Independent Forestry Panel

Public submission

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1. Sustainability of current and future forestry operations in NSW

NSW forests are managed under Environmentally Sustainable Forest Management principles and since 2006 have been managed and certified under either the Responsible Wood Certification (AS4708), or the Forest Stewardship Certification (FSC). As a requirement of these certification schemes, the wood sustainability reviews undertaken every five years and are independently reviewed by external experts. The results of these reviews are publicly available, with recent examples being published by DPI. The post-2019/20 bush fire review is available here: 2019–20 Wildfires (nsw.gov.au). The methods used by FCNSW for timber sustainability analysis have been shown to be adaptive to events like drought and fire, and therefore provide reliable projections of current and future timber sustainability.

Notwithstanding the scientific rigour underpinning the FCNSW timber sustainability reviews, it is important to consider the harvesting linked to these reviews in context with the broader NSW native forest estate. As at 2023, NSW has approximately 7,600,000 hectares of native forest managed under National Park tenure. Another 2,000,000 hectares of native forest is in State Forests, however 1,000,000 hectares of this is in permanent reserve (https://en.wikipedia.org/wiki/State_Forests_of_New_South_Wales). So 90% of the publicly owned native forest in NSW is permanently reserved, significantly higher than the rest of Australia (37% national average - https://www.agriculture.gov.au/abares/forestsaustralia/forest-facts#conservation-of-australias-forests), and 20% more than best of the top ten countries with protected forests (69% in Venezuela - https://research.wri.org/gfr/forest-designation-indicators/protected-forests).

The FCNSW annual sustainability reports (Microsoft Power BI) show that approximately 11,700 hectares of native forest is harvested per year. This equates to 1% of the harvestable State Forest, and an incredibly small 0.002% of the full extent of publicly owned native forests in NSW.

This review highlights that NSW currently has a worlds best standard of reservation of native forests, and a extremely small footprint of land available for currently sustainable timber industry. The small footprint, combined with the robustness of NSW's native forests to disturbance (such as demonstrated after the recent 2019/20 bushfires), provide over-arching confidence in the sustainability of current and future forest operations for timber.

2. Environmental and cultural values of forests, including threatened species and Aboriginal cultural heritage values

The state forests containing native forest have been actively managed for over 100 years. In that time no species have become endangered due to forest management practices, and the environmental values have been maintained. For example, current studies conducted by both independent third parties, as well as those conducted by National Parks in support of the proposed GKNP, show there are similar levels of occupancy of Koalas within SF as National Parks.

"regulated timber harvesting in state forests had no effect on the trend of either metric nor did land tenure (state forest vs. national park). The koala meta-population in these public forests retains a high level of connectivity and genetic diversity (Johnson et al., 2018), which likely promotes resilience to these recent pressures at a regional scale."

https://onlinelibrary.wiley.com/doi/10.1002/ece3.11351

Importantly there is an active environmental monitoring program over state forests that is underpinned by scientifically robust field measurement programs. FCNSW contributes more environmental surveys and observation data to the NSW BioNet Database than any other government department. This is an important fact because research published by the CSIRO (2023 and 2024) highlights the importance of using data for decision making. Their 2024 National Koala Population Estimates project puts the Australian population between 224k and 524k, which is ten times higher than previously published estimates from the Australian Koala Foundation (32k to 58k). The CSIRO paper notes that the previous estimates relied on more qualitative approaches such as expert elicitation. The 2024 method:

"was enabled by two distinct advances. The first of these was a concerted effort to collate koala presence, absence, and abundance data from a wide range of sources (individuals, research organisations, community groups, local governments, and state governments). This effort had been neglected up until this point. The second advance was an analytical framework to combine all these disparate sources and types of data. This methodology was, and still is, right at the forefront of statistical ecology."

I consider the environmental management and monitoring practices FCNSW undertakes, when combined with the most stringent prescriptive regulatory framework set up by the EPA, ensure that environmental values have been maintained (over the last 100 years) and will continue to be maintained for future generations. Further, the investment FCNSW makes in data and knowledge of environmental values per hectare is probably the highest of all government departments and therefore is critical to future planning and decision making as our forests try and adapt to climate change.

