

## Logging or carbon credits

### Comparing the financial net benefits of forest-based activities in NSW's Southern Forestry Region

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#### Executive Summary and Key Findings

For several decades, the alternative commercial and economic uses and management of Australia's native forests and sectors have generated considerable debate. In the past five years, this debate has sharpened as the native forest sector has contracted, driven by rapidly growing international competition in woodchip supply markets and increasing domestic competition from plantation softwood supplies. New carbon markets also are emerging that could enable the Australian Government and native forest owners, including State Governments, to earn carbon credits from altering native forest management practices. Reducing or stopping harvesting in Australia's native forests, could generate carbon credits including forest management, FM, credits, which are recorded in Australia's greenhouse accounts under the Kyoto Protocol, and Australian carbon credit units, ACCUs, which are issued under the Carbon Farming Initiative.

This study compares the net financial benefits, or net revenue, that native forestry industry firms operating the Southern Forestry Region of NSW currently generate from harvesting and processing logs with the carbon credit income the NSW Government could earn from avoiding harvesting these forests and earning carbon credits.

The study finds that in 2012 few if any participants in the Southern NSW timber industry benefited financially from harvesting or processing these state-owned native forests:

- the native timber logging and milling industry companies in the Southern Forestry Region overall made losses of at least \$1.4 million
- the region's major chip-mill, South East Fibre Exports declared an after-tax loss of \$3 million, cut its workforce by a third and halved its production shifts
- Boral, the region's major saw miller, mothballed its Batemans Bay saw mill, one of its three in the region in late 2012
- hence the industry's employment declined about 24 per cent from 330 to 250
- the NSW Government, the owner of the timber through Forestry Corporation NSW also is made losses of over \$764,000 in 2010-11 from selling its Southern Forestry

Region native hardwood logs to these processors, according to its answers to questions on notice in the NSW Parliament.

- The study estimates that in 2014, if production remains at late 2012 levels, the Southern Forestry Region forestry industry and Forestry Corporation NSW could expect to lose up to \$3.2 million. Over the next eight years, if chip prices remain at current levels, the industry could lose approximately \$22 million, and \$41 million over the next 20 years, in present value 2012-dollar terms. (See H1 and H2 in Table 1 below.) South East Fibre Exports itself could lose \$278 million from processing pulplogs from Southern NSW and East Gippsland over the next 20 years, if woodchip prices stay at their current levels.
- Alternatively, if the NSW Government ceased logging these native forests, the Australian and NSW Government could generate significant net revenue from selling and earning Australian Carbon Credit Units. In 2013, net of forest management costs, these avoided emissions could earn the NSW Government \$12.7 million, rising to \$46 million in 2020 and \$113 million by 2032, or about \$800 million over the next 20 years, in discounted present value 2012 dollars. This income could fund a similar level of employment in the local region to the forestry industry at present and eventually almost 5 times more, over 1,170 jobs. (See CC1 in Tables 1 and 2 below.)
- The Victorian Government owned Vic Forests supplies South East Fibre Exports with just over half its hardwood pulplogs from its East Gippsland forests and Victorian saw-loggers with somewhat more saw logs than Forestry Corporation NSW supplies from the Southern Forestry Region. Hence, if Victoria avoided harvesting its East Gippsland forests, its government could earn slightly more carbon credit income than the NSW Government over the next 20 years.
- The forestry industry's problems do not appear to be due to insufficient access to timber reserves. South East Fibre Exports' raw material costs per tonne, including timber royalties to Forestry Corporation NSW and harvesting, have actually fallen in nominal and real terms over the past five years. However, its revenue per tonne of exported woodchips and export volumes have fallen even more sharply. The study supports the national industry's analysis that its problems are due to the high Australian dollar, depressed international woodchip prices, shrinking domestic sawn hardwood markets and the strong growth of the domestic soft and hardwood plantation sectors.
- The study uses as a case study, NSW's 433,000 hectare state-owned Southern Forestry Region, which stretches from Nowra to the Victorian border and inland to Tumut. (See map below.) It employs mainly publically available data, answers to questions on notice and author interviews with the local forestry industry's chief executive officers in 2011 and 2012 to estimate the net financial benefits of the region's processing mills, their harvesting and haulage contractors and Forestry Corporation NSW.
- The study measures the avoided emissions from ceasing to harvest logs from this region by using the Australian Government's forest management model (*FullCAM*), which it employs to estimate Australia's Kyoto Protocol obligations, and a refined version of this model. It estimates that

ceasing to harvest these native forests would avoid 1.18-1.84 million tonnes of carbon emissions per year for the next 20 years, depending on the carbon emissions model and emission leakage assumptions employed. It values these avoided emissions at two projected price scenarios for Australian Carbon Credit Units. The higher price scenario is the one the Australian Treasury employed in its modelling for the *Clean Energy Future Act, 2011* and the lower price scenario reflects currently depressed carbon prices in Europe.

