

The Chair
Cabinet Policy Committee

A PROPOSED MECHANISM TO INCENTIVISE PERMANENT (NON-HARVEST) “COMMERCIAL” FOREST SINKS

Purpose

1. In accordance with Cabinet’s directive of 7 October 2002 [CAB Min (02) 26/18 refers], this paper reports to Cabinet on the proposed operational details of a mechanism to encourage permanent (non-harvest) forest sinks. The paper recommends that private sector interests be invited to comment on the proposed mechanism and that the Convenor, Ministerial Group on Climate Change and Minister of Forestry be authorised to finalise the details of the mechanism following this process, provided the mechanism remains substantially the same.
2. It also seeks Cabinet approval for legislation to be drafted to facilitate the operation of the mechanism, and for the inclusion of this legislation in the proposed Climate Change Response Amendment Bill 2003.

Executive Summary

3. This paper proposes a mechanism allowing landowners to access the value, created under the Kyoto Protocol, of sequestering carbon on their land through establishing new forests. Participation in the mechanism would be voluntary.
4. The mechanism would essentially be a contract (registered against land titles) between the Crown and a landowner. Under these contracts the Crown would agree to provide an amount of tradable carbon emission units equal to the amount of carbon sequestered by new forests on a given block of land over the first commitment period of the Kyoto Protocol (2008 – 2012). In return landowners wishing to take advantage of the mechanism would contract with the Crown not to harvest trees from the newly established forests. Deliberate breaches of these non-harvest covenants would attract penalty payments to the Crown.
5. Landowners would also have to agree to reimburse the Crown if the amount of carbon on their land declined and this resulted in a consequential liability to the Crown under the Protocol. Landowners would also be liable for ongoing monitoring, verification and administrative costs.
6. Obligations under these contracts will be registered against land titles and will run with and bind the land. They will also be perpetual, unless the Crown agrees to vary the contract with the landowner.

7. The mechanism is essentially commercial in nature, allowing landowners to make better economic use of their land, particularly isolated and erodable land not suitable for agriculture or forestry. Though not specifically designed to generate environmental benefits, the mechanism will result in positive environmental outcomes in terms of biodiversity, soil and water conservation, and reducing agricultural emissions through displacing pastoral agriculture.
8. The proposed mechanism will require some legislative backing, particularly in relation to the registration of agreements against land titles and the enforcement (search and seizure) and penalty regime. It is proposed that the Climate Change Response Amendment Bill 2003, which is already on the Government's legislative agenda, include provisions to extend the regulation making powers of the Forests Act 1949. Regulations would then be made to give effect to the mechanism.
9. The mechanism is fiscally neutral for the Crown, except in the first year when \$0.24 million (GST inclusive) of unrecoverable Crown expenses are expected. These expenses have already been provided for in the 2003/04 Budget process.

Background

10. In October 2002 Cabinet agreed in principle that, as part of a package of measures to address climate change, there should be a mechanism to incentivise the creation of permanent (non-harvest) forest sinks by providing that landowners can receive returns from such forests in proportion to the carbon sequestered by them. Such a mechanism is referred to in this paper as a "commercial" permanent sinks mechanism, because it would effectively allow landowners to "farm" carbon sequestration based on their expectations of the commercial returns and risks of such activities.
11. Cabinet directed officials to report by March 2003 on the details of such a mechanism [CAB Min (02) 26/18 refers]. The mechanism will provide incentives by utilising the value of forest sinks created under the emissions trading provisions of the Kyoto Protocol.
12. The Kyoto Protocol and its associated Marrakech Accords impose specific rules on claiming credits and accounting for land upon which credits have been claimed. These rules, along with the Good Practice Guidance¹ for accounting for forest sink activities currently under development, provide the background against which the proposal for a domestic mechanism has been designed.

Criteria

13. The mechanism has been designed with the following criteria in mind:
 - fiscal neutrality for the Crown, including recovery of any direct costs incurred by the Crown;
 - consistency with the Kyoto Protocol, Marrakech Accords and Good Practice Guidance on accounting for land use, land use change and forestry (LULUCF) activities

¹ Good Practice Guidance for accounting for land use, land-use change and forestry (LULUCF) is being developed, but this will not be finally agreed before the ninth Conference of the Parties in late 2003

- (to the extent that this is known);
- efficient market signals being provided to landowners;
- clear separation between forests established for timber production and those established for carbon sequestration;
- a party, other than the Crown, always being identifiable as being liable for any future carbon loss;
- an overall net environmental benefit in terms of enhanced biodiversity, reduced soil erosion, and improved water quality and some reduced agricultural emissions;
- minimising compliance and administrative costs.

Eligible Land

14. Under the terms of the Kyoto Protocol (article 3.3), New Zealand must account for carbon changes in all direct human induced forests established post-1990 on land that was not forested as at 31 December 1989 - so-called “Kyoto forests”. The establishment of such forests is referred to as afforestation and reforestation (A&R) activities and it is these activities that will generate New Zealand’s expected sink credits in the first commitment period (2008-2012).
15. In the case of pre-1990 forests (so-called “non-Kyoto forests”), New Zealand may elect whether it wishes to account for carbon changes in these forests. Based on present data, non-Kyoto forests are expected to be net emitters of carbon nationally over the first commitment period. Consequently, Cabinet agreed in principle not to account for the carbon in these forests [CAB Min (02) 26/16 refers].
16. Given Cabinet’s decision, the only land that will be eligible to earn sink credits over the commitment period is land that was not forested as at 31 December 1989. In order to qualify for sink credits the establishment of the forest must also be direct human induced².
17. It is proposed that the two criteria described in paragraph 16 be applied to activities under the permanent forest sinks mechanism. In this way the Government can ensure that these new forests will generate credits under the Kyoto Protocol, the value of which can then be disseminated to landowners. Leaving aside any direct costs (which can be recovered separately) this ensures the mechanism is fiscally neutral to the Crown.