With regard to Aboriginal cultural heritage, I have been lucky enough to have been invited to information sessions and some special sites by the FCNSW Aboriginal Partnerships Liaison Team. This was a very personally humbling experience and leads me to believe FCNSW can be proud of their relationships with Aboriginal communities, the Aboriginal businesses they support, and their proactive, and sensitive approach to Aboriginal cultural heritage.

3. Demand for timber products, particularly as relates to NSW housing, construction, mining, transport and retail

I am passionate about NSW hardwoods, how beautiful they are, and how important it is to have these species available for building, furniture and flooring. I am currently renovating my house and will be proud and excited to be having Blackbutt flooring as part of this project.

In the five years to June 2023, Australia harvested on average 2m m3/year of hardwood sawlogs from native forest and plantation sources (ABARES Data asat Dec 2023). The table below summaries the harvest details for Australia, and where available the NSW, and NSW State Forests contribution.

Hardwoods used for Sawnwood and veneer (m3)	Average for 2018 to 2023			Contribution of NSW SF NF
	Australia [a]	NSW [a]	NSW State Forest [b]	
Native forest logs harvested (m3)	1,455,000	446,000	220,000	15%
Plantation logs harvested (m3)	593,000	101,000	56,000	
Total logs harvested (m3)	2,048,000	547,000	276,000	11%
Estimated gross roundwood equivalent consumption within Australia (m3)	2,626,000			
Estimated gross roundwood equivalent consumption within Australia from imported sources (m3)	578,000			

[a] Australian forest and wood product statistics datasets

[b] Forestry Corporation of NSW Annual Reports

Based on the last five years average harvests, New South Wales public native forests contributed 11% of the countries supply of hardwood sawlogs (2M m3). Australia consumes approximately 2.6M cubic metres of hardwood roundwood and imported about 578,000 m3 of hardwood sawlogs per year to meet the demand. The Forestry Corporation of NSW annual report sh

Reviewing the ABARES and FCNSW reports highlights a number of important considerations about the recent harvest levels:

- NSW harvest levels are very low relative to their sustainable yield capability, reflecting the limitations of three wetter than average years
- Victoria, and Western Australia have recently announced dramatic changes to native forest policy, and have commenced cessation of harvesting. Yields in 2022/23 show the early impacts of these decisions.
- Queensland has just created a new national park for Greater Gliders.

The likely impacts of these factors are a 50% reduction of the 2022/2023 yields from native forest for Victoria, Western Australia. A similar reduction is expected from the Queensland public estate. NSW is shown with a return to more typical harvest levels that are closer to their reported sustainable yield.

Hardwoods used for Sawnwood and veneer (m3)	Projected Harvests 2025 to 2035			Contribution of NSW SF NF
	Australia [a]	NSW [a]	NSW SF [b]	
Native forest logs harvested (m3)	856,095	446,000	325,000	38%
Plantation logs harvested (m3)	593,000	101,000	35,000	
Total logs harvested (m3)	1,449,095	547,000	360,000	22%
Estimated gross roundwood equivalent consumption within Australia (m3)	2,626,000			
Estimated gross roundwood equivalent consumption within Australia from imported sources (m3)	1,176,905			

[a] Australian forest and wood product statistics datasets

[b] Forestry Corporation Annual Reports

The important message in this table is that the reliance on imports is projected to increase to over 1M cubic metres a year. And, notwithstanding demand for hardwood timbers can follow short term fluctuations, there has been steady 10% increase in demand every 5 years since 2012.

The ongoing contribution of NSW public native hardwood sawlogs is becoming increasingly important for the short to medium term (10 to 40 year) horizon for both NSW and Australia. Noting it is unlikely that this resource (and its sustainable yield) will be increased in the foreseeable future, the focus then turns to hardwood plantations. The Forestry Corporation sustainable yield data shows that the current plantation estate will barely scratch the surface of the import gap, at best being able to double supply to say 70,000 m3 in 40 years if new planting starts straight away.

