skewed incentives to plant exotic forests. Can create inequality among landowners.	Likely to reduce the future oversupply of exotic forestry units. Provides some incentive for productive land use and indigenous biodiversity. Exotics levy can be recycled to support indigenous biodiversity programmes	Likely to reduce the future oversupply of permanent exotic forestry units. Drives gross emission reductions. Reduces risk of sunk cost permanent exotic forestry.