Limitations on access to mechanism

18. It is proposed that, aside from the limitations outlined above, no other restrictions be placed on access to the mechanism, either in terms of the quality of land that can be included or the total area that can be established.
19. This is because the proposed mechanism is a market-based instrument that does not require additional Crown funding and which allows landowners to make commercial land use decisions based on their perceptions of the risks and rewards of managing their land for timber, agricultural, or carbon sequestration outputs.

² The term ‘direct human induced’ is further elaborated in the Marrakech Accords under the definitions of “afforestation” and “reforestation” as being “conversion [of non-forested land to forested land] through planting, seeding and/or the human-induced promotion of natural seed sources.”

Conditions of Participation

Covenant not to harvest

20. All participants in the mechanism would be required to covenant that they would not harvest trees (including firewood) from the relevant forest. It should be clear, however, that the harvesting prohibition would not extend to the harvesting of other forest products such as honey, forest fungi, or game animals.
21. The non-harvest covenant (or agreement) would be registered against land title, be perpetual, and binding on future landowners. However, should future rules of the Kyoto Protocol or its successor remove the ability to generate sink credits from forests, then the non-harvest covenant would be terminated. Consequently, agreements under the mechanism must be able to be amended or terminated.
22. In such an event the future use of the forest would be subject to normal district and regional planning requirements and the indigenous forest provisions of the Forest Act 1949, as applicable. It should be noted that any expiry of the non-harvest covenant would not exempt landowners from any ongoing liabilities to repay credits in the event that a forest loses carbon, to the extent such liabilities are imposed internationally.
23. Enforcement of the non-harvest covenant would involve periodic checking for physical signs of timber harvest as part of the assessment and verification of carbon sequestration undertaken at the end of the commitment period or periods.
24. An appropriate 'penalty' regime would be necessary to ensure compliance with the covenant. This would be in addition to the landowner being required to repay any emission units received in respect of the forest. A 'penalty' regime is necessary to prevent landowners signing a covenant, receiving credits then at some future date harvesting the forest; effectively creating a devolved sink credits regime. Not only is this contrary to Government's policy on sink credits, it would also create incentives for existing forest owners to deforest their current non-Kyoto lands and move to Kyoto compliant land to earn sink credits.
25. As this mechanism is in essence a voluntary commercial arrangement, it would be undesirable to create a regime that established penalties at a criminal level. Such penalties would be inconsistent with the nature of the undertaking (essentially contractual) and potentially a major disincentive to participation.
26. Officials therefore propose that in the event a landowner breaches the non-harvest covenant, they be required to replace all the credits they have received plus repay any "profit" they had made from the sale credits and investment of the proceeds of such sales. In practice the simplest means to achieve this would be to establish a default regime. Under such a regime landowners in breach of covenants would be required to replace all credits received plus additional units calculated on the basis of an annual compounding rate of 10 percent, applied to each year's sequestration, commencing from the earliest year in which the forest sequestered carbon in respect of which units were generated.
27. For example under such a regime, a forester who planted radiata pine in 2003 would receive around 625 (tonnes CO₂) of credits by 2032. At 10% compound rate per annum,

if the forester harvested these trees in 2032 they would be required to pay back around 2460 credits.

28. The penalty regime would not apply to carbon lost through natural or deliberate disturbances that were not breaches of the non-harvest covenants. In these circumstances landowners would be required to meet the liabilities arising from the loss of carbon only.
29. A penalty regime is not considered necessary for deliberate actions that reduce carbon (except harvesting) because the requirement to purchase emission units to cover carbon lost from the forest will already provide a powerful incentive not to clear the land. In addition, there may be forest health or risk management reasons that would make it prudent to deliberately remove some material from the forest, such as to build fire breaks. It would not be appropriate to introduce a penalty regime for the carbon lost through such activities. The key issue for the Crown is ensuring forests under the mechanism are not harvested for commercial gain.

Consistency with the New Zealand Forest Accord

30. It is proposed that to be eligible forest establishment must be consistent with the New Zealand Forest Accord. The Accord is a voluntary agreement signed in August 1991 between the commercial forestry sector and conservation groups. In essence, signatories to the Accord agree inter alia that their establishment of planted forests will not involve the clearance of significant regenerating indigenous forest. Such a policy would not prevent landowners from including areas of significant indigenous regeneration under the mechanism, or from inter-planting such areas with indigenous or exotic trees.
31. Adoption of this policy would help ensure the environmental integrity of the mechanism. It should be noted that Maori landowners are generally not signatories to the Accord, as this was seen by many as an unreasonable restriction on the use of their land for commercial forestry purposes. However, officials do not anticipate that this issue will be as significant to Maori in the case of permanent non-harvest forest, as in this case regenerating scrub provides a good basis for the establishment of the permanent forest, and would therefore not need to be cleared in order to participate in the mechanism.

Forest management plans

32. It is proposed that landowners wishing to participate in the mechanism would be required to prepare and register a forest management plan that would then form part of the obligations of participation in the mechanism. The management plan would be assessed to ensure compliance with the “direct human-induced” requirements of the Kyoto Protocol for activities eligible to generate forest sink credits.
33. The management plan would also help ensure the achievement of reasonable biodiversity, and soil and water conservation outcomes. Some key features of the management plan could include:
 - description of the land area involved;
 - description of the management steps taken or to be taken to establish the forest;
 - a risk management plan (e.g. control of pest/grazing animals, fire); and
 - a forest monitoring, measurement and verification plan.

Species selection

34. No restrictions are recommended on the selection of species that may be planted under the mechanism. This would allow rapid growing species such as radiata pine, eucalypt species, and Douglas fir to be established and to reach full maturity. Over time, and depending on site conditions and locality to seed sources, such forests are likely to develop a significant indigenous component, and may eventually become dominated by indigenous species. In any event, fully mature exotic forests will generally contain significantly greater biodiversity than the bare land they replace and will significantly reduce soil erosion in erosion prone areas.
35. Including exotic species within the mechanism will also allow hard-to-establish sites, such as drier sites or sites with poor soils, to be more readily included in the mechanism.

