



A few comments from a retired forester on the conclusions and recommendations in the

Wilderness Society funded AUN report

“Green Carbon: The role of natural forests in carbon storage”¹

The report presents a summary of results from studies of the carbon stored in the eucalypt forests of south-eastern Australia. The authors then use these results to make policy recommendations on the continued use of Australia’s native forests for timber production.

I am not able to comment on the calculations in the report (although the calculations suggest that our native forests are unbelievably productive – see Alan Ashbarry’s paper prepared for TCA, under Reports & Submissions on TCA Website; www.tca.org.au). However, I suggest that the conclusions and recommendations are illogical, misleading and dishonest, for the following reasons.

1. The conclusions are based on the assumption that sustainable forestry (which includes regeneration) will result in the release into the atmosphere of all the carbon stored in the forest. This is nonsense, for three reasons.
 - (i) The report finds that 42% of the carbon in a natural forest is stored in the soil, 43% in living biomass, 2% in leaf litter, 6% in stags and 7% in other woody debris. Thus even if every piece of organic matter above the ground was removed during harvesting, only 58% of the carbon would be removed. Of course, in reality significant amounts of carbon remain in the forest, even after regeneration treatment.
 - (ii) A significant amount of carbon continues to be stored for decades or even centuries in long-lived products such as house frames, flooring, furniture and paper. The report does make a brief comment (page 17) accepting this reality but it is ignored in the conclusions and recommendations.
 - (iii) The report does not take into account the fact that after harvesting a forest regenerates, so it continues to take carbon out of the atmosphere. (The report simply suggests, with no evidence, that the carbon released during harvesting and regeneration treatments cancels out the carbon stored in wood products and the carbon-absorbed as the forest regenerates).

¹ by Brendan G. Mackey, Heather Keith, Sandra L. Berry and David B. Lindenmayer. Fenner School of Environment & Society, Australian National University. July 2008.

2. Natural forests are defined in the report as “forests that have not been disturbed by intensive human land-use activities, including commercial logging” (page 11) – in other words, old-growth forests and wilderness forests. The definition could perhaps include forests that have regenerated following some natural disaster (such as regrowth from the 1939 bushfires in the Central Highlands of Victoria).

Whether or not regrowth from natural disasters such as wildfires is included in the definition of natural forest, clearly much of Australia’s commercial forest is excluded from this definition as it is regrowth after timber harvesting operations. However, it is illogical to suggest that regrowth following wildfire is somehow more natural than regrowth following timber harvesting operations. But contrary to the definition of natural forests, the report seems to include regrowth following timber production in its calculations of the carbon stored in natural forests.

3. The report misleadingly assumes that the impacts of deforestation and forest degradation are the same. Deforestation is the permanent removal of the forest and its replacement with some other land use (such as agriculture or urban development). Forest degradation is defined in the report as “any human land-use activity that reduces the carbon stocks of a forested landscape relative to its natural carbon carrying capacity”. Thus the emotive term “forest degradation” includes all regrowth forests except those resulting from natural disasters (although many so-called “natural disasters” are in fact the result of human activity).

4. Deforestation may result in most of the above-ground carbon being released into the atmosphere, although some carbon is likely to remain below the ground in the soil. Timber harvesting, on the other hand does not result in the immediate release of all the above ground carbon. The report states that on average 58% of the total carbon in the forest is above the ground (in living biomass, dead trees, woody debris and leaf litter). Some of this remains in the forest even if the harvested area is subsequently burnt to promote regeneration. 42% of the carbon in the forest is stored below the ground in roots and the soil. Much of this carbon remains after timber harvesting operations.

The report also ignores the fact that the regenerating forest continues to take carbon out of the atmosphere.

The report states (page 40) that “protecting existing natural forests from deforestation is important” because “18 per cent of annual greenhouse gas emissions come from deforestation”. However, commercial timber production in Australia’s native forests does not result in deforestation and it is dishonest of the authors to suggest otherwise.

5. Maximum carbon uptake by a forest occurs when the forest is young and fast-growing (the age at which maximum carbon uptake occurs depends on the species and the environment). As forests reach maturity the rate of carbon uptake approximately equals the rate at which carbon is released through the decay of old trees. Thus, while an old forest may contain a lot of carbon, it is not likely to be taking any more out of the atmosphere.

6. If the world does not produce timber products from its forests, we will have to use other products (such as steel, aluminium, concrete and plastics). The manufacture of these products emits huge amounts of carbon into the atmosphere. Thus any policy that reduces timber availability and encourages its replacement with alternative products will result in a large increase in net carbon emissions. The report's conclusions ignore the fact that the alternatives to using wood have a vastly greater environmental impact than using sustainable timber from Australia's forests.
7. Page 8 states "If, however, all the carbon currently stored in the 14.5 million ha of eucalypt forest in south-eastern Australia was released into the atmosphere it would raise the global concentration of carbon dioxide by 3.3 parts per million by volume (ppmv). This is a globally significant amount of carbon dioxide; since 1750 AD, the concentration of carbon dioxide in the atmosphere has increased by some 97 ppmv."

But it is dishonest to suggest that all of natural forest will be harvested. Only about 10% of Australia's native forest is available for harvest. Even if all the carbon in the area available for harvest was released (which, as demonstrated above is an absurd conclusion), that none of the timber went into long-lived products (another absurd conclusion) and that the forest was not regenerated (a third false conclusion) the carbon released would be only a small fraction of that claimed in the report.

