

Submission to Senate Select Committee on Climate Policy

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Key points

- a) Plantations should be withdrawn as a covered sector in the CPRS.
- b) Australia is poised for another round of zealous plantation establishment that has a potentially serious climate change downside and is disconnected from wood market realities.
- c) The CPRS accounting rules for plantations are designed to stimulate plantation investment and to isolate the resulting projects from future changes in the carbon price. It is inconceivable that governments around the world engaged in developing a global carbon market wish to create outcomes where projects/businesses, once issued with units, become immune from CO₂ price signals for the next 130 years.
- d) Separate to the CPRS, Australia should bring the land use sector into a wider climate policy, with food security, water and ecological sustainability prime considerations and with special attention to the boundary issues with the CPRS, most particularly bioenergy and biomass feedstocks.
- e) The Government should guarantee its interpretation of Subdivision 40-J of the *Income Tax Assessment Act 1997* that capital expenditure for carbon sink forests is not fully deductible upfront.

Introduction

1. The Government presents the Carbon Pollution Reduction Scheme (CPRS) as the centre-piece of its climate change policy. 'Reforestation' (mainly tree plantations for wood and/or carbon) is the only land use activity covered by the Government's proposed CPRS.¹ There is mounting evidence-based scientific research alerting us to ecologically superior land use activities for climate change mitigation. In November 2008, the Ad Hoc Technical Expert Group on Biodiversity and Climate Change (established to provide biodiversity related information to the United Nations Framework Convention on Climate Change) listed the following key principles in considering this issue:

- a. In their natural state, ecosystems are generally more carbon dense and biologically more diverse. Well functioning ecosystems have greater

¹ Even if agriculture is included from 2015, CO₂ fluxes associated with land use will not be included. Agriculture, as a sector in emissions trading would include only non-CO₂ emissions, mainly arising from animal husbandry. Soil carbon will not be included under the Kyoto Protocol.

resilience to climate change that will aid in their natural adaptation and ongoing climate change mitigation function.

- b. Primary forests are generally more carbon dense, harbour the highest biodiversity and have higher resilience than other forest ecosystems (notably plantations).
 - c. Land use activities that involve clearing and logging reduce the standing stock of living biomass carbon, cause collateral damage to soil and dead biomass carbon, reduce biodiversity and thus ecosystem resilience. This creates a carbon debt that takes decades or centuries to recover.²
2. From these principles come the following ecologically-based priorities for climate change mitigation and adaptation for the forest 'land use' sector, starting with the highest priority:
 - a. Avoid emissions from deforestation and forest degradation by protecting existing carbon stocks in primary forests and woodlands,³ i.e. do not clear or log these ecosystems.
 - b. Maintain, or where necessary, re-establish the restorative capacity of deforested and degraded natural ecosystems to ensure maximum carbon sequestration as they return to their full carbon carrying capacity.
 - c. For natural forests and woodlands devoid of restorative capacity, reforest using mixed native species to enhance resilience and therefore long-term carbon storage capacity. Reforestation should make use of remnant natural forests and woodlands.
 3. 'Reforestation' through plantations of single and/or exotic species—the mainstay of the 'reforestation' component of the proposed CPRS—will not create resilient self-regenerating ecosystems. Whilst plantations sequester carbon, they store considerably less carbon per hectare than natural forests because the stands are usually harvested at a relatively young age and young trees store less carbon than old trees. Plantations of single and/or exotic species established for carbon sinks (i.e. not for wood production and therefore not regenerated through replanting after harvest) are more vulnerable to collapse through pests and disease than natural forests and, having no intrinsic regenerative capacity, will eventually die and release large quantities of CO₂.
 4. The government's climate policy has promoted the least ecologically sound forest land-use activity—'reforestation' through plantations for wood and/or carbon—over

² Ad Hoc Technical Expert Group on Biodiversity and Climate Change (2008), Draft findings of the first meeting of the second Ad Hoc Technical Expert Group on Biodiversity and Climate Change, London 17-21 November 2008.