Hardwood imports are not good for the Australian economy or for the worlds environment. Recent Forest and Wood Products Australia (FWPA) statistics show:

- By volume the majority of Australia's hardwood imports are coming from Brazil, Indonesia, Malaysia, China and the USA
- 86 per cent of imports are coming from countries with a worse environmental index that Australia (the Yale Environmental Index)

I think it is immoral and strategically dangerous for Australian governments to close native forest industries, and increase reliance for supply from countries with poor environmental standards. This outcome can only accelerate the impacts of climate change for Australia and the planet.

4. The future of softwood and hardwood plantations and the continuation of Private Native Forestry in helping meet timber supply needs

As outlined in my notes for issue 3 above, hardwood plantations are important for augmenting Australia's demand for hardwood sawlogs and other products. Softwood plantations fill different markets and softwood timbers and not able to substitute the market sectors that hardwood sawlogs fill (structural timbers for construction, flooring & decking, power poles and bridges, furniture etc).

The FCNSW annual sustainability report includes just under 36,000 hectares of hardwood plantations as at 2023. The sustainable yield of high quality sawlogs from these plantations peaks at under 50,000 m3 per year, and total sawlog yields at 110,000 m3 per year at 2050.

If we were to explore a scenario where NSW shifted to full reliance on hardwood plantations for high quality hardwood sawlog production based on current sustainable yields, the estate would need to be increased by over five times the current plantation area. Even if we just tried to double the plantation area to 70,000 hectares, at say $3,000 per hectare, the bill would be over $100,000,000 just for the land, before planting and tending costs are considered (also around $3,000 per hectare). Finding suitably productive land for this exercise would be challenging, and more so when the land market detected the increased demand and started to increase the values accordingly.

Even if NSW were able to identify suitable and available land, the logistics of sourcing seed, and managing planting would require the program to be staged to practical and achievable levels of maybe 5,000 hectares a year. At $6,000 per hectare (nominal purchase and establishment costs) the bill would be ~$30M per year for between 7 and 10 years. And we would then need to wait 35 to 50 years for the first planting of these trees to mature and yield suitable high-quality timbers.

The numbers above are conservative and highlight that a transition to hardwood plantations would need to be planned as a long-term project that is spread over a longer period, say 40 years, so as to be affordable, and practical from a land acquisition and management perspective. In the meantime, NSW need to maintain a vibrant and environmentally sustainable native forest industry to ensure ongoing supply of Australia's best hardwood timber species.

With regard to private native forests, it is my experience from observing various university and also government studies, that this resource is difficult to predict, and even more so to manage. Environmental standards are lower for private landowners, if for no other reason than the fact that each landowner would need training and technical support to improve their silvicultural and environmental outcomes at the times they choose to commence harvesting. Observing over 50 years of history indicates that it is not possible to expect private owners to unanimously agree to increase the levels of harvest if timber supply from public native forests were to be significantly decreased.

5. The role of State Forests in maximising the delivery of a range of environmental, economic and social outcomes and options for diverse management, including Aboriginal forest management models

Environmental

This topic is discussed in section 2 above. My key point is that the environment is not compromised by sustainable harvesting. In fact active forest management and thinning can ameliorate the impacts of drought and fire in the landscape. (https://minerva-access.unimelb.edu.au/rest/bitstreams/ad5730f7-b168-58de-b873-c1e9472bc0cd/retrieve).

Economic

The hardwood timber industry in NSW contributes approximately $2.9 billion in gross value add, and supports approximately 8,900 full time equivalent jobs (https://nenswforestryhub.com.au/upload/documents/reports/articles/230219220855_NSWHardwoodTimberIndustry-EconomicContributionStudy-Final-20Feb2023.pdf)

Given that state forests contribute about 50% of wood products to the NSW economy, it is reasonable to assume that half of economic contribution is directly linked to state forests.

Notwithstanding the direct contribution to the NSW economy noted above I cite the FWPA publication: Carbon stocks and flows in native forests and harvested wood products in SE Australia, Jan 2016.

