

This is a joint submission on behalf of the Northern NSW Division of Timber Communities Australia and the School of Environmental Science and Management at Southern Cross University.

Community sustainability depends on aligning forestry policy with credible science and industry commitment towards sustainable forest practice

By Dr Andrea Leys

Research Scientist, Sustainable Forestry Program, Southern Cross University, PO. Box 157, Lismore 2480, NSW. andrea.leys@scu.edu.au or 0438 875 935

&

Mr Tony Wade

Regional Coordinator, Northern NSW, Timber Communities Australia
tony.wade@bigpond.com.au or 0428 199 782

In this address we aim to respond to several terms of reference presented by the House of Representatives Standing Committee on Agriculture, Resources, Fisheries, and Forestry for inquiring into the Australian Forestry Industry.

- Opportunities for and constraints upon production

Forests cover approximately 19% of Australia's land area, being 18.7% native forest (mainly eucalypts) and 0.3% plantation forests (DAFF, 2010). By far the major constraint to production from these Australian forests is government policy and regulation. Those involved in the industry are highly aware that while demand for timber continues to not only increase domestically but internationally (particularly in China), peculiarly, increasing areas of native forests have been placed under protection from harvest. Only 6% (or 9.4 million ha) of public native forests remain accessible (DAFF, 2010). This has created a long-term problem for Australia in relation to wood supply, highlighted in magnitude by the \$2.2 billion trade deficit in timber and wood products in 2009, and increasing. Not a small figure by any means given the entire merchandise trade deficit for Australia in this period was \$2.9 billion (DFAT, 2010).

The current lack of growth in the plantation forestry industry, which could have helped significantly with long-term wood supply, again is a direct result of inappropriate policy. This came to a head after the collapse of major companies reliant on the managed investment retail forestry scheme throughout 2009 and 2010. The fact the model depended on a continuous flow of investment funds was surely visible to most in the industry and unsustainable from the start, given the normality and acceptance that economic cycles

always have downturns after good times. Now we are faced with a sovereign crisis in that international investors are capitalising on Australia's misfortunes, buying these resources at fire sale prices while the federal government allows this. Recently the Canadian pension fund AimCo purchased the Great Southern's forestry estate at a ridiculously low price of \$415 million, having previously been valued at over \$1 billion two years prior, for 2500 square kilometres of Australian freehold land that also includes prime agricultural tracts (Main, 2011). The global financial crisis and subsequent collapse of these companies have left the hardwood plantation forests without active management in the north-east region of NSW now for years and are degrading. Management by the new owners is urgently required.

For too long politicians have responded to pressure to lock up native (natural) forests based on non-scientific calls from environmental groups who promote a lack of management as sound environmental practice. Significantly, science suggests otherwise (Montagu et al., 2003; Florence, 2004). Sound management practice in forests offers many benefits towards environmental sustainability and protection, not to mention community social and economic sustainability (Leys and Vanclay, 2010). There are significant tracts of plantation forest that have been placed under protection in the conversion of State Forests to National Parks. These areas include sections of Goonengerry, Bindarri and Whian Whian National Parks in Northern NSW that contain significant plantation timber resources that should be made available for harvesting to help address the nations under-supply of timber. Mebbin National Park has plantations of Gympie messmate, flooded gum and hoop pine (Source: John MacGregor-Skinner, pers. comm., 2011). The quality of the timber will be dependant on future management, as currently this doesn't happen in our degraded and underfunded National Parks.

Society needs to ensure forests are well managed. However, management is too often denied to foresters or underfunded in native forests. Foresters must be allowed to remove invasive weeds that take nutrients away from existing trees that overgrow habitats for native animals, pollute and choke natural waterways, impact survival of aquatic species and contribute to the deterioration in water quality (Crooks, 2002), and degrade landscapes. Managing forests by tending trees through thinning and pruning improves the wood properties and commercial value of trees remaining. Managing regrowth and fuel loads on forest floors can help prevent wildfires and subsequent losses to neighbouring infrastructure, not to mention human lives, wildlife and domestic animals which can so tragically occur. Tending tracks and water points also assist in responding to fire threats, and all contribute to active management and ultimate multiple values of forests (Leys and Vanclay, 2011). This is where policy must match industry commitment for sustainable forest management based on credible science.