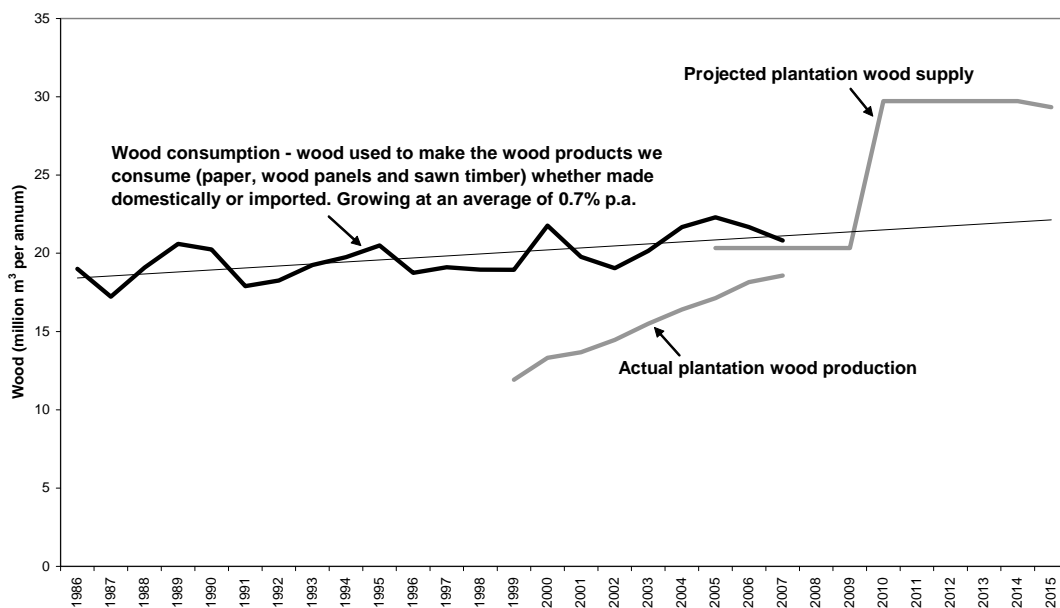
³ For estimates of the carbon stocks in South eastern Australian eucalypt forests see Mackey B.G., Keith H., Berry S. and Lindenmayer D.B. (2008), *Green Carbon: The Role of Natural Forests in Carbon Storage*, The Australian National University, E PRESS <
http://epress.anu.edu.au/green_carbon_citation.html>

ecologically superior options. This is wrong. Australia's contribution to tackling climate change will be stunted and will cost more than need be.

The role for plantations

5. Australia's 'forestry' industry is now plantation based and, as a consequence, more productive and competitive in all major wood products sectors—pulp and paper, wood panels and sawn timber. In 2006/07, plantations made up nearly 70% of Australia's wood supply; plantation processors made 82% of Australia's sawn timber and wood panels; and plantations accounted for 77% of the wood used in Australian paper manufacturing.⁴ According to the Bureau of Rural Sciences' projections, Australia faces an immediate surge in plantation wood supply following more than a decade of strong, steady growth in plantation wood supply (Figure 1).
6. Australia's softwood and hardwood plantations can meet virtually all our wood needs for paper, wood panels and sawn timber without having to call on native forest wood or imports.

Figure 1 Australia has moved beyond wood self-sufficiency, using plantations alone.



Source: ABARE Australian Commodity Statistics & Australian Forest and Wood Products Statistics; BRS Australia's Plantation Log Supply 2005-2049.