No requirement for an additionality test

36. An additionality test would ask the question whether the activity would have occurred in the absence of an incentive mechanism being provided. Such a test is proposed for the Projects mechanism³ where the activities likely to receive incentives are investments in assets with pre-existing commercial values, such as wind, hydro, or biofuel energy generation. It is not proposed to include any ‘additionality’ requirements for eligibility to the proposed mechanism, as:
- it is highly likely that the vast majority, if not all, the forests being regenerated would meet additionality criteria as there is little other direct financial returns that can be generated from new non-harvest forests;
 - imposing additionality criteria could create a perverse incentive for landowners to clear existing regenerating Kyoto forest, to strengthen their case for additionality;
 - a number of landowners have already established permanent forests on the assumption that credits would be devolved;
 - unlike the Projects mechanism (where the Government does require additionality) the Government is not utilising an existing asset (New Zealand’s initial assigned amount) to provide the incentive to undertake the activity.

Ability to adjust for ‘leakage’

37. Leakage refers to emissions (or reduced sequestration) that occurs outside the boundaries of the forest but that is reasonably attributable to the forest project.
38. An example of leakage in this context would be where a landowner regenerated forest on some Kyoto eligible land, but then cleared some existing forest and converted it to pasture to make up for the lost grazing area. The carbon released from such a clearance would be a deforestation liability to the Government and should therefore be deducted from any credits earned by the forest regeneration project. While such leakage is likely to be rare

³ The Projects mechanism is a Climate Change initiative under which investors considering initiatives that would reduce emissions can bid for assistance (in the form of emission units) from the Government to assist in making the investment economically viable.

the Government should, nevertheless, retain the ability to adjust for it in blatant or extreme cases.

Relationship to the East Coast Forestry Project

39. The East Coast Forestry Project (ECFP) is a government scheme designed to encourage sustainable land use change on highly erodable land. Grants are paid to encourage vegetation (forest) cover on steep pastoral lands, generally through either regeneration of natural forest or by planting commercial forests. The ECFP provides incentives to locate an activity on a highly erodable site rather than encouraging the activity itself.
40. It is proposed that the landowners wishing to utilise the permanent non-harvest (commercial) forest sinks mechanism would also have access to grants under the ECFP in respect of establishing non-harvest forests. Such a regime would be consistent with the treatment of commercial forest establishment under the ECFP. It would encourage the establishment of permanent forest sinks on the highest priority sites for soil and water conservation on the East Coast. Finally, access to permanent forest sinks mechanism is likely to reduce the level of support sought by landowners wishing to retire land under the ECFP. It may therefore reduce overall costs to the Crown.

Financial Instrument to Provide Incentive

41. On 7 October 2002 Cabinet agreed to retain all sink credits and their associated liabilities, at least for the first commitment period [CAB Min (02) 26/16 refers]. Recognising this decision, the two principal options available to incentivise permanent (non-harvest) forests are either the Government paying cash incentives or some form of financial instrument that approximates the economic effect of issuing credits directly.
42. The most efficient means of incentivising new non-harvest forest sinks would be for forest owners to receive a financial instrument that could be traded at the world price of carbon. In this way forest owners will receive correct market signals regarding the value of their forest sinks and fiscal risks to the Crown would be minimised. Initial indications are that forest owners are also likely to prefer such a mechanism over a cash incentive as it does not rely on future Governments making appropriations to fund payments, and is therefore seen as a more robust long term funding mechanism.
43. An analogous situation exists within the Projects mechanism. Here it is proposed that the Crown issue an emission unit promissory note, on the basis of which recipients could then forward sell options to buy units to national and international buyers. The promissory note will only be convertible to emission units on the basis of actual, verified emission reductions from the Project.
44. It is recommended that the Crown issue the same instrument, i.e. a promissory note for emission units, for non-harvest commercial forest sinks. As with Projects the note would only be converted to emission units on the basis of actual verified carbon sequestration by the relevant forest over the first commitment period, adjusted for leakage.

Assignment of Liabilities and Rights

45. Under the terms of the Marrakech Accords, every sink credit issued creates an equal contingent emission liability should the carbon sequestration be reversed at any time, as for example in the case of a forest fire. In addition, the establishment of a Kyoto forest creates an obligation to monitor the carbon in the forest in the first commitment period and all subsequent commitment periods.
46. Ultimately, the Kyoto Protocol imposes an obligation on the Crown for both these areas of liability. Should the Crown wish to avoid additional costs it is important that all such liabilities run in perpetuity with the land upon which the permanent forest is to be established and bind all future owners. It would be prudent for agreements under the mechanism to include a requirement that landowners take out insurance against accidental loss of carbon from the forest.
47. While such provisions are likely to make the mechanism considerably less attractive to some landowners, they would nevertheless ensure landowners are exposed to the true long-term nature and risks associated with carbon sink credits.
48. With regard to landowner rights to receive sink credits, it is proposed that these also be assigned in perpetuity, but with the explicit condition that credits will only be issued so long as future international agreements provide for the generation of credits from the land in question⁴.
49. The most transparent option to achieve these outcomes is for the existence of relevant obligations, liabilities and rights to be registered against land title and attach by default to the current landowner.
50. In the event of liabilities arising and a failure by the landowner to meet their obligations, it is proposed that the Crown recover any losses through normal contractual remedies.
51. Because of the perpetual nature of the liabilities and obligations, it is also proposed that lessees wishing to enter agreements must first obtain the written permission of the landowner.