"*For NSW native forests the socio-economic benefits of management for timber production were higher than those of management for conservation only, with the State Forests on the North Coast of NSW generating more socio-economic value than those at Eden. The cost (economic impact) of transitioning production forests to conservation-only forests for Eden was $64M and the loss to the regional economy was $308M before taking into account carbon abatement. For the north coast, the cost of transition was $540M and the loss to the regional economy was $3.36B before taking into account carbon abatement. Transitioning to management for conservation also incurred a sharp decline in regional employment*."

https://fwpa.com.au/wp-content/uploads/2016/01/Amended_Final_report_C_native_forests_PNC285-1112.pdf

Social

State forests provide an important range of social opportunities and activities, and a significant number of these are not available on national parks. I cite single track mountain biking, horse riding, bee keeping, trail biking, four-wheel driving, and dog walking as examples of activities almost exclusively hosted on state forest. These activities are very poorly catered for under the National Park model in NSW. There are some limited examples where these activities are present on national parks, like mountain biking in Kosciuszko national park, however the vast majority of parks have no infrastructure and do not permit the activity except on formed roads.

Single track mountain biking is an important case in point for the role of state forests. There are around 35 mountain bike clubs in NSW (https://auscycling.org.au/find-a-club). Most of these clubs have permits on state forest that allow the development and maintenance of single track trail networks that are used for recreation and racing. This type of mountain biking has a huge following (over 300,000 participants across Australia that spend over $600 million per annum (https://auscycling.org.au/news/mountain-biking-australia-economic-and-participation-analysis). The industry is growing every year, particularly with electric mountain bikes becoming more available.

The NSW government has become aware of the growth and potential tourism and investment benefits from mountain biking relatively late compared to other states in Australia. As an indicator of their new awareness, in the last 3 years the NSW government has invested over $15 million in mountain trail network development in Southern NSW (Eden, Narooma and Mogo). These projects are wholly on state forest, a signal of the difficulties of getting approval to undertake such activities on national park.

This example provides an insight into the importance of state forests in NSW if the state wants to compete with the rest of Australia for the economic growth and tourism benefits from this style of active recreation.

Aboriginal forest management models

FCNSW employs an Aboriginal Partnerships Liaison Team to work with Aboriginal communities throughout NSW. Their team strives to conserve the qualities and attributes of places that have spiritual, historic, scientific or social value. Their partnerships are delivering cultural burning, cultural showcasing (Giingan Tourism Experience - BMNAC) and cultural heritage management (over 5,000 recorded sites being maintained).

Microsoft Power BI

6. Opportunities to realise carbon and biodiversity benefits and support carbon and biodiversity markets, and mitigate and adapt to climate change risks, including the greenhouse gas emission impacts of different uses of forests and assessment of climate change risks to forests

Products that are produced and sold locally have a significantly lower carbon footprint than those that area imported into the country. I cite elements of the FWPA publication: Carbon stocks and flows in native forests and harvested wood products in SE Australia, Jan 2016, a paper I strongly recommend the panel read.