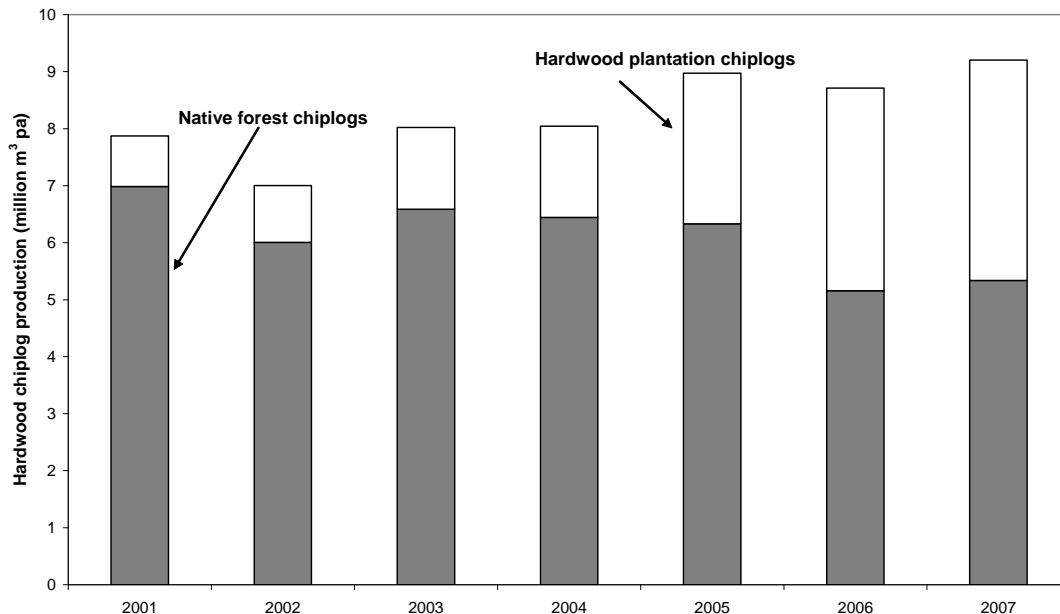
7. With plantations dominating domestic processing, woodchip production (mostly for export) now dominates Australia's major native forest logging regions: 84% of Tasmanian production is chipped, 80% Central Victoria, 81% East Gippsland, 40-50% North East NSW and 90% Eden region NSW.⁵ However, MIS hardwood plantations are now bearing merchantable wood and starting to displace native

⁴ Ajani J. (2008) 'Australian production of wood and wood products in 2006/07 disaggregated by wood source', unpublished paper, Fenner School of Environment and Society, The Australian National University.

⁵ Ajani J. (2007), *The Forest Wars*, p. 278.

forest woodchips (Figure 2). The substitution is taking place primarily in the Japanese woodchip market where 85% of Australia's hardwood chip exports are sold. Japan's woodchip market has been stagnant since the early 1990s.

Figure 2 Hardwood chiplog production - Australia



Source: ABARE Australian Forest and Wood Products Statistics.

