Submission on the National direction for plantation and exotic carbon afforestation discussion paper

Joint submission by

Beef + Lamb New Zealand and Federated Farmers of New Zealand

18 November 2022

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SUBMISSION ON THE NATIONAL DIRECTION FOR PLANTATION AND EXOTIC CARBON AFFORESTATION DISCUSSION PAPER

TO: Ministry for Primary Industries and the Ministry for the Environment

DATE: 18 November 2022

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ABOUT BEEF AND LAMB NEW ZEALAND

Beef +Lamb New Zealand (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. B+LNZ has the mandate to submit on behalf of its levy-payers on matters that affect them.

B+ LNZ represents around 9,000 farming businesses, providing around 35,000 jobs across New Zealand. The sector is a significant contributor to New Zealand's economic wellbeing. Export revenue from New Zealand's red meat industry for the year ending 30 September 2022 was $11.8billion.

B+LNZ actively works across numerous environmental programmes, building farmers' capability and capacity in environmental management, supporting sustainable product development, influencing government policy, and building on farmers' ethos of environmental stewardship, as part of a vibrant, resilient, and profitable sector based around thriving communities.

ABOUT FEDERATED FARMERS

Federated Farmers of New Zealand (Federated Farmers) is a membership organisation, which is mandated by its members to advocate on their behalf and ensure representation of their views. Federated Farmers does not collect a compulsory levy under the commodities levy act and is funded from voluntary membership.

Federated Farmers represents rural and farming businesses throughout New Zealand. We have a long and proud history of representing the needs and interests of New Zealand's farmers

Federated Farmers aims to empower farmers to excel in farming. Our key strategic outcomes include provision for an economic and social environment within which:

- Our members may operate their business in a fair and flexible commercial environment;
- Our members' families and their staff have access to services essential to the needs of a vibrant rural community; and
- Our members adopt responsible management and sustainable food production practices.

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SUMMARY OF RECOMMENDATIONS

Federated Farmers and B+LNZ:

Strongly support urgent action on these current proposals and a wider work programme assessing the role of forestry in the New Zealand Emissions Trading Scheme (NZ ETS).

Support the proposals to extend the scope of the Resource Management Act (RMA) regulatory framework to include exotic carbon forests and to improve wildfire management.

Support the need to further examine and adjust the regulatory, financial, and advisory mechanisms to better manage the adverse impacts associated with NZ ETS driven exotic afforestation

Encourage the Government to consider a wide variety of policy options and tools to ensure that the effects of carbon forestry are best managed and that opportunities are able to be realised.

Support amending the National Environmental Standards for Plantation Forestry (NES-PF) to include a new forest category – 'exotic carbon forest'

Support amending the NES-PF to require Forest Management Plans (FMP) for exotic carbon forests

Encourage the Government to ensure that these changes will manage the environmental effects of new *and existing* exotic carbon forests

Support the design and implementation of a new national consenting requirement to manage the social, cultural, and economic impacts of plantation and exotic carbon forestry (Option 2).

Recommend further analysis and consultation (before June 2023) on the specific provisions that would apply under Option 2, National Direction for Afforestation.

Recommend additional consultation and analysis on how best to ensure Option 2 can be effectively implemented without unduly impacting on farmers wishing to integrate carbon forestry within their operations.

Note that further analysis is required to determine the precise hectare thresholds for permitted, restricted discretionary, and discretionary activities.

Support in principle the National Direction proposed in Option 2, subject to analysis and consultation on the details of the National Direction

Support the provision of additional guidance and support for councils to enable communities to better determine appropriate locations and scale of forests regardless of whether local or national direction is provided for.

Support the clarification of councils' ability to make rules for matters outside of the NES-PF

Support the clarification of councils' ability to make more stringent rules than established by the NES-PF.

Support amending the NES-PF to add a new requirement for plantation and carbon forests over 1 hectare to have a Wildfire Risk Management Plan.

Note that we encourage officials to seek other affected parties' views, especially Fire and Emergency New Zealand, on the need for a wildfire risk management plan for areas over 1ha and confirm that areas this small would benefit from additional regulatory burden given the risk posed.

Support the proposals to address matters identified through the Year One Review of the NES-PF to better enable foresters and councils to manage the environmental effects of forestry.

Support the proposed changes to wilding tree risk management, slash management, alignment with other tools (the NES-Freshwater), and minor amendments to address operational issues.

Strongly support the establishment of a moratorium for the inclusion of exotic species in the 'Permanent Forest' category of the NZ ETS, in place for at least two years (1 Jan 2025), to give sufficient time for the Government to:

- implement the preferred options; and
- conduct further work with farmers, the forestry and agricultural industries, carbon foresters, Iwi, and particularly affected community groups to modify the NZ ETS (along with other policy tools and mechanisms), to better address the negative social, economic, environmental and cultural impacts of large-scale afforestation.

Strongly encourage that amendments be made to the NZ ETS to limit how many forestry units participants can surrender for non-forestry related activities. New Zealand remains the only country in the world allowing ETS participants to offset 100 per cent of their surrender obligations through forestry.

Strongly encourage a full review of the NZ ETS focusing on how the NZ ETS might better drive afforestation (native and exotic) that is integrated within existing landscapes and land uses and identify how risks associated with land use change are managed, and co-benefits are best realised.

GENERAL COMMENTS AND BACKGROUND

1) B+LNZ and Federated Farmers (collectively "we") welcome the opportunity to submit to the Ministry for Primary Industries (MPI) on the 'National direction for plantation and exotic carbon afforestation' discussion paper (the discussion paper).

2) This joint submission reflects our shared concerns regarding the unsustainable spike in carbon farming and blanket afforestation. We support many of the preferred options as presented within the discussion document to expand the scope of the National Environmental Standards for Plantation Forestry and to create new National Direction. We request further engagement with officials, and others, on provisions at the national and regional scale that can support communities' aspirations for integrated carbon forestry plantings that support a vibrant sheep and beef sector.

3) Throughout this submission the terms 'carbon farming' and 'carbon forestry' are used to refer to any forestry that is entered into the ETS. Any forestry registered into the ETS receives the majority of its income from Government issued carbon credits and it is therefore appropriate to refer to this forestry as 'carbon forestry', be it carbon-only forestry or carbon and timber forestry.

4) These forests will have a role to play in meeting our multiple environmental objectives of carbon removals, biodiversity provision, and erosion control. They also come with risks associated with pests, disease, and fire. We must balance the need for national or catchment level aspirations with what communities are actually able to bear in terms of the scale, pace, and style of change they are experiencing. 'Right Tree, right place' needs to become more than a slogan in New Zealand forestry policy.

Our context

5) 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 manage 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% of New Zealand's remaining native vegetation. This places NZ sheep and beef farmers second only to the Crown estate as kaitiaki of NZ native vegetation.

6) Additionally, there is 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 CO2-e (Ministry for the Environment) to 10.4 – 19.7 Mt CO2-e (AUT). [1]

7) Previously, Te Uru Rākau – New Zealand Forest Service has identified 2.8 million hectares of farmland suited to afforestation.[2] Based on the emissions pricing pathways used by the Climate Change Commission, MPI has estimated that about 650,000ha of new plantings would be driven by current settings with about half of this (350,000ha) in permanent forest by the end of 2030. It is likely that much of this planting will occur on previously efficiently farmed sheep and beef land.

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[1] 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

[2] https://www.beehive.govt.nz/release/new-rules-proposed-carbon-farming-exotic-forests-future

8) 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 5million hectares of grassland used for sheep, beef, and deer production. If the Climate Change Commission recommendations are realised and 350,000ha of exotic forest is established by 2030, this would amount to about 7% of the current sheep, beef, and deer grassland area. This afforestation would displace $441million at the farm gate and cuts export receipts by $637 million.

9) MPI also commissioned modelling on the impact of status quo settings. This includes the unfettered use of forestry offsets within the NZ ETS. If these projections are realised, about 1.6m hectares, or 23% of the total productive grassland sheep and beef land will go into trees by 2030.

10) It is unclear if MPI projections assume that whole farms will be converted or that integrated planting occurs. However, previous statements have highlighted that planting could occur on 'marginal' land. According to some, this is reasonable given the 'marginal' nature of some of this land and the pressure to use these lands to offset our long-lived gas (mostly fossil fuel) emissions.

11) We take issue with the mischaracterisation of 'marginal' land as being of low productive value. While LUC Class 7 land, for example, may have a smaller range of suitable uses, those uses may still be of high productive value, either as valuable components within wider farm systems or as entire farms – indeed some of New Zealand's best wines are grown on Class 7 land.

12) In a sheep and beef system, perceived 'marginal' land can play an important role in grazing stock and providing shelter at key times of the year. It is important that farmers are able to maintain these options as they provide opportunities for adapting farming systems as part of climate resilience.

13) Our farmers have been actively planting and maintaining integrated vegetation to control erosion, provide habitat, provide shade, and shelter for their animals, and limit their impact on Freshwater health. Via catchment groups, regional councils, and their own initiative, landowners planted over 19,000,000 indigenous trees and close to 37,000,000 exotic trees thanks to the support of the One Billion Trees programmes.[3]

14) Clearly, sheep and beef farmers have been active stewards of their land and are key partners when trying to increase planting and management of woody vegetation. Thus, farmers are a key part of New Zealand achieving its climate goals. As part of this, we are working to ensure New Zealand's transition is achieved by enabling livelihood pathways that support the continued thriving of communities, based on improved economic and social wellbeing outcomes.

15) Evidence[4] shows that New Zealand red meat farmers are some of the most efficient and effective producers in the world. By planting too much of our land that can provide quality food, we are limiting our ability to effectively provide quality protein to a growing global population as well as reducing export revenue, so critical for New Zealand's economic and

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[3] Pg 20, Ministry for Primary Industries. 2022. One billion trees fund: 30 month monitoring and evaluation report. Retrieved April 20, 2022.

[4] See: https://beeflambnz.com/sites/default/files/levies/files/LCA_Lit_review.pdf

social wellbeing.. We are also not managing our land resources in a way that is resilient to the impacts of climate change with unmanaged blanket monoculture pine trees consuming large amounts of freshwater and posing major fire risks.

16) Farmers are a major stakeholder in the New Zealand forestry sector. Many farmers take great care to integrate vegetation into their farming systems, often at a great time and financial commitment.

17) Increasing vegetation within in farming systems has the potential to deliver a wide variety of benefits such as providing shade and shelter to livestock, providing a short-term feed source for livestock during drought, improving biodiversity outcomes, and improving water quality outcomes. As highlighted, many farmers are already providing these benefits. We do not want to see these benefits curtailed at the expense of a siloed vision for forestry as the core means of offsetting fossil fuel emissions that must be reduced in order to best address our climate crisis.

18) The current policy settings that are artificially incentivising the blanket afforestation of productive sheep and beef farms are in clear contradiction to the Paris Agreement. The parties to this agreement, including New Zealand, agreed to "*Recognizing the fundamental priority of safeguarding food security and ending hunger, and the particular vulnerabilities of food production systems to the adverse impacts of climate change*"[5]. Parties also agreed to "*Increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production"*[6] Artificially incentivising the wholesale conversion of productive farmland into blanket forestry is misaligned with these stated Paris Agreement goals.

The risks and impacts of unmanaged carbon forestry

19) How communities are supported as part of our transition to a low emissions society will need to be determined by the communities themselves as informed by national visions[7] for change. Right now, there is no clear vision or objectives guiding New Zealand's use of exotic, or native, vegetation to deliver on the multiple opportunities that are clearly present.

20) We must provide for the ability for local communities to say 'no' to land use change that does not align with their community or personal aspirations for their lands and catchment resources. Central government's lack of control of the (central government designed) NZ ETS or forward planning is not something that local communities should bear the consequences of. Given the pressures already on our communities and councils to implement the raft of legislative burdens on them, we must be conscious of *how* change is expected to occur as much as *what* levels of afforestation are expected. Delaying these hard decisions only means that the consequences become more pronounced over time.

21) We have choices about how we transition to a low-emissions economy. As recommended by the Climate Change Commission, we must be conscious of both when and where

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[5] [5] Paris Agreement, United Nations Treaty Collection. 8 July 2016, available at <https://unfccc.int/files/meetings/paris_nov_2015/application/pdf/paris_agreement_english_.pdf>

[6] Paris Agreement, United Nations Treaty Collection. 8 July 2016, available at <https://unfccc.int/files/meetings/paris_nov_2015/application/pdf/paris_agreement_english_.pdf>

[7] The vision for Aotearoa New Zealand's forests as set out in the 2021 Emissions Reduction Plan is: "By 2050, Aotearoa New Zealand has a sustainable and diverse forest estate that provides a renewable resource to support our transition to a low-emissions economy. Forestry will contribute to global efforts to address climate change and emissions reductions beyond 2050, while building sustainable communities, resilient landscapes, and a legacy for future generations to thrive."

plantings occur. We cannot have the negative consequences of using trees as a short-term fix to our long term need to transition to a low-emissions and warming neutral future go unmanaged. As highlighted by researchers assessing the impacts of afforestation on rural communities in the Taraua district[8]:

> *"While the discussion appears to be about which tree to plant where, it is in fact a discussion about land use change and what is considered to be effective land use. How individuals and communities manage land use change, and how to encourage and enable diverse vibrant economically-driven rural communities, underpins this ongoing discussion and debate." Pg 6.*

22) Currently policy settings are not providing the time nor space for effective conversations to happen. Rural communities understand the opportunities that mosaic landscapes can provide but the pace of change and a lack of control of this change makes individuals and groups "feel they are not part of these large-scale decisions, their voices are not being heard, and they are not included in the changes that impact on their way of life and the lives of their families/whanau and their mokopuna (pg 7)."

23) We must consider the real impact that land use change is having on our short-term and long-term aspirations and resilience to climate change. We must have alternative strategies to diversify the options presented to our farmers so that multiple objectives can be realised. This means encouraging carbon sequestration, along with increased habitat and connectivity for native fauna, and improvement of freshwater ecosystem health.

24) We must have a unified vision for how we would like our land to be used to meet multiple economic, social, cultural, environmental, and climatic objectives. This will inform the choices that central government, councils, and communities make about use of carbon forestry as an offsetting strategy and what constraints are placed on its location, scale, and management due to environmental, economic, social, or cultural concerns.

25) The development of this collective vision will take concerted effort and timely action. Even without it however, legislative changes can begin to be drafted now. We do not have time to wait for another 1, 3, or 5 planting seasons to better manage the risks and impacts of carbon forestry. Thus, the proposed changes should be implemented at pace and a decision made on the use of a National Policy Tool or guidance done quickly.

26) There are many opportunities to work collaboratively in this space. We request to work directly with officials on these matters and to continue to engage with Ministers. In the meantime, we strongly encourage officials to draft the necessary legislative changes to implement the preferred options and provide advice at pace to councils on what national provisions, or guidance, they can expect.

The need for action

27) Carbon forestry comes with substantial risks and impacts that are not being effectively managed by government nor participants in the NZ ETS. This is especially the case of risks to community resilience and natural capital associated with large scale plantings of unmanaged blanket exotic forests.

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[8] https://www.tararuadc.govt.nz/__data/assets/pdf_file/0022/14980/The-Impacts-of-Afforestation-on-Rural-Communities-in-the-Tararua-District-March-2021.pdf

28) We are primarily concerned about the loss of jobs that occurs when productive sheep and beef farms are converted to pine plantations and the economic, social and cultural impacts of this. We are also concerned by the increased fire risk these exotic forests represent for rural communities and the potential for these plantations to harbour pest animals and tree diseases.

29) According to the Government's Discussion document and interim Regulatory Impact Statement on the proposal to remove exotics from the permanent forest sink category (citing a previously commissioned B+LNZ report from BakerAg and an additional report from PwC), permanent 'plant and walk away' planting regimes provide a significantly lesser contribution to employment and the economy as compared to other land uses, especially sheep and beef farming and plantation forestry. Along with reduced employment, the type of jobs available within the forestry sector will require significant travel across the country and provide limited opportunities for individuals to work within their home communities.

30) With increased afforestation, the export revenue will be nil from permanent exotic forests. On top of this, with less stock going through the works, there could be a significant impact on agricultural supply chains; affecting the viability of meat processing sites due to reduced supply. We are very concerned about the potential for decreases in the number of livestock going to processors triggering regional economic tipping points.

31) There has been enough forethought or proactive decision making to manage the risks to our rural communities and natural world.. A suite of artificial, distortionary government policies are leading to monocultural plantation forestry and replacing pastoral farms. This is not being driven by an independent 'market' where the government is conducting a 'light touch' approach towards its management. What we are seeing is directly driven by central government NZ ETS settings that many parties, including the Climate Change Commission, agree are not fit for purpose.

32) There is a growing amount of international evidence that challenges New Zealand's exotic forestry emission offsetting regime. The New Zealand Government's climate change strategy relies on two very problematic tools: offsetting emissions by purchasing currently non-existent international carbon credits, and offsetting emissions by incentivising increasing rates of blanket exotic monocultural afforestation domestically.

33) New Zealand's climate change policy approach is recklessly reliant on monoculture plantings to offset domestic emissions and to-be-developed international offsets that are likely to be in high demand from other nations and face significant hurdles to demonstrate their integrity .. As noted by Dame Anne Salmond:

> *"It is now beyond doubt that New Zealand's primary strategy for tackling climate change - offsetting through the Emissions Trading Scheme, with the financial incentives it gives to the large-scale planting of monocultures of exotic pine trees - runs in the opposite direction to international scientific advice.*
>
> *In the latest Intergovernmental Panel on Climate Change (AR6) report, for instance, released yesterday, the practice of "planting large scale non-native monocultures, which would lead to loss of biodiversity and poor climate change resilience" was placed among the 'Worst Practices and Negative Adaptation Trade-offs' for temperate forests…*

> *Above all, New Zealanders – politicians, officials, investors and Kiwis at large – need to be aware that global scientific advice recommends strongly against New Zealand's primary strategy for tackling climate change – large scale industrial tree plantations, both at home and abroad."*[9]

34) We support the NZ ETS as a primary means of achieving New Zealand's long-term climate goals. However, we do not support expansive monoculture afforestation as an outcome from the operation of the NZ ETS.

35) We do not think that exotic afforestation should be used by the Government as the dominant method for addressing New Zealand's carbon emissions profile. Rather, tree plantings should be used in such a way as to generate multiple outcomes across community wellbeing and natural capital parameters, in addition to generating carbon offsets, as part of wider options to decarbonise the economy.

36) Forestry, and carbon forestry have roles to play within farming landscapes and farming operations. However, we are seriously concerned about the current scale, pace, and style of planting..

37) We support increasing the integration of trees on farms under the principle of planting the 'right tree in the right place for the right purpose'. Unfortunately, current policy in New Zealand does not encourage the upholding of this often repeated principle. Rather, based on current settings and frameworks 'The right tree in the right place for the right purpose' seems to mean 'pine trees, anywhere for carbon credits'.

38) We note that this consultation document comes 24 months after the 2020 general election. In the lead-up to this election, the Labour Party pledged if re-elected it would take less than six months to protect productive farmland from the rampant spread of large-scale exotic tree planting across the country. [10]

39) We also note that this consultation comes after the Government's policy backflip regarding the 'Managing Exotic Forestry Incentives' discussion document. Regarding this decision by the Government to backdown on a plan to address the unsustainable spike in carbon-only exotic monocultural afforestation, Federated Farmers President Andrew Hoggard and Beef + Lamb New Zealand's President Andrew Morrison wrote in a joint article:

> *"The proposals to amend the ETS were not going to solve the problem of out-of-control, whole-farm conversions to carbon forestry but B+LNZ and Federated Farmers believe they were a step in the right direction and welcomed the Government finally promising to offer long-term clarity by a set date.*
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> *In their March discussion document, the Government finally acknowledged it needed to slow down carbon farming. While our two organisations think the measures they've proposed to date are just tinkering around the edges, at least there were some proposals on the table and at least our farmers would have known more by the year's end.*

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[9] https://www.newsroom.co.nz/ideasroom/anne-salmond-ipcc-report-condemns-forestry-use-planned-by-nz

[10] https://www.newshub.co.nz/home/rural/2020/07/labour-s-pledge-to-protect-farmland-from-carbon-forests-a-step-in-the-right-direction-but-question-marks-remain-federated-farmers.html

> *Feds and B+LNZ acknowledge that unpicking the web of blanket forestry incentives demands complex analysis, and that the implications for Māori landowners require particular attention, but we both supported the Government's proposed option of putting in place a moratorium while the details were worked out. Instead, the Government has decided to do nothing, rolling out the red carpet for speculators interested in fence-to-fence monocultural pine conversions across New Zealand.*
>
> *On July 28 Ministers Nash and Shaw sent a letter essentially advising submitters that it has kicked the critical carbon-only forestry issue to touch, informing stakeholders that it won't be sticking to its 2023 deadline.*
>
> *This letter came just one day after the Climate Change Commission released advice calling for an increased carbon price ceiling ($171 by 2023) and for the Government to do something to dull incentives for blanket forestry offsets."*[11]

40) We do not have confidence that the Government is thinking critically about the risks and impacts of the use of forestry offsets to meet its domestic and international emissions reduction targets.

The policy opportunities

41) We support the use of exotic trees, both permanent and in rotation, within an integrated landscapes approach, where land use and land type are matched, and natural resources utilised within environmental limits. To this end, we must use the existing regulatory structures to provide protection to the natural environment and regional communities while allowing for flexible land use, as well as improvements to our natural capital, economic, and social wellbeing over time.

42) We support a redesigned permanent forest category, and wider use of forestry within the NZ ETS which:

a) supports forests to deliver positive long-term outcomes as part of Aotearoa New Zealand's climate transition;
b) supports the transition of exotic forests to long-term indigenous carbon sinks;
c) holds forest owners accountable for delivering effective forest outcomes;
d) ensures effective financial management of forests over the long-term;
e) ensures forests meet environmental and other forest management best practice;
f) manages risks to rural communities from changing land use; and additionally
g) enhances the climate resilience of rural communities, and
h) supports Māori to realise aspirations for their land.

43) We want to ensure that these objectives can be met while also providing for resilient and thriving rural communities (not just management of 'risks' to them).

[11] https://www.fedsnews.co.nz/government-backflip-on-carbon-farming-baffling/

44) As noted by MPI/MfE officials in their Regulatory Impact Assessment on the proposed changes to the permanent forest category, "While the resource management system can address environmental risks and locational issues it will not address the incentive provided by the NZ ETS, which is the key driver of permanent exotic afforestation" (pg 35).[12] Changes must be made to the current NZ ETS settings.

