

# Further Material on Pre 1990 Forests

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## OVERVIEW

1. This paper discusses a number of issues relating to the treatment of pre 1990 forest in the NZ ETS. All sections include discussion of options that have been suggested by key stakeholder groups, especially Maori.

## SECTION 1: TARGETING OF ASSISTANCE TO PRE 1990 EXOTIC FOREST OWNERS

### Context

2. Under the ETS Bill owners of pre 1990 forest land will receive, in total, a fixed overall level of assistance equivalent to 55Mt of emissions. The bulk of this assistance will be provided through the free allocation of NZUs (with the remainder provided through the granting of two exemptions from the deforestation requirements – a 50 hectare exemption and 2 hectare deforestation allowance). While not stipulated in the Bill itself, the government's current proposal is to allocate these units to landowners on the basis of land area.<sup>1</sup>
3. The government estimates that, once the cost of the two exemptions has been taken into account, landowners covered by the scheme will receive a free allocation of allowances of approximately 39 units per hectare. This is considerably smaller than the provisional estimate of deforestation liabilities for mature Radiata forest of approximately 800 units per hectare.
4. This approach has been relatively heavily criticised by elements of the forestry industry. The key concerns expressed are that:
  - That the proposed level of compensation per hectare (through free allocation) is insufficient where landowners have viable alternative commercial land uses available;
  - There is no recognition that some landowners will suffer significantly greater losses than others;
  - Some owners either were not aware these changes were coming, or were unable to deforest prior to 2008 due to being tied into long term forest contracts.

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<sup>1</sup> This discussion deals with plantation forests only.

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### Discussion

5. The government considers that it is the proposed targeting of assistance for pre 1990 forests, rather than the overall level, that is most validly open to criticism.
6. The overall level of assistance proposed for pre 1990 forests is relatively generous to that proposed for other sectors. The total level of assistance of 55Mt is equivalent to the industry's full historic rate of emissions for 28 years. Further, the forest industry is unique in having had six years forewarning of the likelihood of policy changes of this nature, and the ability to bring forward their deforestation to avoid liabilities.
7. Under the proposed targeting approach the 55Mt of assistance will be allocated equally across all landowners regardless of the quality of their land. However, the costs of the ETS will not fall equally on all landowners. Those with high value alternative uses will be significantly more heavily affected. As a result, those parties wanting to deforest their land will be required to surrender a significantly greater number of units than they have been freely allocated.
8. The following sections discuss a number of possible options for targeting the proposed assistance more tightly.

### Selection Criteria

9. None of the available targeting options is perfect. To guide the choice between the options it is therefore important that the government has a clear understanding of the different qualities that their chosen option would ideally have, and the relative importance of each criteria where tradeoffs between them are necessary. A 'perfect' approach to the targeting of assistance would ideally:
  - See the assistance going to the groups the government is most concerned about;
  - Protect the price signals provided by the ETS;
  - Be relatively easy and cost effective to operate;
  - Not impose unduly high fiscal costs or risks on taxpayers.
10. The first two of these criteria are discussed further below.

### *Groups of Greatest Concern*

11. The government considers that the parties with the strongest claims for greater levels of assistance are those who:
  - a) Have land which is most suitable for conversion to another commercial use
  - b) Purchased their forest land before 2002 when the government announced its intention to introduce some form of deforestation controls
  - c) Were unable to take advantage of the 2002-2008 period to deforest key areas of their land due to:

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- Having ceded control over the forest over that period through some type of long term agreement, such as a lease or forestry right;
  - Having less ability to access the resources needed to deforest, such as owners of relatively small areas of forest.
12. In practice it is unlikely to be possible for the government to equally target all of these characteristics; some choice between them is likely to be necessary.
  13. Maori are particularly heavily represented in this group of landowners of concern. While they are large owners of forest land, they are not large owners of the forests themselves. Government understands that a number of iwi groups have not had an opportunity to deforest prior to 2008 as their land has been covered by long term agreements such as Forestry Rights. In addition, many Maori groups have expressed the view that they are less able to sell their landholdings, so are more heavily affected. Further, some perceive that they were actively encouraged to plant trees on their land by previous governments, so have expressed concern about being 'locked into' a land use which is potentially less profitable than alternative options.