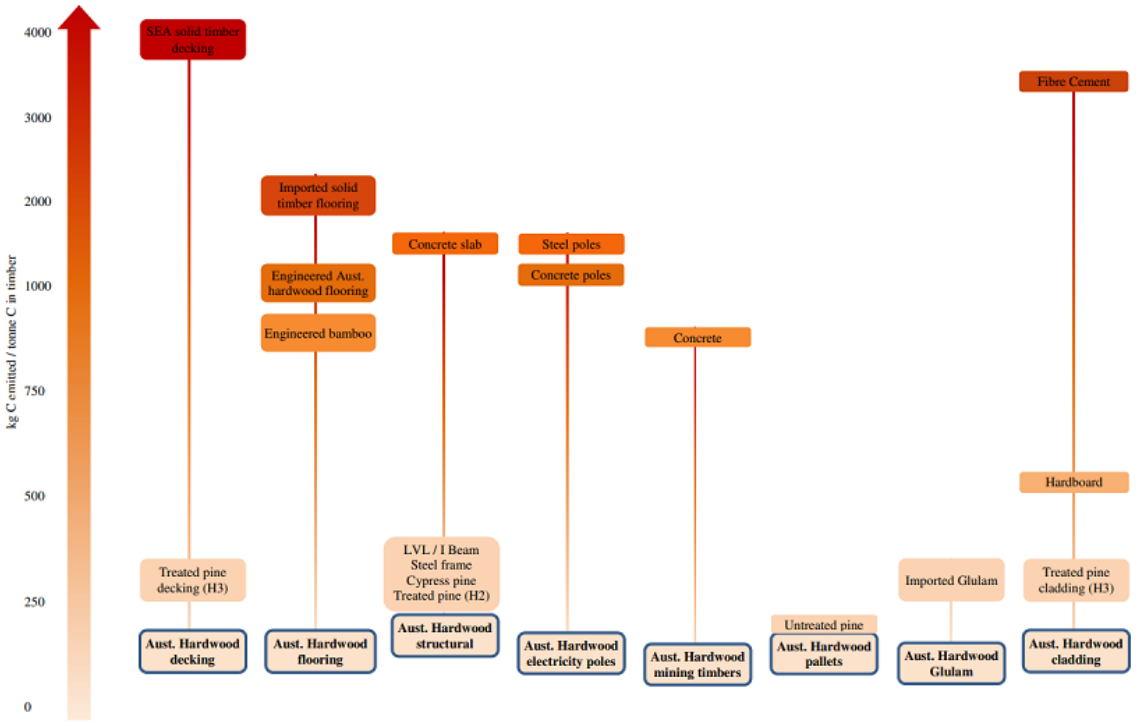
https://fwpa.com.au/wp-content/uploads/2016/01/Amended_Final_report_C_native_forests_PNC285-1112.pdf

I draw the readers attention to the following important findings.

Hardwood timber products

Page 10 – Relationship between locally produced hardwood timber products (HWPs) and their alternatives. Most local products require emissions of around 100 to 150 kilograms of carbon per tonne of carbon in the product. Nearly every other option generates around 10 times the emissions, with some generating as much as 40 times the carbon (notably southeast Asian decking timber and fibre cement.

Figure 2. The emission footprint for Australian hardwood HWPs and their likely replacement products.



Substitution impacts for paper products

The key alternative source of biomass for pulp and paper production was deemed to be primarily in Indonesia. The current supply of pulpwood from Asia is one of the key industries identified as a driver for deforestation of primary forest, forest degradation and loss of peatlands in SE Asia.

The calculated product substitution impact for pulp production from Eden (typically silvertop ash forests), where the woodchips are exported is around 200t C/ha. Where the pulp is converted to paper locally, as was the case in Victoria and Tasmania, the substitution factor is much higher, at around 1000t C/ha. This means that for every tonne of carbon in pulp sourced from local forest saves typically just over 3 times the carbon emissions from the next best source.

In terms of mitigating green house gas emissions, there is clear evidence that locally sourced timber products are better than imported alternatives. The paper concludes:

"the relative differences in the GHG balance of production and conservation scenarios do not warrant policies that aim to halt native forest management for wood production. There is considerable room however for improvement in the GHG outcomes of managing for production, and the work highlights the potential for further industry development that can be coupled with an improved GHG outcome, with multiple benefits. These opportunities include increased use of biomass for bioenergy, value-adding of processing co-products and changes in waste management.

The benefits associated with these opportunities include:

• Reduction of wastage and increased returns via value-adding of co-products

• Contribution to emission reductions and increased returns by potential participation in national carbon abatement schemes (e.g. RET, ERF)

• Development of new industries, with flow-on benefits to regional centres

• Contribution to energy security

These opportunities still exist and are becoming even more important in 2024.

In conclusion, an over-reliance on timber imports should be discouraged if Australia is to reduce its contribution to the global carbon footprint and avoid the risk of price spirals due to increasing international competition for a diminishing world supply.