Legal Framework

52. The underlying framework for the mechanism will be contractual between the Crown and landowners. Because contracts would be registered against land titles, be perpetual and binding on future owners, legislative provision (in the principal legislation or via regulations) needs to be made to implement the proposed regime. Legal advice suggests that, given legislation is necessary, there is the opportunity to set out the purpose of the covenant and (for the avoidance of doubt) what such covenants may contain. Without limiting the ability of the parties to agree whatever provisions they see fit, legislation could provide for some or all of the following:

⁴ Under the terms of the Kyoto Protocol, sink credits can only be generated in the first commitment period (2008-2012). Thereafter, the ability to generate credits and the rules applying to them is the subject of future negotiations between the Parties to the Kyoto Protocol.

- general authorisation for a Minister of the Crown to enter agreements with landowners to give effect to the mechanism;
- the purpose of the covenant;
- a framework for agreeing and registering against land title an obligation not to harvest timber from the land that can take effect in perpetuity or for a specified term;
- obligations on lessees to seek landowner's agreement prior to entering agreements;
- a framework for agreeing and registering against land title any other obligations the Crown may require as part of the agreement, for example implementing forest management plans and ongoing monitoring requirements;
- a framework for agreeing and registering against the land title the landowner's obligations in the event there is a loss of carbon from the forest resulting in a liability on the Crown for an emission;
- a framework for agreeing and registering against the land title the landowner's rights with regard to receiving future emission units;
- providing for any perpetual liabilities, obligations and rights associated with the permanent (non-harvest) forest to apply to the current landowner;
- an enforcement and penalty regime in the case of material breaches of the covenant not to harvest timber, including powers of search and seizure;
- the ability to vary and/or terminate the agreement by mutual consent of the Parties;
- a framework to allow establishment of permanent non-harvest forests to be conducted as joint ventures under Forestry Rights legislation.

53. Some of these matters may be more appropriately included in the agreements to covenant, and therefore may not be required to be provided for in the legislation.

54. It is proposed that the Climate Change Response Amendment Bill (CCRAB) include consequential amendments to the regulation making powers of the Forest Act 1949, to allow regulations to be made under the Forests Act to give effect to the mechanism. The CCRAB has priority three status on the Government's legislative agenda, and is expected to be introduced this year and enacted next year.

Administration of the Mechanism

55. Officials have identified two principal options for the administration of the mechanism. The first is operating the mechanism in a similar manner to the development and registration of sustainable forest management plans under the Forests Act 1949. The Ministry of Agriculture and Forestry (MAF) administers this Act. This option would tend to signal that the mechanism is essentially a private commercial undertaking, which is facilitated by the Crown and where the Crown requires certain minimum standards to be applied and verified.

56. The second option would be to administer the mechanism out of the Department of Conservation, utilising existing (mostly non-departmental) structures for securing the protection of private land for conservation. Such an approach would signal that the mechanism is essentially a conservation initiative. Consequently, there is a risk of increasing expectations that the Crown would be prepared to extend funding over and above the returns provided by carbon sink credits alone in order to 'purchase' explicit conservation outcomes.

57. It is recommended that, in light of the generally commercial nature of the mechanism and the degree of policy and operational “fit” with other sustainable forest management activities under the Forests Act 1949, MAF be given responsibility for administering the mechanism. Should it be considered necessary to provide a general authorisation for a Minister of the Crown to enter agreements with landowners to give effect to the mechanism, it is therefore proposed that this be the Minister of Forestry.

Benefits and Risks of the Proposed Mechanism

58. The proposed mechanism provides opportunities for landowners to retire predominantly marginal land while still receiving a financial return. Some landowners may also generate further returns from non-timber forest outputs such as hunting licenses, honey production, and tourism operations.

59. For the Crown, the principal benefits are environmental. The mechanism is likely to focus on highly marginal farmland, which may be unsustainable under agriculture and unsuitable for production forestry. Benefits in retiring marginal land include biodiversity enhancement, soil and water conservation, and improved flood protection (aiding adaptation to expected increases in cyclone events as a result of climate change). Some reduction in emissions from agricultural sources might also be expected as new permanent forest displaces pastoral agriculture.

60. Because using the mechanism would often require very little capital to initiate and is suited to erodible, isolated hill country it may be of particular interest to Maori landowners.

61. The most significant risk associated with the forest sink mechanism is the liability created whenever total carbon in a forest falls below the cumulative amount of sink credits issued in respect of that forest. This risk is minimised by:

- requiring landowners (current and future) to covenant not to harvest the forest;
- registering the existence of such obligation against land titles; and
- devolving responsibility for all reductions in carbon to landowners.

62. A further risk for the Crown is that over time (probably not before many decades) the Crown may be left holding residual responsibilities for abandoned land that carries ongoing monitoring obligations and contingent carbon liabilities, but is no longer sequestering carbon. However, these risks are likely to be small relative to the overall responsibilities of the Crown for monitoring the carbon in all of New Zealand’s forests and its contingent liabilities for the deforestation of all indigenous forest on Crown land.

Possible Uptake of the Mechanism

63. To provide an order of magnitude of possible returns under the mechanism, research suggests that a hectare of manuka-kanuka scrub on the East Coast may sequester up to 12 tonnes of CO₂ a year during its active growth phase up to around age 30. This equates to gross returns of \$120 to \$300 per hectare per year at \$10 to \$25 per tonne CO₂ per year respectively.

64. It is extremely difficult to speculate on how much uptake of the mechanism may occur. Undoubtedly the perpetual nature of the monitoring and emission liabilities will deter many investors. However, these liabilities reflect the reality of the rules of the Kyoto Protocol and should therefore be reflected in the mechanism design.
65. Probably the most important factor affecting uptake is the expectation of carbon emission price. This will become more certain over time, for example, once Russia ratifies, the EU finalises its emission trading policies, and rules for future commitment periods are agreed. Consequently, uptake may be small initially, but - depending on market factors - may increase substantially over time.

