

In Confidence

Office of the Minister for the Environment

Chair, Cabinet Environment, Energy and Climate Committee

INVESTIGATING THE NEED TO LIMIT PLANTATION FORESTRY ON PRODUCTIVE LAND

Proposal

1. This paper proposes work to investigate the need for national direction under the Resource Management Act 1991 to limit the scope for new plantation forestry on productive land.

Executive summary

2. In the last decade, substantial deforestation occurred in New Zealand. This was driven by the collapse of the carbon price under the Emission Trading Scheme (ETS) (when flooded with so called Russian or Ukrainian hot air carbon units) following the collapse of negotiations for an extension to the Kyoto Protocol and then uncertainty about future carbon prices. The increased value of other land uses (particularly dairy farming) was also a factor for deforestation.
3. Recently there has been an uplift in forestry planting. This is a good and intended outcome, and proof that government policies are working.
4. However, there is some concern based on anecdotal reports, that an increasing share of New Zealand's productive land¹ is starting to be converted from farmland into plantation forestry as a result of increasing carbon price and new environmental regulations. The concern is that this could have long-term negative impacts for rural communities (such as impacts on food production and jobs). Therefore, Cabinet have asked for advice on potential tools to limit the pace and scale of potential future land conversions to forestry.
5. We recently consulted on the proposed National Policy Statement for Highly Productive Land (NPS-HPL) to limit the loss of highly productive land² from urban expansion and lifestyle development pressures, but this tool does not address shifts between productive land uses ie, farming to forestry.
6. If Cabinet desires more control to limit forests being planted on productive land, restrictions could apply to particular classes of land, types of trees, or sizes of blocks. A number of options exist around:
 - modifying existing mechanisms around forestry:
 - One Billion Trees Fund restrictions or changes

1 Typically lower producing land supporting pasture, sheep and beef activities. Most commonly located on Land Use Classes 4-7 in the Land-Use Capability (LUC) classification system.

2 The most versatile and high producing land supporting dairy, pasture and horticulture. Most commonly located on Land Use Classes 1-3 in the Land-Use Capability (LUC) classification system.

- Overseas Investment Act changes to forestry approvals or consents
- Emissions Trading Scheme mechanisms
- a Resource Management Act 1991 (RMA) mechanism working through local government land-use decisions by means such as requiring a resource consent for plantation forestry in certain classes of land or actively discouraging plantation forestry on such land.

7. s 9(2)(g)(i)

9. I propose that Cabinet agree that the Ministry for the Environment (MfE) and Ministry for Primary Industries (MPI) investigate the need and preferred options, s 9(2)(g)(i)

Background

10. The Land Use Classification (LUC) System is the main database used in New Zealand to describe the productive capability of land. The LUC assigns land to a class between 1 and 8, class 1 being the most productive and versatile, and class 8 having severe limitations to productive use. See Appendix 1 for more details. LUC is a measure of the versatility of land which considers what the land can be used for from a biophysical basis ie, not an economic basis.

Proposed National Policy Statement for Highly Productive Land

11. Local authorities (councils) are responsible for controlling the use, development and protection of natural resources, including land, through RMA plans and policy statements. Central government can also provide direction under the RMA to councils on how to manage land (and other natural and physical resources) through national instruments as is currently done for urban development capacity, freshwater management, and a number of other matters.

12. Protection of highly productive land is not specifically recognised as a matter of national importance in the RMA and no specific direction in relation to its management is given. The approaches taken by councils vary, and highly productive land can be undervalued and given less weight in planning decisions than other (at times competing) matters.

13. Consultation on the proposed NPS-HPL closed on 10 October 2019.

14. The overall purpose of the proposed NPS-HPL is to improve the way highly productive land is managed under the RMA to:
- recognise the full range of values and benefits associated with its use for primary production;
 - maintain its availability for primary production for future generations; and
 - protect it from inappropriate subdivision, use and development.
15. The NPS-HPL would require local authorities to identify highly productive land based on a set of defined criteria (soil capability, climate, water availability, size etc) with LUC Classes 1-3 being the interim criteria to determine highly productive land until this process has been undertaken.
16. The proposed NPS-HPL focuses on maintaining highly productive land for 'primary production' for future generations. The definition of 'primary production' currently includes forestry activities.