- Opportunities for diversification, value adding and product innovation

Pulp mills also need to be approved on the basis that the latest technology is used to ensure environmental impacts are minimised and managed. The recent approval of the Bell Bay pulp mill proposal (March 2011) has been a sound commitment from government, as paper imports contribute the major proportion of the annual trade deficit in forest and wood products (DAFF, 2010), costing Australian's dearly. Concern regarding the quality of wastewater from pulp and paper mills has often been raised, and understandably given the potential risks to waterways and aquatic organisms if suitable treatment measures are not undertaken. However the commitment from the forestry industry to comply with the highest international environmental standards can not only be enforced by strict regulation, it can also be built on science which attests to the efficiency in aerobic and anaerobic treatment processes that remove soluble biodegradable organic pollutants otherwise of concern (Pokhrel and Viraraghaven, 2004).

Scientific reports also suggest that technologies in the pulp bleaching process that minimise the use of chlorine dioxide and increase the amounts of other bleaching agents including oxygen and ozone will reduce potential by-products while still being able to produce high grade commercial pulp products from eucalypt timber (Lachanel et al., 2005, 2006). This process is referred to in the literature as Elemental Chlorine Free (ECF)-Lite. Further, Gutierrez (2001) report that technologies for closed-cycle milling where there is zero liquid effluent (ZLE) may be possible longer term, although at the moment the process is non-commercial due to problems arising in the handling of wood extracts and poor quality of the final product.

In regards to energy innovation, interestingly Mollersten et al. (2004) report that *'pulp mills and integrated pulp and paper mills have the potential to become net exporters of biomass-based electricity while at the same time removing CO₂ from the atmosphere on a net basis.'*

- Social and economic benefits of forestry production

It is interesting to note that a study found recreational and well-being values of forests to humans were enhanced by improving their visual appeal. Martens et al. (2010) found forests that had been tended and made accessible to people for walking had a greater effect on human well-being than forests left untended or wild. This was a direct result of physical accessibility through provision of paths, visible access achieved through thinning and pruning forest stands and removing hanging dead wood that all stimulated, aroused and activated people, leaving them with a sense of calm and tranquillity. This highlights the

human restorative potential of managed forests which appears to be overlooked in policy on managing forests for multiple-uses including recreation in Australia.

Rural communities have faced severe job losses through cuts in the forest industry. Mill closures continue, which for over a hundred years have supported small communities. The latest closures in the north-east region of NSW include Ford Timber Mills in the Upper Clarence region in late 2010, with 34 jobs lost (includes Urbenville and Woodenbong mills). Other mills and manufacturing businesses in the north-east NSW region that have closed include: Sandilands Mill where approximately 30 jobs were lost; South Grafton Mill with 26 jobs lost; South Grafton Parquetry put off 35 workers, Kempsey Mill approximately 30 workers, Bolangerie 30 workers, Tenterfield 30 workers, Glenn Innes 30 workers, Boserbrick 30 workers, Walcha 30 workers, and Gloucester put off 30 workers (Source: Tony Wade, Timber Communities Australia, 2011). This is a total of approximately 335 employees put out of work, not to mention the negative socio-economic impacts on their local communities, including loss of spending with local goods and services providers.