Fiscal Implications

66. No identified fiscal implications arise from this paper. Providing the incentive for the establishment of permanent (non-harvest) forest sinks would be fiscally neutral.
67. It is possible that the Crown would devolve to landowners the value of some sink credits that it would otherwise have received, i.e. in the absence of the mechanism. No statistically robust assessment can be made at present of the magnitude of this potential loss to the Crown. However, discussions with experts in this field suggest that only a small proportion (perhaps around 5%) of New Zealand's regenerating scrub is likely to have regenerated since 1990 (and therefore be eligible to generate sink credits). The magnitude of any loss to the Crown is therefore likely to be small.
68. The direct fiscal costs for administering the mechanism would be recovered from participants. The exception would be during the first year of operation where MAF would incur establishment and operational costs but where it is unlikely that a significant number of agreements will be finalised. This would result in direct costs to the Crown of \$0.24 million (GST inclusive) in the 2003/04 year only. Funding to meet this expected cost has been agreed during the Ministerial consultations of the 2003/04 Budget round.
69. Finally, participation in the mechanism must be strictly at the landowner's own risk. In particular, it must be clear that any changes to international agreements or activities that impinge upon the ability to generate or sell sink credits do not imply any obligations upon the Crown to compensate landowners.

Maori Issues

Inter-generational equity

70. During earlier consultation on climate change matters, Maori generally supported the concept of a mechanism to encourage the regeneration of permanent protection forests on marginal land. The proposal in this paper would provide such a mechanism. However, many Maori also considered that some level of sustainable timber harvest should be allowed under the mechanism as a way of addressing inter-generational equity between current landowners, who will receive sink credits, and future generations of landowners, who will not⁵. Cabinet's decision not to allow sustainable timber harvest reflects the considerable extra administrative difficulties and fiscal risks (in terms of potentially

⁵ Once a forest has reached maturity CO₂ emissions and sequestration is generally in balance, meaning sink credits are no longer generated.

incentivising deforestation of non-Kyoto forests) created by blurring the line between forests established for carbon sequestration and those established for timber production.

71. A further issue for Maori wishing to participate in the mechanism is the long-term nature of the covenant not to harvest and the degree of alienation that such a covenant would imply under the terms of Te Ture Whenua Maori Act 1993. Such alienation would likely require a very high level of agreement amongst landowners to be reached before participation in the mechanism.
72. Some landowners have suggested this issue could be resolved through providing for future generations to reconsider the non-harvest covenant, i.e. an opt-out clause, say every 30 years. In the case of forests established with commercial tree species, such provision risks the mechanism being 'gamed' to operate effectively as if the credits had been devolved, with a host of associated problems. While this risk is considerably less where forests are established exclusively with indigenous species, such a policy would nevertheless blur the line between permanent (non-harvest) forests and those established for other, commercial, purposes.

Provision for Cultural Harvest

73. Section 30(2) of the Conservation Act 1987 makes provision for the Director-General to authorise any person to take on or from a conservation area any plant intended to be used for traditional [non-commercial] Maori purposes. It is proposed that agreements under the mechanism would contain an equivalent provision if requested by the landowner.

Legislative Implications

74. Legislation would be necessary to implement the mechanism. It is proposed that amendments be made to the regulation making powers of the Forests Act 1949, to allow regulations to be made under that Act to give effect to the mechanism. The content of this legislation is discussed above under the heading Legal Framework. It is recommended that Cabinet approve the drafting of such legislation.
75. The legislation necessary to implement the proposed mechanism would be included in the proposed Climate Change Response Amendment (CCRAB) Bill. Provision for this mechanism is likely to result in 5 additional clauses to the Bill.

Regulatory Impact Statement and Business Compliance Cost Statement

76. An RIS/BCCS is attached that complies with the requirements for these statements. The BCCS notes that compliance costs may arise from: legal fees; developing and registering agreements against land titles; developing and implementing forest management plans; and periodic forest measurement and verification. It notes that, with the exception of periodic forest measurement and verification, these costs are likely to be one-off. It notes also that at present it is only possible to provide indicative estimates of compliance costs, as actual costs will depend on standards that are still being developed internationally.
77. Based on the information provided in the attached RIS/BCCS, the Business Compliance Costs Unit considers that the disclosure of information is adequate, and the level of analysis is appropriate given the likely impacts of the proposal.

Bill of Rights Act 1990 and the Human Rights Act 1993

78. The proposals to include penalty and search and seizure regimes into the legislation need to be considered for consistency with the New Zealand Bill of Rights Act 1990. The Ministry of Justice advises that the proposals in this paper lack sufficient detail to enable it to consider the proposals more fully at this time. A final view as to whether the proposals will be consistent with the Bill of Rights Act will be dependent on the scope and detail of the drafting of the legislation. However, officials from the Ministry of Justice and MAF will work together to ensure that the Bill is consistent with the Bill of Rights Act.

Consultation

79. The following departments have been consulted during the preparation of this paper: Treasury, Te Puni Kōkiri, Ministry for Economic Development, Department of Prime Minister and Cabinet, Department of Conservation, Ministry for the Environment, Ministry of Agriculture and Forestry, Ministry of Justice, Land Information New Zealand.

80. The general principles underlying the proposed mechanism have been discussed with landowners and research providers working in this area. However, these and other private interests, including Māori landowners, have not had the opportunity to comment on the proposed mechanism itself.

81. It is recommended that private interests be invited to comment on the proposed mechanism. The Convenor, Ministerial Group on Climate Change in consultation with the Minister of Forestry would then be authorised to agree the final details of the mechanism, provided these are not substantially different from those described in the paper.