### *Protection of ETS Price Signals*

14. Probably the most effective way to target assistance to the parties that have land with commercially viable alternative uses is to tie the provision of assistance to the act of deforestation. In this way, only parties that actively demonstrate their willingness to incur deforestation costs will receive assistance. There are a number of different ways that this can be done, but all work on the principle of encouraging the parties to reveal their desire to deforest. Such options are therefore sometimes referred to as 'revealed preference' approaches.
15. While revealed preference approaches are effective at targeting assistance to those who will be most affected by the introduction of the ETS, all have an important inherent weakness: they work by reducing (but not removing) the cost of deforestation and therefore necessarily undermine the price signals the ETS was designed to establish.
16. The government therefore faces a key choice between targeting assistance to the parties that will be most heavily affected by the ETS on the one hand, and maximising economic efficiency by preserving the price signals created by the ETS on the other. This is a particularly important choice in the case of deforestation, as reductions in the rate of deforestation have been identified as one of the key, lower cost options for reducing emissions in New Zealand over the short term.
17. The government's current view is that it should avoid undermining the ETS price signals unless there are strong reasons for doing so.

### ***Description and Discussion of Generic Options***

18. Officials have identified a range of generic options for targeting assistance to pre 1990 forest owners, including several options that have been suggested by industry stakeholders:

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- Targeting on the basis of land use capability;
  - Targeting on the basis of other characteristics of concern;
  - A progressive obligation;
  - A subsidised offset regime;
  - A subsidised auction;
  - A (criteria based) application process.
19. In practice, the government may choose to introduce a mix of these different generic options.

### *Targeting on the basis of land use capability*

20. The option of targeting assistance on the basis of Landcare's land use classification (LUC) database was considered in some depth during the initial policy development phase. It was ultimately rejected because of imperfections in the available data. Landcare's land use classification system was never intended to be used to target assistance in this way. If it were used it is inevitable that the quality of some parties' land would be assessed incorrectly and as a result they would be over or under compensated.
21. That said, while not perfect it is clear that this approach would be more successful on average at targeting assistance to those groups that will be most heavily affected by the ETS than the current pro rata approach. The government is also relatively confident that despite its shortcomings, the use of LUC data to target assistance could be done in a way that avoided the risk of legal challenge.
22. In summary, while imperfect, this approach is workable and could be re-considered if it was considered fairer than the simple pro rata approach.

### *Targeting other characteristics of concern*

23. As noted, there are a number of different characteristics that define the group of forest land owners that the government is most likely to want to target assistance to. The suitability of that land for conversion to alternative uses is one key characteristic. But the government would ideally also target those who purchased their forest land before 2002, and/or were unable to take advantage of the 2002-2008 period to deforest, and/or only own relatively small areas of forest land.
24. The government could make eligibility for receiving some, or all, of the 55Mt assistance package conditional on these additional criteria. This could need to be done through an application process, or through a declaration-based approach where the administrator reserved the right to audit a suitable number of declarations.

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25. Preliminary analysis suggests that around 55% of the pre 1990 forest estate was either purchased by the current owner after November 2002, or is Crown Forest Licence land currently owned by the government (which will likely be sold in time to successful Treaty claimants at a price that reflects the impacts of the ETS – see discussion in section 2 below). Limiting the free allocation of NZUs to private sector groups that purchased their land before November 2002 would therefore see the number of eligible owners reduced by over half, and therefore see them receiving in excess of twice the number of units per hectare than they would have been given under the simple pro rata approach.
26. Similarly, the size of holdings of owners of pre 1990 forests is highly skewed. While there are roughly 4,000 owners of pre 1990 forest land, the top 10-15 firms hold the bulk of the estate. Any decision to target the allocation of NZUs to smaller landowners would therefore see those eligible receiving a significantly increased level of units per hectare.
27. The government does not have good information on the number of parties that have been unable to deforest in the 2002-2008 period due to having delegated the forest management function to a third party.

