



Ministry for the
Environment
Manatū Mō Te Taiao

Joint briefing: Implications of a ban on exports of emissions units from the forestry sector

Date:	21 August 2009	MfE Priority:	Urgent
Security Level:		Number of Attachments:	Nil
		MfE Ref No:	09-B-02389

Action Sought

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Minister for Finance Hon Bill English	<p>Indicate whether you prefer to allow exports to continue during the low price phase for post-1989 forests and/or pre-1990 forests</p> <p>Indicate whether you prefer to allow banking to continue during the low price phase for non-forest sectors (Liquid Fossil Fuels and Stationary Energy and Industrial Processes).</p>	25 August 2009
Minister for Climate Change Issues Hon Dr Nick Smith	<p>Indicate whether you prefer to allow exports to continue during the low price phase for post-1989 forests and/or pre-1990 forests</p> <p>Indicate whether you prefer to allow banking to continue during the low price phase for non-forest sectors (Liquid Fossil Fuels and Stationary Energy and Industrial Processes).</p>	25 August 2009
Minister of Agriculture and Forestry Hon David Carter	<p>Indicate whether you prefer to allow exports to continue during the low price phase for post-1989 forests and/or pre-1990 forests</p> <p>Indicate whether you prefer to allow banking to continue during the low price phase for non-forest sectors (Liquid Fossil Fuels and Stationary Energy and Industrial Processes).</p>	25 August 2009

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Executive Summary

Introducing a price cap into the New Zealand Emissions Trading Scheme (NZ ETS) will come with administrative implications. In particular it will influence policy settings regarding the export and banking of units. As a general rule, the greater the latitude towards export and banking the greater the risks of arbitrage, but also the stronger the economic incentives and market development opportunities.

Officials' view is that the fiscal risks associated with allowing the export of units from the forestry sector are relatively low and allowing banking is desirable to assist with managing the long term nature of forestry investments. In order to further reduce the risks of arbitrage (assuming exports are allowed), Ministers may wish to consider prohibiting the banking of units issued to the Stationary Energy and Industrial Processes (SEIP) and fishing sectors prior to 2012.

Although it is difficult to be definitive on the scale of any of these risks, regardless of Ministers' final decision on the export of forestry units, there is an arbitrage risk associated with allowing the banking of free allocation provided to the SEIP and fishing sectors. Treasury view is that the banking and export of forestry units should be permitted, but neither banking nor export of SEIP and fishing free allocation should be.

The downside of prohibiting banking for the SEIP and fishing sectors is that it will reduce the size of the market for these participants and may lead to opportunities for market manipulation.

In terms of linking with the Australian CPRS, allowing exports prior to linking will pose no barrier to a future linked scheme. However it is likely to be necessary to ban the export of units from the forestry sector in the event that the schemes are linked. Counterbalancing this, foresters would then be able to sell units in an Australasian market.

Officials recommend that Ministers agree to allow the export of units from the forestry sector. If Ministers further wished, they could also ban the banking of units from the industrial sector in order to minimise arbitrage risks.

Officials further recommend that it be clearly communicated that exporting of units may not be permitted if a future link with the CPRS occurs, although units would be able to be sold to Australia.

Recommended Action

We recommend that you:

- (a) Indicate** whether you prefer to allow exports and banking to continue during the low price phase for:
- post-89 forests **Yes / No**
 - pre-1990 forests **Yes / No**
- (b) Indicate** whether you prefer to allow banking to continue during the low price phase for non-forest sectors (Liquid Fossil Fuels and Stationary Energy and Industrial Processes). **Yes / No**
- (c) Refer** this paper to the Minister of Finance **Yes / No**

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Purpose of Report

1. This briefing note provides you with further advice on the implications of a ban on exports of emissions units from the forestry sector and expands on the advice provided in the addendum to the cabinet paper for a Moderated Emissions Trading Scheme [CAB (09)445].

Background

2. On 10 August 2009 Cabinet considered proposals for a moderated Emissions Trading Scheme. You were invited to submit a revised paper to Cabinet which includes allowing the export of forestry-related New Zealand Units converted to assigned amount units, subject to further advice on the issue of arbitrage, the costs to the Crown, and the implications for compatibility with the Australian Carbon Pollution Reduction Scheme (CPRS).
3. Subject to your feedback on this advice, we will use it as the basis for preparing content for a paper to be submitted to Cabinet on 7 September.
4. Treasury officials have been consulted on this briefing, and agree with its analysis and recommendations.