45) It is clear that Government officials recognise that the current settings do not effectively manage the risks of rampant carbon forestry as driven by the NZ ETS. However, we are not confident that Government Ministers agree with their concerns and instead are being strongly influenced by a select few who have a vested interest in reaping significant short term gains at the expense of rural communities and the wider New Zealand economy.

46) The proposed changes to the definitions and conditions within the existing National Environmental Standards for Plantation Forestry are welcomed. The preferred options will begin to manage the style of plantings we are currently seeing and more effectively manage the risks they pose to the natural environment and climate resilience.

47) We also appreciate the Government's consideration of how best to use the RMA to manage the social, economic, and cultural impacts of afforestation. This legislative tool however has not been implemented uniformly to manage these impacts and we are continuing to engage in how this can change as part of the ongoing RMA reforms. However communities and their councils need certainty on how best to address the real-world implications of carbon forestry now.

48) The proposed changes will go some of the way to managing the problems we see. However, without addressing the core driver, the unfettered use of forestry in the NZ ETS, the adjustments to the NES-PF will not ensure that the core problem is addressed. To address the core issue the NZ ETS settings must be changed as soon as possible. We reiterate our support for a moratorium on exotic carbon only forestry to be put in place while reforms to the ETS and forestry are made.

49) Policy approaches must be implemented in concert. Without action, we see unmanaged and rapid afforestation, comprised of pine and other exotic species in places and ways that the majority of people and organisations disagree with. This means that settings within the RMA, and the ETS must be changed to align with our local and national aspirations.

[12] https://www.mpi.govt.nz/dmsdocument/53992-Managing-Permanent-Exotic-Afforestation-Incentives-Regulatory-Impact-Statement

RESPONSE TO CONSULTATION QUESTIONS

PART A: MANAGING THE ENVIRONMENTAL (BIOPHYSICAL) EFFECTS OF EXOTIC CARBON FORESTRY

Q A1 Do you agree with the problem statement set out above? Y/N Are there other things we should consider?

We agree that the issue is threefold: 1. exotic carbon forestry is not subject to same standards as other carbon forests. 2. There is limited support/guidance for intended transition from exotic to native forest and 3. There is uncertain future environmental issues.

However, we seek additional consideration of the effects on biodiversity and disease resilience as a result of unmanaged pest species. Deer and goats can cause significant damage to native bush and tend to thrive in unmanaged pine forests. Additionally, wild pigs find homes in forested areas and can cause significant damage when not controlled. It is important that we consider the risk and impact of unmanaged pests, and their likely ability to thrive in vast areas of forest if left unchecked.

We also ask that the environmental effects of existing plantation and carbon forest plantings must be managed effectively. Consideration must be given to the application of these rules to already planted areas, rather than just areas being assessed for afforestation.

Lastly, the climate resilience of any given planting/planted exotic forests must be considered. This includes not just its risk from fire but also its ability to withstand the impacts of drought, disease, or flood. Such adverse weather events will occur more regularly and with more severity due to climate change.

Q A2 Have we accurately described the environmental effects of exotic carbon forests (Table 2)? Y/N What other environmental effects (if any) need to be managed that are different to those of plantation forests? Please provide evidence on the impact of these effects.

Yes, the majority of environmental effects have been accurately described. However, we would contend that the regulation of water supply and quality could be an adverse effect of plantation and carbon forestry, rather than only a positive effect. The relationship between water supply and quality is very catchment specific and thus additional and currently established exotic forestry could be having a negative impact on the water availability within a catchment. There is good evidence[13] of this happening in several regions of New Zealand. Given the impacts of climate change in different areas, the increased uptake of water by exotic forests could be positive or negative.

Additional negative effects of blanket exotic pine afforestation on pasture is the decrease to soil carbon levels and the increase to the albedo effect.[14] Both of these effects remain unquantified in the NZ ETS but will reduce the positive carbon benefits of blanket pine forestry. We recommend that more research is carried out on these areas to ensure that climate policy best reflects reality.

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[13] See: https://icm.landcareresearch.co.nz/knowledgebase/publications/public/Forestry&water%20yield-the_NZ_example.pdf and https://www.envirolink.govt.nz/assets/2109-NLRC223-Investigation-of-the-effects-of-afforestation-on-catchment-water-balance-Case-studies-in-Northland-and-Waikato.pdf

[14] https://www.tandfonline.com/doi/full/10.1080/00288233.2017.128413: https://www.researchgate.net/publication/224710466_Implications_of_albedo_changes_following_afforestation_on_the_benefits_of_forests_as_carbon_sinks

Q A3 Do you agree that the environmental effects of exotic carbon forests should be managed through the NES-PF? Y/N Why?

Yes, we agree that the environmental effects of exotic carbon forests should be managed through the NES-PF. We think that given the availability and suitability of this existing tool, it would be prudent to utilise it.

Q A4 The right-hand column of Table 2 sets out possible new regulatory controls. Please indicate if you disagree with any of these potential controls or feel we have missed anything and explain or provide evidence.

We agree with the majority of the regulatory controls listed. However, we disagree with the potential control listed for the service level agreements with FENZ. We suggest that these agreements should only be required for planted areas over 100 ha.

Policies designed to offer national direction on exotic afforestation should take care not to disincentivise the integration of vegetation within farms and should therefore distinguish between small scale forestry and large-scale forestry. The regulatory burden for smaller plantings should be lower to reflect their reduced risks and impacts.

Q A5 Do you agree with option 2 for managing the environmental effects of exotic carbon forestry (amend the NES-PF to include exotic carbon forests)? Y/N Why?

Yes, *we agree with the preferred option (number 2) to amend the NES-PF to include exotic carbon forestry to better manage the environmental risks and effects of exotic carbon forestry. We think that given the availability and suitability of this existing tool, it would be prudent to utilise it.*

Q A6 Do you agree that a National Environmental Standard should manage [choose one]: (a) the environmental effects of exotic carbon forests only? Y/N or (b) environmental effects and forest outcomes, including transitioning from predominantly exotic to predominantly indigenous species? Y/N Why?

W*e agree that the NES should manage the environmental effects and forest outcomes, including transitions from predominantly exotic to predominantly indigenous species. This is because the requirements for transitioning are substantial. Evidence suggests that high rainfall, sufficient native seed sources, healthy native bird population, and low browsing animal pest numbers are required to even consider successful transition forest and 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)"*[15]*.*

We are yet to see evidence that large forestry companies who claim they intend to convert to native forestry have the right structures and covenants in place to ensure this happens. Although the current aspirations could be sincere, the delivery must be held accountable.

We do not think that current carbon investors should be able to plant and 'walk away' from their planted forests without facing requirements to ensure these forests are actively managed and/or transitioned to native plantings.

This guarantee can come from participation requirements in the NZ ETS, along with covenants. However, we do not think that the covenant conditions within the current NZ ETS

[15] Pg 6, Forbes 2022. Transitioning Exotic Plantations to Native Forest State of Knowledge Report 2021-2022.

settings are sufficient and it is prudent to update these as well as utilise the structures of the RMA to effectively manage the risks and effects of this land use activity.

This includes providing councils with discretionary powers to grant consents applications given the evidence that "transitions should only be attempted at scales which are reasonably manageable" (pg 6, Forbes). Understanding what is 'reasonable' requires significant forethought and understanding of the site characteristics and management objectives. Meeting these conditions will be a challenge in every location and councils should have the power to require additional management as required to ensure transition. Guidance and on-the-ground support must be provided by MfE and MPI to inform Council's interpretations of what is 'possible' and clear dispute resolution processes established.

We propose that both the RMA and the NZ ETS permanent forest settings manage the transition requirements for exotic forests intended to transition to native vegetation. The NZ ETS can manage the carbon and covenant requirements of these forests but the RMA can be used to manage the environmental and social risks/impacts of this kind of forest management.

Q A7 Do you agree with the proposal in option 2 (amend the NES-PF to include exotic carbon forests) to add wind effects as a matter of discretion to Regulation 17, to manage potential instability as a result of wind for all forests on red zone land? Y/N What benefits or drawbacks would there be from adding wind effects?

Yes, we agree with the proposal to add 'wind effects' as a matter of discretion to Regulation 17 within the NES-PF to better manage the potential instability as a result of wind for all forests on red zone land. This would provide additional protection for freshwater management given the risk of slash from windblown trees. However, it could also add significant additional costs and burden to applicants and councils to assess and determine whether the wind blow risk is too great based on current wind patterns or projected wind patterns for a given area. Additional guidance from central government would be beneficial to ensure uniform interpretation and effective implementation.

We further recommend that changes should be made which requires plantings to have significant setbacks from boundary lines. Setbacks must be at least the mature tree length distance away (30m) from roading and boundary lines (note that this is significantly larger than the current 10m setback requirement in the NES-PF). Many New Zealand farmers regularly report issues caused by forestry that is planted to close to boundary lines and infrastructure.

Boundary fencing infrastructure and maintenance should also be equally shared between property owners. Too often New Zealand farmers are forced to fix fences that have been damaged from poorly-managed forestry, There must be conditions put in place and effective enforcement of these to ensure shared maintenance costs.

Q A8 How effective would option 2 (amend the NES-PF to include exotic carbon forests) be in managing the environmental effects of exotic carbon forestry? [select from a range/scale not effective – highly effective] Why?

We think that amendments of the NES-PF to include exotic carbon forests could be effective at managing the environmental effects of exotic carbon forestry. However, this effectiveness (on whatever scale you choose) will be highly dependent on the capacity and capability of both applicants and councils when implementing and enforcing these rules (in the short and long term).

Amendments of the NES-PF to include exotic carbon forests are necessary but not sufficient to address the unsustainable spike in monocultural forestry. As previously discussed, making structural improvements to the NZ ETS to allow a limit on the amount of forestry offsetting that can contribute towards a participants surrender obligations is also a necessary short-term solution.

Q A9 What implementation support would be needed for option 2 (amend the NES-PF to include exotic carbon forests)?

Implementation support required to ensure that the effects of exotic carbon forests are effectively managed by their inclusion within the NES-PF include: 1. Additional time and resourcing availability for council staff to implement and monitor the requirements effectively, 2. Provision of guidance to both Councils and foresters/farm-foresters. 3. Strong enforcement and monitoring provisions to ensure that conditions are effectively complied with and assessed as such overtime. 4. Consistent and repeated reviews of alignment of legislative requirements with other mechanisms, especially the Climate Change Response Act 2002 and 5. Effective auditing of compliance with conditions and implementation of requirements

Q A10 Do you agree with option 3 for managing the environmental effects of exotic carbon forestry (amend the NES-PF to require forest management plans for exotic carbon forests)? Y/N Why?

Yes, we agree that the NES-PF should be amended to require forest management plans for exotic carbon forests. We believe that this will be a great start to ensuring that the risks of these forests can be managed and that the initial intentions for the use and ongoing management of that forest are articulated clearly.

Q A11 Do you agree that forest management plans should manage [choose one] (a) environmental effects only? Y/N or (b) environmental effects and forest outcomes, including transitioning from predominantly exotic to predominantly indigenous specie(s)? Y/N Why?

We think that forest management plans should manage (b) environmental effects and forest outcomes including transitioning from predominantly exotic to predominantly indigenous species. This is because there is a significant burden to convert an existing (or to be planted) exotic forest depending on the location of the forest. The management requirements must be stipulated from the start and complied with to ensure effective transitioning. Without a plan clearly outlining the management at the beginning that is then reviewed by the council, or another expert party, there is no guarantee that the assumed environment and management outcomes will occur in practice – i.e., there is no guarantee of a promised transition into native.

Q A12 Based on your answer to the previous question, what content should be required in forest management plans?

The content that should be required in forest management plans should be the information highlighted in the consultation document as well as additional information on the likely ability for new species to grow given soil pH, moisture retention characteristics on the planting/regeneration site, and pest (pig, deer, goat) incursion and impact risks. As highlighted in the discussion document, further consultation on the content requirements etc. may be required. However, this should not delay the implementation of these rulesets.

Forest management plans should have particular care for the well-being of nearby ecosystems and members of the community .

Q A13 How effective would option 3 (amend the NES-PF to require forest management plans for exotic carbon forests) be in managing the environmental effects of exotic carbon forestry? [select from a range/scale not effective – highly effective] Why?

The effectiveness of amending the NES-PF to require forest management plans for exotic carbon forests to ensure better management of the environmental effects of these forests will depend on whether and how forest management plans will be required for a permitted activity vs. consented activity, their scope and content, and how well monitored and enforced these plans are.

We contend that a forest management plan would better be described as a forest environmental management plan if its scope was open to managing the environmental effects of forest, and carbon forest, activities.

Q A14 What implementation support would be needed for option 3 (amend the NES-PF to require forest management plans for exotic carbon forests)?

The implementation support required to implement option 3 (amend the NES-PF to require forest management plans for exotic carbon forests) would be increased resourcing and training for council staff and advisors on the required content and quality parameters of a forest management plan. It would also require additional support for foresters, farmers and other landowners who need to complete these plans to understand their obligations, how to fulfil these, and how best to implement the content within their plans.

Templated forest environmental management plans (similar to a Freshwater Farm Planning template) could be developed to ensure uniform framing and utilisation. There is a particular need to support smaller scale farm-foresters who do not necessarily have the guidance or support of larger forestry operators.

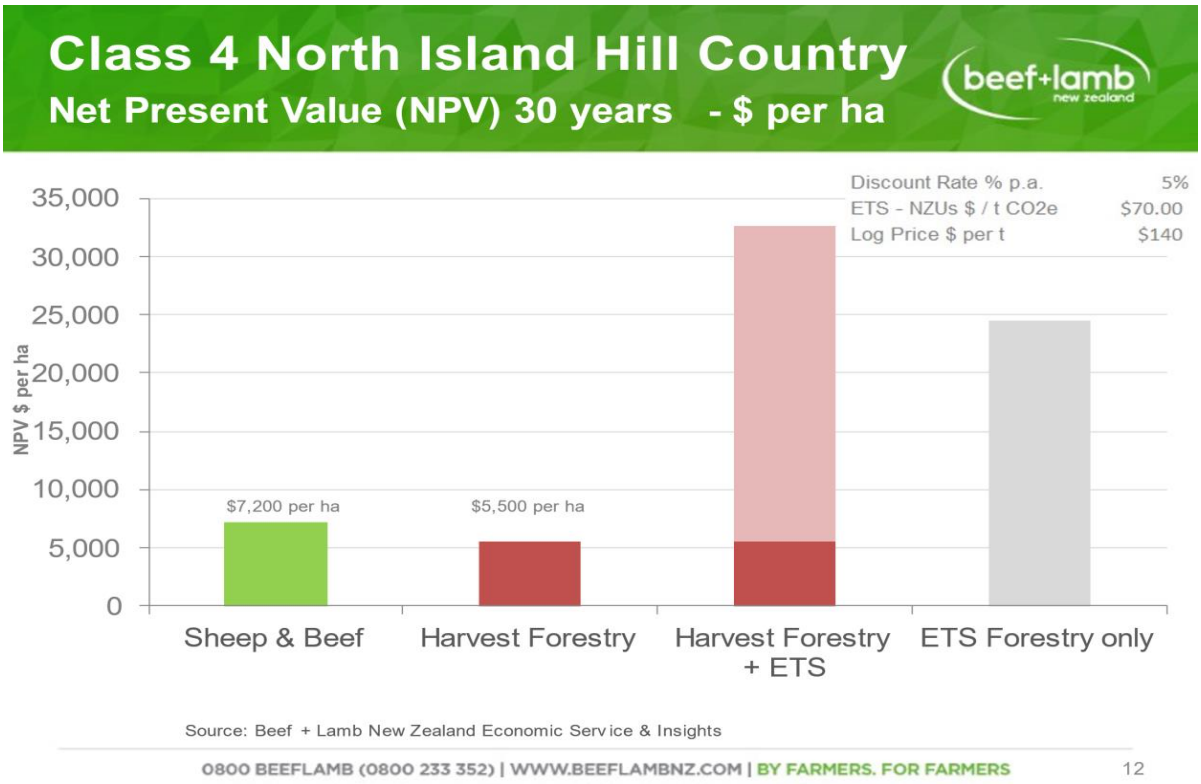
PART B CONTROLLING THE LOCATION OF PLANTATION AND EXOTIC AFFORESTATION TO MANAGE SOCIAL, CULTURAL AND ECONOMIC EFFECTS

Q B1 Do you agree with the problem statement set out above? Y/N Are there other things we should consider?

Yes we agree that the recent and projected increase in exotic afforestation, especially the emergence of exotic carbon forests on a significant scale, has raised concerns about adverse effects among a range of parties. Those concerns include multiple social, cultural, economic, and environmental issues and have become more urgent as the rates of afforestation have increased. Although, the existing controls in the resource management regulatory system can theoretically be used to manage the environmental effects of afforestation, many councils have not yet utilised their existing powers to effectively manage the social, cultural, and economic effects of exotic forestry or carbon forestry. As exotic and carbon afforestation increases, these impacts will become more pronounced and councils should be instructed and monitored to manage these effects accordingly.

The problem definition does not acknowledge that the recent unsustainable spike in afforestation is being driven by government policy and not consumer demand. The core distortionary policy that is effectively subsidising the exotic planting, is the ETS. Unlike red meat, consumers are not demanding forestry NZUs.

The below graph by B+LNZ shows the impact of the ETS on the profitability of forestry (both permanent and rotational) relative to sheep and beef farms. The table shows that without the ETS subsidy sheep and beef farms compete with timber forestry, but with the ETS subsidy, forestry (both permanent and rotational) is dramatically more profitable.



While some may argue that the ETS and NZUs from forestry are the 'free market' at work, it is not a free market of willing buyers and sellers but rather a market in which the Government forces the participation of buyers, demanding the emitting industries surrender NZUs.

The problem definition should also give consideration to the pressures on food production. Conversion of land in pastoral use to carbon forestry means that land is taken out of supplying food. This is in direct contradiction to the 2015 Paris Agreement that explicitly acknowledges the fundamental priority of safeguarding food production. Given there are already pressures on global supply of food, consideration needs to be given to how conversion to carbon forestry impacts this.

The world is suffering a global food security crisis and New Zealand has a moral responsibility not to artificially cut food production in the midst of such a crisis. According to the United Nations' World Food Programme, 205 million people in the world are in need of urgent food assistance, compared to 193 million in 2021, and this is twice as many as in 2016. The cost of living is at a 32 year high and showing no sign of slowing. Decreasing the amount of land producing food means there will be less food going to domestic and international markets. Continued unfettered wholesale conversion of meat protein-producing land into carbon forestry is also likely to impact the availability of sustainably produced meat products and drive up pricing for this important dietary protein for New Zealanders.

Q B2 Have we accurately described the social, cultural, and economic effects of plantation and exotic carbon afforestation at a community level (Appendix D refers)? Y/N What other social, cultural or economic effects should we be aware of? Please provide evidence on the impact of these effects.

Yes. However, following on from Q B1, consideration also needs to be given to the long term wider cumulative effects on New Zealand's economy as a whole. This includes the impacts associated with reduced sheep and beef production and a commensurate reduction in red meat & other co-product processing and monies spent within smaller regional communities.

The rate and scale of whole farm conversions into forestry has significant long-term implications for rural communities and the wider New Zealand economy.

With more than 175,000 hectares of whole farms sold for afforestation we could expect to see a decline of around 1.0 million Stock Units (SU)[1] . If 100 per cent afforestation area was planted (134,500 ha) the land use change would equate to:

- *an annual farm production loss of $170 million at the farm gate, at 2021-22 prices*
- *with a cumulative production loss of $540 million at the farm gate from progressive planting replacing livestock from 2017 to 2022*

The above quantifies the impact from 175,000 ha of farmland sold for forestry and the farmgate receipt loss that would have been spent in the district buying farm goods and services, meeting farm family living expenses and meeting tax and payments.

From the farmgate, production moves into manufacturing-processing (secondary sector) where processing adds a further 44 percent value to livestock production.

Export markets drive the sheep and beef farm sector as 90 per cent or more of production is exported. The farm production displaced by afforestation can be considered destined for export. At 2021-22 export prices this would equate to lost export receipts of:

- *$245 million annually and*
- *$775 million cumulatively from 2017 to 2022.*

B+LNZ commissioned some independent analysis that shows each 100 ha of afforestation would result over 30 years in:

- *A loss of 34 jobs if the trees are harvested, aka harvest forestry;*
- *A loss of 44 jobs if the trees are not harvested, aka carbon-only forestry.*

This is compared to the 52 jobs per 100 hectares, over 30 years, that the red meat industry does provide.

We acknowledge that land use change is expected to occur. However, this does not come without cost. When assessing the impact of going above and beyond the Climate Change Commission's modelled planting rates of 25,000ha/yr and aligning more with what we are seeing now (at 35,000ha/yr) we would expect to see red meat sector employment drop 119,000-154,000 jobs over 30 years if afforestation is allowed to continue to 350,000 ha by 2030. This is even after counting increased employment from afforestation.

These job losses don't just impact the people directly employed within the red meat sector. B+LNZ Economic Service estimates from the Sheep and Beef Farm Survey that on average nearly 90%[2] of cash gross farm revenue is spent in the local community. This means that in

[1] Hill Country and Hill Farms run 4.3 to 9.3 livestock units per hectare. Estimated livestock carrying capacity of whole farm sales for afforestation was on average 7.7 stock units per grassland hectare.

[2] Note that the remainder is considered to be Interest, tax and debt-reduction payments would leave the local community, e.g., to a bank and Inland Revenue.

aggregate, commercial sheep and beef farmers collectively spend over $5.4 billion each year in their local communities. A reduction in jobs within rural communities also reduces the economic expenditure within rural New Zealand. This is a cost of land-use change we must acknowledge and discuss. Changing land use to permanent carbon forestry however has even greater impacts.

Unlike red meat, there is no export market for forestry NZUs and unlike sheep and beef farming, there are no local flow on economic benefits from forestry NZUs. An estimated 7 jobs/100ha (as compared to 52 jobs/100ha for red meat farming) over 30years is a significant reduction in the full-time work opportunities available in rural New Zealand. The lack of local jobs, and the flow-on effect of these, is significant.

An additional consideration is that the land use change to carbon forestry switches land earnings from export revenue generation to emissions trading of carbon credits which are paid in New Zealand dollars. Given the typically lesser value of the NZD compared to the Euro or USD, this reduces the opportunity for our land uses to provide a 'value add.'

Q B3 Do you agree that the social, cultural and economic effects of plantation and exotic carbon forests should be managed through the resource management system? Y/N Why?

Yes. The resource management system has the ability to manage the social, cultural and economic effects of plantation and exotic carbon forests and should be used to do so.