### *Progressive obligation*

28. Under this option the size of the deforestation charge would be increased in steps as greater areas of land were deforested. Building off the existing threshold, the first 50 hectares of deforestation could be made free for all participants, the second 50 ha charged at  $\frac{1}{3}^{\text{rd}}$  of the normal rate, the third 50 ha at  $\frac{2}{3}^{\text{rds}}$  the normal rate, and then the full charge levied on any deforestation over and above 150ha.
29. This is one form of the 'revealed preference' approach discussed above. However, the degree of targeting is constrained by the fact that assistance for any one participant is limited to the deforestation of 150ha.
30. One of the weaknesses of this option is that it would make it difficult for the government to control the total level of assistance provided, as that cost would depend on the level of deforestation that ultimately occurred.
31. Another key weakness of this option lies in its administrative implications. The differential charges could either be tied to individual parcels of land as was proposed for the existing 50ha threshold, or to individual participants. The option of tying them to the land would necessitate the creation of two more different classes of partially exempt land, which would need to be taken into account when land was bought and sold, and tracked through the MAF forestland database. Alternatively, tying the differential charges to individual participants would increase incentives on parties to deforest prior to selling their land, and for parties who owned less than 150ha of pre 1990 at the time of the scheme's introduction to buy more in order to take advantage of their ability to deforest it more cheaply than the previous owner could.

### *Subsidised offset regime*

32. Under this option the participants would be allowed to 'shift' areas of their pre 1990 forest after harvest by planting an appropriate area of forest in a new location. The government would meet the cost of the deforestation liability and

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retain the credits for the new forests as they grew. To reduce the costs to the Crown, and maintain incentives on forest owners to only shift their forests where the original areas had a truly higher value alternative land use, it would be sensible to require a greater area of land to be re-planted in the new location; say 2-3 times, or more, the original area of forest. This is another 'revealed preference' approach.

33. Depending on the number of hectares of new forest that had to be planted for each hectare deforested, this option would be potentially costly for the government. The deforestation liability involved would be incurred by the government immediately, but the bulk of the replacement credits would not be earned until 2-3 decades later. This option would therefore need to operate under a fixed annual budget and application process. This option would also see the Crown facing relatively high levels of fiscal uncertainty for an indefinite period of time, as it would continue to carry the liability for all harvesting and replanting of the new offset forests in perpetuity.
34. Lastly, it should be noted that this option may not lead to substantially greater levels of new planting than were otherwise likely to occur (in other words 'additionality' can not be guaranteed).

### *Subsidised Auction*

35. Under this option the government would auction deforestation-specific units, and would subsidise their cost so that they sold at a discount relative to the normal domestic market price for NZUs. The actual price paid would be determined by the level of demand for the deforestation units, ensuring that there was no unmet demand. This is another example of use of the 'revealed preference' approach.
36. As noted, the units auctioned would need to be deforestation-specific, not generic NZUs. They would be freely tradable domestically, but would only be able to be surrendered to cover emissions from *deforestation*.
37. If this option was taken a decision would need to be taken about how to treat Crown Forest Licence (CFL) forests. It would be likely to be necessary for the Crown, or Crown Forest Rental Trust, to participate in the auction process.

### *Deforestation assurances issued through an application process*

38. One approach would be for individual forest owners to apply to have the costs of their deforestation met from a deforestation pool. This option shares the key weakness of all of the 'revealed preference' based approaches in that it will reduce the effectiveness of the price signals provided by the ETS. It would also leave the government to determine how to prioritise between applicants, which is likely to prove administratively difficult and contentious.

### **Possible Allocation Packages**

39. Officials' advice is that none of the individual options discussed above is likely to be preferable, when used on its own, to the currently proposed pro rata approach. A complete shift away from the pro rata approach would risk leading to too great a change in the distribution of the assistance package, thereby creating a new set of winners and losers.