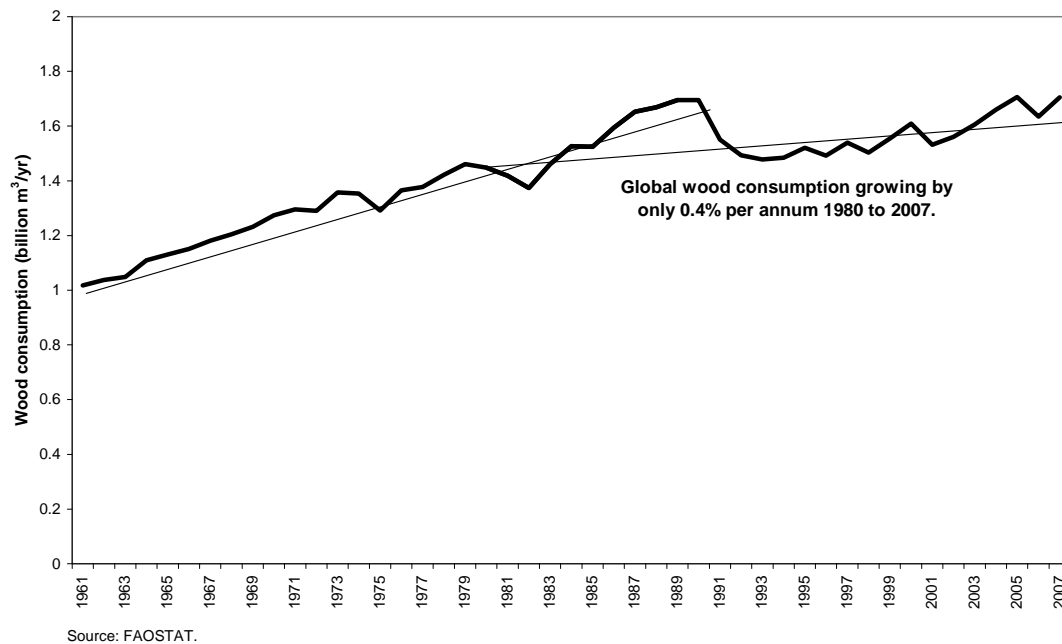
8. The Bureau of Rural Sciences projects 14 million m³ per annum of hardwood plantation chiplogs coming on stream from 2010. This is double the volume of Australian native forest woodchips exported annually. The native forest displacement is already in train. The Australian Government can choose to accelerate the substitution and work to remove the economically damaging low-priced native forest woodchip competition from the three south eastern state governments.
9. The role for plantations is very much more than a high quality raw material enhancing the competitiveness of Australian wood processing. Plantations liberate large areas of Australia's native forests to do the job they do better than other ecosystems—substantial carbon storage in biologically diverse, resilient natural ecosystems.

The global wood market

10. Although absent in half a century of Australian forestry policy, rigorous market analysis should precede consideration of another plantation investment surge. Because Australia is past wood self-sufficiency (Figure 1), additional substantial planting for wood production requires exporting: probably as unprocessed wood given Australia's historical policy settings. Wood used to make paper, sawn timber and wood panels is no longer a high-growth global industry. Over the quarter century post the 1970s oil-shock period (1980 to 2007), global wood consumption increased by an average of only 0.4% per annum (Figure 3). Stagnating wood products consumption in high-income countries and resource

saving strategies across the wood products industry explains the low growth in global wood use.

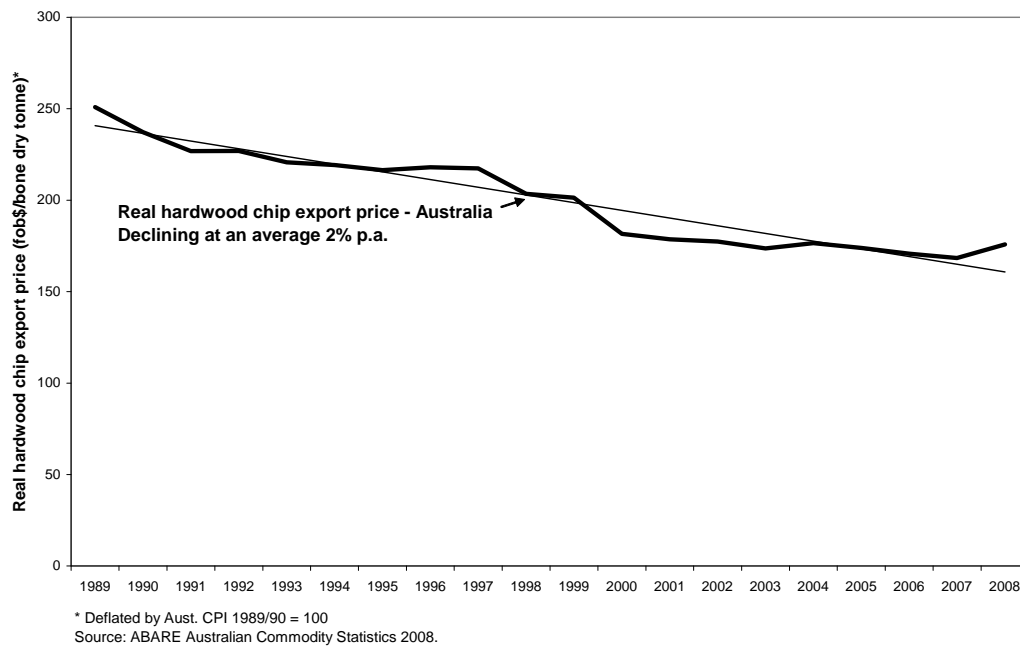
Figure 3 Growth in global wood consumption