Ultimately, the increase in conversions of pastoral use land to carbon forestry is a response to the current and short-sighted ETS policy settings which make it more profitable to convert land to carbon forestry. As such, we consider the best long term way to manage the issues above is to amend the ETS to level the regulatory playing field between pastoral land use and carbon forestry.

However, despite the advice of the Climate Change commission, NGOs and farming groups (such as Beef + Lamb New Zealand and Federated Farmers), the Government has shown no significant willingness to make systemic structural changes to the ETS.

We have also been advised that some changes to NZ ETS would likely take years and given Government inaction regarding the myriad social and economic issues caused by forestry subsidies (such as the ETS) to date, it is appropriate to regulate under the RMA to address the negative effects of conversions now. Note that we believe it would be a relatively simple and quick legislative process to remove exotics from the permanent forest category while an exemptions regime was developed.

Q B4 What is your preferred option for managing the social, cultural and economic effects of plantation and exotic carbon afforestation? Select from list: Option 1 (a local control approach); Option 2 (a consent requirement through national direction); Why?

In principle, we prefer Option 2 (a consent requirement through national direction) to manage the social, cultural, and economic effects of plantation forestry National Direction would be helpful but not sufficient to address the issue, there also needs to be a stringent plan in place to adjust the forestry offsetting settings in the NZ ETS.

As outlined above, we recommend that the Government put in place a limit on the amount of emissions an ETS participant can offset in the ETS. New Zealand is alone in allowing 100% of an ETS participants surrender liabilities to be offset via the blanket monocultural afforestation of productive farmland.

Along with making structural changes to the ETS, we support enabling this to be addressed through the resource management system.

Just as local councils have consenting powers with regard to the conversion of sheep and beef farms to dairy, they should have the ability to consent regarding the conversion of sheep and beef farms to carbon forestry..

If a resource management response is progressed, either as an interim measure or a more permanent solution, we *consider the best way would be through a consent requirement through national direction.*

A national solution is needed given there is an immediate need to address the issues being created by conversions to carbon forestry and it may take a while for regional and district councils to create the necessary rules.

However, the detailed conditions and wording within national guidance will have a significant impact on its ability to manage change. We seek additional consultation on the detailed provisions of the potential national direction.

We note that some submitters, including a group of District Councils, are submitting detailed policy provisions to be included in National Direction. We seek the opportunity to further work through these, and other proposals, to ensure they are workable for our farmers and will actually achieve the desired outcomes.

As the detailed provisions are finalised, we strongly encourage continued collaborative engagement to ensure uniform implementation and interpretation.

Q B5 How effective would option 1 (a local control approach to managing the location of plantation and exotic carbon afforestation) be in managing the social, cultural, and economic effects of plantation and exotic carbon afforestation? [select from a range/scale not effective – highly effective] Why?

A local control approach to managing the location of plantation and exotic carbon forestry will be less effective at managing the social, cultural, and economic effects of plantation and exotic carbon afforestation relative to *Option 2. This is particularly correct if a moratorium on exotic carbon-only forestry is not put in place while local councils take the time to develop plans. This is because of the limited experience of councils in managing the social, cultural, and economic impacts of activities under the RMA and the uneven levels of baseline data for councils to refer to then assess the cumulative effect on their communities.*

Q B6 What impact would option 1 (a local control approach to managing the location of plantation and exotic carbon afforestation) have on the rate and pattern of plantation and exotic carbon afforestation?

Once in place, Option 1 could have a comparable impact to Option 2 to manage the rate and pattern of plantation and exotic carbon afforestation. However, given it would take a longer time for a local control approach to be implemented, there is likely to be those that take advantage of the intervening period to afforest areas that will likely not be approved.

Q B7 What are the benefits of option 1 (a local control approach to managing the location of plantation and exotic carbon afforestation)?

The key benefit of Option 1 is that local communities would be able to have a say in how much conversion to carbon forestry they want in their regions. There may be communities that wish

to allow greater conversion or more permissible conversion than others. However, as the discussion document outlines, this needs to be weighed against the desirability of ensuring consistency across regions. Local flexibility can also be given in appropriately drafted national direction guidance. This means that consultation and engagement with people who will be affected at first and second can be incorporated.

Q B8 What are the costs or limitations of option 1 (a local control approach to managing the location of plantation and exotic carbon afforestation)?

Assuming that a local control approach would utilise the RMA's Schedule 1 process, this would mean an extensive submissions process with appeals likely to the Environment Court (and potentially beyond). This comes with the associated cost of that process, to both submitters and councils. Additionally, this process ultimately involves compromise which may not result in an outcome that entirely addresses the fundamental issue with carbon afforestation.

Again, while not preferred, such an approach may be workable if the Government puts in place a moratorium on new carbon forestry in the permanent forest category while plans are developed.

Q B9 If option 1 (a local control approach to managing the location of plantation and exotic carbon afforestation) is progressed, would making plan rules to manage the social, cultural and economic effects of plantation and exotic carbon afforestation by controlling its location be a priority for your community or district? Choose from a range Not a priority to high priority Why?

This would be a high priority for farmers and their communities. This is because of the significant impacts associated with land use change.

Q B10 What implementation support would be needed for option 1 (a local control approach to managing the location of plantation and exotic carbon afforestation)?

If Option 1 is progressed, we recommend that greater direction would be required for councils to address the issues. While there is the NPS-HPL, this is largely silent on the issues of social, cultural, and economic effects. Either an amendment to the NPS-HPL or a standalone NPS for plantation and carbon afforestation would be desirable to support council decision making.

Q B11 Are the variables outlined above (type of land, scale of afforestation, type of afforestation i.e., plantation, exotic carbon, transitional) the most important ones to consider? Y/N What, if any, others should we consider?

Yes, the variables outlined are very important to consider. However, we would also like to consider the scale of planting within a given catchment or rural community and region.

In addition, consideration needs to be given to timing of conversions. An influx of carbon forestry to a region is likely to result in unacceptable cumulative social, cultural and economic effects in the short to medium term. Local councils should be empowered to put in place a cap on the amount of land that can be converted from pastoral land use to carbon forestry within a certain time frame to better manage those cumulative effects and allow local communities to adapt.

Q B12 Which afforestation proposals should require consent? (Please consider factors such as the type of land, the scale of afforestation, the type of afforestation (plantation, exotic carbon, transitional) and other factors you consider important).

To not disincentivise the integration of vegetation within farms, we consider that limited afforestation should be permitted, based on the size of the land afforested within a given farm business or land title.

Further analysis is required in regard to the precise area threshold, but initial consultation with farmers indicated support for requiring a resource consent for afforestation above 100 ha.

Q B13 How effective would option 2 (a consent requirement through national direction to control the location of plantation and exotic carbon afforestation) be in managing the social, cultural and economic effects of plantation and exotic carbon afforestation? [select from a range/scale not effective – highly effective] Why?

We think that a consent requirement through national direction will be more effective. This is because investors, farmers, and foresters would have a unified understanding of what Support the use of different thresholds that could apply to different forest types. This would mean that higher thresholds would encourage small-scale afforestation while managing large-scale and 'whole farm' conversions to forestry, to encourage the most productive use of land and retain the viability of local farming.

Such policy measures are necessary but not sufficient. There needs to also be structural changes to the ETS to reduce the subsidy forestry is receiving.

Q B14 What impact would option 2 (a consent requirement through national direction to control the location of plantation and exotic carbon afforestation) have on the rate and pattern of plantation and exotic carbon afforestation? Please explain or provide evidence.

Given the immediate effect of a national direction, this may mean there is less "rush" to convert pastoral use land to carbon forestry. However, we consider that Option 2 should have largely the same impact on the rate and pattern of afforestation as Option 1. We also support a moratorium on new carbon only ETS forestry while this option is developed.

Q B15 What are the benefits of option 2 (a consent requirement through national direction to control the location of plantation and exotic carbon afforestation)?

Option 2 shortcuts the Schedule 1 process and has more immediate effect. This issue demands urgent action. It also prevents a "gold rush" of conversion that could happen using the Schedule 1 process.

Q B16 What are the costs and limitations of option 2 (a consent requirement through national direction to control the location of plantation and exotic carbon afforestation)?

Ultimately this depends on the regime that is put in place. However, the main cost that is likely to arise is the consenting cost and the right balance between engaging the consenting process and managing the effects must be struck.

Q B17 What are the most important and urgent social, cultural and economic effects of plantation and exotic carbon afforestation that you would like to see managed under the resource management system? Where and at what scale do these effects need to be managed?

The most urgent issue is the lack of long-term economic activity and employment opportunities that result from the conversion of sheep and beef farms to forestry.[16] *Other important factors include, the long-term damage to the wider New Zealand economy, the threat to the culture of*

[16] https://beeflambnz.com/sites/default/files/Wairoa%20Afforestation_FINAL.pdf

many rural New Zealand communities and the impact on important rural institutions, such as schools, from the population loss that results from blanket afforestation.

Q B18 Should this be done now under the RMA, or later under the proposed National Planning Framework and NBA plans?

We strongly prefer the immediate application of these rules as soon as possible. Thus, we think they should be implemented now under the RMA and then adapted to suit the proposed National Planning Framework.

As, at the time of writing, the detail of the National Planning Framework and NBA plans has yet to be released, it is difficult to provide meaningful comment to this question. As above, ideally the social, cultural, and economic effects of carbon afforestation should be addressed through the ETS also.

Again, we reiterate our previously noted support for the Government's proposed moratorium on exotic carbon forestry ETS registrations in the permanent forest category.

Q B19 Would standards in an amended NES-PF need the support of national policies and objectives? Y/N Why?

For consistency, yes. The NPS-HPL protects highly productive land for use in "land-based primary production", which includes agricultural, pastoral, horticultural and forestry activities, and therefore does not distinguish between pastoral land use and forestry. For consistency, the NPS-HPL land should be amended to exclude carbon forestry from the definition of "land-based primary production". This is especially so given the only "produce" from carbon forestry is carbon credits, which cannot truly be counted as "primary production". This should include any forestry that is entered into the ETS, be that carbon only or carbon and timber as all ETS registered forestry derives the vast majority of income from NZUs.

New Zealand farmers produce food and fibre because international and domestic consumers' are demanding these products. ETS participants are legally compelled by the Government to purchase NZUs which are effectively subsidising the unsustainable spike in afforestation many rural communities are experiencing.

Q B20 What implementation support would be needed for option 2 (a consent requirement through national direction to control the location of plantation and exotic carbon afforestation)?

Support would need to be given to councils to understand the issues and enable resource consent processing. This support should consider the varying impact afforestation is having across New Zealand, with some councils highly impacted and others barely impacted at all.

PART C IMPROVING WILDFIRE RISK MANAGEMENT IN ALL FORESTS

Q C1 Do you agree that wildfire risk management plans (WRMPs) should be included in the NES-PF? Y/N Why?

Yes, we think Wildfire risk management plans can be a good way to reduce the risks associated with fire. A plan would help identify the fire risks, and how these will be managed and could include information on the species being planted; the weather (including changing climate conditions); topography; values at risk within and neighbouring the forest; suppression and containment options; access to water for firefighting, mitigation measures which can be built into the development and management of the forest.

Fire plan requirements should be required for both carbon only forestry as well as carbon and timber forestry.

Q C2 Do you agree that the role of councils in monitoring the WRMP should be limited to ensuring that a plan has been developed? Y/N If not, what should the role of councils be?

No, we do not think that the role of councils in monitoring the WRMP should be limited to ensuring that a fire management plan has just been developed. Rather, we believe that councils should also have some responsibility to ensure that the plan developed is also of quality and implemented in accordance with expected best management practices.. There are a variety of ways to do this without requiring significant additional burden for councils. An example would be to ensure that a wildfire risk management plan developed meets the requirements of FENZ, or another agency, and has been developed using a template from this organisation in partnership with others. It would be the responsibility of the Councils to review compliance and content of the templated material but the responsibility of FENZ to provide significant guidance and support to councils to do this properly.

Q C3 Do you agree that a five-year review requirement is appropriate for WRMPs? Y/N Why?

We are unsure if a five year review requirement is appropriate for a wildfire risk management plan. It is not clearly stated in the discussion document why a five yearly update is more or less appropriate than an alternative timeframe. Considerations that would inform an appropriate timeframe could include:

-updated climate change projections
-experience with fire management and lessons learned
-review to be done to ensure template is still appropriate or compliance with existing plan
-alignment with other regulatory obligations requiring review, such as certified freshwater farm plans
-changes in local fire management capabilities.

Q C4 Do you agree that a module for a WRMP that is consistent with farm plan templates could be used for farmers with forests to plan for managing wildfire risk? Y/N If no, please provide reasons.

Yes, we agree that a module for a wildfire risk management plan that is consistent with farm planning templates could be used for farmers with forests. However, we would want to ensure that the regulatory burden for different sized planted areas is clearly articulated (i.e., lesser burden for forests under 40ha in size). Additionally, we would want to ensure that a wildfire

risk management plan would manage the fire risks associated with all plantings within a property, rather than require management plans for separate plantings.

We would also expect that a wildfire risk management plan would become part of the standard levels of service provided by a forest management and advisory operator providing their services to farm foresters. Lastly, we would also expect that template materials would be available for farmers (or others) who would not be required to complete a farm plan as part of any farm assurance of regulatory requirement.

Q C5 What implementation support would be needed for this proposal?

Sheep and Beef farmers will require implementation support to ensure the effective use of wildfire risk management plans. See some ideas in our answer to the previous question above.

Additionally, although rural advisors work with FENZ to support smaller landowners to understand how best to manage fire risk, there is very little data on smaller planted areas including what species are planted, who is managing these, and where they are located. Smaller areas in this case can be as large as 100ha and given the likelihood of increased plantings of this size going forward, it is important for regional councils and central government to provide mapping and data management support to best identify and track the management of these planted areas. This will support FENZ and regional councils understand the cumulative risks of additional plantings

PART D: ENABLING FORESTERS AND COUNCILS TO BETTER MANAGE THE ENVIRONMENTAL EFFECTS OF FORESTRY WILDING CONIFER RISK MANAGEMENT

We do not have substantial views on the content in Part D of this consultation. However, when seeking feedback from our farmer members and levy payers, there was concern expressed about the suitability of the current 10m setback requirements in the NES-PF and the compliance with maintenance and pest control requirements, especially fencing upgrades and pig/deer management. The alternative suggestion is to change the current set-back requirements in the NES-PF, at the same time that other proposed changes are made. For other matters will let others in the space submit their views to inform officials advice and Ministers' decisions.

Primary Industries Issues Poll
October 2022

CLIENT:	Federated Farmers of New Zealand Inc.
POLL DATES:	Sun 2 to Tue 11 October 2022. The median response was collected on Fri 07 October 2022.
TARGET POPULATION:	Eligible New Zealand voters.
SAMPLE POPULATION:	Eligible New Zealand voters who are contactable on a landline or mobile phone or online panel.
SAMPLE SIZE:	1,000 respondents agreed to participate – 800 via phone and 200 via online panel.
SAMPLE SELECTION:	A random selection of 20,000 nationwide phone numbers and a random selection from the online panel.
WEIGHTING:	The results are weighted to reflect the overall voting adult population in terms of gender, age, and area.
SAMPLE ERROR:	Based on this sample of 1,000 respondents, the maximum sampling error (for a result of 50%) is +/- 3.1%, at the 95% confidence level.
CODE COMPLIANCE:	This poll was conducted in accordance with the Research Association New Zealand Code of Practice and the International Chamber of Commerce/European Society for Opinion and Market Research Code on Market and Social Research.

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New Zealand's emissions trading scheme allows those who emit carbon dioxide to purchase either a government carbon credit or a credit produced by those growing forests. Do you support allowing emitters to offset their emissions with forestry credits?

		Count	Col %
Allow emitters to offset with forestry credits	Yes	347	37%
	No	324	34%
	Unsure	269	29%
	Total	940	100%

A small plurality of 37% support allowing forestry offset credits with 34% opposed and 29% unsure.

		Gender	
		Female Col %	Male Col %
Allow emitters to offset with forestry credits	Yes	37%	37%
	No	29%	40%
	Unsure	34%	23%
	Total	100%	100%

		Age		
		18 - 39 Col %	40 - 59 Col %	60+ Col %
Allow emitters to offset with forestry credits	Yes	47%	34%	29%
	No	20%	37%	47%
	Unsure	33%	29%	24%
	Total	100%	100%	100%

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		Area					
		Akl Col %	Wgtn Col %	Chch Col %	Prov Cities Col %	Towns Col %	Rural Col %
Allow emitters to offset with forestry credits	Yes	36%	59%	48%	31%	40%	24%
	No	27%	13%	29%	44%	34%	51%
	Unsure	37%	27%	23%	25%	26%	25%
	Total	100%	100%	100%	100%	100%	100%

		Deprivation		
		Least Col %	Moderate Col %	Most Col %
Allow emitters to offset with forestry credits	Yes	34%	36%	42%
	No	43%	32%	25%
	Unsure	23%	32%	33%
	Total	100%	100%	100%

		Probed Party Vote				
		National Col %	Labour Col %	ACT Col %	Greens Col %	Unsure Col %
Allow emitters to offset with forestry credits	Yes	43%	43%	19%	50%	35%
	No	33%	23%	62%	32%	28%
	Unsure	24%	34%	18%	18%	37%
	Total	100%	100%	100%	100%	100%

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New Zealand's emissions trading scheme is the only one in the world to allow fossil fuel emitters to offset 100% of their emissions by planting new pine forests. Do you support a limit on the amount of fossil fuel emissions that can be offset with new pine forests?

		Count	Col %
Support limit on forestry offsets	Yes	509	54%
	No	235	25%
	Unsure	195	21%
	Total	940	100%

54% of respondents support a limit on forestry offsets with 25% opposed.

		Gender	
		Female Col %	Male Col %
Support limit on forestry offsets	Yes	55%	53%
	No	20%	30%
	Unsure	24%	17%
	Total	100%	100%

		Age		
		18 - 39 Col %	40 - 59 Col %	60+ Col %
Support limit on forestry offsets	Yes	57%	56%	49%
	No	19%	25%	32%
	Unsure	24%	19%	20%
	Total	100%	100%	100%

		Area					
		Akl Col %	Wgtn Col %	Chch Col %	Prov Cities Col %	Towns Col %	Rural Col %
Support limit on forestry offsets	Yes	54%	58%	52%	58%	56%	46%
	No	21%	24%	26%	26%	20%	38%
	Unsure	25%	19%	22%	16%	24%	17%
	Total	100%	100%	100%	100%	100%	100%

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		Deprivation		
		Least Col %	Moderate Col %	Most Col %
Support limit on forestry offsets	Yes	53%	56%	52%
	No	25%	21%	31%
	Unsure	21%	23%	17%
	Total	100%	100%	100%

		Probed Party Vote				
		National Col %	Labour Col %	ACT Col %	Greens Col %	Unsure Col %
Support limit on forestry offsets	Yes	57%	60%	41%	60%	40%
	No	23%	20%	42%	27%	28%
	Unsure	20%	21%	17%	14%	32%
	Total	100%	100%	100%	100%	100%

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High carbon prices now mean it is three times more profitable for sheep and beef farmers to plant their farms in pine trees – rather than carry on farming. How do you feel about the continued conversion of sheep and beef farms to pine forests to meet climate change targets? Would you be strongly opposed, somewhat opposed, somewhat supportive or strongly supportive?

		Count	Col %
Conversion of farms to forestry to meet climate targets	Strongly opposed	335	36%
	Somewhat opposed	138	15%
	Neutral	161	17%
	Somewhat supportive	130	14%
	Strongly supportive	58	6%
	Unsure	118	13%
	Total	938	100%

Only 20% support converting farms to pine forests to meet climate change targets with 51% opposed.

		Gender	
		Female Col %	Male Col %
Conversion of farms to forestry to meet climate targets	Strongly opposed	30%	42%
	Somewhat opposed	14%	16%
	Neutral	18%	16%
	Somewhat supportive	15%	13%
	Strongly supportive	7%	5%
	Unsure	16%	9%
	Total	100%	100%

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		Age		
		18 - 39 Col %	40 - 59 Col %	60+ Col %
Conversion of farms to forestry to meet climate targets	Strongly opposed	19%	40%	48%
	Somewhat opposed	14%	13%	17%
	Neutral	24%	17%	10%
	Somewhat supportive	20%	12%	9%
	Strongly supportive	8%	8%	3%
	Unsure	14%	11%	13%
	Total	100%	100%	100%

		Area					
		Akl Col %	Wgtn Col %	Chch Col %	Prov Cities Col %	Towns Col %	Rural Col %
Conversion of farms to forestry to meet climate targets	Strongly opposed	28%	25%	31%	41%	33%	55%
	Somewhat opposed	15%	12%	12%	16%	15%	14%
	Neutral	20%	16%	14%	13%	25%	9%
	Somewhat supportive	12%	22%	13%	13%	16%	12%
	Strongly supportive	8%	14%	13%	4%	2%	4%
	Unsure	17%	12%	17%	13%	9%	7%
	Total	100%	100%	100%	100%	100%	100%

In rural areas, 69% of respondents are opposed.

		Deprivation		
		Least Col %	Moderate Col %	Most Col %
Conversion of farms to forestry to meet climate targets	Strongly opposed	41%	33%	32%
	Somewhat opposed	16%	16%	10%
	Neutral	20%	13%	19%
	Somewhat supportive	13%	12%	18%
	Strongly supportive	3%	7%	10%
	Unsure	8%	18%	12%
	Total	100%	100%	100%

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		Probed Party Vote				
		National Col %	Labour Col %	ACT Col %	Greens Col %	Unsure Col %
Conversion of farms to forestry to meet climate targets	Strongly opposed	46%	17%	54%	21%	31%
	Somewhat opposed	16%	16%	13%	17%	10%
	Neutral	16%	23%	13%	16%	15%
	Somewhat supportive	11%	19%	12%	29%	5%
	Strongly supportive	2%	9%	3%	12%	9%
	Unsure	9%	15%	6%	5%	29%
	Total	100%	100%	100%	100%	100%

The net opposition to conversion by party vote is:

1. ACT -52%
2. National -49%
3. Undecided voters -27%
4. Labour -5%
5. Greens +3% (marginally in favour)

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In the last year, the Overseas Investment Office has approved the sale of around 20,000 hectares of farmland for conversion to pine forests. What is your stance on foreign companies buying sheep and beef farms to offset their emissions? Is it strongly opposed, somewhat opposed, somewhat supportive or very supportive?