Te Puni Kōkiri comment

82. Te Puni Kōkiri considers that the permanent forest sinks mechanism as proposed in this paper is likely to be rejected by most Māori landowners because it would not adequately provide for inter-generational equity. This is because, as recognised by Parliament in the Te Ture Whenua Māori Act, Māori land is not simply an economic resource: it is Taonga Tuku Iho. In recognition of this special status, there are statutory restrictions on the ownership and disposal of Māori land. Many Māori consider that each successive generation of landowners should have the opportunity to reconsider the use being made of their land. Parliament has recognised this in respect of conservation uses, by providing a special mechanism - Ngā Whenua Rāhui - that allows the use of Māori land subject to conservation covenants to be reconsidered every 30 years. Te Puni Kōkiri recommends that a similar mechanism be provided for Māori landowners in relation to permanent commercial forest sinks.

Recommendations

It is recommended that the Cabinet Policy Committee:

1. **note** Cabinet directed officials to report to POL by 31 March 2003 on details of a mechanism in which landowners receive returns in proportion to the carbon sequestered in a regenerating forest where the landowner covenants that forest for permanent protection (non-harvest);
2. **agree** that the Minister of Forestry be empowered to enter agreements with landowners to give effect to the mechanism described in (1);
3. **agree** that only land and activities eligible to generate forest sink credits under the terms of the Kyoto Protocol (as implemented in New Zealand) will be eligible for inclusion in agreements under the mechanism, and that all such agreements shall include covenants by landowners not to harvest trees, except as provided for under recommendation (17) below;
4. **agree** that to be eligible, activities must be consistent with the New Zealand Forest Accord, and must therefore not involve the clearance of significant indigenous forest regeneration;
5. **agree** that aside from the criteria in (3) and (4) above no other restrictions be placed on eligibility to enter agreements under the mechanism;
6. **agree** that landowners entering agreements under the mechanism should bear all liabilities, costs and risks associated with generating, claiming, monitoring and marketing forest sink credits;
7. **agree** that landowners entering agreements under the mechanism should have access to the value of all future sink credits able to be generated from that land and those activities to which the agreement applies, provided that all agreements explicitly provide that the Crown is not liable for any loss should future rules of the Kyoto Protocol or its successor agreement not allow sink credits to be earned from previously eligible forests;
8. **agree** that agreements under the mechanism may include any obligations to monitor, verify or protect the forest as the parties to the agreement see fit;
9. **agree** that all liabilities, obligations and rights associated with the agreement under the mechanism be perpetual, binding on future landowners, and be registered against land titles;
10. **agree** that, notwithstanding (9) above, agreements under the mechanism may be varied or terminated with the mutual consent of the parties to it;
11. **agree** that should future provisions of the Kyoto Protocol or its successor agreement remove the ability to generate sink credits, non-harvest covenants will be terminated, but that landowners will remain liable for replacing any emission units in the event that the forest loses carbon, to the extent such liabilities are imposed internationally;
12. **agree** that before lessees may enter or modify agreements they must first obtain the written permission of the landowner;
13. **agree** that, in the event landowners breach the non-harvest covenant, they be required to replace all emission units they have received in respect of the area land to which an

agreement applies, plus additional units calculated on the basis of an annual compounding rate of 10 percent applied to each year's sequestration, commencing from the earliest year in which the forest sequestered carbon in respect of which units were generated;

14. **agree** that in circumstances where carbon is lost from a forest through either natural or deliberate means (other than harvesting) landowners should be liable for the amount of carbon lost only, and not for any additional penalty amount;
15. **agree** that the Ministry of Agriculture and Forestry should administer the mechanism;
16. **agree** that incentives payable to landowners will be in the form of promissory notes, convertible to emission units on the basis of actual, verified carbon sequestration over the first commitment period (adjusted for leakage);
17. **agree** that agreements covering Maori land may make provision for the taking of forest products, including trees, for traditional (non-commercial) Maori purposes;
18. **approve** the drafting of legislation to amend the regulation making power provisions of the Forests Act 1949 to allow regulations to be made under that Act to establish a legal framework giving effect to the decisions above,
19. **agree** that the legislation described in (18) above include powers of search and seizure for the purpose of verifying and enforcing compliance with the mechanism;
20. **note** that, while all ongoing costs for administering the mechanism will be recovered from participants, it is excepted that there will be direct costs to the Crown of \$0.24 million (GST inclusive) in the 2003/04 financial year only which can not be cost recovered;
21. **note** that during consultations on the 2003/04 Budget, Ministers agreed to support additional funding of \$0.24 million (GST inclusive) for the 2003/04 financial year only to meet the costs identified in (20) above, and that there are therefore no new fiscal implications arising from the proposed mechanism;
22. **direct** officials to refer the proposed mechanism to private sector interests and invite comments on it and report the outcome of this process to the Convenor, Ministerial Group on Climate Change and the Minister of Forestry;
23. **authorise** the Convenor, Ministerial Group on Climate Change and Minister of Forestry to finalise the details of the mechanism, provided these are not substantially different from those proposed.

Hon Pete Hodgson
Convenor, Ministerial Group on Climate Change

Regulatory Impact and Business Compliance Cost Statement

Background

On 10 December 2002, the Government ratified the Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC). In addition to taking on certain obligations, ratification of the Protocol opens commercial opportunities for New Zealand.

One such opportunity is the ability of the Government to claim forest sink credits generated from carbon sequestration following the establishment of new forests on previously unforested land ('carbon sequestration' refers to the process of removing CO₂ from the atmosphere through photosynthesis and storing increasing amounts of this CO₂ as carbon in biomass). The Government has decided that a voluntary mechanism should be put in place to allow individual landowners to take advantage of this opportunity under certain circumstances.

The mechanism proposed would essentially be a contract between the Crown and a landowner that would facilitate the new commercial activity of 'carbon sequestration'. Under these contracts the Crown would agree to provide an amount of tradable carbon emission units equal to the amount of carbon sequestered by new forests on a given block of land over certain time periods. In return landowners would contract with the Crown not to harvest trees from the newly established forests.