National Environmental Standard on Plantation Forestry

17. The NES-PF are regulations under the RMA which came into force on 1 May 2018. The NES-PF objectives, which apply to forests of 1 hectare or more throughout New Zealand are to:
- maintain or improve the environmental outcomes associated with plantation forestry activities
 - increase the efficiency and certainty of managing plantation forestry activities.
18. The NES-PF provides a consistent set of regulations for plantation forestry activities and is underpinned by an Erosion Susceptibility Classification that (indirectly through the NZLRI) is based on the LUC classes. Activities in zones with lower susceptibility to erosion (green, yellow, and orange zones) are generally permitted activities, subject to range of conditions to manage potential effects on the environment. Activities in red zones and steeper orange zones, which have very high erosion susceptibility require resource consent. Afforestation on red zone land requires resource consent.
19. The NES-PF regulations cover eight core plantation forestry activities that have potential environmental effects:
- afforestation (planting new forest)
 - pruning and thinning to waste (selective felling of trees where the felled trees remain on site)
 - earthworks
 - river crossings
 - forestry quarrying (extraction of rock, sand, or gravel within a plantation forest or for operation of a forest on adjacent land)
 - harvesting
 - mechanical land preparation
 - replanting.

20. The NES-PF applies to any forest of at least one hectare that has been planted specifically for commercial purposes and will be harvested.
21. MPI, MfE and Department of Conservation (DOC) are currently working on a year one review of the NES-PF to consider how the NES-PF is being implemented, as well as any issues that have arisen within the first year of implementation. The one year review is receiving advice from a stakeholder working group made up of council representatives, foresters, environmental non-governmental organisations, and MfE, DOC and MPI officials.
22. Officials expect to brief Ministers (the Minister of Forestry and the Minister for the Environment) later this year on progress on the matters in the terms of reference and any issues that have arisen. This may include potential changes to improve the workability of the regulations and any suggestions to address policy issues. If any substantive changes are proposed, the Government would need to consult on those proposals.
23. In the event that public consultation is required we would work to the following approximate timeframes:

Process Step	Approximate timeframe
Progress report to Ministers on one-year review	Mid-Dec 2019
Policy work, development of consultation materials, production of Regulatory Impact Statement (RIS), cabinet materials	From Jan 2020 to 31 March 2020
Public consultation	April/May 2020

Analysis

The problem

24. There is some concern, based on anecdotal reports, that large areas of productive land across New Zealand are being (or have the potential to be) converted into plantation forestry, and that this has the potential to impact on the social and economic wellbeing of rural communities. A major focus of concerns voiced by rural communities is on whole-farm conversions. To date, evidence of this problem is anecdotal only, so more work needs to be done to assess the issue and determine if intervention by government is warranted.
25. There may be some confusion about forestry occurring on productive land because this is not a well-defined term. For example, concerns from some groups about afforestation of productive land are often referring to 'productive sheep and beef land'. This can mean the better areas of Classes 6 and 7, and smaller areas of Classes 4 and 5. The proposed NPS-HPL focusses on Class 1-3, as these are considered to be the most highly productive land areas. While some sheep and beef finishing land is on classes 1-3, the value of this land makes it unlikely to be converted to forestry.

26. For the purposes of this paper, the term 'highly productive land' refers to Classes 1-3 land and the term 'productive land' refers to Classes 4-7 land.

Increases in afforestation

27. Increases in new forestry planting are likely being driven by a range of government priorities including the One Billion Trees programme, ETS and broader climate change targets. In parallel, strong log prices, a rising carbon price, water quality and soil conservation aims, and individual landowner choices and decisions are also supporting the establishment of more trees in the landscape.
28. There are increased reports of land being sold for conversion but this is difficult to verify as official information does not capture the intended use of purchased land. It is not, however, clear that forestry is the major driver of regional land price increases. If the carbon price is stable at \$25 in real terms, then the Net Present Value of a plantation pine forest will exceed that of land in sheep and beef production. Carbon price increases will improve the economics of forestry because of carbon sequestration. This is what carbon pricing is intended to do.
29. MPI modelling suggests afforestation, driven by carbon price, ETS accounting and commercial planting, of 671,000 to 1.08 million hectares from 2019-2050. This compares with 600,000 hectares in the 1990s planting boom, and deforestation of 70,000 hectares over the past decade.
30. Information from the One Billion Trees programme and the Overseas Investment Office, suggests that most new forest will be on LUC Classes 6-7 land. Afforestation is predominant on LUC Class 6 land where forestry is competitive with sheep and beef farming (economically and environmentally). Land in Classes 5-8 is not suitable for arable cropping, and in Classes 7-8 is not suitable for pastoral grazing. The main driver for land conversion is domestic buyers and domestic investors.
31. Forestry currently occupies 20% as much in land area as sheep and beef does. It would take sustained large scale afforestation to significantly reduce sheep and beef land area. New Zealand has sufficient suitable land to greatly expand afforestation to sequester carbon without substantial negative effects on pastoral agriculture. This land includes over one million hectares of highly erodible land unsuited to pastoral agriculture (although some of this is also unsuited to production forestry). Afforestation on this land will depend on economic returns, including the price of the New Zealand Unit³ (NZU), and whether the land is suitable for production or permanent forests. Afforestation with native species is best suited to areas where natural regeneration will occur. This is due to the high costs associated with the planting of native species. Generally afforestation is more likely on marginal land on sheep and beef farms, or marginal land not currently in production, than dairy farms (where land prices are high).