		Count	Col %
Foreign companies buying farms to offset emissions	Strongly opposed	473	50%
	Somewhat opposed	140	15%
	Neutral	124	13%
	Somewhat supportive	74	8%
	Strongly supportive	14	1%
	Unsure	114	12%
	Total	939	100%

Only 9% of adult New Zealanders support foreign companies buying NZ farms to offset their emissions with 65% opposed.

		Gender	
		Female Col %	Male Col %
Foreign companies buying farms to offset emissions	Strongly opposed	49%	52%
	Somewhat opposed	14%	16%
	Neutral	14%	13%
	Somewhat supportive	8%	8%
	Strongly supportive	0%	2%
	Unsure	15%	9%
	Total	100%	100%

		Age		
		18 - 39 Col %	40 - 59 Col %	60+ Col %
Foreign companies buying farms to offset emissions	Strongly opposed	29%	55%	68%
	Somewhat opposed	20%	13%	11%
	Neutral	24%	11%	5%
	Somewhat supportive	13%	7%	4%
	Strongly supportive	2%	1%	1%
	Unsure	12%	13%	11%
	Total	100%	100%	100%

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		Area					
		Akl Col %	Wgtn Col %	Chch Col %	Prov Cities Col %	Towns Col %	Rural Col %
Foreign companies buying farms to offset emissions	Strongly opposed	39%	48%	52%	52%	50%	70%
	Somewhat opposed	15%	14%	15%	21%	13%	10%
	Neutral	15%	6%	21%	8%	24%	3%
	Somewhat supportive	12%	7%	2%	6%	8%	6%
	Strongly supportive	3%	5%	0%	1%	0%	0%
	Unsure	16%	20%	11%	13%	5%	11%
	Total	100%	100%	100%	100%	100%	100%

		Deprivation		
		Least Col %	Moderate Col %	Most Col %
Foreign companies buying farms to offset emissions	Strongly opposed	54%	50%	46%
	Somewhat opposed	15%	17%	12%
	Neutral	13%	12%	16%
	Somewhat supportive	6%	8%	11%
	Strongly supportive	1%	1%	4%
	Unsure	12%	13%	11%
	Total	100%	100%	100%

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		Probed Party Vote				
		National Col %	Labour Col %	ACT Col %	Greens Col %	Unsure Col %
Foreign companies buying farms to offset emissions	Strongly opposed	55%	38%	71%	42%	45%
	Somewhat opposed	15%	18%	3%	27%	17%
	Neutral	14%	16%	8%	19%	6%
	Somewhat supportive	6%	12%	12%	8%	4%
	Strongly supportive	1%	2%	3%	4%	0%
	Unsure	9%	14%	3%	0%	28%
	Total	100%	100%	100%	100%	100%

The net opposition to foreign companies buying farms for offsets by party vote is:

1. National -63%
2. ACT -59%
3. Undecided voters -58%
4. Greens -57%
5. Labour -42%

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Both native trees and pine trees can earn carbon credits in New Zealand. Pine trees grow much faster so can earn money much more quickly. Do you think the government should provide a greater incentive for establishing native forests compared to planting pine trees?

		Count	Col %
Incentivise native forests over pine forests	Yes	574	61%
	No	120	13%
	Neither should get credits	68	7%
	Unsure	177	19%
	Total	939	100%

61% support greater incentives to plant native forests over pine forests.

		Gender	
		Female Col %	Male Col %
Incentivise native forests over pine forests	Yes	63%	59%
	No	10%	16%
	Neither should get credits	6%	8%
	Unsure	21%	16%
	Total	100%	100%

		Age		
		18 - 39 Col %	40 - 59 Col %	60+ Col %
Incentivise native forests over pine forests	Yes	61%	62%	59%
	No	12%	10%	17%
	Neither should get credits	9%	7%	6%
	Unsure	18%	21%	17%
	Total	100%	100%	100%

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		Area					
		Akl Col %	Wgtn Col %	Chch Col %	Prov Cities Col %	Towns Col %	Rural Col %
Incentivise native forests over pine forests	Yes	55%	69%	63%	59%	60%	71%
	No	14%	9%	13%	14%	12%	13%
	Neither should get credits	7%	8%	4%	10%	8%	3%
	Unsure	24%	14%	20%	17%	20%	13%
	Total	100%	100%	100%	100%	100%	100%

		Deprivation		
		Least Col %	Moderate Col %	Most Col %
Incentivise native forests over pine forests	Yes	62%	56%	68%
	No	13%	15%	10%
	Neither should get credits	8%	7%	6%
	Unsure	17%	23%	16%
	Total	100%	100%	100%

		Probed Party Vote				
		National Col %	Labour Col %	ACT Col %	Greens Col %	Unsure Col %
Incentivise native forests over pine forests	Yes	62%	61%	54%	87%	54%
	No	18%	10%	13%	0%	8%
	Neither should get credits	8%	4%	15%	0%	9%
	Unsure	12%	24%	18%	13%	30%
	Total	100%	100%	100%	100%	100%

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17 October 2022

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Land-use change from pastoral farming to large-scale forestry Update

August 2022

Orme & Associates Limited

Client Report

Update of land-use change from pastoral farming to large-scale forestry for 1/1/2020 – June 2022

Author/s	Phil Orme, NZCF, BFor Sci (Hons) MNZIF
Date	August 2022
Version	Draft V3
Client Details	Beef + Lamb New Zealand Ltd

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Figures, Tables and Maps

Executive Summary

Orme & Associates has been commissioned by Beef + Lamb New Zealand to:

REVIEW AND UPDATE the Land Use change on Pastoral Farms report to June 2022.

This report covers the period **1/1/2020 to 30/6/2022** and also includes an updated assessment of properties not recorded in previous reports, due to potential timing issues with settlement dates, and probable effect of COVID-19 restrictions during the latter part of 2020 affecting conditional clauses.

814 rural properties classified as Pastoral or Forestry were identified as transferring to a different owner during the period 1/1/2020 to 30/6/2022. Of these 137 (16%) met the criteria for inclusion in the report as potentially being converted from pastoral to afforestation, compared to 14% recorded in the previous report.

Whole farms identified as purchased for potential afforestation

The period 1/1/2017 to 30/6/2022 results are tabled below:

Whole of Farm Purchase	Year				2021	Q1 & Q2 2022	Grand Total (Hectares)	% by Conversion
	2017	2018	2019	2020				
Honey (Mānuka)	3,039	7,340	1,678	3,313	2,292	-	**17,662**	**10.1%**
Forestry	2,510	11,245	26,198	6,069	11,306	3,895	**61,223**	**34.9%**
Carbon Forestry				13,635	19,717	3,010	**36,362**	**20.7%**
Forestry OIO	1,455	8,982	10,626	15,261	19,136	4,600	**60,060**	**34.3%**
Total Whole of Farm	**7,004**	**27,567**	**38,502**	**38,278**	**52,451**	**11,505**	**175,308**	**100.0%**
Previous Report	**7,004**	**27,567**	**38,502**	**28,159**	**14,246**	**-**	**115,478**	

The results of our review estimate:

1. The gross land area of whole farms purchased in the 1/1/2020 to 30/6/2022 for planting is estimated at **102,234 ha**.
2. Approximately 5,606 ha gross land area is identified for Honey operations, a significant drop on previous % basis.
3. Approximately 36,362 ha gross land area is identified as purchased by a likely (Long Rotation) Carbon Entity.
4. Approximately 38,997 ha gross land area is identified through the OIO process.
5. The balance of 21,270 ha gross land area is assumed to be from domestic purchasers interested in both production forestry and carbon options.
6. The data was based on sales that could be verified during the stated period.

NB. Total gross land area is 102,234 ha or 102,235 ha, due to rounding variances with different data/tables.

Emerging trends

LUCAS 2016-layer summary

Analysis of the 2016 LUCAS layers of the properties identified since the last report suggest:

LUCAS 2016 Layer	Cropland - Annual	Grassland - High producing	Grassland - Low producing	Grassland - With woody biomass	Natural Forest	Planted Forest - Pre 1990	Post-1989 Forest	Wetland - Open water	Wetland - Vegetated non forest	Grand Total (Hectares)
North Auckland		4,312	95	153	1,143	82	84	5	11	**5,884**
South Auckland		5,422	2,915	228	1,665	46	39	2		**10,318**
Hawkes Bay	0	6,833	4,921	522	258	210	343	14	7	**13,113**
Gisborne		1,211	2,784	325	275	200	1,154	4	1	**5,955**
Taranaki		1,253	2,997	113	1,622	327	120	1		**6,434**
Wellington		5,327	12,950	1,970	3,673	914	2,404	21		**27,259**
Marlborough		37	1,208	311	435	10	545	0		**2,546**
Nelson		367	374	28	238	21	118	1		**1,146**
Canterbury		666	2,426	474	203	43	547	1		**4,360**
Otago	0	5,219	8,584	3,167	1,682	691	522	2	94	**19,960**
Southland		1,726	2,535	321	643	13	14	4	3	**5,261**
Grand Total	**0**	**32,373**	**41,788**	**7,613**	**11,837**	**2,557**	**5,890**	**54**	**117**	**102,235**
% 2020-2022	0.0%	31.7%	40.9%	7.4%	11.6%	2.5%	5.8%	0.1%	0.1%	**100%**
% 2017-2020	0.0%	24.2%	41.2%	6.7%	16.1%	2.5%	8.9%	0.1%	0.0%	**100%**

72.6% (vs 65.4% in the 2017-20 period) of the whole farms sold into forestry, were in clear pasture,

7.4% (6.7%) in potentially reverting country, and

19.9% (27.5%) in either exotic or indigenous forest species.

This would appear to indicate a shift in the overall characteristics of the land changing hands from the initial reporting period (2017-2020).

LUC classification summary

Further analysis of properties in this sample found that:

Region	Land Use Classification (LUC) Band								Grand Total (Hectares)
	2	3	4	5	6	7	8	Other	
North Auckland	0	36	428		4,830	589			**5,884**
South Auckland	32	533	512	18	7,729	1,476	18		**10,318**
Hawkes Bay	60	469	326		9,702	2,473	82		**13,113**
Gisborne	27	77	67		1,975	3,695	112	3	**5,955**
Taranaki		60	663	93	3,180	2,318	120		**6,434**
Wellington	36	574	455	230	14,747	11,039	174	4	**27,259**
Marlborough		0	36		2,240	244	25	1	**2,546**
Nelson			25		462	510	149		**1,146**
Canterbury		368	381		2,745	833	7	26	**4,360**
Otago	6	1,454	5,075	2,512	10,279	630		4	**19,960**
Southland	46	361	942		3,912				**5,261**
Grand Total	**207**	**3,931**	**8,910**	**2,853**	**61,801**	**23,807**	**687**	**38**	**102,234**
% 2020-2022	0.2%	3.8%	8.7%	2.8%	60.5%	23.3%	0.7%	0.0%	**100%**
% 2017-2020	0.1%	3.1%	5.4%	0.9%	52.0%	36.7%	1.7%	0.1%	**100%**

84.5% (90.4%) in our assessment of land being identified for conversion, since the initial report, is land of LUC 6 and above,

60.5% (52.0%) of the area is in LUC 6,

23.3% (36.7%) in LUC 7 and 0.7% (1.7%) in LUC 8,

Classes 2-5 have increased from 9.5% to 15.5%.

Although a small shift in LUC from 7 to 6, when combined with the changes in the both the ESC and LUCAS classifications, it appears to signal more productive land in the market being purchased for afforestation purposes.

Erosion Susceptibility Classification summary

Region	Erosion Susceptability Class (ESC)					Grand Total (Hectares)
	Low	Moderate	High	Very High	Other	
North Auckland	1,148	4,068	609	59		**5,884**
South Auckland	3,074	6,687	547	9		**10,318**
Hawkes Bay	2,272	6,825	3,126	889		**13,113**
Gisborne	261	1,885	1,054	2,752	3	**5,955**
Taranaki	919	3,077	1,401	1,037		**6,434**
Wellington	5,237	11,982	8,418	1,619	3	**27,259**
Marlborough	2,276	244	25		1	**2,546**
Nelson	487	389	270			**1,146**
Canterbury	2,845	1,481	7		24	**4,360**
Otago	15,592	4,364			4	**19,960**
Southland	5,243	18				**5,261**
Grand Total	**39,354**	**41,019**	**15,458**	**6,365**	**29**	**102,234**
% 2020-2022	38.5%	40.1%	15.1%	6.2%	0.0%	**100%**
% 2017-2020	28.2%	35.8%	26.0%	9.9%	0.0%	**100%**

1. Introduction

Orme & Associates was originally commissioned by Beef + Lamb New Zealand to:

"Update and track the amount of land that has been or will be planted into exotic plantation species in the near future that is likely to take land out of pastoral production".

A refresh has been requested and specifically concerning a full 2021 year and any up-to-date 2022 data.

A review back to the beginning of 2020 was also conducted to ensure all sales were identified where settlement was potentially deferred for a variety of reasons, including COVID 19 issues, this resulted in an additional 10,119 hectares being identified as being "sold" in 2020.

The project initially involved a comprehensive review of available land-use-change data, to provide up-to-date statistics on the areas of land being from converted from pastoral farming into forestry under different ownership models, grant programmes and owner objectives for the period 1/1/2017 to 31/12/2020. This was tabled as the *"Land-use change from pastoral farming to large-scale forestry"* prepared through BakerAg.

To provide a benchmark for 'whole of farm' purchase we analysed all sales of 250 ha or more to be consistent with the process of the original report.

Plantable area (effective forest land) was calculated using the LUCAS layer classifications to identify pastoral land available to change on each property, again consistent with the initial report methodology.

Land Use Capability (LUC) Classification was obtained by intersecting the property titles identified with the NES layer.

When combined with the updated sales information from this current report, the table including original data from 2017 to 2019 and updated data from 1/1/2020 to 30/6/2022 is represented as below:

Whole of Farm Purchase	Year				2021	Q1 & Q2 2022	Grand Total (Hectares)	% by Conversion
	2017	2018	2019	2020				
Honey (Mānuka)	3,039	7,340	1,678	3,313	2,292	-	**17,662**	**10.1%**
Forestry	2,510	11,245	26,198	6,069	11,306	3,895	**61,223**	**34.9%**
Carbon Forestry				13,635	19,717	3,010	**36,362**	**20.7%**
Forestry OIO	1,455	8,982	10,626	15,261	19,136	4,600	**60,060**	**34.3%**
Total Whole of Farm	**7,004**	**27,567**	**38,502**	**38,278**	**52,451**	**11,505**	**175,308**	**100.0%**
Previous Report	**7,004**	**27,567**	**38,502**	**28,159**	**14,246**	**-**	**115,478**	

Table 1: Updated data for whole farms and partial farm new planting areas

Below is the summary table from the previous report which also included 1BT and Crown Forestry JV figures.

Whole of Farm Purchase	Year				Q1 & Q2 2021	Grand Total (Hectares)	Percentage by Conversion
	2017	2018	2019	2020			
Honey (Mānuka)	3039	7340	1678	3295	2641	17993	15.6%
NZ Sales	2510	11245	26198	19104	7496	66553	57.6%
OIO	1455	8982	10626	5760	4109	30932	26.8%
Total Whole of Farm	7004	27567	38502	28159	14246	115478	100.0%
Partial farm plantings by Landowner through 1BT/JV							
1BT Landowner Grant		12,124 Indigenous + 13,434 Exotic			0	25560	66.8%
Crown Forestry JV		21,822 original - 9,144 cutover			0	12678	33.2%
Total Partial farm funded	47382					38238	100.0%
Totals						153716	

2. Methodology

Once again, a review of land sales recorded through real-estate records was undertaken for the period 1/1/2020 to 30/6/2022. This was then compared to properties previously recorded and also the OIO website to cross reference and identify any omissions or time delays and actual sales dates recorded, where available.

To note - In the November 2021 report, groupings were - Honey (Manuka), NZ Sales, OIO and based on sales by year. For this report we have expanded the groupings to – Honey, Carbon Forestry, Forestry, Forestry OIO and broken-down sales by quarter.

OIO areas have been further refined to reflect the areas of pastoral land potentially converted rather than the gross areas referred to in the OIO decisions.

There appears to have been a significant lift in property transactions intended for afforestation, based on the interpretation of the data, with a revised jump in settled transactions in 2020 from previously reported 28,159 hectares to 38,278 hectares. Quarterly figures also appear to indicate a trend for sales being recorded in the 4th quarter in both 2020 and 2021.

Entity	2020				2021				2022		Grand Total (Hectares)	% by Conversion	
	Qtr1	Qtr2	Qtr3	Qtr4	Qtr1	Qtr2	Qtr3	Qtr4	Qtr1	Qtr2		2020-2022	2017-2020
Carbon	2,309	1,286	1,608	8,432	3,802	305	3,340	12,269	3,010		**36,362**	**36%**	**58%**
Forestry	2,387	1,639	638	1,404	1,862	3,741	3,076	2,627	3,550	345	**21,270**	**21%**	
Honey				3,313	2,292						**5,606**	**5%**	**16%**
OIO		4,044	1,890	9,327	4,768	1,682	2,702	9,984		4,600	**38,997**	**38%**	**27%**
Total	**4,696**	**6,970**	**4,137**	**22,476**	**12,724**	**5,729**	**9,118**	**24,880**	**6,560**	**4,944**	**102,234**	**100%**	**100%**
Grand Total	**38,278**				**52,451**				**11,505**		**102,234**	**100%**	

Table 2: Land sale data from 01/01/20 to 30/06/22

Sales that showed up as having been completed within the 2020 year but were not included in the initial November report, have been included in this analysis, as have updated numbers for the full 2021 year, which indicates a leap to 52,451 hectares. This confirms previous expectations that there was a delay in the finalising of sales affecting a more correct representation of the sales transactions.

Area of farms converted for harvest forest by region

The table below records the updated sales for the 2020-2022 sales period and compares against the % of sales by district recorded for the period 2017-2020 in the previous report.

Region	Sales by District (hectares and %) 2020-2022		2017-2020	% Change of area sold
North Auckland	5,884	6%	4%	**+8%**
South Auckland	10,318	10%	4%	
Hawkes Bay	13,113	13%	10%	**+5%**
Gisborne	5,955	6%	4%	
Taranaki	6,434	6%	4%	**-17%**
Wellington	27,259	27%	46%	
Marlborough	2,546	2%	6%	**-5%**
Nelson	1,146	1%	2%	
Canterbury	4,360	4%	4%	
Otago	19,960	20%	16%	**+8%**
Southland	5,261	5%	1%	
Grand Total	**102,234**	**100%**	**100%**	

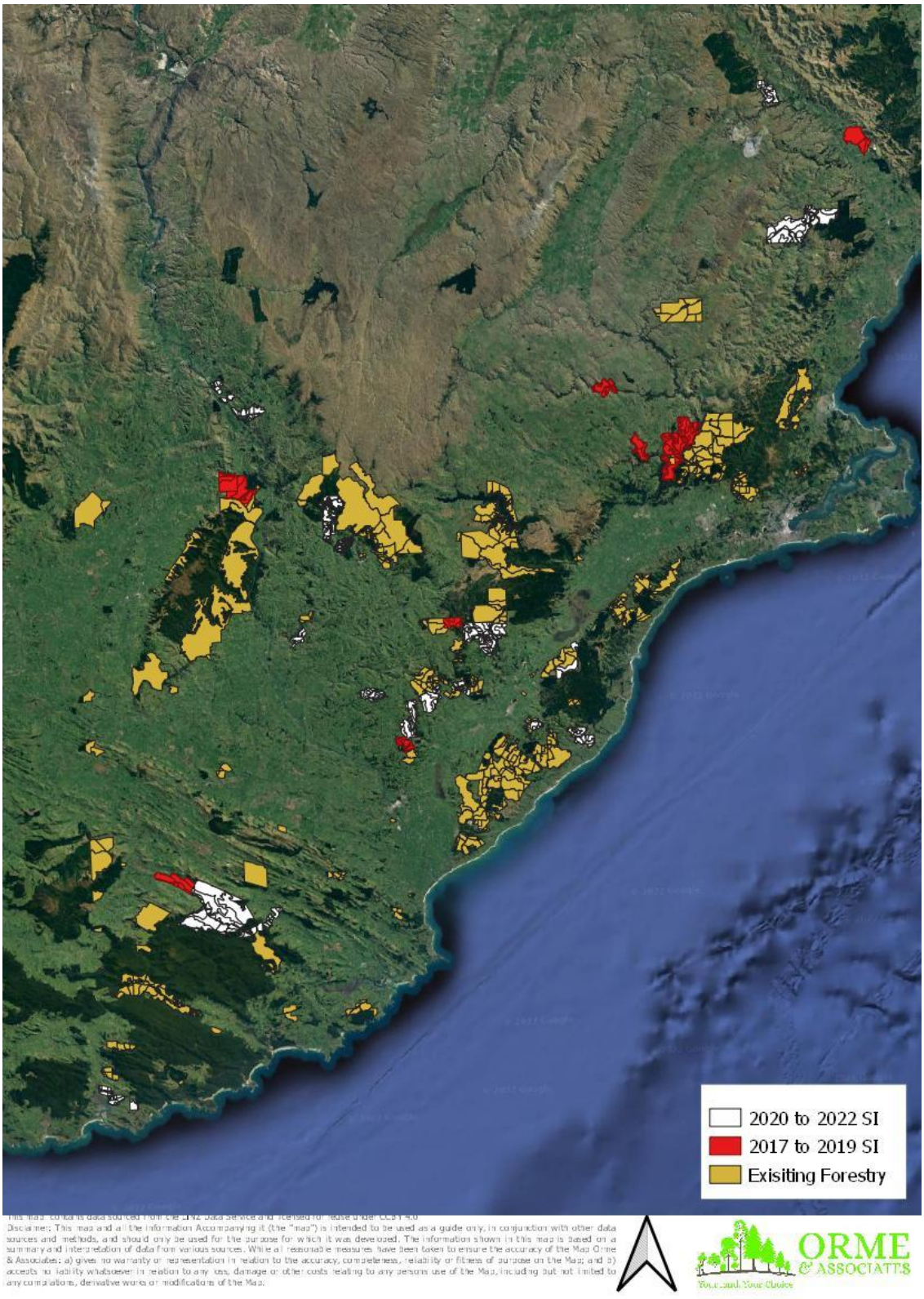
Table 3: Land sale by district data from 01/01/20 to 30/06/22

As can be seen there appears to be a shift away from the lower North Island/Wairarapa area on a percentage basis, with opportunities being developed in Northland and the southern South Island.