Statement of problem and need for action

The generation of sink credits through sequestering carbon is governed by the rules of the Kyoto Protocol, its Marrakech Accords and Good Practice Guidance (currently under development). These rules must be reflected in the implementation of the mechanism, and consequently provided for in an appropriate legal framework, in order to ensure that:

- activities carried out under it generate sink credits; and
- landowners are exposed to the true costs, risks and returns associated with sequestering carbon as a commercial activity.

Current legal frameworks do not allow contracts that adequately address the perpetual nature of the costs and contingent liabilities associated with carbon sequestration or the geographically-specific nature of these activities. Legislative backing is therefore required to ensure that:

- There are no inherent 'subsidies' to participating landowners, which may result in over participation in the mechanism and 'losses' elsewhere in the economy; and
- The Crown does not have to meet any ongoing costs and/or liabilities should they arise.

Government policy decisions requiring non-harvest covenants by landowners require additional legislative backing, particularly in relation to the registration of agreements (contracts) against land titles and an enforcement (search and seizure) and penalty regime.

Failure to adequately address these issues could result in forests planted for commercial timber production being included in the mechanism. This may create incentives for existing forest owners to deforest their current forested lands and replant elsewhere to earn sink credits. This in turn could have major negative implications for New Zealand's emission liabilities, as deforestation of land is considered a source of greenhouse gas emissions under the rules of the Kyoto Protocol.

Statement of public policy objective

A principal objective is to contribute to New Zealand's response to climate change by:

- encouraging additional sequestration of carbon by forests; and
- encouraging the development of a trading market for greenhouse gas emission units.

Statement of options for achieving desired policy objective

Status quo - implement agreements (contracts) under existing legal framework

Consideration was given as to whether the Government's policy could be implemented using existing legal frameworks to enter normal contractual arrangements with landowners and other legal entities. Under this option legal entities would contract with the Crown *inter alia*:

- not to harvest the trees;
- to meet any liabilities arising from losses of carbon; and
- to meet any ongoing monitoring costs.

The Crown for its part would contract to supply emissions units equal to the verified amount of carbon sequestered provided specified conditions were met.

However, as normal contractual arrangements can not bind and run with land, this option was rejected because it may not provide ongoing certainty with respect to assigning the contingent liabilities created whenever carbon is sequestered and sink credits are issued. There was concern that normal contracts would not sufficiently protect the Crown's interests in case of insolvency or winding up of a company. It may also create uncertainty if the legal entity with which the Crown had contracted sold the land.

As the activities upon the land determine the extent of any future liabilities, it was considered important that the liabilities and obligations imposed under the mechanism should apply to current landowner, who would presumably be in the best position to manage such liabilities. This outcome could not be assured under current legal frameworks.

Ordinary contractual arrangements would not allow the establishment of an enforcement and penalty regime that would adequately address the national level risks to the Crown that could occur if participants do not honour their non-harvest obligations. The absence of such provisions would jeopardise the establishment of the mechanism as, as discussed above, it could create incentives to deforest land and significantly increase New Zealand's liabilities under the Kyoto Protocol.

Preferred option – new legislation

New legislation would provide for the rights and obligations associated with the activity of commercial carbon sequestration to be registered as a covenant against land titles. This will ensure that the rights and obligations bind and run with the land upon which the activity is undertaken, which is considered the most appropriate way to provide a legal framework that properly reflects the ongoing nature of these rights and obligations.

In addition, new legislation would allow the establishment of a penalty and enforcement regime, including search and seizure provisions. This will help to ensure the Government is not exposed to the potentially considerable fiscal costs that could result if landowners breach their obligations under the mechanism.

Without limiting the ability of the parties to agree whatever provisions they see fit, legislation could provide for some or all of the following:

- a framework for agreeing and registering against land title an obligation not to harvest timber from the land that can take effect in perpetuity or for a specified term;
- a framework for agreeing and registering against land title any other obligations the Crown may require as part of the agreement, for example implementing forest management plans and ongoing monitoring requirements;
- a framework for agreeing and registering against the land title the landowner's obligations in the event there is a loss of carbon from the forest resulting in a liability on the Crown for an emission;
- a framework for agreeing and registering against the land title the landowner's rights with regard to receiving future emission units;
- providing for any perpetual liabilities, obligations and rights associated with the permanent (non-harvest) forest to apply to the current landowner;
- an enforcement and penalty regime in the case of material breaches of the covenant not to harvest timber, including powers of search and seizure; and
- a framework to allow establishment of permanent non-harvest forests to be conducted as joint ventures under Forestry Rights legislation.

Statement of net benefit of this proposal

Government

The benefits to the Government of this proposal are largely environmental. The mechanism is likely to focus on highly marginal farmland, which may be unsustainable under agriculture and unsuitable for production forestry. Benefits in retiring marginal land include biodiversity enhancement, soil and water conservation, and improved flood protection.

Some reduction in emissions from agricultural sources might also be expected as new permanent forest displaces pastoral agriculture. Reducing emissions in this way might reduce the cost of New Zealand's emission obligations in the order of \$50 to \$100 per hectare per year of the commitment period.

The direct costs to the Government are likely to be minor as it is anticipated that, except during the first year of operation, all costs associated with administering and managing the

mechanism will be recovered from landowners participating in it. The mechanism will be administered by the Indigenous Forest Unit of the Ministry of Agriculture and Forestry, which has existing skills and experience relevant to this proposal. This will minimise overhead costs and allow maximum flexibility to adjust government staffing levels to match demand for services from landowners. Ongoing government staffing estimates are based on two fulltime positions, the costs of which would be borne by the Crown in the first year only. These costs are estimated at \$0.24 million (incl. GST) per year, but will increase or decrease depending on demand for services.