³ The primary unit of trade in the ETS is the New Zealand Unit (NZU), also called a carbon credit. One NZU represents 1 tonne of carbon dioxide (or the equivalent for other greenhouse gases).

32. Data does not suggest that elite soils (Classes 1-3) are being converted to forestry. In most places, land prices manage the expansion of forestry onto productive land (ie, the land is too expensive for forestry to be profitable). Data from One Billion Trees (1BT) programme outlines that only 2.86% of land area approved for planting is on Classes 1-3. Class 4 covers an additional 4.29% of approved land area for planting. See Table 1 below (and Appendix 3) for where plantation forestry is occurring on all classes of land. The remaining 1.7m ha is primarily on Classes 6-8.

Table 1: Plantation forestry coverage⁴ across New Zealand according to LUC Class (source: Land-use and Carbon Analysis System Programme (LUCAS), Ministry for the Environment)

LUM Class ⁵	LUC Class 1 (ha)	LUC Class 2 (ha)	LUC Class 3 (ha)	LUC Class 4 (ha)	LUC Class 5 (ha)	LUC Class 6 (ha)	LUC Class 7 (ha)	LUC Class 8 (ha)	Total (ha) ⁶
Post-1989 ⁷ forest	375	3,422	24,970	54,945	5,818	356,304	223,614	13,368	684,767
Pre-1990 ⁸ planted forest	1,276	8,302	66,299	239,395	8,584	655,468	431,153	27,393	1,449,961
Total Post-1989/pre-1990	1,651	11,724	91,269	294,340	14,402	1,011,772	654,767	40,761	2,134,728
Total land (ha)	187,109	1,201,490	2,442,415	2,776,477	209,880	7,471,202	5,687,983	5,798,811	26,535,442

33. There is sometimes a reluctance to plant on the steeper Class 7 and especially Class 8 land due to access constraints, practices needed to reduce environmental effects, and health and safety issues. This is the land where erosion is a significant problem and trees are particularly beneficial in stabilising erosion, though erosion can be a problem for 6-8 years following harvest, so efforts to mitigate this are more costly. We have anecdotal evidence that since the NES-PF came into force plantation foresters are avoiding afforestation on red zone land for this reason. The One Billion Trees Programme prioritises initiatives that support certain outcomes such as stabilising erosion prone landscapes and are intended to encourage permanent trees or forests in these areas.

Impacts of increased afforestation

34. In the last decade, substantial deforestation has occurred in New Zealand, driven by the collapse of the carbon price under the ETS and uncertainty about future

4 Native forest, which makes up 28.7% of New Zealand's land cover, is not included in this table.

5 Land Use Mapping data was generated by MfE through the LUCAS programme to ascertain land cover. The most recent information was generated in 2016.

6 This total does not reflect the "other" category, which is a total of 760,075 hectares.

7 Post 1989 forests are areas that have been planted or established in forest species, on land that was non-forest land as at 31 December 1989. Can be either exotic species or regenerating native forest. Land in this category may be potentially eligible to be enrolled in the ETS.

8 Pre-1990 planted forest is land that was in plantation forest before 1 January 1990. This is all exotic forest and is not enrolled in the ETS, though owners will face deforestation liabilities if they deforest.

carbon prices; as well as the increased value of other land uses (particularly dairy farming). Large scale deforestation occurred from 2003/4 onwards, with the majority occurring shortly prior to the 2008 introduction of forestry in the NZ ETS (to avoid the anticipated carbon liability on conversions of pre-1990 forest land). These conversions were driven by higher perceived returns from agricultural land. Deforestation restarted after 2008 due to the low price of international units in the NZ ETS, up to May 2015 when those Russian 'hot air carbon units' were excluded from the scheme. Now with greater certainty around the ETS there has been an uplift in forestry planting. This was intended and is a good outcome.