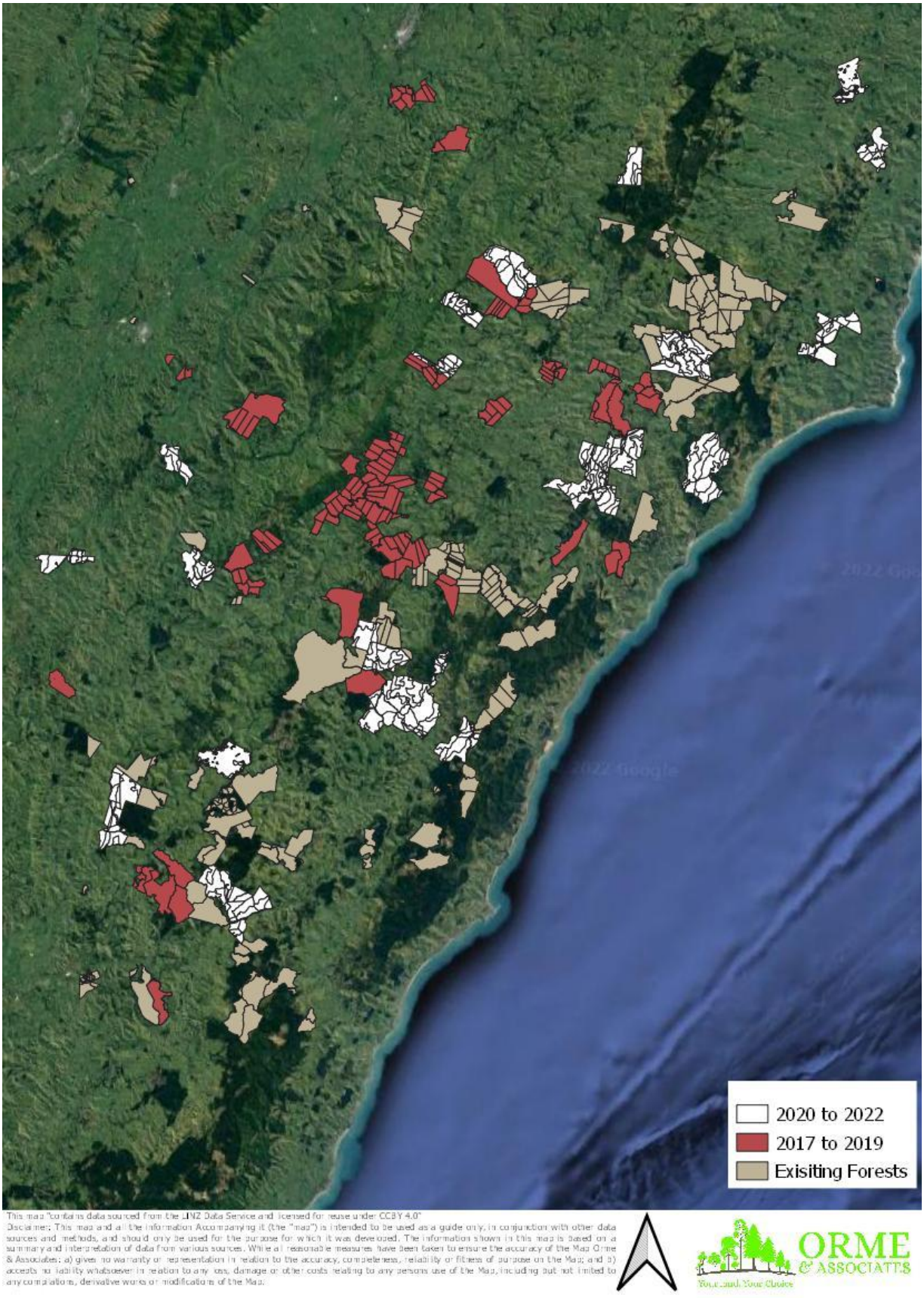
Maps of land acquisitions

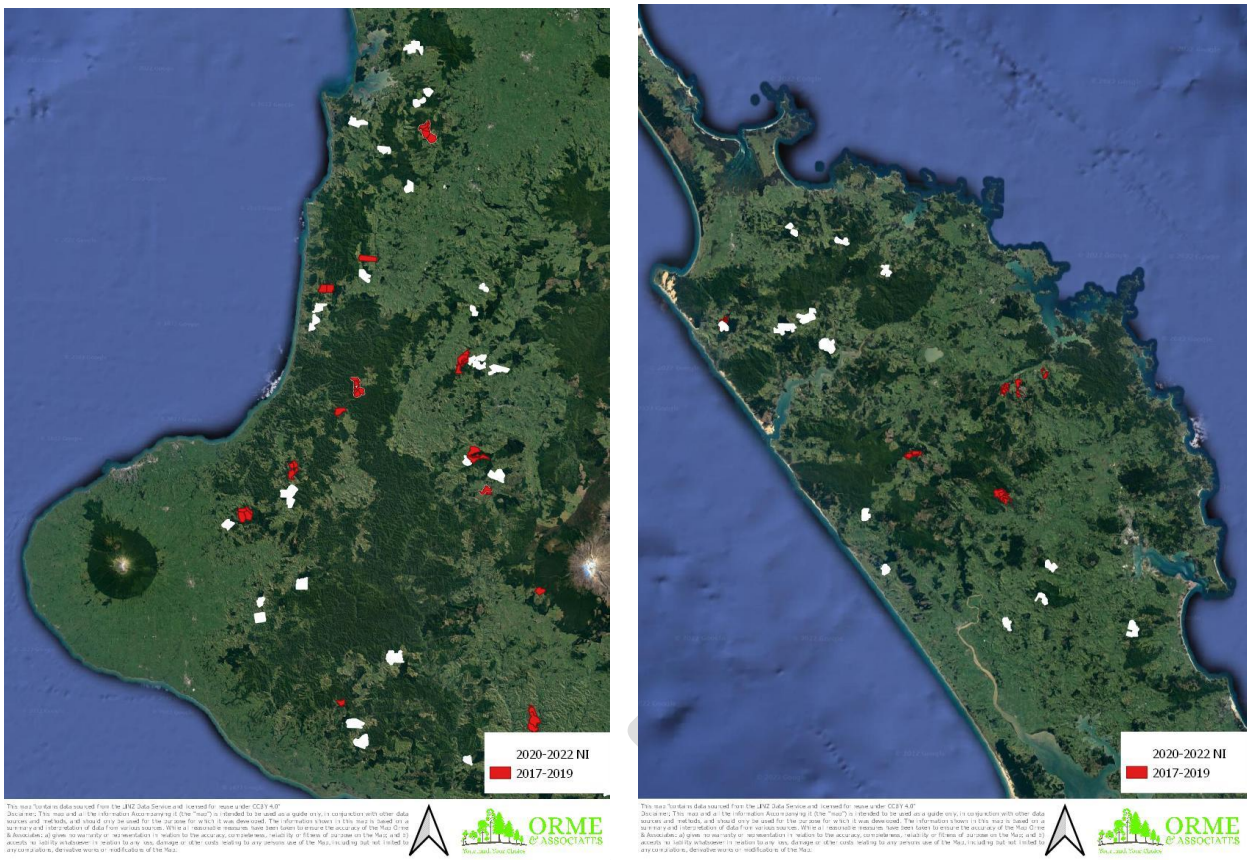
Indicative Regional maps of all properties identified in this review are included in the Appendices.

The maps show that in the South Island, initial land acquisitions identified for forestry were generally widely scattered, however, as additional properties change hands there appear to be clusters and natural groupings starting to emerge in the Otago region. Additional sales earlier reported in the OIO summaries that were expected to add to this pattern, have become apparent.



In contrast, the North Island map, which had showed some major clusters of properties in the initial report (especially around existing afforestation areas) that were likely to be converted from sheep and beef farming to forestry, has seen a spreading of the sales pattern into other regions notably Northland and the greater Taranaki/Waikato Region.





This latest round has seen an increase in areas changing hands in the South Island, potentially due to lower land costs and less competition for the land, on an increase in the total land changing hands for potential afforestation.

Area of farms converted native vs. exotic plantings

Unfortunately, this level of detail is not able to be identified from the sales information. There is additional information and detail included in most OIO decisions, however, on a broader scale, this cannot be identified.

In general, discussions within excess of 100 existing landowners visited during the course of the last year, has indicated that, wherever possible, they would have a preference to establish indigenous species. However, the cost of establishment and pest control in general, makes large scale conversion to natives uneconomic without any additional support since the closing of the One Billion Trees (1BT) fund.

It is critical that if there is a serious desire to encourage the establishment of natives on farm, that some form of assistance must be provided.

3. Land Type Affected

3.1 Areas of land being converted to forestry by LUC Class

We analysed the Land Use Capability (LUC) Classification data for properties identified in several ways, including by owner and by region.

The LUC system is an assessment of the land's capability for use, which '*takes into account its physical limitations and its versatility for sustained production*'.

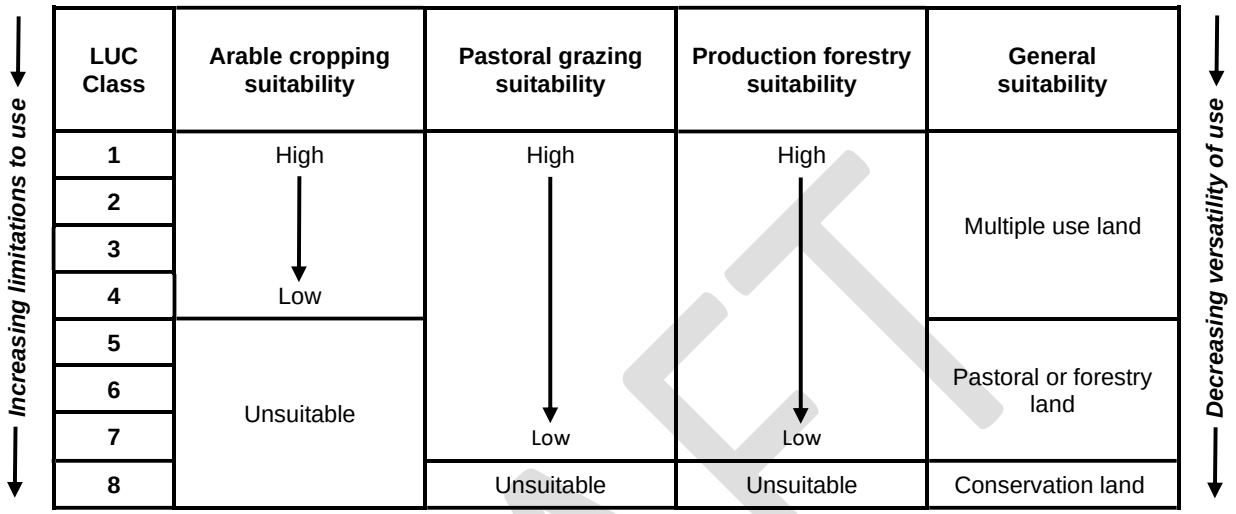


Figure 1: Increasing limitations to use and decreasing versatility of use from LUC Class 1 to LUC Class 8

Land Use Capability (LUC) Classification and **Erosion Susceptibility Classification (ESC)** layers were intersected on top of the property title layers. This again produced a data set with accurate estimates of the areas of land in different LUC and ESC classes on all the properties identified for the period concerned.

Region	Land Use Classification (LUC) Band								Grand Total (Hectares)
	2	3	4	5	6	7	8	Other	
North Auckland	0	36	428		4,830	589			**5,884**
South Auckland	32	533	512	18	7,729	1,476	18		**10,318**
Hawkes Bay	60	469	326		9,702	2,473	82		**13,113**
Gisborne	27	77	67		1,975	3,695	112	3	**5,955**
Taranaki		60	663	93	3,180	2,318	120		**6,434**
Wellington	36	574	455	230	14,747	11,039	174	4	**27,259**
Marlborough		0	36		2,240	244	25	1	**2,546**
Nelson			25		462	510	149		**1,146**
Canterbury		368	381		2,745	833	7	26	**4,360**
Otago	6	1,454	5,075	2,512	10,279	630		4	**19,960**
Southland	46	361	942		3,912				**5,261**
Grand Total	**207**	**3,931**	**8,910**	**2,853**	**61,801**	**23,807**	**687**	**38**	**102,234**
% 2020-2022	0.2%	3.8%	8.7%	2.8%	60.5%	23.3%	0.7%	0.0%	**100%**
% 2017-2020	0.1%	3.1%	5.4%	0.9%	52.0%	36.7%	1.7%	0.1%	**100%**

Table 4: Summary of all LUC areas due for conversion to forestry

When compared to the LUC percentages from the initial report, a subtle change in the classification is starting to emerge with an increase in Class 4 and 5 land showing up on the table, an increase in Class 6, and a subtle reduction in Class 7 land being involved.

It is also interesting to see that the traditional “carbon” and “honey” companies still favour land with less productive classifications. Some subtle changes in OIO purchased properties, and farms traded by non “carbon” entities shows a marked increase in Class 4 land being involved.

More detail about whether the better class of land is being on sold to farming interests has been anecdotally reported but at this stage cannot be quantified.

Entity	LUC Layer								Grand Total (Hectares)
	2	3	4	5	6	7	8	Other	
Carbon	0%	2%	4%	0%	64%	28%	1%	0%	**36,362**
Forestry	0%	6%	17%	0%	61%	15%	1%	0%	**21,270**
Honey	0%	3%	4%	2%	44%	46%	2%	0%	**5,606**
OIO	0%	4%	9%	7%	59%	20%	0%	0%	**38,997**
Grand Total	**207**	**3,931**	**8,910**	**2,853**	**61,801**	**23,807**	**687**	**38**	**102,234**
% of Total	**0%**	**4%**	**9%**	**3%**	**60%**	**23%**	**1%**	**0%**	**100%**

Table 5 shows the areas of land by region under the different ESC categories going into forestry.

Here we see a more even split between land in the three main ESC classes – low, moderate, and high, with only a small percentage of 'very high' (i.e. highly erodible land) being destined for planting (down to 6% from previously reported 10%).

This represents a slight departure from the previous 4-year profile possibly reflecting a reduction in 'harder' farmland for sale and the increases in price making the next tier of farms to be traded.

Region	Erosion Susceptability Class (ESC)					Grand Total (Hectares)
	Low	Moderate	High	Very High	Other	
North Auckland	1,148	4,068	609	59		**5,884**
South Auckland	3,074	6,687	547	9		**10,318**
Hawkes Bay	2,272	6,825	3,126	889		**13,113**
Gisborne	261	1,885	1,054	2,752	3	**5,955**
Taranaki	919	3,077	1,401	1,037		**6,434**
Wellington	5,237	11,982	8,418	1,619	3	**27,259**
Marlborough	2,276	244	25		1	**2,546**
Nelson	487	389	270			**1,146**
Canterbury	2,845	1,481	7		24	**4,360**
Otago	15,592	4,364			4	**19,960**
Southland	5,243	18				**5,261**
Grand Total	**39,354**	**41,019**	**15,458**	**6,365**	**29**	**102,234**
% 2020-2022	38.5%	40.1%	15.1%	6.2%	0.0%	**100%**
% 2017-2020	28.2%	35.8%	26.0%	9.9%	0.0%	**100%**

Table 5: Areas of land (ha) being converted to plantation forestry by Erosion Susceptibility Classification

Historically, steeper land has been purchased by forestry interests due to its availability/lesser interest from farming and/or for environmental reasons. Carbon forestry (where radiata pine is planted but there is no intention to harvest the trees) and mānuka are two further options which are now attractive on some of this most challenging of ESC classes.

The table below supports the evidence in LUC table (Table 4) that the class of land purchased by non-traditional "carbon" entities is in general better farmland in respect to LUC and ESC criteria.

ESC	Entity				Grand Total
	Carbon	Forestry	Honey	OIO	
Low	25%	55%	19%	44%	**38%**
Moderate	49%	34%	42%	35%	**40%**
High	22%	8%	33%	11%	**15%**
Very High	4%	3%	6%	10%	**6%**
Other	0%	0%	0%	0%	**0%**
Grand Total	**100%**	**100%**	**100%**	**100%**	**100%**

Under the National Environmental Standard for Plantation Forestry (NES-PF), some of this land in Very High (red) zones cannot be planted for production forestry without resource consent

3.2 LUCAS Layer Analysis

As well as the ESC and LUC analysis undertaken, property shapefiles were intersected with the 2016 LUCAS Layer.

LUCAS 2016 Layer	Cropland - Annual	Grassland - High producing	Grassland - Low producing	Grassland - With woody biomass	Natural Forest	Planted Forest - Pre 1990	Post-1989 Forest	Wetland - Open water	Wetland - Vegetated non forest	Grand Total (Hectares)
North Auckland		4,312	95	153	1,143	82	84	5	11	**5,884**
South Auckland		5,422	2,915	228	1,665	46	39	2		**10,318**
Hawkes Bay	0	6,833	4,921	522	258	210	343	14	7	**13,113**
Gisborne		1,211	2,784	325	275	200	1,154	4	1	**5,955**
Taranaki		1,253	2,997	113	1,622	327	120	1		**6,434**
Wellington		5,327	12,950	1,970	3,673	914	2,404	21		**27,259**
Marlborough		37	1,208	311	435	10	545	0		**2,546**
Nelson		367	374	28	238	21	118	1		**1,146**
Canterbury		666	2,426	474	203	43	547	1		**4,360**
Otago	0	5,219	8,584	3,167	1,682	691	522	2	94	**19,960**
Southland		1,726	2,535	321	643	13	14	4	3	**5,261**
Grand Total	**0**	**32,373**	**41,788**	**7,613**	**11,837**	**2,557**	**5,890**	**54**	**117**	**102,235**
% 2020-2022	0.0%	31.7%	40.9%	7.4%	11.6%	2.5%	5.8%	0.1%	0.1%	**100%**
% 2017-2020	0.0%	24.2%	41.2%	6.7%	16.1%	2.5%	8.9%	0.1%	0.0%	**100%**

Table 6: LUCAS 2016 layer

This indicated a 7% increase in the proportion of High producing Grassland being converted to forestry.

Again, interesting to note that this is largely due to private land sales rather than traditional Carbon entities that still seem to be targeting the lower classes of land.

Entity	LUCAS 2016 Layer						
	Cropland - Annual	Grassland - High producing	Grassland - Low producing	Grassland - With woody biomass	Natural Forest	Planted Forest - Pre-1990	Post-1989 Forest
Carbon	0%	31%	45%	5%	13%	1%	5%
Forestry	0%	37%	32%	8%	11%	4%	7%
Honey	0%	27%	34%	5%	31%	0%	4%
OIO	0%	30%	43%	9%	8%	3%	6%
Grand Total	**0%**	**32%**	**41%**	**7%**	**12%**	**3%**	**6%**

3.3 Comment: the value of LUC, ESC and LUCAS information

The LUC and ESC systems are both now well-established as descriptors of topography and erosion susceptibility and are used extensively to regulate and guide land use. They also inevitably influence the perceived and actual value of land on the open market.

Hill country farms in New Zealand are traditionally made up of a large percentage of LUC Classes 5, 6 and 7 land and some of these are very profitable. It is fair to say however, that the steeper the land (i.e. higher LUC and ESC classes), the higher the production costs to generate the same farming output per hectare compared with land in lower LUC/ESC classes. The same can be said of forestry, where, within reason, while land productivity is less sensitive to topography and erosion potential, costs of production are sensitive to these site factors. Some of the country's best forest growth rates are seen on steep to very steep land in areas of moderate to high erodibility in the eastern North Island.

Equally, there are farms on lower LUC land that due to climatic conditions, choice of farming approach and other factors, are not as profitable as might be expected. However, the data suggests that forestry investors understand and remain confident of the potential of land in high LUC/ESC classes in the price range at which the land is currently available.

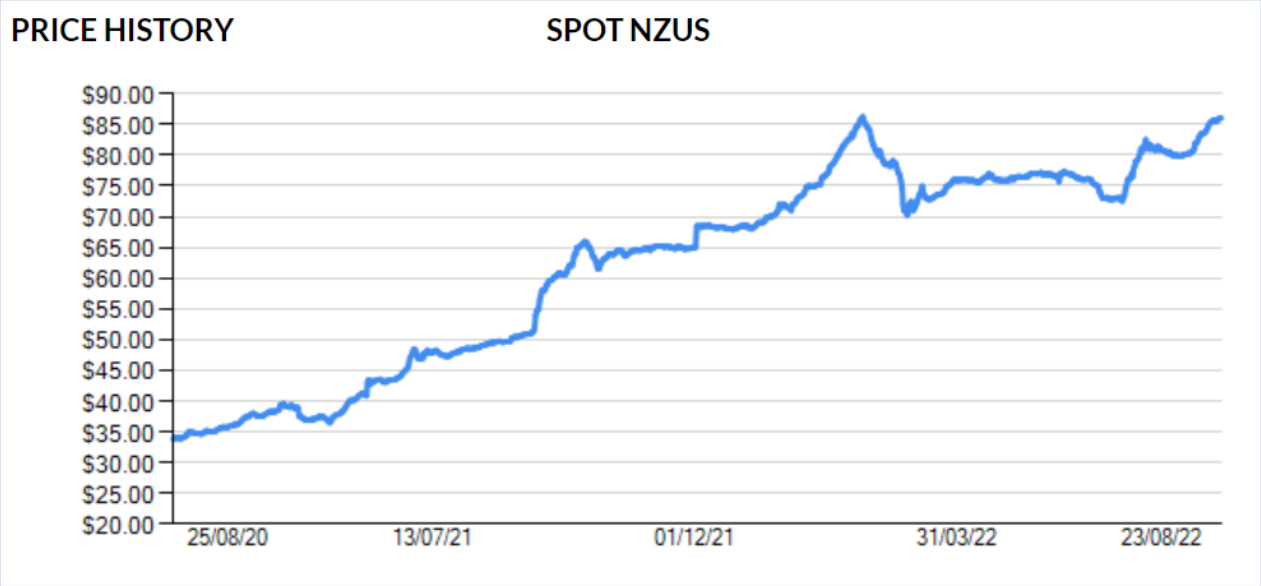
A shortage of properties and a continued rise in the value of carbon is seeing demand and price points trend steadily upwards with requests from Real estate agents looking for land in some districts, starting at $14,000 to $19,000/ha.

3.4 Indication of key drivers of land use change

Carbon Market

It would be fair to suggest that the increase in the price of carbon traded on the secondary market changes the economics of traditional farming methods in favour of full or partial farm conversion to forestry, with the added benefit of the increased carbon available under the new averaging and permanent categories making the economics in most districts more favourable.

The graph below represents the trend in the NZU spot price since early 2020. This clearly demonstrates an increase in the possible returns already identified; however, a large number of landowners are fundamentally opposed to wholesale land use change.