A further potential cost to the Crown arises from the risk that over time the Crown may be left holding residual responsibilities for abandoned land that carries ongoing monitoring obligations and contingent carbon liabilities. These risks (and possible costs) are likely to be negligible relative to the overall responsibilities of the Crown for monitoring the carbon in all of New Zealand's forests and its contingent liabilities for the deforestation of all indigenous forest on Crown land.

Landowners

The mechanism will allow landowners to consider alternative and potentially more profitable uses for marginal farmland. To provide an indication of possible returns, manuka-kanuka scrub on the East Coast might generate gross returns of \$120 to \$300 per hectare per year at \$10 to \$25 per tonne CO₂ respectively. The price of carbon is particularly important to estimating returns, but can not be estimated accurately until a number of international variables become clearer. Some landowners may also generate further returns from non-timber forest outputs such as hunting licenses, honey production, and tourism operations.

Because using the mechanism would often require little capital to initiate it may be of particular interest to Maori landowners. The mechanism incorporates the ability for Maori landowners to harvest some timber products for cultural uses under certain circumstances.

Costs to landowners will include cash and non-cash costs. At this stage it is not possible to accurately predict cash costs as the standards for forest management, measurement and verification will be designed to be consistent with international requirements, and these are still under development, however, an indication of cash costs might include:

- legal fees and costs of developing agreements and registering these against land titles (in the order of a few hundred to a few thousand dollars);
- development and implementation of forest management plans (these may be completed by landowners with little financial cost);
- carrying insurance to cover potential losses of carbon (insurance costs are typically \$10 to \$20 per hectare for normal forest investments);
- periodic forest measurement and verification (which may be around an average of \$25 per hectare per year of the first commitment period).

Non-cash costs would include loss of agricultural production from the land and reduced land value over time as some land use options are no longer available and the forest nears the end of its period of net carbon sequestration. These are also difficult to estimate, but are likely to be small given the low quality of land likely to be retired from production under the mechanism.

Wider economy

The mechanism will encourage:

- additional sequestration of carbon by forests; and
- the development of a trading market for greenhouse gas emission units.

Both these outcomes will provide additional flexibility to companies seeking to minimise their net emissions to the atmosphere. This may be particularly relevant for companies with Negotiated Greenhouse Agreements (NGA), as for these companies commercial carbon sequestration may provide a least-cost option to meet their obligations under their specific NGA. Similarly, if future Government's decide to move to an emissions trading regime (where large emitters take responsibility for meeting their own emission liabilities) this mechanism may well provide an efficient least-cost option for off-setting emission liabilities.

Developing a larger trading market for greenhouse gas emission units in New Zealand should have spin-off benefits in terms of increasing the marketability of such units and reducing the cost per unit of transactions.

Consultation undertaken

Government agencies

The Treasury, Te Puni Kokiri, Ministry for Economic Development, Department of Prime Minister and Cabinet, Department of Conservation, Ministry for the Environment, Ministry of Agriculture and Forestry, Ministry of Justice, and Land Information New Zealand have been consulted. Departments will be further consulted as legislation and any associated regulations are drafted.

Te Puni Kokiri recommends that the policy should provide for future generations of Maori landowners to reconsider the agreement not to harvest trees. The Government decided against this advice, as such an arrangement may lead to a blurring of the line between forests established for timber production and those established as forest sinks. This in turn could create distortions in investment decisions throughout the forest industry, inequities between landowners, and increased liabilities for the Crown.

Public and sectoral consultation

The general principles underlying the proposed mechanism have been discussed with landowners and research providers working in this area. However, these stakeholders and other private interests, including Maori landowners, have not had the opportunity to comment on the proposed mechanism itself. It is proposed that private interests be invited to comment further on the proposed mechanism.

Business compliance cost statement

Sources of compliance costs

Compliance costs may arise in the following areas:

- legal fees and costs of developing agreements and registering these against land titles;
- development and implementation of forest management plans; and
- periodic forest measurement and verification.

Parties likely to be affected

It is likely that the majority of participants in the mechanism will be landowners of hill country farming operations. There are some 6,800 such operations in New Zealand.

Estimated compliance costs of the proposal

Estimates of compliance costs are:

- legal and registering fees and any costs incurred in developing agreements are expected to be in the order of a few hundred to a few thousand dollars depending on the extent of independent legal advice landowners wish to seek;
- forest management plans, which may be able to developed by landowners themselves with little or no financial cost. Some modest charges may be imposed to recover the costs of officials reviewing and approving management plans;
- forest measurement and verification operations are expected to be conducted at the start and end of the commitment period (2008 to 2012). Typical pre-harvest forest mensuration operations cost around \$25 per hectare. Assuming:
 - similar levels of measurement are required;
 - the cost of measuring carbon is twice that of measuring timber; and
 - 20% of the land area is independently verified (i.e. remeasured);

then average costs of around \$25 per hectare per year of the first commitment period would be incurred. This cost would halve for further commitment periods as in future the measurements taken at the end of the last commitment period would provide the opening carbon balance for the new commitment period.

Longer term implications of the compliance costs

Forest measurement and verification costs are expected to be ongoing but periodic. The frequency of measurement and verification may reduce over time as the forest reaches a steady state of carbon. Other compliance costs are expected to be one-off.

Level of confidence of compliance cost estimates

At present it is only possible to provide indicative estimates of compliance costs. The actual level of compliance costs will be governed by the need to meet standards for measurement and reporting set internationally. These are still under development and will not be completed until the end of 2003.

Key compliance cost issues identified in consultation

Landowners consulted principally noted compliance costs arising from forest measurement and verification and the ongoing nature of these costs. While these activities are an essential component of the mechanism, the design of the mechanism has sought to minimise these costs by requiring measurements only at the start and end of a commitment period.

Overlapping compliance requirements

There are no overlapping compliance costs.

Steps taken to minimise compliance costs

It is expected that forest measurement and verification will be required only once at the start and end of each commitment period. In future it may be possible to reduce these costs still further by extending the period between measurements, particularly as the forest reaches maturity.