- For the NSW Government to earn Australian Carbon Credit Units, the Australian Government would need to make avoided forest harvesting projects eligible to earn carbon credits by placing them on the positive list of the Carbon Farming Initiative Act. At present, projects involving the planting of native forests can earn these carbon credits, but not projects avoiding native forest harvesting. In mid-2013, the Australian Government was in the process of making this reform. If it does not, the Australian Government alone could benefit fiscally from ceasing native forest logging.
- If the avoided emissions from avoiding logging are not eligible to earn Australian Carbon Credit Units, they could be sold in global voluntary carbon offset markets. However, voluntary carbon offsets are currently worth about \$6 per tonne of avoided CO<sub>2</sub>e, about one quarter of the Australian compliance market price of \$23 per ton. The article provides a full explanation of the Australian and international carbon credit regimes.

#### *Other financial and economic benefits from carbon capture scenarios*

- Unlogged forests provide more water run-off for agriculture and settlements than logged forests as undisturbed forests absorb significantly less water than regenerating forests. This water could generate additional agricultural production and urban water supply income and related employment.
- Forest preservation also is more likely than logging to support income and employment growth in the region's other major industries, tourism and fisheries by preserving the region's natural beauty and protecting fish breeding estuaries. Tourism alone employed 58,500 people in Southern NSW in 2009 and tourism related sectors generated approximately 60 per cent of the Bega Valley Shire's income and employment in 2012.
- Ceasing native forest logging also would help prevent the on-going loss of biodiversity in the region. Many species including the South Eastern Koala, the long nosed potoroo and the yellow-bellied glider are now on the edge of extinction in the Far South Coast of NSW.

## Key Results

**Table 1a: Projected present value of net financial benefits generated by the New South Wales Government, Forestry Corporation of NSW and the SFR's hardwood processors under the core (H1 and CC1) scenarios, method 1 (real 2012 AU\$ million)**

	2014-2020	2014-2033
<b>Scenario H1: Present value of net financial benefits generated by the Forestry Corporation of NSW and SFR hardwood processors from harvesting for chips and sawlogs at 2011-12 levels</b>		
Low chip price (\$80 per gt fob)	-\$37.9	-\$76.7
High chip price (\$90 per gt fob)	-\$19.2	-\$39.9
<b>Scenario CC1: Present value of net financial benefits generated by New South Wales Government by stopping harvesting and selling ACCUs, with ACCU prices following the central carbon price path</b>		
Net financial benefits	\$26.6	\$222.0

**Table 1b Present value of net financial benefits received by the Australian Government under the core (H1 and CC1) scenarios, method 1 (real 2012 AU\$ million)**

	2014-2020	2014-2033
<b>Scenario H1: Present Value of net financial benefits received by Australian Government under H1 scenario, with FM credit value determined using the central carbon price path</b>		
Low chip price (\$80 per gt fob)	\$40.8	\$140.7
High chip price (\$90 per gt fob)	\$40.8	\$140.7
<b>Scenario CC1: Present value of net financial benefits received by Australian Government under CC1 scenario, with FM credit value determined using the central carbon price path</b>		
Net financial benefits	\$42.6	\$149.2

The two most significant results from the core scenarios are that:

- the present value of the net financial benefits generated from harvesting by the Forestry Corporation of NSW and the SFR's hardwood processors is negative under both the low and high woodchip price paths; and
- the present value of the net financial benefits received by the New South Wales Government from the CFI project exceeds the equivalent returns to the Forestry Corporation of NSW and the SFR's hardwood processors under the core harvest scenario by a considerable margin.

The present value of the net financial benefits from the carbon farming initiative project (CC1) over the period 2014-2020 is estimated to be \$27 million, and \$222 million over the entire 20 year projection period. In comparison, the present value of the net financial benefits generated by the Forestry Corporation of NSW and the SFR's hardwood processors under the H1 scenario over the projection period is estimated at between -\$40 million and -\$77 million. These losses are attributable to SEFE and the Forestry Corporation of NSW. The estimated present value of the combined net financial benefits generated by these entities over the projection period is between -\$53 million and -\$89 million. These losses are partially offset by positive returns generated by the region's sawmills; the present value of their combined net financial benefits over the period 2014-2033 is estimated at \$13 million.

The other notable aspect of the results is the net financial benefits received by the Australian Government, which is similar in both the H1 and CC1 scenarios. The present value of the net financial benefits they are expected to receive over the period 2014-2033 in the H1 scenario is \$141 million, compared to \$149 million in the CC1 scenario. This result is attributable to the fact that the Australian Government receives a large number of FM credits in the H1 scenario while under the CC1 scenario, the lost company tax revenue is effectively replaced by the revenue received via the residual FM credits.

Employment outcomes under the carbon capture scenario also are superior to the current harvest scenario after 2020. The SFR's Table 2 outlines these results.