For further details or access to Carbon pricing, please contact Jarden Securities on +64 (9) 521 7802 or carbon@jarden.co.nz

On Farm Cost Increases and compliance

Another key consideration is the increase in on farm costs and in particular the increase in the cost of fertilizers in the last 12 months. There are farming platforms that rely heavily on an economic application and recent price increases have seen some of the properties we have been dealing with tip the balance and begin to consider massive changes in land use.

Combine this with the continual changing regulatory environment and many landowners are beginning to question the business case behind staying a traditional farming operation.

Land-use Change

Land prices in most regions have continued to climb. While this is positive for the landowners concerned, as it also lifts the equity value of other properties in the area, the increased carbon price is likely to see more pressure on land for conversion to forestry.

The analysis tends to suggest that the larger, longer rotation players in the market still actively pursue land that could be defined as less productive farmland on the basis that the comparable ESC and LUC % splits, when compared to what appears to be newer entrants to the market, show a higher % of the better classes of LUC, ESC and LUCAS with the newer entrants.

There has been a clear lift in the prices paid for land throughout all of the country.

The traditional "carbon" hotspots have seen a shift in areas traded. This appears to be a combination of reduced availability and more cost-effective options in other regions that can provide similar carbon returns especially on a long-term basis.

The table (Table 3) below shows a shift in regions across NZ on a % of total sales basis.

Region	Sales by District (hectares and %) 2020-2022		2017-2020	% Change of area sold
North Auckland	5,884	6%	4%	**+8%**
South Auckland	10,318	10%	4%	
Hawkes Bay	13,113	13%	10%	**+5%**
Gisborne	5,955	6%	4%	
Taranaki	6,434	6%	4%	**-17%**
Wellington	27,259	27%	46%	
Marlborough	2,546	2%	6%	**-5%**
Nelson	1,146	1%	2%	
Canterbury	4,360	4%	4%	
Otago	19,960	20%	16%	**+8%**
Southland	5,261	5%	1%	
Grand Total	**102,234**	**100%**	**100%**	

Current Landowners situation

Again, the level of detail available in terms of the sales is inconclusive. It is well known that the average age of farmers in New Zealand is at the upper end of the scale, however, we are starting to see a new generation taking over and transitioning into the business.

These younger farmers appear to be prepared to look objectively at the total farming operation and analysing down to a paddock-by-paddock level the best use of land to support their chosen farm model.

This detailed analysis is now required across many platforms as rising costs associated with fuel, fertilizer, additional feed, and other on-farm costs all add up.

Couple this with a shortage of staff in some regions and the industry appears to be in a very delicate state.

Most farmers see the potential benefit of an integrated approach incorporating trees in certain places on their farms less suited to food production.

ETS Awareness

A recent program, covering 70 farm visits in the Hurunui district in Canterbury, to explain the ETS and possible current and future opportunities with trees on farms, noted the following (start of extract):

"The overriding initial position of landowners was one of general confusion around the ETS, and how it related to their individual property and circumstances - what qualified, what didn't, how and what to claim? How can something that doesn't leave the farm be "sold"?

Most of the landowners were initially nervous and slightly confused, having heard different, often conflicting, versions about the ETS at various locations. However, once they understood the basic concept, then the opportunities started being presented by the landowners themselves.

From the visits we identified an initial starting position as noted below:

Starting Property Position				
Pre-1990 FAP on title	**Existing ETS**	**Post 89 Exotic**	**Post 89 Indigenous**	**ETS Intention**
36	**17**	**42**	**27**	**31**
51%	**24%**	**60%**	**39%**	**44%**

- **51%** of properties had Pre-1990 Forest Allocation Plan (FAP) compensation attached. Some of these properties had had the units transferred to them when purchasing the property (not compulsory to do so).
- **24%** had existing ETS registrations to some degree, some with Crown Joint Ventures (JV) and Forestry Rights (FR).
- **60%** had qualifying Post-1989 Exotics NOT registered.
- **39%** had Post-1989 Indigenous NOT registered.
- **44%** had qualifying trees that they planned to register, time permitting.

After the visits and discussions, landowners indicated the following adjustments to their original plans:

Planned Future Intention				
Plant Radiata	**Plant Poles**	**Indigenous Plant & Reversion**	**Plant Other Species**	**Register in ETS**
22	**40**	**34**	**23**	**57**
31%	**57%**	**49%**	**33%**	**81%**

- **31%** were looking at planting small areas of radiata for production if access allowed, for permanent carbon, or contribution to the farming model for either ETS or He Waka Eke Noa (HWEN) benefits.
- **57%** were VERY interested in planting poles for soil conservation purposes, with the added benefit of carbon helping with the cost involved.
- **49%** planned some form of indigenous establishment. However, without exception all were concerned about the cost and pest control from other properties in the district.
- **33%** were looking to plant something other than radiata. Redwoods and high density Euc's being amongst the most talked about.
- **81%** after the visits with existing and/or proposed plantings, planned to register in the ETS.

General observations from meeting with farmers

- Without exception every property visited was trying to do the best by their land and looking at ways to spread risk and increase income streams.
- Each farm was slightly different in respect to land and stock management.
- Huge amount of time spent on compliance and reporting.
- Limited support/subsidy on a national scale since One Billion Trees Fund (1BT) was cut off.
- Preference to plant natives but cost and survival rates of concern.

- No carbon recognition for fencing, protecting and promoting existing indigenous land to regenerate (additionality).
- Lack of coordinated pest control in the region/nationally, especially with the increased numbers of pests being seen on properties.
- Unaware that mixed species could qualify.
- Unaware that stock could still graze if needed and measurement is to the dripline not fence line.
- Worry of TB spreading back into the area.
- Need for permanent Exotics in hard-to-reach areas to help survival of farm.
- Confusion around PRE-1990 forest obligations and general understanding with some potential pre-1990 deforestation issues identified.
- Confusion on 'safe' (aka 'low risk') carbon understanding.
- Lack of understanding by their accountants and lawyers around ETS transactions i.e., land sales, changes to unincorporated bodies which can constitute a transfer of participation (i.e., transmission of interest).
- Recent concern that talks of removing exotics from the Permanent Forest category to prevent Whole Farm conversions, will make planting uneconomic in terms of carbon income, in the 20-100 hectares of the property that are poor performing in respect to grazing, inaccessible and almost impossible to get a road to within the current rules to harvest.
- Shift in focus from solely ETS to ETS vs HWEN - what the differences are and what is the best option for them. General frustration around the rules, proposed changes and uncertainty around which is the best way forward." (end of extract)

Barriers currently seen to further conversion

It has been suggested that lack of seedling supply has restricted the level of conversion in New Zealand in recent times. In reality, this is not the case if forward planning and order placement confirmation with nurseries is done in a timely manner.

Additional capacity for both exotic and indigenous seedling production is starting to appear in the industry.

Labour has also been a cause for concern. Planting costs per tree have risen from around $0.40/tree to $0.80-$0.90/tree as the availability of "trained" planters is constrained by the effects of border closers and lingering COVID 19 restrictions in play.

Many opportunistic contractors have appeared in the industry to fill the gap. However, there is no substitute for experience. Examples of poor planting techniques resulting in poor survival, poor timing or absence of release spraying and follow up blanking operations are becoming apparent.

Proper establishment also involves on going pest control and release spraying operations.

Chemical supply has been interrupted by COVID-19 restrictions internationally and placed even more importance on proper forward planning and quality control.

The real barrier is certainty around the rules going forward and the ability to carefully plan 12-months in advance and be confident to set up contractual arrangements for the supply of trees and labour.

3.5 Distance to the nearest port

Historically, beyond a certain distance and depending on a range of variable factors including the log price, harvesting costs, transport costs, domestic mill locations, and shipping costs, it becomes less economic to transport logs to the mill for processing or the port for export. Although referred to as distance to Port, in reality it is the DISTANCE TO MARKET.

This influences the value of traditional forestry land, however, with the increasing price of carbon, the economics of the entire cycle has greatly improved the returns from the first crop and provided increased confidence in pricing decisions.

In the initial report, properties were identified between 150 km and 200 km from the nearest port. Forests closer than 150 km to a port are those expected to be most likely managed for both timber and carbon revenues (based on current industry log revenues and costs), unless purchased by entities that have a carbon-only focus from the outset.

With the rise in the price of carbon since 31/12/2020 and the introduction of auctioning, to a large degree, the distance to market has impacted the decisions less, as there is more potential income from carbon than harvesting the trees, and the distance to the Carbon market is ZERO km.

Having only one band for averaging of 16 years for Pinus radiata has changed the focus. If additional bands recognised the increase in volumes of a longer 40–50-year framing rotation and the ability to offset higher harvesting costs with higher per hectare recoverable volumes, then economically longer rotations would become more viable than registering in the "permanent" category which is currently the only other viable option for marginal operations and resulting in carbon only management regimes, which will potentially affect log supply going forward, so is an issue for the traditional production forest and timber industry in New Zealand.

Areas registered as permanent forestry within the post-1989 Emissions Trading Scheme (ETS), with a progressive production thinning regime, while maintaining the 'forest land' definition of a minimum 30% canopy cover, are expected to become attractive options.

NB. The detailed rules for averaging accounting and other changes to the ETS are still being finalised and may be subject to change. The rules will be set out in the new regulations for forestry in the ETS. These regulations will be finalised and published by 1 October 2022. They come into practice on 1 January 2023.

In addition, this year the Government sought feedback on a proposal to exclude exotic forests from being registered in the new permanent post-1989 category in the ETS. The consultation on the proposal closed on 22 April 2022. Submissions are being considered. A decision is expected to be made on this later in the year.

4. Discussion

4.1 Why is farmland continuing to be sold?

With projected returns on forestry investments increasing due to the addition of carbon revenues, 'forestry' is now able and prepared to pay more for the land than 'traditional farming'. As forestry buyers have arrived on the scene, some landowners have chosen to take the opportunity to benefit, with the time being right to move on to the next farm or next stage in life.

The evidence would, on the surface, suggest that the price of carbon has certainly had an increased effect on not only the land values, but also the type of land that is able to be traded, as the demand remains to purchase and properties with less effective areas are taken up.

While this is making it attractive for some existing landowners to exit the industry or move onto better land, the potential for increased afforestation of pastoral land is real, and the areas concerned appear to be increasing with the sales information showing combined sales of 102,234 hectares for the period, a significant increase on that previously reported.

If we look at the timing of sales, we see the beginning of a trend for confirmation of S&P agreements in the last quarter of the year.

It is interesting to note that confirmed contracts show a low level in the first two quarters of 2022, perhaps reflecting the mixed messages coming from both Ministers Nash and Shaw around the future of exotics in the ETS permanent category.

Entity	2020				2021				2022		Grand Total (Hectares)	% by Conversion	
	Qtr1	Qtr2	Qtr3	Qtr4	Qtr1	Qtr2	Qtr3	Qtr4	Qtr1	Qtr2		2020-2022	2017-2020
Carbon	2,309	1,286	1,608	8,432	3,802	305	3,340	12,269	3,010		**36,362**	**36%**	**58%**
Forestry	2,387	1,639	638	1,404	1,862	3,741	3,076	2,627	3,550	345	**21,270**	**21%**	
Honey				3,313	2,292						**5,606**	**5%**	**16%**
OIO		4,044	1,890	9,327	4,768	1,682	2,702	9,984		4,600	**38,997**	**38%**	**27%**
Total	**4,696**	**6,970**	**4,137**	**22,476**	**12,724**	**5,729**	**9,118**	**24,880**	**6,560**	**4,944**	**102,234**	**100%**	**100%**
Grand Total	**38,278**				**52,451**				**11,505**		**102,234**	**100%**	

If we look further into the detail surrounding the type of land being purchased by the various entities, we see that the traditional large scale and OIO players, continue to focus on a “lower” class of land across the three measures used in this report:

1. LUC
2. ESC
3. LUCAS

Entity	LUC Layer								Grand Total (Hectares)
	2	3	4	5	6	7	8	Other	
Carbon	0%	2%	4%	0%	64%	28%	1%	0%	36,362
Forestry	0%	6%	17%	0%	61%	15%	1%	0%	21,270
Honey	0%	3%	4%	2%	44%	46%	2%	0%	5,606
OIO	0%	4%	9%	7%	59%	20%	0%	0%	38,997
Grand Total	207	3,931	8,910	2,853	61,801	23,807	687	38	102,234
% of Total	0%	4%	9%	3%	60%	23%	1%	0%	100%

ESC	Entity				Grand Total
	Carbon	Forestry	Honey	OIO	
Low	25%	55%	19%	44%	38%
Moderate	49%	34%	42%	35%	40%
High	22%	8%	33%	11%	15%
Very High	4%	3%	6%	10%	6%
Other	0%	0%	0%	0%	0%
Grand Total	100%	100%	100%	100%	100%

Entity	LUCAS 2016 Layer						
	Cropland - Annual	Grassland - High producing	Grassland - Low producing	Grassland - With woody biomass	Natural Forest	Planted Forest - Pre-1990	Post-1989 Forest
Carbon	0%	31%	45%	5%	13%	1%	5%
Forestry	0%	37%	32%	8%	11%	4%	7%
Honey	0%	27%	34%	5%	31%	0%	4%
OIO	0%	30%	43%	9%	8%	3%	6%
Grand Total	0%	32%	41%	7%	12%	3%	6%

The independent entities (referred to as Forestry) buying land for afforestation seem to be purchasing land with significantly better classes of grassland and better ESC and LUC profiles. This potentially represents a FOMO (Fear Of Missing Out) approach rather than a carefully considered economic evaluation.

When compared to the total sales of all properties over 250 hectares for the period 2020-2022 (including properties staying in traditional farming Operations), the following LUC differences were observed between land identified as potential afforestation and land assumed to be under the farming business as usual model.

In both islands there appears to be a lower LUC class of land transitioning into forestry.

South Island Sales		
LUC	**Afforestation**	**Farming**
1	0%	0%
2	0%	2%
3	5%	12%
4	15%	15%
5	5%	2%
6	62%	46%
7	12%	19%
8	0%	5%

North Island Sales		
LUC	**Afforestation**	**Farming**
1	0%	1%
2	0%	3%
3	3%	7%
4	3%	8%
5	0%	1%
6	58%	54%
7	35%	25%
8	1%	1%

4.2 Analysis of potential land expectation value (LEV) comparing traditional production forestry to a Permanent (non Clear-fell) model

The increasing effect of the carbon price on the potential purchase price for land is often discussed.

Traditional Production Forestry has always been a viable option in most areas subject to the traditional effect of distance to market. This has also been heavily influenced in recent years, on market volatility, logistical freight volatility and the effect of demurrage (slow loading/unloading of vessels).

A comparison of a property near Masterton was conducted to illustrate the potential influence of carbon on the returns for various forestry models, including carbon only, for an additional 100 hectares of Pinus radiata being established.

Framing Regime	Cashflow: Years 0 -10	Cashflow: Years 11 - 20	Cashflow: Years 21 - 29 (incl. log revenue and replanting)	Cashflow: Years 30 - 50	IRR	NPV (8.5%)	Total Cost	Total Revenue	Surplus
Forestry - no carbon	-$426,300	-$70,000	$2,128,465		6.3%	-$137,639	$801,600	$2,433,765	$1,632,165
Sale of first 16 years carbon	$1,116,180	$1,629,480	$2,108,265		31.8%	$1,199,116	$867,600	$5,721,525	$4,853,925
28 Yrs Carbon Only	$1,350,920	$2,538,540	$2,284,480		32.4%	$1,527,099	$618,300	$6,792,240	$6,173,940
50 Yrs Carbon Only	$1,350,920	$2,538,540	$2,544,560	$4,271,100	32.4%	$1,733,033	$838,300	$11,543,420	$10,705,120

Forestry - no carbon

As can be seen the returns for traditional forestry without registering in the ETS represent a reasonable internal rate of return (IRR) (6.3%) although the net present value (NPV) is negative.

Sale of first 16 years carbon ($70/NZU)

By registering the same forest into the ETS under averaging (16 years carbon allocated) the resultant potential income in the early years dramatically increases the returns (IRR 31.8%).

NPV has increased dramatically as a result of the sale of the carbon allocated.

(NB. These numbers include the cost of replanting after harvest to avoid the need to surrender the carbon allocated).

28 years carbon only (No Clear-fell)

The calculations appear to indicate that at $70/NZU, if traded, that the return from not harvesting under the carbon accounting model results in a greater return than carbon and stumpage, without the concerns of market volatility, and potential environmental, fencing and roading issues sometimes related to harvesting activities.

Permanent Forest (50 years carbon)

The effect of a Permanent Forest registration for 50 years indicates possible returns if the carbon is traded at $70/NZU. Please note this places an obligation against the land. Should the 'forest land' definition not be maintained a unit surrender would be required, and penalties may apply.

Most B+LNZ platforms have areas on farm, that are suited to Permanent Exotic Afforestation, where the weed species, productivity and access require a different thought process to be productive. It is important that this option is maintained to help ensure the survival of many "traditional" farming operations.

5. Summary

Throughout the project it was evident that the data was continually changing as land was purchased, on-sold, approved, or declined by the OIO office, and simply in relation to the timing of available information, when contracts settled, and information could be released.

Our original objective was to:

"Independently validate the amount of land that has been or will be planted into exotic plantation species in the near future that is likely to take land out of pastoral production".

The results of our current review estimate:

Whole of Farm Purchase	Year				2021	Q1 & Q2 2022	Grand Total (Hectares)	% by Conversion
	2017	2018	2019	2020				
Honey (Mānuka)	3,039	7,340	1,678	3,313	2,292	-	**17,662**	**10.1%**
Forestry	2,510	11,245	26,198	6,069	11,306	3,895	**61,223**	**34.9%**
Carbon Forestry				13,635	19,717	3,010	**36,362**	**20.7%**
Forestry OIO	1,455	8,982	10,626	15,261	19,136	4,600	**60,060**	**34.3%**
Total Whole of Farm	**7,004**	**27,567**	**38,502**	**38,278**	**52,451**	**11,505**	**175,308**	**100.0%**
Previous Report	**7,004**	**27,567**	**38,502**	**28,159**	**14,246**	**-**	**115,478**	

The data was based on sales that could be verified during the stated period.

The areas identified includes sales dated 2020 that emerged confirmed as a result of timing issues around the OIO approvals process and apparent conditional domestic sales in November/December 2020 that have since settled.

This caused a jump of over 10,000 hectares in the 2020 numbers and a dramatic (though not unexpected) rise in the area purchased in 2021 for conversion.

The amount of land that has been and continues to be purchased for mānuka operations has dropped.

Given the increase in the carbon price, and the state of the mānuka honey industry, it may become increasingly difficult for honey producers to compete in the current market to purchase land.

The perceived economics of forestry with the updated carbon cashflows, continues to be attractive and the demand for potential forestry land from investors remains strong.

There is unsatisfied demand amongst prospective purchasers. However, limitations with seedling, labour and chemical supply going forward will, to a certain extent, delay the speed of transition.

There is also an increasingly strong interest/commitment from farmers and landowners considering within-farm plantings, to diversify their income options and Greenhouse Gas (GHG) obligations.

The strong uptake of the One Billion Trees (1BT) planting grant by existing landowners, provided evidence that many farmers were assessing the long-term benefits associated with putting part of their farm in trees, planting 'the right trees in the right place' - where the right place is one which increases overall farm profitability, reduces total farm emissions, and may also confer other sustainable environmental and social benefits.

Since the fund was stopped, so has landowner commitment/ability to plant non-radiata species.

Demand is increasing for a funding model to help landowners establish indigenous vegetation and other exotic species such as Redwoods with their soil conservation and longevity values, as well as Eucalyptus, Oaks and other NON-radiata species.

The danger is, if some form of funding does not eventuate soon, exotics, and radiata in particular, will become the ‘go to’ species due to the economics involved.

There is a real benefit for existing BLNZ members to benefit from within farm plantings, as the lack of labour in some areas, cost of fertilizer, fuel and additional feed in response to more dramatic climate events, cause many landowners to question how and why they are in the business of farming.

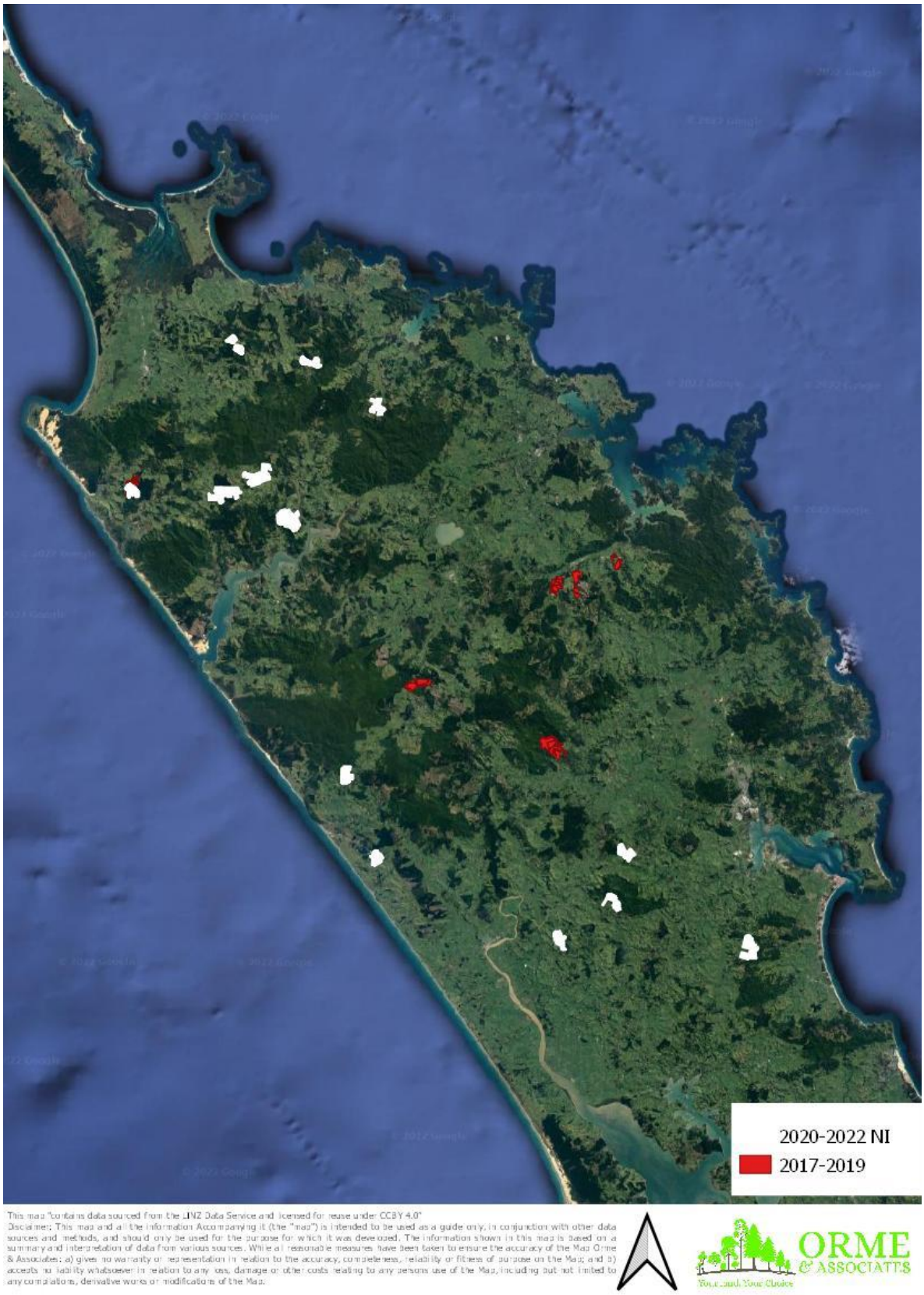
The traditional “carbon” entries are changing the rhetoric around the discussion, referring to longer 50-year plus rotations and ultimately the transition to indigenous forest.