35. However, there is some vocal concern, based on anecdotal reports that an increasing share of New Zealand's productive land is being converted from farmland to plantation forestry as a result of increasing carbon price and new environmental regulations, and it is asserted this could have long-term negative impacts for rural communities. Some people are concerned about negative impacts such as loss of productive farmland for food production, and impacts on jobs. There is also concern around speeding up the current trend of people moving from the regions to the cities and a loss of infrastructure in and sustainability of regional communities.
36. The impacts on communities of afforestation are very different depending on the mix of forest models (scale, species, management and purpose), local demographics, broader economic conditions and the influences of broader government policies. MPI's new Agriculture and Investment Services Business Unit, through its Sustainable Land Use package, will support farmers to manage transitions.
37. Te Uru Rākau is also working closely with landowners to support the integration of trees into productive farming landscapes. For a grant application to be successful, Te Uru Rākau must be satisfied that the proposal is a suitable land use for the area and is consistent with good forest management and environmental practices.
38. There has been less afforestation on red zone land since NES-PF came into force (mainly Classes 7-8 land) due to requirement for consent, which reflects underlying risk of forestry activity.
39. There are clear benefits associated with afforestation. For example, the export revenue from forestry was over \$6 billion in 2018, which is greater than horticulture and equivalent to 70% of export revenue from meat and wool. Afforestation also has the physical benefit of stabilising erosion-prone land. In addition, afforestation can provide a range of wider environmental benefits including habitat for biodiversity, improved freshwater quality and erosion control and increased landscape resilience to the effects of climate change.
40. Care must be taken before adjusting policy to slow planting rates as this would have other effects elsewhere in the economy. Given the ambition of New Zealand's 2030 target set by the previous government, any reduction in afforestation is likely to result in a need to purchase additional international units or undertake costly domestic abatement.
41. In addition, adjusting policy around planting rates could have implications for programmes like the One Billion Tree and the Essential Freshwater work programmes. It is important to note that around 90 percent of One Billion Tree

funded planting is on LUC 6 or above land. Additionally, there is a 300ha limit on grant funded tree planting and applications are screened to ensure they won't result in whole-farm conversions.

Options for change

42. There are a number of potential levers to manage the impacts on increased afforestation on productive land:

- One Billion Trees Fund restrictions or changes;
- Overseas Investment Act changes to forestry approvals or consents;
- ETS mechanisms;
- controlling local government land-use decisions about where trees may be planted.

s 9(2)(f)(iv)

[Redacted content]

National Direction under the RMA

47. National direction under the RMA could be through a National Policy Statement (NPS) or a National Environmental Standard (NES).

48. Each mechanism has different potential impacts:

- a NES could directly impose a new rule in plans; eg, to require consents for new plantation forestry on certain classes of land.
- a NPS could strongly discourage certain activities, such as plantation forestry but could not directly impose rules.

New National Direction under the RMA

49. In terms of timelines and resourcing a stand-alone national direction instrument would likely require more time to develop than modifying an existing instrument, although the narrower the scope of any new rules, the simpler and faster the process could be. A normal timeframe for developing national direction would be around nine to eighteen months (see Appendix 2).

Modifying the proposed National Policy Statement for Highly Productive Land (NPS-HPL)

50. s 9(2)(f)(iv)

[Redacted]

[Redacted]

[Redacted]

51. These changes to the proposed NPS-HPL would not address the concerns raised by communities about afforestation of sheep and beef country (ie, broadly land Classes 4 and above). Afforestation of highly productive land is quite limited and will likely to continue to be so even under a high carbon price.

52. s 9(2)(f)(iv)

[Redacted]

53. The current timing for the proposed NPS-HPL is for a report back in December 2019 on proposed changes following consultation. s 9(2)(f)(iv)

[Redacted]

54. s 9(2)(f)(iv)

[Redacted]

55. s 9(2)(f)(iv)

[Redacted]

s 9(2)(g)(i)

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Modifying the National Environmental Standards on Plantation Forestry (NES-PF)

56. The NES-PF manages the environmental effects of forestry and where it can be located in relation to different types of land (with considerable focus on mass movement erosion risk). The NES-PF provides for the majority of forestry activities to occur as a permitted activity, provided specified conditions are complied with. Under the current NES-PF councils have little ability to apply additional controls for forestry activities outside of the NES-PF provisions. ^{§ 9(2)(f)(iv)}

57. NESs are the most appropriate tool to achieve a nationally consistent rule as national policy statements do not allow specific rules to be prescribed. A review of the NES-PF is underway now, ^{§ 9(2)(f)(iv)}

58. ^{§ 9(2)(f)(iv)}

59. ^{§ 9(2)(f)(iv)}

Advice on the review of the NES-PF is expected in April 2020. Any actual changes to the NES-PF are not likely to take place until 2021.