The following data on timber related business closures (table below) confirms the difficulty and plight of timber communities in the North East region and the Southern & Eden regions of NSW, provided by the National Timber Union (Mr Craig Smith, NSW State Secretary, CFMEU Forestry & Furnishing Products Division, 18 March 2011). This data refers only to the recorded number of businesses that received exit assistance between 1996 and 2007 for particular regions of NSW, plus the mill closures in the North-East region mentioned previously, and don't include the many businesses ineligible for exit assistance or flow on businesses affected:

Table: Recorded number of timber industry business closures across NSW forest regions (having received business exit assistance between 1996 – 2007, plus NE mill closures)

Region of NSW	Sawmills	Lorry Owner Drivers	Harvest or haulage contractors	Other related businesses	TOTALS
North-East	30	14	32	5	81
Southern & Eden	6	20	14	1	41
TOTALS	36	34	46	6	122



Figure: Ford's Timber Mill at Urbenville just prior to recent closure

This is an urgent situation across Australia that requires government intervention to stimulate forestry, not provide compensation packages for people to exit the industry as reported both above and in Tasmania (Colbeck, 2011), and most certainly across other states. In regards to forest governance, Larson and Petkova (2011) suggest the main objective of good governance should be *'to ensure forest sustainability, together with fair decision making and benefit distribution'* and *'that decision makers are accountable and that decisions are based on the analysis of what is good for people and forests in general and not personal interest.'* While genuine old growth forest should certainly be protected from logging, many communities across Australia for a long time have relied on harvesting regrowth forests for economic and social sustainability. Decisions that prevent further harvest in these regions have severe negative impacts for people working and living in these communities, and to the flow-on business and service industries.

The **new task** for federal politicians will be to support the forest industry through sensible policy initiatives that realign timber needs of society with the commitment of foresters to sustainably manage Australian native (natural) and plantation forests based on credible science. New or amended policy will need to allow sustainable harvest of larger tracts of native (natural) forests than is currently available, and with increased funding to assist in management and regulatory services (as opposed to regulation codes), known currently to be severely under-resourced and under-funded.

- Potential energy production from the forestry sector

Less wastage will also increase efficiencies within the forest industry; however this is currently constrained by a lack of investment in this area. Cellulose biomass materials from harvest and mill waste offer enormous potential as feed stocks in the production of renewable energy for gas and liquid fuels (Berndes, 2011; Takeshita and Yamaji, 2008; Regalbuto, 2009), however requires significant investment in research to refine technologies for small scale production and regional infrastructure development. In particular, biodiesel production at the local scale could substantially reduce fuel haulage costs and environmental impacts from the forestry and agricultural industries as a result of changing focus away from non-renewable petroleum based products.

- Land use competition between the forestry and agriculture sectors &

- Creating a better business environment for forest industries

New policy to stimulate plantation forestry development on private land will be necessary, and subsidies are likely to have the quickest impact for the helping address the increasing timber supply deficit. Subsidies for farmers that include establishing plantations on land of least agricultural value would be the most welcome to primary industries as a collective, and promote integration between the industries rather than competition. Ideally this model was supported by agriculturalists in a study in north-east NSW (Leys and Vanclay, 2010). Payments (subsidies) should be made dependant on performance criteria such as timber growth rates, improvements to biodiversity, and water quality and soil protection after the initial establishment phase, however will require the development of policy mechanisms and targeted investment for measuring, monitoring and evaluation by employing experts in these fields. Through the promotion of environmental services by the forestry industry, the business environment is highly likely to be improved (Bauhus et al., 2010).

In summary, there is a need for increased federal investment and policy development to align with our comprehensive understanding of forest science and the needs of society to improve Australia's prospects for a more sustainable forest industry and re-invigoration of rural communities. Matching capacity, capability and commitment by foresters and land managers to a sustainable future is only hindered by lack of effective government policy; forest policy development and amendment is now within the hands and powers of our government.