The challenge for the traditional farming operation is to embrace the opportunities for forestry and carbon within their current farming models.

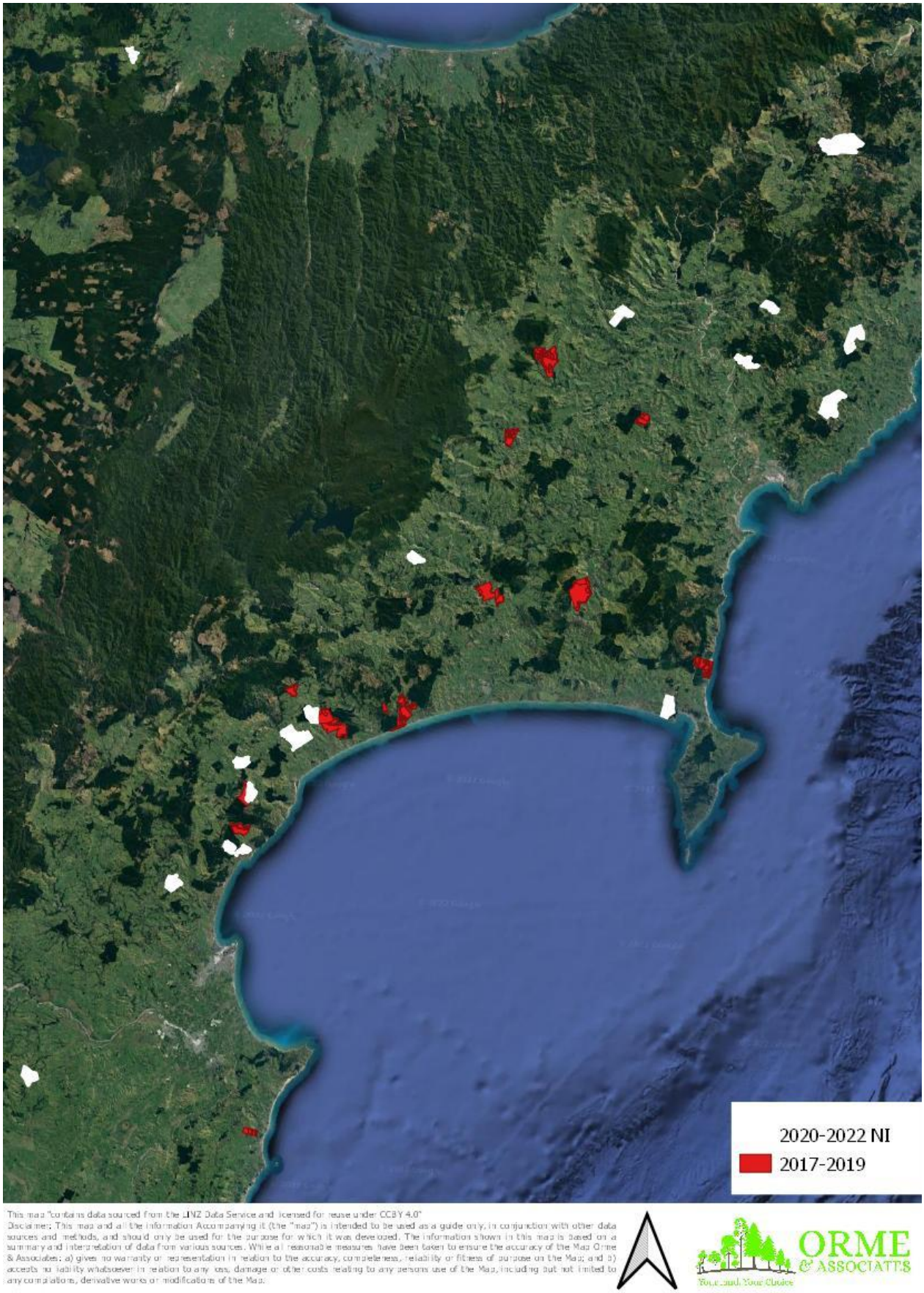
There is a real danger that, if while trying to influence the government of the day to combat the large-scale full farm conversions of food producing land, for potential changes to the regulations, that this will also negatively impact on those farmers that need an element of forestry, to enable them to meet their financial, environmental and GHG offsetting requirements and stay in business.

6. Appendices

6.1 Appendix A: Regional distribution of land acquisitions identified as likely for forestry conversion

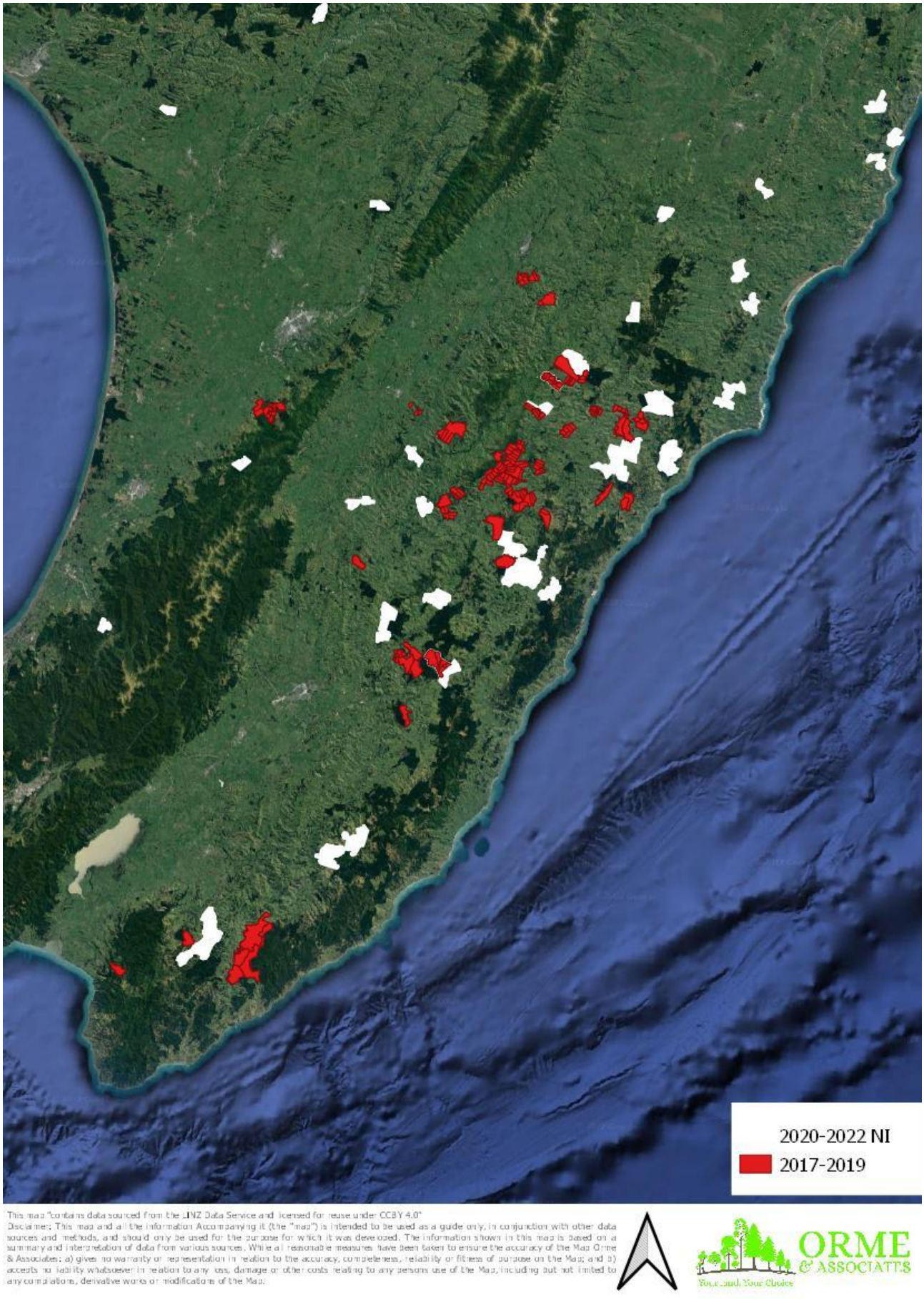


Map 1: Northland zoned land acquisitions for forestry

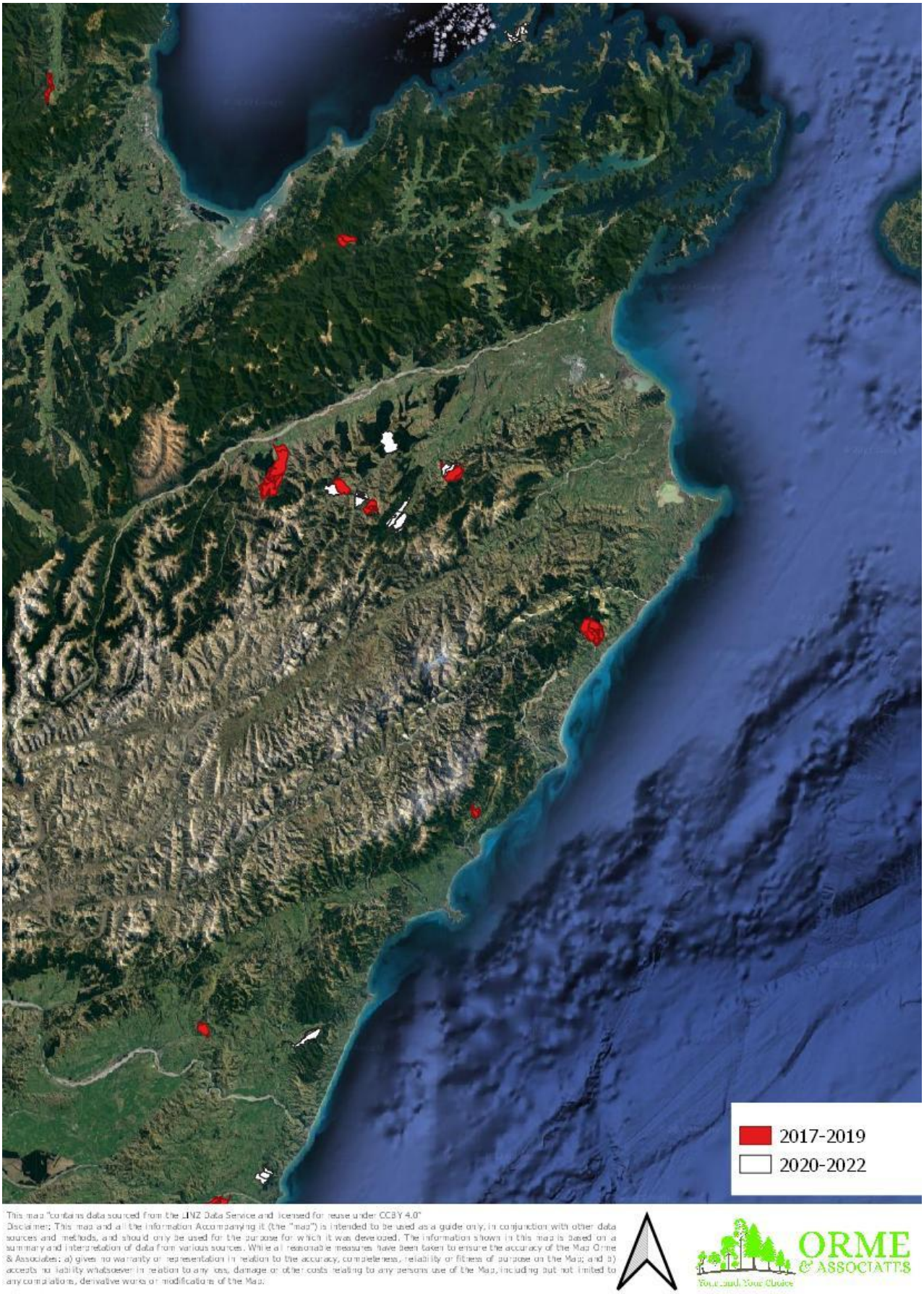


Map 2: Gisborne / Hawke's Bay zoned land acquisitions for forestry

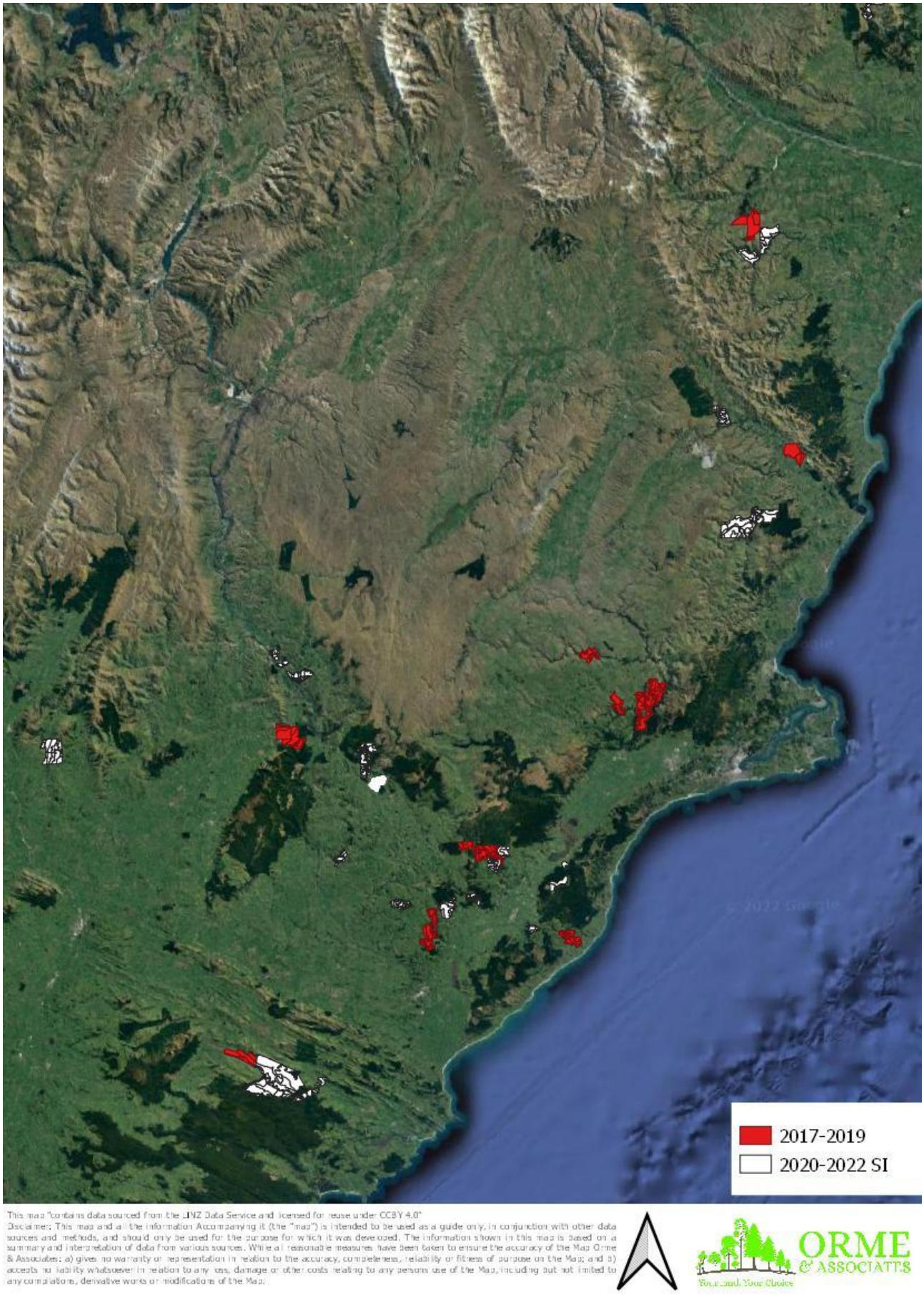
Map 3: Taranaki zoned land acquisitions for forestry



Map 4: Lower North Island zoned land acquisitions for forestry



Map 5: Top of the South Island zoned land acquisitions for forestry



Map 6: Otago / South Canterbury zoned land acquisitions for forestry

APPENDIX THREE: THE IMPACTS OF BLANKET AFFORESTATION

The detrimental social and economic impacts of blanket afforestation farmland were stated in a report "Right Tree Right Place" prepared for Tararua District Council by Ag First[1]. This report stated:

"The Situation in the Tararua District

- *In 2019 $110,320,000 worth of pastoral land was sold, of this 31% was for carbon forestry and 25% for forestry, only 37% was for strictly pastoral use. But on a per hectare (ha) basis, of the 12,137ha traded, a total of 10,171ha had gone into forestry. This is approximately 85% of the land area.*
- *At an average stocking rate of 8.5 stock units per hectare, this would mean 50,000 stock units worth of sheep and 20,000 stock units worth of cattle would have gone from the district in one year. It has been assessed that the loss in community spend due to this decrease in stock units is between $1,700,000 and $2,100,000 per year.*
- *These numbers were recorded when the value of carbon (expressed in CO2 equivalents) averaged under $25/tonne. At the time of the initial Right Tree Right Place work carried out for the TDC the value of a CO2E was $35/t with some forward contracts at $42/t. As of report finalisation the price is close to $50/t, a doubling of the NZ carbon price in two years.*
- *Although it is speculative by nature it would be reasonable to expect this trend to continue and possibly even accelerate.*
- *Any discussion around land use change in the district should involve an understanding of the implications of both the price of carbon and the impact of the National Policy for Fresh Water Management."*

Our farming members report that forestry is quickly becoming the dominant land use in both Gisborne and Wairoa, leading to poor environmental, economic and social outcomes.[2] Many blanket monocultural forestry conversions are the result of foreign owned companies utilising the Special Forestry Test provisions under the Overseas Investment Office (OIO). The use of the Special Forestry Test avoids the same level of scrutiny that such a purchase would incur if the foreign purchaser intended to keep farming the land. As noted in our submission on the matter, the recent changes made to the Special Forestry Test do not address this discrepancy. Two recent high-profile examples of this were the sale of the iconic Huiarua and Matanui stations to the Ingka Group (the parent company of Ikea).[3]

Federated Farmers Gisborne Wairoa President Toby Williams launched a petition to prevent the sale and blanket pine afforestation of these two large farms. The petitions received over 8,000 online signatures and stated:

> *"**Help us save iconic Huiarua and Matanui stations from off-shore forestry interests***
> *Huiarua and Matanui stations, north-east of Gisborne, represent over 6000 hectares of New Zealand's finest agricultural land.*
> *Much of it is easy rolling and cultivatable.*
>
> ***Land quality such as this is rare in our country***
> *If these farms were located anywhere else in New Zealand, or closer to Gisborne city, they would likely be converted to dairy farms - with a milk processing factory to boot!*

[1] Provincial-Growth-Fund-Te-Uru.pdf (tararuadc.govt.nz)

[2] https://beeflambnz.com/sites/default/files/Wairoa%20Afforestation_FINAL.pdf

[3] https://www.linz.govt.nz/resources/oia-release/ingka-groups-application-consent-acquire-huiarua-station-and-matanui-station

These farms are the East Coast's equivalent of iconic high-country South Island properties
If there was an application to plant pine forests on a South Island high country farm, do you think we would be having this conversation and need this petition? Environmentalists would be in uproar.

If these farms go, so does the East Coast farming community & Mata School
In its heyday Huiarua Station had more than 50 permanent staff and a school of its own. They now host Mata School, which services the families and whānau on the surrounding farms. This saves these children traveling into Tokomaru Bay daily, on the treacherous Mata Road.

The shearing gang they use is already looking for alternate sheds due to many farms being planted in trees.

All of this increases the isolation of the farms that still want to farm up there.

It makes it harder to keep roads open and safe for people. It makes it harder for those farms to attract staff and services.

Who would want to move to the middle of nowhere and live with almost no neighbours? These are some of the reasons we need to keep the farms as farms, not plant them in forestry.

This needs to stop before it consumes every farm up the East Coast
If Huiarua and Matanui stations go, it increases the pressure on the people who remain farming around there to plant theirs as well. It's a vicious cycle that needs to be stopped before it consumes every farm up on the East Coast.

It is their isolation that is the achilles heel and the reason why there is attraction for forestry.

We don't believe the offshore purchaser will harvest the trees
We are told it is the intention of the purchaser to harvest the trees via land-based logging for the most part.

I do not believe this for one second. The Mata Road, which is where the logs will have to come out, is already one of the worst roads in New Zealand.

The farms are approximately 2.5 hour drive from Gisborne, although given the state of the road, that's probably closer to 3.5 hours.

Together with the distance to port and the cost of transport will make it prohibitively expensive to harvest."[4]

Tragically for Gisborne Federated Farmers members, the local community, and the Mata school, in September this year the Government approved the sale of Huiarua and Matanui Stations to the Ingka Group. Ingka plans to convert about 5,000 ha of the 6,000 ha of pastoral

[4] https://www.change.org/p/overseas-investment-office-help-us-save-huiarua-and-matanui-from-offshore-forestry-interests

land of these stations to blanket monocultural pine forestry.[5] Federated Farmers Gisborne Wairoa President Toby Williams described this decision as 'Devastating for the East Coast.[6]

SLASH AND NEGATIVE FORESTRY HARVEST EXTERNALITIES

Blanket clear-fell harvest practices and slash have created problems that are particularly evident in regions such as Gisborne. Gisborne's highly erodible land, coupled with frequent winter heavy rainfall and inappropriate historical land use (both forestry and farming) mean sediment is an issue in most catchments. Post-Cyclone Bola planting was indiscriminate and consequently, the harvest of those forests are having large impact on water quality, downstream properties, and infrastructure. Slash is still present in flood-prone areas and harvesting is yet to occur in many catchments. Harvest practices and forest residue management will be live issues in Gisborne for several years to come with local communities bearing the impact of the negative effects of forestry without receiving the financial benefits.

