

Submission to Garnaut Climate Change Review Issues Paper 1: Land use – Agriculture & Forestry

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This submission presents forest industry information and analysis focussed to the Review's task of recommending 'policies and policy frameworks to improve prospects for sustainable prosperity'.

Background

1. Currently, two fundamentally different systems supply wood to Australia's wood products industry: plantations and native forests. Plantations are an agricultural cropping system. Native forests are self-regenerating natural ecosystems. Which system dominates wood supply has significant implications for both industry competitiveness and climate change.
 - a) By delivering the benefits of an agricultural regime (large concentrated volumes for scale economies, order, location, plant selection etc), plantations have lifted the competitiveness of Australia's wood products industry (sawn timber, wood panels, pulp and paper).
 - b) Australia's plantation based forest industry can recapture its logging emissions much earlier than the competing native forest based industry. Plantations generate and re-grow wood resources relatively quickly (10 to 30 year rotations). Maintaining native forests' self-regenerating capacity and associated ecological services requires logging rotations of 100 plus years (Gibbons & Lindenmayer 2002; O'Shaughnessy & Jayasuriya 1991; Roxburgh et al. 2006).
 - c) Good policy framing requires the separation of Australia's two wood production systems and the tracking through of their different implications for industry competitiveness and climate change. In doing this, we may find that economic and ecological objectives are complimentary.

2. Australia's wood products industry is already heavily dependent on plantations with 80% of processed product now plantation based (Table 1).

Table 1. Estimated Australian production of wood and wood products and unprocessed wood exports by wood source 2006/07

	Unit	Plantation	Native forest	% plantation
Wood production	million m ³ roundwood	18.3	8.8	68
Sawn timber & wood panels	million m ³ finished product	5.6	1.3	82
Wood for domestic pulp production (2004/05)	million m ³ roundwood	2.4	0.7	77
Other wood products	million m ³ finished product	0.5	0.3	66
Exported unprocessed wood - chips & logs	million m ³ roundwood	7.2	5.7	56

Source: Ajani 2008.

Woodchip production now dominates in most of Australia's major native forest logging regions (Ajani 2007, figure 14.1, p. 278) and faces increased competition from maturing hardwood plantation resources in a stagnant global market (Ajani 2007, pp. 261-5).

3. Australia now faces great opportunities to shift virtually all its wood production to already established plantations, thereby enhancing the wood products industry's competitiveness and reaping native forests' full ecological services, including long term and substantial carbon storage. Realising these benefits requires a fundamentally new forest policy frame driven by a political leadership never before seen in forestry at the Commonwealth level.
4. Separation—based on the two ecosystems (plantations as agriculture and native forests as self-regenerating natural ecosystems)—is the key to understanding forestry's increasing competitiveness. It is also the key to understanding forestry and CO₂. Good forest policy frames for climate change require robust data that reports separately on emissions and sequestration for both native forest logging and plantation logging. The available data sets are incomplete and too aggregated. They fall short in assisting evaluate the main policy options for forests and climate change, namely:
 - a) Not logging old growth native forests and using existing plantations for wood supply.
 - b) Maximising the carbon sequestration potential of regrowth native forests by retiring them from wood supply and using existing plantations instead.

- c) Expanding the existing plantation estate by planting trees on already cleared land for wood production.
- d) Planting native vegetation to replicate a self-regenerating ecosystem and not for wood supply.

Issues

5. Opportunities for adaptation

Forestry in Australia offers immediate and substantial adaptation opportunities where adaptation is defined in the Review's Issues Paper as adjustments in natural or human systems to climate change that moderates harm or exploits beneficial opportunities. This is particularly in the hardwood chip sector where most native forest logging is concentrated and where plantation wood supply is projected to increase dramatically. The Bureau of Rural Sciences projects Australia's hardwood plantation chiplog supply increasing to 13.8 million m³ per annum by 2010-14 (Bureau of Rural Sciences 2007, p. 8). This compares with estimated current annual native forest woodchip production (mostly for export) of 5.6 million m³ and estimated current annual hardwood plantation woodchip production (mostly for export) of 3.6 million m³ (Ajani 2008). Currently Australia's hardwood chip exports account for around a third of the global trade.

The competition-based displacement of native forest product witnessed in the sawn timber market as Australia's softwood sawlog plantations matured is now repeating in the hardwood woodchip market. State government native forest pricing policy works to frustrate the displacement (for comparative log prices see Ajani 2007, figure 13.2, p. 265), generating economic inefficiency and lost opportunities for cost effective climate change amelioration.

The adaptation strategy of shifting commodity production to plantations and refocussing native forests to ecological services is substantially an overhaul of economically inefficient government forest industry policy. Policy development requires engagement of both the Commonwealth and the States of a nature not experienced in Australian forestry.

6. Mitigation challenge

The same policy overhaul (shifting commodity wood production to plantations and using native forests for their ecological services) will deliver positive mitigation outcomes, since greenhouse gas emissions are less per unit of finished product in a plantation growing and logging regime relative to a native forest wood supply system.

7. ETS for forestry?

The Issues paper suggests that an ETS may not be appropriate for forestry. This may well be correct. In this respect, the Review's first task is to construct

the right frame for understanding the Australian forest industry and to set out how the two wood growing regimes differ in their contribution to emissions and sequestration. With this information and analysis, meaningful land use options can be built and evaluated for climate change impacts. Some points:

- a) With comprehensive and robust science information and a forestry industry policy of shifting commodity wood production to plantations, we can avoid the complexity of including forestry in an ETS and instead include native forests' resulting increased capacity to sequester CO₂ in the wider basket of strategies Australia employs in tackling climate change.
- b) It is likely that the emissions and sequestration flows associated with plantation wood growing, logging and processing will generate a close to carbon neutral outcome over a full rotation. If this is the case, including wood producing plantations in an ETS will create unnecessary reporting and administrative costs and thereby undermine the competitiveness of plantation products. However, an ETS on energy production will work favourably for plantation processing in its competition against relatively energy intensive non-wood products such as concrete and steel.
- c) Supply side issues more than market considerations have dominated forest industry advocates and forest policy in Australia. The tax minimisation driven plantation managed investment schemes are the most recent manifestation. They generate wood resource shocks and distortions in agricultural land use. The forest carbon sink debate is currently following this same pattern: focussing on (plantation) wood supply and leaving the wood market realities for another day, one or two decades down the track. In the light of 7b above, an ETS with or without plantation products included should boost the demand for wood products (relative to more energy intensive non-wood products) and set the rate of investment in new plantations.

If however governments wish to go further and encourage investment in forest sinks to meet climate change objectives, permanent plantings of multi species that replicate self regenerating ecosystems may provide the highest carbon sequestration per \$ of expenditure over the long term.

Recommendation

That in preparing the policy frame for forestry and climate change, the Review separates Australia's two forestry sectors based on their fundamentally difference wood growing systems and map their different implications for economic efficiency and climate change.

References

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