Analysis

Fiscal Risks from allowing exports from forestry

5. The potential fiscal impact of allowing the export of forestry-related units arises from the possible impact on the domestic supply of NZUs. All other things held constant, when a greater number of NZUs are exported the possible future domestic supply of NZUs is directly reduced. As a result, the number of units purchased from the government under the price cap will increase. Since providing units to the domestic market under the price cap mechanism is costly, forcing participants to sell their units domestically can lead to savings.
6. If participants have the ability to bank units, the ban on exports may simply lead to a greater number of units being banked than would otherwise be the case and there will be no impact on the level of domestic supply.¹ Even applying a relatively conservative discount rate there is likely to be an economic incentive for participants to bank under such circumstances if they expect carbon prices in CP2 to be higher than \$30-35 (which would be a reasonable expectation). A large number of participants are expected to bank units if exporting is not allowed.
7. So there is only a low risk of significant fiscal impact from allowing exports, and no risk if the international price of carbon is lower than the price cap. The size of this fiscal risk will be greater:
 - If participants expect the price of carbon internationally to fall in CP2 (in which case exporting the units immediately at a high price is more attractive than banking them).
 - The longer that the export ban is expected to remain in place (depending on a range of factors, including the level of the price cap to be imposed during an extended ban).

¹ Domestic supply is effectively the number of New Zealand units that are issued, less the number of units either exported or banked.

Scenario

8. The scenario you have asked us to analyse is where the international carbon price rises to \$35 (\$10 above the price cap of \$25). It is assumed that this causes 10% of foresters (who would not otherwise bank their units) to sell their units offshore.
9. The estimated cost of this scenario could be as high as \$108 million. An estimated 92 million units are expected to be earned from post 1990 forests in CP1, and 16 million units are expected to be allocated to pre 1990 forests giving a total pool of 108 million units in CP1. The cost of exporting 10% of these units would be 10.8 million units, multiplied by the price gap of \$10, giving a total of \$108 million in CP1.
10. Official's assessment is that there is a low probability that government will face fiscal costs of this magnitude as a result of allowing exports. This is because:
 - the circumstances when a scenario such as the above is likely to arise is when the international price of carbon is above \$25 in CP1 and expected to fall below \$25 in CP2; and
 - if the price is expected to stay high foresters would likely bank their units for sale in future periods, so the fiscal cost of a scheme which allows exporting would not differ from a scheme which allows foresters to bank their units but not to export them.
11. It is possible to prohibit unit banking which would eliminate the fiscal risk. However there are a number of downsides associated with a ban on banking. Firstly, it would add to the complexity of the NZ ETS. Secondly it could cause difficulties for post 1989 forestry participants who would be unable to accumulate units while forests grow in order to meet future emissions liabilities, if they apply for them during the period that the price cap is in place.
12. A second possible short term fiscal cost would arise if the ability to export post-1989 units led to a greater number of forest owners opting to join the ETS. While this would provide long term benefits, it would reduce the number of units available to the Government in CP1, and therefore increase short term costs.
13. It should also be noted that even when allowing exports creates fiscal costs to the government, it produces equivalent gains to foresters so there is no economic loss to New Zealand as a whole. Conversely, a ban imposes costs on the forestry sector.

Impacts on specific forestry sectors

Post 1989-forests

14. Reduced returns to foresters or high levels of uncertainty among investors will reduce investment in new planting and participation of existing post-89 forest owners in the ETS – both outcomes come at economic cost.
15. If foresters are uncertain about the future income streams from carbon, it could give rise to an economic cost associated with a risk of decreased rates of planting. There is also a risk of increased deforestation of post-89 forests.
16. Achieving a high level of new forest planting would be assisted by the forestry industry having as much confidence in future income streams from carbon as they do in future income streams for timber. Future income streams from carbon are likely to be discounted significantly relative to future income streams from timber – at least until a

number of uncertainties have been resolved and the sector has confidence in the current policy framework.