The authors have resorted to a classic "straw man" argument". A "straw man argument" involves ignoring an opponent's actual position and substituting a distorted, exaggerated or misrepresented position. By discrediting the straw man (which, as its name implies, is easier to destroy than the opponent's actual position) the opponent's credibility can be destroyed.

8. The report points out that natural forests are more resilient than plantations in recovering from disturbances such as fire or pest damage. There is no reason to assume that they will not be just as resilient in recovering from sustainable timber harvesting which is far less damaging than wildfires. The report uses mountain ash forests of Central Highlands of Victoria as a case study, pointing out that they contain the highest carbon stocks of all forest types in south-eastern Australia. But the report fails to mention that many of these mountain ash forests are regeneration from the 1939 bushfires so are less than 70 years old. If these magnificent forests have developed in less than 70 years from the devastation of "Black Thursday" of 1939, they are not likely to be destroyed by sustainable timber harvesting.
9. The report assumes that the only significant value of a forest is in its carbon storage potential. Other forest values (such as timber products, water production, recreation, animal habitat) are mentioned but are considered to be of insignificant worth when compared to carbon storage. Accordingly, the report concludes that we should manage all our native forests simply for maximum carbon storage and we should not do anything which could reduce the carbon stored in the forest.

10. Page 36 of the report states that “While clearing for agriculture ... can be a major cause of deforestation and forest degradation (especially in tropical forests), commercial logging can also be the initial causal factor. ... A succession of planned and unplanned, legal and illegal land-use activities can be introduced into a landscape facilitated by the logging infrastructure – in particular, the road network. The end point of this process can be broad-scale degradation and deforestation, with associated increased carbon dioxide emissions.”

This paragraph may be true for some tropical countries, but is completely irrelevant in a report on Australia’s south-eastern forests. Given the extremely strict regulatory environment in which Australian forestry operates, unplanned and illegal logging is extremely rare and on the very few occasions when it does occur it is on a very small scale and is due to human error rather than a deliberate attempt to break the law.

This paragraph, like much of the report, is also based on the dishonest assumption that the impact of sustainable forestry (which the report emotively calls “forest degradation”) is the same as the impact of deforestation. As pointed out above, sustainable forestry is clearly not deforestation.

11. The report states (page 37) that 44% (about 6.4 million hectares) of native forest in south-eastern Australia has not been logged and is therefore at its maximum carbon storage level. If these forests were left untouched by human activity, the carbon stored in the intact forests would be protected, and would be equivalent to avoided emissions of 460 Mt of carbon dioxide per year for the next 100 years. But as the report points out (page 21) most of this forest is in rugged areas so is never likely to be used for commercial timber production. The amount of carbon that might be emitted if these forests were logged is totally irrelevant because most or all of them will never be logged. This is another “straw man” argument.

The remaining 56% of forest which has been logged is assumed (with no evidence) to be storing only 60% of its carbon potential. The report concludes that if left untouched to grow to maturity, it would absorb 136 megatonnes (Mt) of carbon dioxide per year for the next 100 years (equivalent to 24% of Australia’s net greenhouse gas emissions). But this conclusion is based on the assumption that all carbon removed from the forest during timber harvesting is immediately emitted into the atmosphere. As pointed out above, this is not the case.

12. Page 38 states that if “the entire carbon stock was released from the forests in our study area into the atmosphere, it would raise the global concentration of carbon dioxide by 3.3 ppmv” (parts per million by volume). This may or may not be true, but it is completely irrelevant to any argument about continued timber production in Australia’s native forests. The report’s authors are being deliberately misleading by including this statement as part of their argument against timber production in Australia’s native forests. Only about 10% of our native forests are available for timber production and as pointed out above not all the carbon in the forest is emitted when timber production occurs. Thus the total amount of carbon that would be emitted if all our forests were totally destroyed is irrelevant to the argument about sustainable timber production in 10% of our native forests.

13. Page 38 uses Judith Ajani's claim that that Australia can meet most of its current timber needs from plantations to argue that we do not need to produce any timber from native forests. Ajani's conclusions have been thoroughly discredited by other critics for several reasons, including the following:
- (i) She appears to have over-estimated the productive potential of plantations.
 - (ii) There is only a limited range of species grown in plantations.
 - (iii) Many of Australia's plantations are managed on short rotations for paper production. It is not possible simply to leave the trees in the ground for a few more decades to produce sawlogs because sawlog production requires different management regimes.
 - (iv) A significant percentage of the plantation estate is owned by companies who have based their investment decisions on the short-term return from pulp. If governments suddenly demand that the companies leave the plantations unharvested for several more decades there would be huge compensation claims and there would almost certainly be no further investment in plantations.
 - (v) No other industry is told that it must supply only domestic markets and must not seek export markets. Why should forestry be treated differently? Australia's forest industry is one of the most sustainable in the world. Exports of Australian wood products reduce the pressure on forests in areas where management practices are less sustainable.

One final comment, the report, although published by the Australian National University, was at funded by The Wilderness Society. One would not expect The Wilderness Society to fund a report that did not support its position on timber harvesting in native forests. There is clearly a huge conflict of interest which casts doubt over the impartiality and integrity of the report.

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