11. The persistent predictions of global wood deficits remain an illusion. Real prices for globally traded wood have not deviated from their long-term downward trend. Many of Australia's first round MIS hardwood plantation prospectus documents assumed real price increases for hardwood chips. Real hardwood chip export prices continue to trend down (Figure 4) and large areas are coming on stream at a time when the main outlet—the Japanese market—has moved from flat to contracting.
12. China's strong growth in wood products consumption is not delivering the wood growers' market dream. Whilst its wood imports (mostly softwood) surged in volume terms by an average 19% per annum over the decade ending 2006, real import prices have declined by an average 6.8 per cent per annum over the same period: in other words, halved.⁶ China's heavy use of recycled paper in paper making is dampening the demand for wood, as is its investment in higher pulp-yielding pulp mills. Through its State Forestry Administration, the Chinese Government has set a target of establishing 13.3 million hectares of wood producing plantations over the period 2001 to 2015, with the aim of reducing its dependence on imports of wood and wood pulp for paper making.

⁶ Ajani J. (2008) 'Australia's Transition from Native Forests to Plantations: The Implications for Woodchips, Pulp mills, Tax Breaks and Climate Change' *Agenda: A Journal of Policy Analysis and Reform*, 15(3), 2008 <<http://epress.anu.edu.au/titles/agenda.html>>

Figure 4 Real prices for hardwood chip exports trend down



New markets for plantation wood—bioenergy

13. Plantation wood has been tagged a renewable fuel source (leaving aside wood growing issues concerning biodiversity, water catchments, soils and chemicals). Plantation advocates make comparisons with fossil fuel emissions when policy should consider the greenhouse impact using annual accounting and comparisons with the full range of energy supply options, including the various renewable energy systems.
14. Logging plantations, including for bioenergy, causes emissions from collateral damage to living and dead biomass and soil carbon. This creates a carbon debt that takes decades to recover.⁷ In a Kyoto accounting construction, the emissions come from sequestered carbon resulting from planting land cleared before 1990. This suggests carbon neutrality if the time period of the analysis is constrained to one or a few rotations. However, from the more fundamental earth system perspective, the ‘reforestation’ is a return of land to its former forested state (albeit less biodiverse). This is the proper base from which the carbon neutrality scale should be set to zero. Using this scientific base, logging Kyoto compliant plantations is carbon negative. For the time being, Kyoto accounting is the convention, but if climate change reaches danger level for humans, debates about the base and carbon neutrality will dissipate and our efforts to reduce emissions from all sources, including logging plantations will intensify. Zealous ‘reforestation’ through plantations has a serious climate change downside.

⁷ Ad Hoc Technical Expert Group on Biodiversity and Climate Change (2008), Draft findings of the first meeting of the second Ad Hoc Technical Expert Group on Biodiversity and Climate Change, London 17-21 November 2008.