Modifying settings for One Billion Trees (1BT)

60. There are options for modifying the 1BT programme ^{§ 9(2)(f)(iv)}

Implications for other policies

61. Changes to policy regarding the appropriateness of plantation forestry on different types of land could impact on a range of other Government policies, which would need to be considered. These include:

- the Essential Freshwater programme, in terms of the benefits of forestry for reducing sedimentation – the new NPS includes a sediment attribute and in many catchments increased afforestation (of some kind) will be an important means of mitigating sediment loss.
- the ability of rural land owners to use potential future ETS carbon revenue opportunities to help diversify their farming systems and to use forests to stabilise erosion-prone land to mitigate sediment loss from pasture.
- the effect on the value of land at point of sale from restricted land use.

Consultation

62. This paper has been prepared by the Ministry for the Environment. The following agencies have been consulted: Ministry for Primary Industries, Department of Conservation, Te Puni Kōkiri, Office for Maori Crown Relations – Te Arawhiti and the Department of Internal Affairs.

63. If it is agreed to investigate this matter further as per the recommendations in this paper, officials will work with key agencies and Maori/iwi.

Financial implications

64. If Cabinet agrees to initiate the work proposed in this paper, there will be costs in the development of, and consultation on, any new national direction under the Resource Management Act. These costs will be met within appropriations in Vote: Environment and Vote: Agriculture.

Legislative implications

65. Any new national direction is via regulation not primary legislation.

Regulatory impact analysis

66. A Regulatory Impact Statement (RIS) will be included in a subsequent paper on actual policy proposals.

Human rights

67. There are no inconsistencies between the proposal and the Human Rights Act 1993.

Gender implications

68. No gender implications statement has been included in this paper.

Disability perspective

69. No disability perspective has been included in this paper.

Publicity

70. This proposal would be welcomed by some and criticised by others. If further work is commissioned I propose to develop a public release in consultation with the Minister of Forestry and the Minister of Agriculture as appropriate.

Proactive Release

71. I intend to proactively release the paper in whole.

Recommendations

The Minister for the Environment recommends that the Committee:

1. **note** that deforestation occurred in New Zealand following the collapse of the carbon price under the Emission Trading Scheme (ETS) and uncertainty about future carbon prices; as well as the increased value of other land uses (particularly dairy farming)
2. **note** that recently there has been a uplift in forestry planting
3. **note** concerns are being expressed by some people that increased afforestation on productive land has the potential to generate counterproductive effects on communities, food production and export potential
4. **note** the evidence is anecdotal and we are not in a position to conclude that concerns about the material quantity of higher class land being converted to forestry are justified
5. **note** that options to address the issue include:

s 9(2)(f)(iv)

s 9(2)(g)(i)

8. **agree** that work should be undertaken by the Ministry for the Environment and the Ministry for Primary Industries to investigate whether there is a need to address this issue and the preferred options, if any, for s 9(2)(f)(iv) limit the scope for new plantation forestry on productive land.

Approved for lodgement

Hon David Parker

Minister for the Environment

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Appendix 1. Land-use capability class in relation to their versatility of use

Land-use capability (LUC) classification groups broad land types by their versatility of use. It is an assessment of the land's capability for sustained use, taking into account its physical and climatic limitations and its ability to maintain long-term plantation.

The main limitations include: erosion susceptibility, steepness of slope, waterlogging or drought, depth of soil and fertility. Climatic conditions include sunshine hours, rainfall patterns, elevation and minimum and maximum temperatures. The LUC classification assumes best practice management appropriate to the identified limitations are used.

National level LUC mapping was conducted in the 1970-80s. The coarse resolution of this mapping excludes features less than 10 hectares and finer scale re-mapping is required for farm level decision making.