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40. The current tentative preference is for continuing to provide the bulk of the assistance package through the pro rata approach, but using one or possibly two of the more highly targeted approaches to provide the final, say 33%, of the value of the package. This would avoid the risks of combining too many options. While possible in theory, in practice combining too many of the individual approaches discussed above is likely to be confusing and administratively difficult.
41. If a shift away from the current status quo approach is to be made, the government therefore has a preliminary preference for one of the following three allocation packages:
  - Moderately targeted: Use the currently proposed pro rata approach to provide  $\frac{2}{3}$  <sup>rds</sup> of the assistance, and allocate the remaining  $\frac{1}{3}$  <sup>rd</sup> to those who purchased their land prior to 2002. (This package could be refined further to limit the  $\frac{1}{3}$  <sup>rd</sup> additional assistance to those that purchased their land prior to November 2002 and were unable to deforest their land during the 2002-2008 period – the approach proposed by the Maori Reference Group – or owned less than, say, 150ha of forest land).
  - More strongly targeted on basis of objective criteria: Use the simple pro rata approach to provide  $\frac{2}{3}$  <sup>rds</sup> of the assistance, and allocate the remaining  $\frac{1}{3}$  <sup>rd</sup> on the basis of Landcare's land use capability classifications.
  - More strongly targeted on basis of revealed preferences: Use the simple pro rata approach to provide  $\frac{2}{3}$  <sup>rds</sup> of the assistance, and allocate the remaining  $\frac{1}{3}$  <sup>rd</sup> through a subsidised auction.

### ***Moderately targeted package***

42. The impact of this option would be to increase the total assistance given to those parties who purchased land prior to November 2002 from the current 39 units per hectare to approximately 58 units per hectare (depending on how the CFL land yet to be settled is treated under such an approach). However, those groups that purchased their land after November 2002, and government owned CFL land, would see their allocation reduced from 39 units to slightly over 25 units per hectare.
43. The targeting under this option could be tightened further by limiting the  $\frac{1}{3}$  <sup>rd</sup> additional assistance to parties that were also unable to deforest during the 2002-2008 period, and/or owned relatively small forest holdings. The government does not have sufficient information to estimate what additional impact these additions would have.
44. The key strengths of this package are that it:
  - Takes account of the fact that parties that purchased their land after 2002 are likely to have seen the cost impact of the ETS at least partially reflected in their purchase price;
  - Does not create any fiscal risk for the Crown.

45. In turn its key weaknesses are that it:

- Does not take account of differing levels of land quality, and therefore the likely size of the impact of the introduction of the ETS on land values.

***More strongly targeted package through use of Land Use Criteria***

46. This option would lead to the owners of higher quality land receiving a higher level of assistance. The degree of differential of assistance that resulted would depend on the allocation weightings attached to different land use categories. The key strengths of this package are that it:

- Has a clear focus on the likely impact of ETS on land values and profits;
- Does not create any fiscal risk for the Crown

47. In turn its key weaknesses are that it:

- Is likely to lead to some landowners being under or overcompensated due to imperfections in the LUC data;
- Will provide assistance to landowners that purchased their land after 2002.

***More strongly targeted package through use of a subsidised auction***

48. This option would see those that had a desire to deforest, as well as the financial and analytical resources needed to participate in the auction process, receiving a higher level of assistance. The level of price-discount of the subsidised deforestation units, and therefore the value of the assistance package, would depend on the demand for deforestation relative to the number of units the government is willing to pay for. The key strengths of this package are that it:

- Is effective at targeting assistance to those parties that have demonstrated a desire to deforest;
- Does not create any fiscal risk for the Crown.

49. In turn its key weaknesses are that it:

- Is likely to be hard to understand (especially for less sophisticated, non-corporate owners);
- Requires parties to incur spending 'up front', in advance of the deforestation (some parties may lack the necessary financial resources);
- Will lead to higher levels of deforestation than the current simple pro rata approach (up to the full number of deforestation units auctioned);
- Creates difficulties around the treatment of Crown Forest Licence forests.