References:

- Bauhus, J., van der Meer, P. and Kanninen, M. 2010. Ecosystem goods and services from plantation forests. Earthscan. Pp 240.
- Berndes, G. 2011. Bioenergy, land use change, and climate change mitigation. Report for IEA Bioenergy and the Swedish Energy Agency.
<http://www.ieabioenergy.com/LibItem.aspx?id=6770>
- Crooks, J.A. 2002. Characterizing ecosystem-level consequences of biological invasions: the role of ecosystem engineers. *OIKOS*, 97: 153–166.
- Colbeck, R. 2011. Forest contractors to claim for losses. *Tasmanian Times*, 28th Jan 2011.
<http://www.tasmaniantimes.com/index.php/article/forest-contractors-to-claim-for-losses>
- DAFF, 2010. Australia's forests at a glance. Pp 100.
http://www.daff.gov.au/__data/assets/pdf_file/0007/1536253/forests-at-a-glance-2010.pdf
- DFAT, 2010. Australia's trade fact sheet 2009/10. <http://www.dfat.gov.au/geo/fs/aust.pdf>
- Florence, RG. 2004. Ecology and silviculture of native forests. CSIRO Publishing. Pp413.
- Gutierrez, A., Romero, J. and del Rio, J.C. 2001. Lipophilic extractives in process waters during manufacturing of totally chlorine free kraft pulp from eucalypt wood. *Chemosphere*, 44: 1237-1242. <http://www.irnase.csic.es/users/delrio/repository/2001-GUTIERREZ-CHEM.pdf>
- Lachenal, D., Chirat, C., Benattar, N., Hamzeh, Y., Marlin, N., Mateo, C. and Brochier, B. 2005. Influence of pulp colour on bleachability: ways to improve the bleaching response of alkaline pulp. *ATIP*, 59(3), 1-11. <http://cerig.efpg.inpg.fr/article-scientifique/2005/Blanchiment-pates.pdf>
- Lachenal, D., Chirat, C. and Hamzeh, Y. 2006. Future challenges in chemical pulp bleaching. *ATIP*, 60(2), 1-11. <http://cerig.efpg.inpg.fr/article-scientifique/2007/chemical-pulp-bleaching.pdf>
- Larson, A.M. and Petkova, E. 2011. An introduction to forest governance, people and REDD+ in Latin America: obstacles and opportunities. *Forests*, 2:86-111.
- Leys, A.J. and Vanclay, J.K. 2010. Social learning study of plantation forestry in the Upper Clarence catchment of north-eastern NSW. CRC Forestry, Technical Report 201, pp 37,
<http://www.crcforestry.com.au/publications/downloads/TR201-LEYS-Andrea.pdf>
- Leys, A.J. and Vanclay, J.K. 2011. Social learning: A knowledge and capacity building approach for adaptive co-management of contested landscapes. *Land Use Policy*, 28: 574–584.

Main, A. 2011. Canadian pension fund leads group in buying Great Southern's assets for \$415m. Business with The Wall Street Journal, 29th Jan 2011.

<http://www.theaustralian.com.au/business/failed-timber-groups-assets-sell-for-415m/story-e6frg8zx-1225996377794>

Martens, D., Gutscher, H. and Bauer, N. 2010. Walking in "wild" and "tended" urban forests: The impact on psychological well-being. *Journal of Environmental Psychology*. DOI 10.1016/j.jenvp.2010.11.001.

Mollersten, K., Gao, L., Yan, J. and Obersteiner, M. 2004. Efficient energy systems with CO2 capture and storage from renewable biomass in pulp and paper mills. *Renewable Energy*, 29(9):1583-1598.

Montagu, KD., Kearney, DE. And Smith, RGB. 2003. The biology and silviculture of pruning planted eucalypts for clear wood production – a review. *Forest Ecology and Management*, 179(1-3):1-13.

Regalbuto, J.R. 2009. Cellulosic Biofuels—Got Gasoline? *Science*, 325(5942):822-824.

Takehita, T. and Yamaji, K. 2008. Important roles of Fischer-Tropsch synfuels in the global energy future. *Energy Policy*, 36(8), 2773-2784.

Pokhrel, D. and Viraraghavan, T. 2004. Treatment of pulp and paper mill wastewater – a review. *Science of the Total Environment*, 333(1-3):37-58.

Dr Andrea Leys

School of Environmental Science and Management, Southern Cross University

Signature




Date

23-03-2011

Mr Tony Wade

Northern NSW Division, Timber Communities Australia

Signature

 23-3-2011

Date

_____€