The 2017-18 floods in the Gisborne region are not isolated events – see GDC's Cyclone Cook Investigation Report for a summary.[7] In Gisborne, every localised storms result in considerable damage from forestry slash.

The below images are of localised flooding near Te Papa Station (Ngakoroa Road) in 2015.

The below images are of Wainui Beach, Gisborne – Cyclone Cook 2017 and of Tolaga Bay Beach, QB Floods 2018

ROAD MAINTENANCE AND ROAD SAFETY

[5] https://www.nzherald.co.nz/the-country/news/overseas-firms-buy-huiarua-and-matanui-stations-for-forestry-conversion/D5XX2AOM2A6P444IXA572HHLKE/

[6] https://www.change.org/p/overseas-investment-office-help-us-save-huiarua-and-matanui-from-offshore-forestry-interests/u/30750360

[7] GDC, 2017, Cyclone Cook Investigation Report, pg. 4. Retrieved from: file://pacificasp.com/data/FED-File$/Users/dbidlake_fed/Downloads/Cyclone-Cook-Slash-Investigation-2017-Report%20(1).pdf

Gisborne's rural roads are in dangerously poor condition due to Council maintenance failures. Gisborne's already poor roading infrastructure is being made worse by congestion and damage from forestry trucks. The below images are some typical examples:

The poor condition of roading infrastructure in Gisborne is of high concern to our farming members. The poor surface condition of roads is:

- Damaging vehicles, creating safety hazards and restricting movement e.g. some Gisborne farmers cannot load truck and trailer units because the roads are unsafe. During summer, this creates animal welfare risks because stock can overheat if left waiting in the truck while the trailer is loaded and transported separately.
- Deterring those considering employment in rural areas (e.g. access requires a four-wheel drive and vehicles deteriorate quickly in these conditions).
- Creating surface flooding and safety hazards.

In Gisborne, many of the rural roads used heavily by forestry companies are narrow and lack areas where passing is possible, and they have blind corners and drop offs where collisions would be fatal. Some farmers have had to invest in radio transmitters (RT) to safely get their children to and from school, pick up groceries from town and move stock short distances (the transmitters enable them to check where forestry trucks are on the road).

Not all farm stock, crop and fibre trucks have RT systems and our members report issues getting trucks to their farms because of congestion created by forestry operations. We are aware of multiple near misses between stock and forestry trucks where farmers have had to use tractors to extract vehicles from ditches and where trailers have had to be unloaded to enable trucks to pass one another. We understand that the situation with forestry congestion may also disrupt NZ Post's deliveries in rural areas.

REGIONAL DEVELOPMENT

The Gisborne-Wairoa regions are among the most deprived in NZ across a range of indicators including employment, housing, health, education, crime, income and access to services.[8] In a snapshot, Gisborne's:

- Median income (for a person over 15) is $24,400 compared with the national average of $28,500.[9]
- Unemployment figures fluctuate due to reliance on seasonal work, but are often among the highest in the country.

[8] http://www.ehinz.ac.nz/indicators/population-vulnerability/socioeconomic-deprivation-profile/#Regional-differences

[9] Statistics NZ, 2013 Census. Retrieved from: http://archive.stats.govt.nz/Census/2013-census/profile-and-summary-reports/quickstats-about-a-place.aspx?request_value=13992&tabname=Income&p=y&printall=true

The main wealth-creating industries are, in order: pastoral farming (mainly sheep and beef due to steep terrain), services to the primary production sector, food and beverage manufacturing, horticulture (mainly citrus, grapes, pip fruit, persimmon and macadamia nuts) and forestry-wood products manufacturing.[10]

However, despite the social and economic benefits of sheep and beef farming, Tairawhiti's Economic Action Plan from 2017 - 2022 bizarrely prioritises economic growth in:

- Wood processing - GDC is working with EWC on feasibility studies for another processing mill (Gisborne only has one sawmill) and predicts a processing mill could create a further 150 jobs and 100 m annually into the East Coast economy.
- Managed recharge of the Makauri aquifer – GDC predicts that an additional 3,000 ha of land on the Poverty Bay flats could be intensified with irrigation to double the horticulture contribution to region.[11]
- Apiculture – In particular, on Māori land (28% of Gisborne's total land area). GDC estimates that investment in hives, extraction, processing, manufacturing, and branding could generate a turnover of $60m per annum.[12]

Frustratingly there is no focus or vision for sheep, beef, or arable farming. Federated Farmers would like to know why this is the case. There is also little information available on the contribution the sector makes to the regional economy. Farmers that attended recent engagement meetings on the Tairawhiti Spatial Plan have commented that Council produced facts and figures for forestry and horticulture, but not sheep, beef or arable farming. Similarly, the most recent Gisborne Labour Market report (2016) fails to consult sheep and beef or arable sectors.

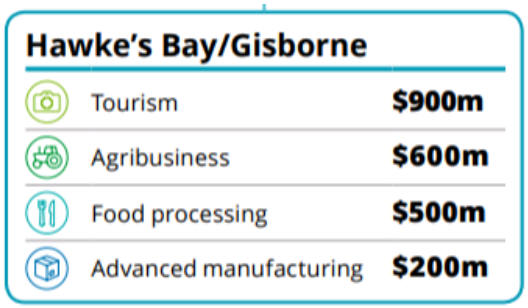
Similarly, Deloitte's 2019 regional economic report predicts the following GDP growth from 2019-2024 (including the emergence of an "advanced manufacturing industry" to service horticulture – unfortunately with only a 'modest or even slightly negative impact on regional employment').[13] It remains unclear where the tourism boom will come from. A graphic from this report is copied below:

[10] Activate Tairawhiti, 2016 LM report, based on statistics NZ data. Retrieved from: http://www.activatetairawhiti.co.nz/assets/Uploads/Tairawhiti-Gisborne-LM-Report-Oct2016.pdf

[11] The Poverty Bay flats contains 18,000 ha of NZ's most productive horticulture land. Currently, only 3,000 ha of that land is irrigated for horticulture, producing $160m in regional GDP annually and employing 1,107 people (about 10% of the Tairāwhiti workforce). Refer to the Tairawhiti Economic Action Plan 2017 - 2022, pg. 10. http://www.activatetairawhiti.co.nz/assets/Uploads/He-huarahi-hei-whai-oranga-tairawhiti-economic-action-plan-.pdf

[12] http://www.activatetairawhiti.co.nz/assets/Uploads/He-huarahi-hei-whai-oranga-tairawhiti-economic-action-plan-.pdf

[13] Deloitte, 2019 Shaping our slice of heaven: Industries of opportunity, https://www2.deloitte.com/content/dam/Deloitte/nz/Documents/Economics/nz-en-DAE-Slice-of-Heaven-2019-Report.pdf, pg. 5: https://www2.deloitte.com/content/dam/Deloitte/nz/Documents/Economics/nz-en-DAE-Slice-of-Heaven-2019-Report.pdf



Widescale forestry conversion sees large plots of land in rural communities with no one regularly living or working on the property. This encourages criminal activity such as cannabis growing, illegal hunting and livestock rustling. The loss of employment opportunities that result from blanket exotic afforestation also leaves fewer individuals to volunteer for critical roles that are disproportionately important for rural communities, such as rural fire brigades, sports clubs and school fundraisers.

The loss of resident farming families means that school bus routes stop, rural schools close and local farming communities drop to unviable numbers. The community, employment and economic implications of blanket afforestation apply for permanent and rotational forestry alike but will be even greater when the sole or key driver is so-called 'carbon farming' where it is highly likely the forest will never be harvested (and therefore less pruning and thinning activities will occur, eliminating the only ongoing source of employment from these properties). Many of our members in Gisborne and Wairoa are deeply concern for the future of their communities and the draft plan does very little to address these concerns.

THE NEED TO RURAL PROOF FORESTRY POLICY IN GISBORNE AND WAIROA

Gisborne and Wairoa are seeing the whole-scale conversion of productive sheep and beef farms to forestry. This forestry is not following the 'right tree, right place, right purpose principle but rather being driven by myriad policies destined to advantage the forestry industry. Our members are anecdotally reporting the harmful social, economic and environmental impacts this spike in blanket afforestation is having and these anecdotal member reports are being confirmed by an analysis commissioned by Beef + Lamb New Zealand.[14]

It is very frustrating that due to a lack of relevant, accurate and up-to-date data, farmers have to pay for reports (commissioned by a commodity levy organisation in Beef + Lamb New Zealand) to highlight an issue that until recently the government insisted wasn't an issue at all. Federated Farmers requests that the Government urgently address the lack of up-to-date regional socio-economic analysis on the social, economic and environmental impacts of blanket forestry on rural communities. Currently, the regional impacts of national policies are not being adequately assessed, this directly contradicts the Governments own 'Rural Proofing' guidance that is supposed to inform all policies.

It is highly troubling that the concerns of our members relating to the incentives driving the blanket afforestation of productive sheep and beef farms went unheeded for years despite the Government ostensibly having a 'rural proofing' framework in place.

In 2018 the Government adopted a 'Rural Proofing Policy', the Beehive press release announcing this policy was titled 'Rural communities at the heart of all decisions'.[15] As evident by the experiences of our farming members in Gisborne and Wairoa, the set of policies

[14] https://beeflambnz.com/news-views/new-report-confirms-trend-land-use-change
[15] https://www.beehive.govt.nz/release/rural-communities-heart-all-decisions

incentivising the afforestation of farmland has not been applied to the rural proofing framework or 'rural lens' which specifically considers rural communities.

The Rural Proofing process outlines seven steps to aid policymakers.

1. *Confirm your policy objectives;*
2. *Identify the benefits and implications of proposed policies and programmes for the rural community;*
3. *Seek advice from relevant rural contacts and organisations;*
4. *Assess the implications of your policy – are they significantly different for the rural community than for urban centres?*
5. *Consider mitigation measures;*
6. *Make adjustments to policies, programmes, and implementation plans; and*
7. *Keep parties updated, including Ministers and departments if there are any unresolved implications.*[16]

We request that all forestry policies and plans (such as the draft forestry and wood processing industry transformation plan) be specifically examined through the rural proofing framework. We are concerned that many policies designed to artificially encourage blanket monocultural forestry take a Wellington-centric approach and are not designed with the well-being of all rural New Zealanders in mind. There is a strong concern held by many of our members in Gisborne and Wairoa that the future prosperity of their regions is being sacrificed to enable urban centres such as Wellington to avoid behaviour change.

As previously noted, it is frustrating that multiple Government policies, plans and reports continue to ignore the positive impacts of pastoral farming, while also ignoring the negative impacts of blanket afforestation. Pastoral farming is an integral part of the primary sector and stated by Minister O'Connor when releasing the rural proofing guidance:

> *"The Rural Proofing Policy will ensure that when policy-makers sit down to design the rules they take into account the unique factors that affect rural communities such as low populations, isolation, and reliance on the primary sector for employment."*[17]

It is important that unique challenges being faced by rural New Zealanders, in regions such as Gisborne and Wairoa, are acknowledged and considered when developing policy and plans. The rural proofing guidance should not sit dormant. It must instead be prioritised to ensure that central government policies and plans (such as the draft forestry and wood processing industry transformation plan) are not only fit for purpose for those in urban centres, but for all New Zealanders.

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[16] https://www.mpi.govt.nz/dmsdocument/29294-Rural-proofing-Guide-for-policy-development-and-service-delivery-planning

[17] https://www.beehive.govt.nz/release/rural-communities-heart-all-decisions

APPENDIX FOUR: EXAMPLES OF ORGANISATIONS COMMENTING ON BLANKET EXOTIC AFFORESTATION

Farmers are not alone in voicing concern in the suite of policies that are incentivising the unsustainable monocultural afforestation of New Zealand's sheep and beef farmland.

In March 2019 the New Zealand Parliamentary Commissioner (for the Environment PCE) published "Farms, forests and fossil fuels: The next great landscape transformation?" An overview of the lengthy report is available on the PCE's website. The report first outlines the problems in New Zealand's current approach of offsetting fossil sources of emissions with biological sinks; as the overview states,

> *"**Chapter four** broaches the core proposition that this report questions: should we, in setting emissions reduction targets and designing climate change mitigation policies, continue to regard all anthropogenic sources and sinks as fully substitutable for one another?*
>
> *This current approach implies that it does not matter which gas is focused on as long as you have a handy means of equating the different lifetimes and potencies of the gases. The same logic underpins the premise that carbon sequestered and locked up in trees can fully offset the impact of carbon dioxide, methane or nitrous oxide emissions from any source.*
>
> *While this may be appropriate for accounting purposes, the real-world differences between the main greenhouse gases suggest that the risks they pose aren't all the same. Two main problems with the current approach are identified:*
> - *First, a single target that includes all sources and sinks renders the temperature outcomes of climate policies uncertain. If no specific target is set for gross fossil carbon dioxide emissions, emissions reductions of methane or nitrous oxide could be substituted for action on reducing fossil carbon dioxide. However, different combinations of reductions will not lead to the same temperature outcomes.*
> - *Second, the fossil carbon dioxide emitted into the atmosphere has a warming effect for centuries to millennia. By contrast, the carbon stored by trees and other terrestrial ecosystems can be quickly released back into the atmosphere in the event of fires, pests or other disturbances. Continuing to emit fossil carbon dioxide on the basis that an equivalent amount of carbon is being sequestered by biological sinks therefore carries significant risks.*
>
> *Furthermore, the extremely long-lived warming impact of carbon dioxide from fossil emissions is known with much greater certainty than the potential climate benefits of forest sinks.*
>
> *These risks are examined at some length and lead to the conclusion that managing fossil emissions separately from biological sources and forest sinks would make better sense. This alternative approach would involve separate targets for each group that reflect the risks their concentrations and warming effects pose to our ability to influence the global average temperature."*[1]

The 2019 PCE report than provides a solution for the carbon accounting problem it identifies. As summarised in the overview of the report:

> *"Fossil emissions need to be reduced to zero by the second half of the century. That should be the aim. Reducing them by only half that and claiming to have managed the*

[1] https://www.pce.parliament.nz/media/196522/overview-farms-forests-and-fossil-fuels.pdf

problem by planting forest sinks to cover the rest is a poor alternative. Not only would the sinks need to be maintained in perpetuity, planting would have to continue as long as there were any residual emissions.

Different considerations apply to biological methane and nitrous oxide. Because they do not accumulate in the atmosphere in the same way that carbon dioxide does, they do not necessarily need to be cut to zero. This is fortunate because no proven negative emissions technologies currently exist that could do so. And critically, any food production, no matter how efficient, will result in some emissions of these two gases. But they do need to be reduced and a variety of mitigation options exist or are emerging that can be deployed.

The extent to which biological emissions need to be reduced involves a judgment about what level of warming is deemed acceptable. In this context, using forest sinks to offset biological emissions is more defensible. Biological methane, nitrous oxide and trees are part of biological cycles, and the duration of the benefits forest sinks can provide is roughly aligned with the duration of warming caused by methane and nitrous emissions.

As a general observation, regardless of the level of ambition of any emissions reduction targets chosen, their rationale and expected economic and temperature impacts should be made clear and explicit. If there are reasons why the temperature objectives and emissions reduction targets for fossil emissions and biological emissions are different, these should also be clearly stated."[2]

In May 2021 the New Zealand Climate Change Commission raised serious concerns about runaway blanket afforestation in its 2021 report 'Ināia tonu nei: a low emissions future for Aotearoa'. The Commission also provided structure changes that would begin address the issue, stating;

"There are several ways the NZ ETS could be amended to manage incentives for afforestation so that the scheme delivers outcomes that align with our advice.

This includes, for example: reducing demand by limiting how many forestry units non-forestry participants can surrender, or requiring them to pay an additional fee when surrendering forestry units; reducing the rate at which units can be earned by exotic forests; or limiting the overall area of forest that can be registered in the NZ ETS each year, or otherwise amending the eligibility criteria. There may also be other options.

Each option will have different impacts on different groups, and the Government will need to identify and work through the risks and benefits of different approaches during the policy development process. This should include engaging and consulting with people affected by the proposed changes, to understand the implications and avoid unintended consequences.

Ideally, this process would proceed in a timely manner, to avoid prolonged uncertainty about how the NZ ETS will operate. This would risk the perverse outcome of discouraging investment in the forests that are needed.
The implementation of any approach to manage the NZ ETS incentives for afforestation should also take into account forests that are not covered by the NZ ETS, on both private and public land."[3]

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[2] https://www.pce.parliament.nz/media/196522/overview-farms-forests-and-fossil-fuels.pdf
[3] https://www.climatecommission.govt.nz/our-work/advice-to-government-topic/inaia-tonu-nei-a-low-emissions-future-for-aotearoa/ pp. 320

The Commission also stated;

> *"The Government should develop a clear position on the role of different types of permanent exotic forests. This should flow through to how they are treated in climate policy, for example whether land converted to fast growth exotic forests can register as permanent in the NZ ETS.*
>
> *During consultation we also heard concerns that whole farms are being planted in exotic production forests, sometimes encouraged by Overseas Investment Act provisions that facilitate foreign investment in forest land. If this is done at significant scale, there could be negative impacts on rural communities that rely on the food and fibre industry for employment.*
>
> *Constraining the NZ ETS incentive could help reduce the scale of afforestation nationally, but influencing where afforestation happens, including how much in specific regions, would likely require a regulatory approach, for example through planning rules.*
>
> *There are multiple pieces of legislation that affect how land is used in Aotearoa. Resource Management Act (RMA) tools such as National Environmental Standards and provisions for Significant Natural Areas are designed to manage environmental impacts.*
>
> *However, some submitters told us that these are not sufficient to manage the full impacts of afforestation. The current revision of the Resource Management system provides an opportunity to align environmental policies to achieve multiple outcomes.*

In November 2021 the 'Native Forest Coalition' released a policy statement and recommendations on native forests, highlighting the urgent need to halt the rapid proliferation of pine plantations driven by high carbon prices and short-term policy settings. The Native Forest Coalition is made up of the Environmental Defence Society, Pure Advantage, Rod Donald Trust, the Tindall foundation, Project Crimson, Dame Anne Salmond, and Dr Adam Forbes.[4] The media release announcing the formation of the coalition states:

> *"Siloed thinking about carbon is leading to very poor outcomes, including large-scale establishment of non-harvested exotic carbon forests and unsustainable clear-fell forestry that places ecosystem health at risk.*
>
> *"We call on the New Zealand Government to immediately prioritize investment in native afforestation over offshore projects. This will accelerate efforts to scale-up our most viable long-term carbon sinks, reverse biodiversity loss, create local jobs and enhance adaptation resilience."*[5]

In February 2022 MPI released a discussion document titled "Managing exotic afforestation incentives". In our submission, Federated Farmers stated that we were pleased that the Government was no longer claiming that the suite of policies distorting land-use decision-making in favour of wholesale afforestation was not a problem. In our submission we also stated that the discussion document was an excellent synthesis of the issues.

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[4] https://eds.org.nz/resources/documents/media-releases/2021/new-coalition-demands-a-halt-to-further-large-scale-exotic-carbon-farming/

[5] https://eds.org.nz/resources/documents/media-releases/2021/new-coalition-demands-a-halt-to-further-large-scale-exotic-carbon-farming/

The “Managing exotic afforestation incentives” discussion document states:

> *“The Government has identified issues with this current approach for the introduction of the permanent forest category in the NZ ETS – due to the high, and rising price of carbon. The NZU price has more than doubled within the last year, from around $35 in late 2020 to upwards of $80 in early 2022.*
>
> *Without changes, the introduction of this new category is likely to result in large areas of land nationwide (relative to historic trends) being planted in permanent forests consisting of exotic species which are not intended to be harvested (referred to as ‘permanent exotic forests’[5] in this document). The most common exotic species being planted as permanent forest at present is Pinus radiata, due largely to its fast rate of growth and the ease of establishing it.*
>
> *Over the long-term, this trend is likely to increasingly present issues for New Zealand:*
>
> ***Rural and local communities***
> *Permanent forests can result in low long-term economic activity and job creation in the region directly surrounding that land relative to competing land uses (generally sheep and beef, deer, and production forestry). If cumulative land conversion occurs at scale or is concentrated in particular regions, this can work against the economic and social outcomes sought by those communities.*
>
> ***New Zealand’s transition to a net-zero emissions economy***
> *With permanent exotic forests being a highly profitable use of land at current carbon price levels, the resulting increase in the supply of NZUs to the NZ ETS from these forests is likely to dampen medium-term carbon prices in the NZ ETS. This risks curtailing investment and uptake of low-carbon technologies to reduce emissions. The Climate Change Commission also identified a clear role for indigenous afforestation which provides slower but sustained sequestration throughout this century.*
>
> ***Long-term environmental outcomes***
> *Large areas of exotic planting with little ongoing management poses long-term risks of animal pests, disease, fire and wilding conifer spread.”*[6]

We were very disappointed in the Government’s decision to adopt none of the measures outlined in the ‘Managing Exotic Afforestation Incentives’ discussion document. In a joint op. ed. Chair of Beef + Lamb New Zealand Andrew Morrison and President of Federated Farmers of New Zealand Andrew Hoggard stated:

> *“The proposals to amend the ETS were not going to solve the problem of out-of-control, whole-farm conversions to carbon forestry but B+LNZ and Federated Farmers believe they were a step in the right direction and welcomed the Government finally promising to offer long-term clarity by a set date.*
>
> *In their March discussion document, the Government finally acknowledged it needed to slow down carbon farming. While our two organisations think the measures they’ve proposed to date are just tinkering around the edges, at least there were some proposals on the table and at least our farmers would have known more by the year’s end.*

[6] https://www.mpi.govt.nz/consultations/managing-exotic-afforestation-incentives pp. 5

Feds and B+LNZ acknowledge that unpicking the web of blanket forestry incentives demands complex analysis, and that the implications for Māori landowners require particular attention, but we both supported the Government's proposed option of putting in place a moratorium while the details were worked out. Instead, the Government has decided to do nothing, rolling out the red carpet for speculators interested in fence-to-fence monocultural pine conversions across New Zealand."[7]

[7] https://www.fedsnews.co.nz/government-backflip-on-carbon-farming-baffling/