## Conclusions

50. The ultimate policy choice between these options should be based on preferences in two key areas:
- The relative degree of concern about giving too much assistance to parties that:
    - a. purchased their land after 2002 *or*
    - b. have land that is not suitable for conversion
  - The level of concern about weakening the price signals provided by the ETS.
51. If the greater concern is to avoid over-compensating parties that purchased their land after 2002 (including CFL land that has yet to be transferred) the first package – combining the pro rata approach with an additional allocation for those non-government parties that bought their land prior to 2002 – is likely to be best (either with or without the additional targeting towards parties that were unable to deforest during the 2002-2008 period, and/or own relatively small forest holdings).
52. In contrast, if the greater concern is to avoid over-compensating parties that have lower quality land, their choice between the other two packages should be based on the strength of their concerns around maintaining the price signals provided by the ETS. The second package – combining the pro rata approach with an additional allocation for parties with high quality land (as assessed by Landcare's land use capability scores) is likely to be preferable where there is a strong concern to maintain the price signals to reduce deforestation emissions. And the third approach – combining the pro rata approach with a subsidised auction – is likely to be preferable where government are comfortable to see some increase in deforestation levels.

**SECTION 2: INCLUSION OF INDIGENOUS PRE 1990 FOREST IN THE ETS**

53. This section discusses whether deforestation of pre-1990 indigenous forest should be included in the New Zealand Emissions Trading Scheme (NZ ETS) and, if so, on what basis. The government is yet to finalise a preferred position on these matters and has sought feedback from stakeholders.
54. New Zealand has large areas of pre-1990 indigenous forest – over 7.5 million hectares – of which officials estimate 2.4 million hectares is in private ownership. Deforestation of the private indigenous estate is estimated to be 1,100 hectares, or 0.04 per cent of the total area, each year.
55. These relatively low levels of deforestation are expected to continue in the near term, mostly in the regenerating scrub classes of indigenous forest (for example, manuka-kanuka scrub) as part of a normal hill-country pastoral farming cycle. There is also some conversion of taller indigenous forest on the West Coast of the South Island for dairying.
56. Over the longer term, higher deforestation rates are possible if the economic drivers for clearance of indigenous forest change.
57. There does not appear to be any practical and defensible way of delineating pre-1990 regenerating scrub from post-1989 regenerating forest. This - combined with the relatively low levels of carbon per hectare; the quite strong economic disincentives to deforest; and the likely level of resistance of landowners to the inclusion of scrubland – means that we do not intend to include deforestation of regenerating scrubland forest in the ETS.
58. Arguments in favour of including tall indigenous forest (excluding regenerating scrubland) in the ETS are as follows:
  - some deforestation of tall forest is occurring and the forest has high carbon densities;
  - while regulatory controls exist in some district plans, effective controls are not complete at a national level;
  - subject to final confirmation, it appears practical to delineate these taller indigenous forests from regenerating scrublands by applying previous land use maps
  - it would provide a once-and-for-all solution to the ongoing risks of deforestation of these forests;
  - many landowners would welcome this move, since any units allocated to them would almost certainly be a windfall gain.
59. The alternative view is that there is little to be gained from bringing deforestation of the remaining indigenous forests into the ETS since:
  - there are regulatory controls already, which while incomplete, appear broadly effective;
  - there is some risk of Treaty claim;

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- the cost of bring these forests into the ETS is roughly equal to the benefit – since the government will allocate NZUs equal to the expected level of emissions that would occur if deforestation had not come under the regime.
60. The government is currently of the view that the inclusion of deforestation of taller indigenous forest (ie. not regenerating scrub) in the NZ ETS is desirable assuming that there is a final confirmation that it is practicable, and assuming that the cost in terms of levels of free allocation is not overwhelming. This is primarily a risk mitigation strategy. Further investigation is needed into the issues implicit before a firm decision on this matter is made. This work is underway.
61. The possible inclusion of indigenous forest in the ETS has been flagged by government since 2002 but has not received great attention in some quarters until recently. Emerging (anecdotal) evidence suggests that there is a likelihood of relatively significant levels of deforestation of taller indigenous forest, particularly on the West Coast, if this forest is not included in the ETS. As such, it could be argued that it is beneficial to include this forest in the ETS as soon as is reasonable, assuming final confirmation of the practicalities of such an approach, and that the costs are manageable.