17. Banning exports may have a significant impact on the sector's confidence in carbon income streams and increase the threshold rates of return needed for forest investment. This could substantially decrease the amount of new forests planted. It is difficult to quantify this impact. However, it should be noted that even relatively small changes to the new planting rate can create a significant economic impact. If the new planting rate under a scheme with an export ban is 10,000 ha per year lower than the new planting rate under a scheme that allows exports, an economic benefit to New Zealand (potentially in the order of \$125-\$200 million²) would be delayed.
18. This cost is a net economic cost to New Zealand (i.e. there are no offsetting benefits) and this decline in planting is likely to have implications for New Zealand's ability to meet future international climate change reduction targets.
19. A ban on the export of units earned from post 1989 forests is unlikely to see a significant increase in the use of the PFSI (even though the PFSI would not be covered by the ban). Current PFSI regulations only allow participants to shift to the ETS until 1 April 2010. Any participant that opted to join the PFSI, rather than the ETS, and avoid the export ban would therefore not be able to easily rejoin the ETS at a later date. Given the 'permanence' aspects of the PFSI, and associated covenant requirements, owners of commercial forests are considered more likely to simply bank units.

Pre-1990 Forests

20. Allowing the export of units allocated to pre-1990 forests is expected to come at a low economic and fiscal cost. There could be a small risk of arbitrage if exports are allowed from pre-1990 forests during the fixed price phase. If the international price rises above the price cap foresters could sell their units and access the price cap to purchase any units required to meet surrender obligations associated with the small amount of expected deforestation.
21. [withheld].

Implications for linking with the Australian CPRS

22. The current design of the CPRS includes a price cap until 2016. As part of this design, it is also the case that no exports of units will be allowed until the price cap is removed.
23. [withheld].
24. [withheld].
25. [withheld].
26. [withheld].
27. Allowing exports of units from the forestry sector now, but maintaining the prospect of banning them in a few years when the NZ ETS is linked to the CPRS would have negative impacts on certainty within the forestry sector.

² This is based on findings from both Scion (2008) and University of Canterbury that the expected value of forestry land with a \$30 international price on carbon would increase by \$5,000-\$8,000. To estimate the economic cost of a decrease in planting these values are multiplied by the number of new hectares planted over CP1 (25,000 ha).

28. However; the level of the price cap under the linked CPRS–NZ ETS is likely to be significantly higher (over NZ\$50) than the \$25 under the low price phase; and once the schemes are linked, foresters would be able to access an Australasian carbon market, which will provide them with a significant market in which to sell their units if exports are banned.
29. On balance, therefore, officials do not believe that the prospect of having to ban exports later in order to link to the CPRS at some point in the future is a reason to ban exports now.
30. However, to minimise the impacts on certainty, Ministers should give clear and early policy signals about the implications for export rules of a possible future link with the CPRS. Ideally this would include timeframes.

Implications for non-forestry sectors

31. The SEIP and fishing sectors are different to the forestry sector because more arbitrage opportunities will exist under a price cap. This is due to there being an emissions obligation to meet, so participants have a genuine option to access units under the price cap. Therefore there is a stronger rationale for banning the export of units from these sectors. The banking of units issued to these sectors could also be banned to avoid the risks of arbitrage over time.
32. [withheld].
33. The downside of prohibiting the banking of units issued to the SEIP and fishing sectors is that it will reduce the size of the market for these participants which may lead to opportunities for market manipulation.
34. The various options regarding exports and banking are outlined in the table below; from allowing no sectors to bank or export to allowing all sectors these options. Essentially this illustrates how risks of arbitrage are balanced against reduced economic incentives in the forestry sector and reduced market development for other sectors.

Option	Forestry exports	Other exports	Forestry banking	Other banking	Arbitrage Risk (time)*	Arbitrage risk (markets)**	Forestry incentives	Market incentives
A	N	N	N	N	nil	nil	High impact	High impact
B	Y	N	Y	N	moderate	moderate	Small impact	Moderate impact
C (Cab. Paper)	N	N	Y	Y	moderate	nil	Moderate impact	Moderate impact?
D	Y	N	Y	Y	moderate	nil	Small impact	Moderate impact?
E	Y	Y	Y	Y	High	High	Low impact	Low impact

*Arbitrage over time refers to arbitrage arising from buying units in one period and selling them in the future.

** Arbitrage over markets refers to arbitrage arising from the ability to buy and sell in different markets.