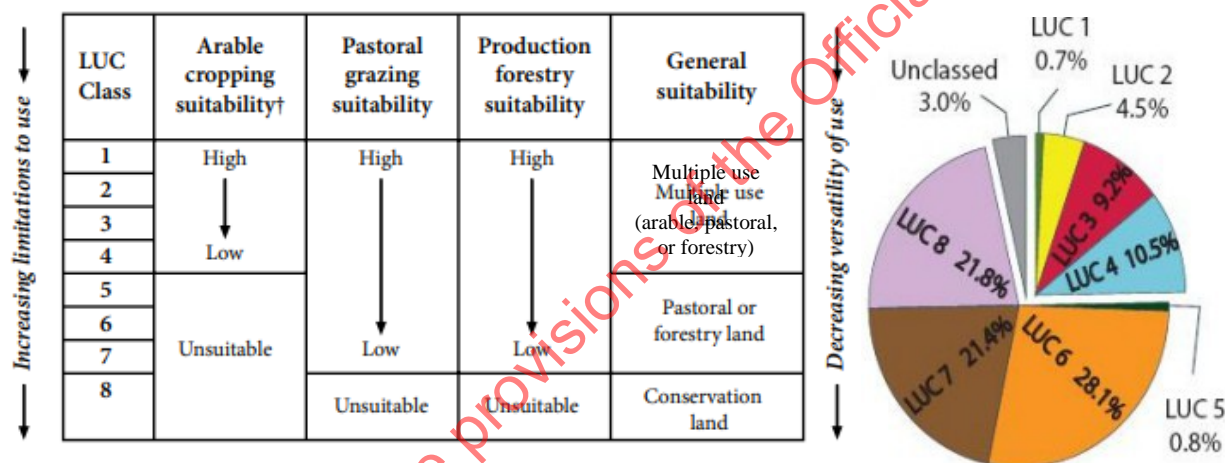


Figure 2: Increasing limitations to use and decreasing versatility of use from LUC Class 1 to LUC Class 8 (modified from SCRCC 1974). † Includes vegetable cropping.

LUC Classes 1 to 4 make up less than a quarter of New Zealand. Under best practice these classes have few limitations and are therefore suitable for arable cropping (including vegetable cropping), horticulture (including vineyards and berry fields), pastoral grazing, tree crop or plantation forestry use.

Classes 5 to 7 cover half of New Zealand. These classes are not suitable for arable cropping due to technical limitations - the slope is too great to drive a cultivator over, cultivation is unsustainable - highly erosion prone, or not viable - waterlogged or saline soils. Under best practice these classes are suitable for pastoral grazing or forestry.

Class 8 land is unsuitable for grazing or plantation forestry, and is best managed for catchment protection, and/or conservation and biodiversity.

Appendix 2. National Direction Process Steps and Indicative Minimum Timeframes (9-18 month process)

Steps	Process	Minimum Timeframes	
Policy scoping	<ul style="list-style-type: none"> Define the problem Gather evidence 	3 months	6 months
Development of national direction tool	<ul style="list-style-type: none"> Ministerial approval of process for national direction tool, and approval to consult (2 -4 weeks) Develop issues paper Non-statutory public consultation (min 6 weeks) Evidence gathering 	3 months	
Statutory public consultation	<ul style="list-style-type: none"> Draft discussion document, s32, RIS Ministerial & Cabinet approval to consult (2 – 3 weeks) Ministerial consultation (2 – 4 weeks) Public consultation (min 6 weeks) 	4 to 6 months	9 to 12 months
Policy refinement & finalising national direction tool	<ul style="list-style-type: none"> Submission analysis Ministerial consideration of submissions Revise s32, RIS, national direction tool Test national direction tool Ministerial & Cabinet approval to finalise national direction tool 	4 to 6 months	
Gazettal process	<ul style="list-style-type: none"> National direction tool comes into effect 1 month after gazettal 	1 month	

Appendix 3. Registered forestry land in the Emissions Trading Scheme (ETS) in 2018 and 2019⁹

	2018			2019		
	Exotic species	Indigenous species	Total	Exotic species	Indigenous species	Total
LUC class 1-5	503	1	504	313	71	384
LUC class 6-8	1,294	23	1,317	1,257	1,353	2,610
Total	1,797	25	1,822 ha	1,570	1,424	2,994 ha

Source: ETS quarterly reporting, Ministry for Primary Industries

Key note points:

1. The total area of registered forest land in the ETS is now 325,709 hectares.
2. This calendar year, Te Uru Rākau registered 2,994 ha of forest land in the ETS:
 - 52% is mixed exotic species, and 48% is indigenous species.
 - 87% is classed as LUC Classes 6-8.

⁹ Post 1989 forests are areas that have been planted or established in forest species, on land that was non-forest land as at 31 December 1989. Can be either exotic species or regenerating native forest. Land in this category may be potentially eligible to be enrolled in the ETS.