**Table 2: Employment generated in Southern Forestry Region from harvesting and carbon capture activities (Full Time Employment)**

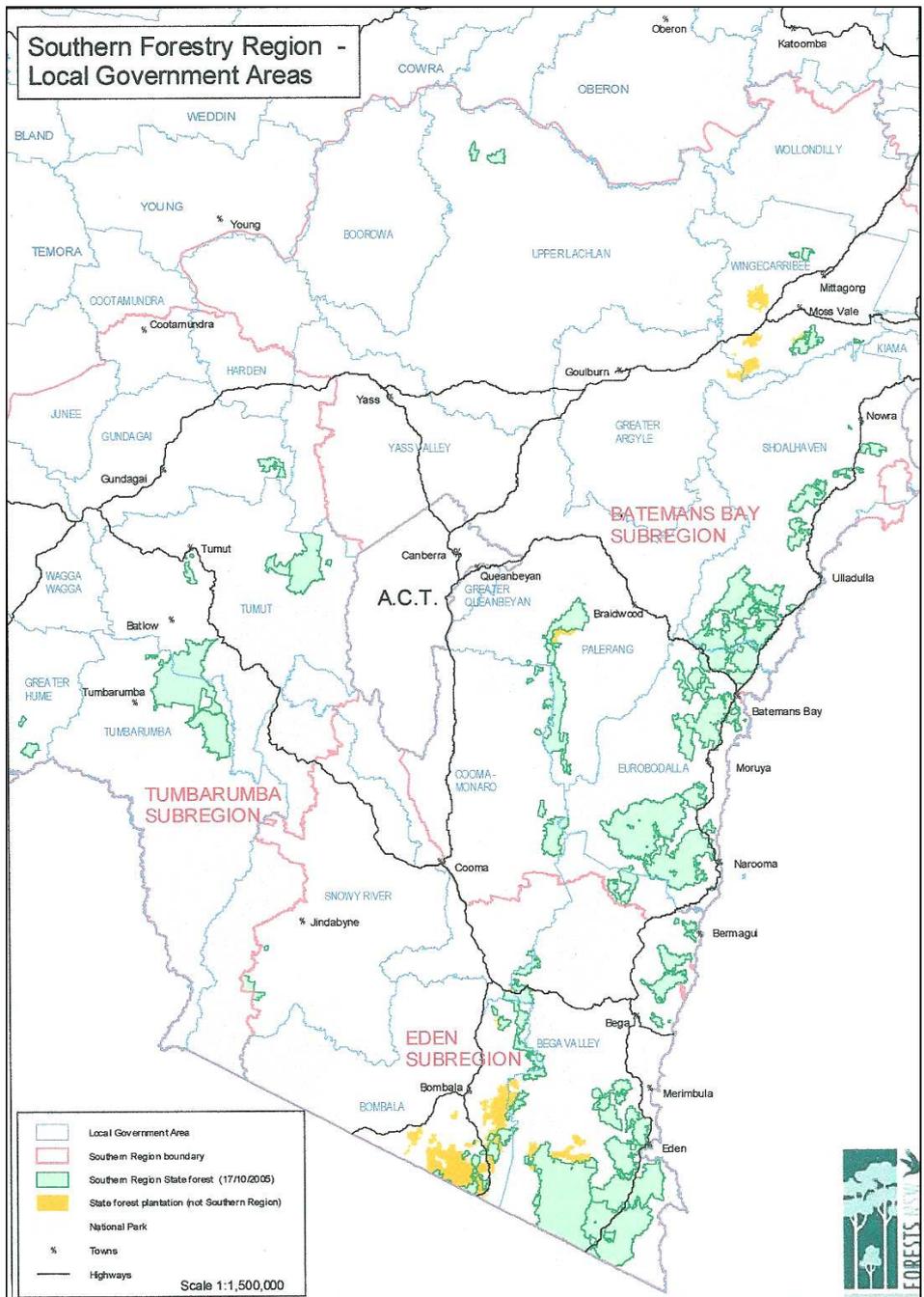
Harvesting scenarios	H1: Chipping and saw logs 2011-12	H2: Chipping and saw logs end 2012	H3: Saw logs only est. 2013
Processing – chip and saw milling	188	159	139
Logging and haulage	139	91	25
<b>Total industry</b>	<b>327</b>	<b>250</b>	<b>164</b>
FNSW personnel	79	75	30
Total including FCNSW	406	325	194

**Scenario CC 1: Carbon capture, employment funded by Australian Carbon Credit Unit income**

	2014	2015	2021	2025	2032
Carbon assessment , forest management, weed and feral animal control, wildlife preservation	205	205	205	205	205
Fire and walking trails, tourist roads, other infrastructure	51	51	120	120	120
Health & educational personnel	-	-	75	75	75
<b>Total</b>	<b>256</b>	<b>256</b>	<b>400</b>	<b>400</b>	<b>400</b>

While employment in the native forest harvesting and processing industry is declining and likely to fall further in future due to the industry's poor financial outlook, employment from the carbon capture scenario already almost matches the industry's 2012 level and could be expected to grow in future years, as carbon prices recover internationally.

For full results see Perkins and Macintosh, "Logging or Carbon Capture - comparing the financial value of forest-based activities in NSW's Southern Forestry Region" on Australia Institute website: <https://www.tai.org.au/index.php?q=node%2F19&type=1> [G&F1]



Source: Forests NSW, Road Management Plan 2006, Southern Region, p6.