Accounting for plantations in the CPRS

15. The draft CPRS bill stipulates that the number of units to be issued for 'reforestation' projects be the 'net total number of tonnes of greenhouse gases removed'. This means that carbon accounting for 'reforestation' will use average crediting; not annual accounting of uptake and emissions separately. The White Paper (section 6.13.4) presented the case for average crediting: that drought or fire could 'unexpectedly' reduce the number of permits in any one year and that annual accounting has high compliance costs.
16. Under average accounting, opting-in wood-producing 'reforestation' investors will receive units as the 'forests' grow, up to a limit determined by the Authority—the net total number of tonnes of greenhouse gases removed by 'reforestation'—and must maintain the land as 'forested' land after each logging event for 130 years.⁸ By averaging, investors receive fewer units up-front but they avoid surrendering units at harvest time.
17. In a world where carbon prices are expected to increase, average accounting isolates wood-producing 'reforestation' investors from a rising carbon price. Investors receive units early (when carbon prices are expected to be low) but do not surrender units at harvest when carbon prices are likely to be higher. If carbon prices soar globally in response to a political and public dawning reality of our perilous situation, wood-producing 'reforestation' investors who have opted-into emissions trading under the CPRS will receive no price signal to avoid adding to emissions by not logging their 'forests'. By including wood-producing plantations in the CPRS, the Government will allow the demand for carbon uptake to stimulate plantation investment but, through the accounting rules, will isolate the resulting projects from changes in the carbon price.
18. The first two objects of the proposed Act are to give effect to Australia's climate change obligations and to contribute to the development of a global carbon market through the CPRS. It is inconceivable that governments around the world engaged in developing a global carbon market wish to create outcomes where projects/businesses, once issued with units, become immune from CO₂-e price signals for the next 130 years.
19. There is also pressure to expand the Kyoto accounts to include carbon stored in wood products. If wood growers are able to discount their emissions at harvest time, by the amount presumed to be stored in wood products, a substantial additional distortion will be introduced.

Carbon Sink Forests

20. Expenditure in relation to establishing trees in carbon sink 'forests' now enjoys taxation benefits through Subdivision 40-J of the *Income Tax Assessment Act 1997*. In the last 2008 sitting of parliament, the Greens (with tax barrister advice)

⁸ The draft CPRS bill does not rule out the possibility for opting in plantation investors to opt out by surrendering units equal to what they have been issued. The Government proposes to deal with this matter in the regulations.

and the Nationals argued that the legislation, as written, means that land purchase costs and other associated capital costs are fully deductible upfront from 1 July 2007 to 30 June 2012. Such provisions are not available to food producers. The Government argued in the Senate that this interpretation was wrong. Perhaps the matter will only be settled through the court. If the opposition parties' interpretation of Subdivision 44-J proves correct and if 'reforestation' is included as the only land use activity in the emissions trading scheme, we can expect a fundamental change in agricultural land use, away from food production and to carbon sink 'forests'. If the objective is climate, water and food security, this policy frame is incoherent.

21. The draft CPRS bill's proposal to account for carbon using averaging to avoid surrendering units at harvest time is not an issue for opting in carbon sink 'forest' investors, because harvesting is not part of the management plan (although the legislation does not prevent investors from changing their minds at a future date). However, carbon sink 'forests' generate another problem for the long-term integrity of a global carbon market aimed at tackling climate change. Without harvesting and replanting, the trees in most carbon sink 'forests' will eventually die and release CO₂ emissions because most of the plantings will not be self regenerating native vegetation. With taxation based subsidies for carbon sink 'forests' and the CPRS, Australia may build a vast 'reforestation' estate that becomes a serious future emissions liability.

Recommendations

1. That the Government exclude 'reforestation' as a covered sector in the CPRS.
2. That the Government, separate to the CPRS, bring the land use sector into Australia's climate policy frame, with food security, water and ecological sustainability prime considerations and with special attention to the boundary issues most particularly bioenergy and biomass feedstocks.
3. That, if the Government retains 'reforestation' in the CPRS, the legislation stipulate that the issue and surrender of units for 'reforestation' be accounted for annually.
4. That the Government guarantee its interpretation that Subdivision 40-J of the *Income Tax Assessment Act 1997* does not provide for land purchase costs and other associated capital costs in relation to establishing trees in carbon sink 'forests' to be fully deductible upfront from 1 July 2007 to 30 June 2012.