

Public submission

NAME REDACTED

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Your submission

1. Sustainability of current and future forestry operations in NSW

An argument that I have frequently heard is that native forest harvesting in NSW is sustainable, because trees are replanted after harvesting. I find this to be an incredibly simplistic picture that shows little understanding of ecological, biophysical and biogeochemical processes and dynamics in forests. It is a problematic claim because it often does not acknowledge the scale and impact of harvesting mature trees, and the decades that it takes for a young seedling to replace a mature tree. In those decades, the area where trees were harvested is not a real forest ecosystem, but more of a young plantation, with cascading impacts on soil moisture and quality, nutrient dynamics, the number of species and size of populations that can be hosted, altered microclimate and more. Forestry operations with heavy machinery often cause additional degradation, through e.g. soil compaction, thereby reducing moisture holding capacity and rooting depth of soils.

(Apologies that references are missing, I have too little time left until the submission deadline).

I would like to introduce the concept Close-to-Nature Forest Management (<https://efi.int/publications-bank/closer-nature-forest-management>),, which for the past 5+ years has shaped the new direction that European forestry is aiming for. This strategy is built on the most recent and best available scientific understanding of what sustainable forest management looks like.

The 7 principles include:

1. Retention of habitat trees, special habitats, and dead wood
2. Promoting native tree species as well as site adapted non-native species
- 3. Promoting natural tree regeneration**
- 4. Partial harvests and promotion of stand structural heterogeneity (“Continuous cover management”)**
5. Promoting tree species mixtures and genetic diversity
- 6. Avoidance of intensive management operations (clearcuts, intensive soil preparation, use of herbicides and pesticides)**
7. Supporting landscape heterogeneity and functioning

I am aware that a number of these rules are already part of the NSW forestry strategy. However, the fact that reports of misconduct regarding e.g. the logging of habitat trees continue to be published, exhibit serious concerns as to the integrity of operations, and justifies questioning the current system. If rules are in place, but they are not being consistently followed, this is a flawed system. And from a pre-cautionary principle, it makes sense to fully refrain from activities that

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cannot be guaranteed to be implemented in a way that indeed limits negative environmental impacts over time.

It is also important to be realistic and critical about what exactly a clear-cut, vs. selective harvesting is. This does to some extent depend on the ecosystem at hand. If selective harvesting was to be aimed for, the threshold should be set based on ecosystem-specific scientific and ecological principles of what level of timber removal is not significantly going to alter key forest dynamics. This threshold tends to be much lower than is commonly claimed. In Queensland for example, selective harvesting involves removing 50% of trees in an area. Removing HALF of an ecosystem and a habitat is hardly selective, and is unlikely to leave the remaining ecosystem unaffected in its ecosystem processes and services.

I therefore completely understand and support the argument that current forestry practices in native forests in NSW are not sustainable, and that the greatest benefit will be derived from ending native forest harvesting, and focusing on plantation and farm forestry to produce the needed raw material.

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

Being originally from Germany, I do not know much about the Aboriginal cultural heritage value of forests in Australia, so I will focus on environmental and general cultural values.

The broad range of environmental values that forests provide have been understood for many decades, and there is a near infinite amount of peer-reviewed scientific evidence on this.

I would like to offer a perhaps somewhat different argument or perspective. It would be a strong win not just for Australia but the rest of the world, to increase the area of native forest in Australia that is left unlogged, or where logging is drastically reduced. Australia is a megadiverse country, and in many of its native forest ecosystems, protection of a given area will have disproportionate positive impacts on biodiversity conservation and carbon storage (when comparing e.g. to many countries in Europe). It is also thereby a dream travel and living destination for people across the world. Even though I appreciate just how hard it is to prioritize environmental values while also addressing other societal needs (especially since it will require a tedious journey of trying to implement more plantation forestry, and re-structuring the industry in which forestry professionals have been working for decades), I see a disproportionate responsibility for Australia, and in this case New South Wales, to guarantee its remnant native forests do not degrade in value, and over time turn into less species- and structurally diverse, low-value ecosystems.

In the last decade or so, many countries in Europe have come together to rethink what sustainable forest management actually looks like. Of course, the context is slightly different in

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that the tree species in Europe are generally less diverse, grow less slowly, etc. and not all rules can be transferred to Australia. Native / Ancient forests in Europe were also largely logged centuries ago already, and forests that are left tend to generally be lower in value. However, the Close-to-Nature forestry principles that have now been adopted as a best-practice guideline (<https://efi.int/publications-bank/closer-nature-forest-management>), and that are being taught in universities across Europe, emphasize the need to eliminate destructive practices such as clear-felling or intensive soil preparation practices.

In my view, if countries across Europe are able to move in this direction, why would Australia insist on not adopting a similar direction? After all, it is almost ridiculous that countries like Germany are concerned about biodiversity loss associated with poor forestry practices, but Australia is not, having multiple times greater biodiversity than Germany.

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

I believe that other submissions will focus on the fact that a great proportion of forest products related to native forest harvesting in NSW does not actually go towards long-term carbon storage solutions such as sawlogs for housing or construction. The majority of products comprise pulp, paper, woodchip and other short-lived, low-quality products that do not contribute to climate mitigation, and that can be replaced with either other material (incl. recycled material – recycled toilet paper definitely does the job) or sourced from e.g. plantation or farm forestry operations. After all, these products do not require a certain tree form or size.

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

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

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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

Benefits for carbon storage (considering most NSW forest products are not long-lived) and biodiversity conservation from ending native forest harvesting in NSW are quite straightforward.

There is a paper from Denmark I am aware of that compares the emission mitigation potential of different scenarios, and finds similar carbon mitigation potential in unmanaged forests as in a poplar monoculture plantation that is harvested for energy (burning) and replacement of fossil fuels (“Do forests best mitigate CO₂ emissions to the atmosphere by setting them aside for maximization of carbon storage or by management for fossil fuel substitution?” By Taerøe et al. 2017). I think this is where it should be decided whether the value of native forest can really be compared to a “crop”. It has also been shown in a recent study published in the Nature journal, that globally, unmanaged forests have greater resilience to disturbances than managed forests, amongst others due to their more complex structure and greater species diversity (“Emerging signals of declining forest resilience under climate change” by Forzieri et al. 2022).

If the NSW government would like a financial incentive or compensation for ending native forest harvesting, this should focus on biodiversity or other payment for environmental services mechanisms, but not carbon markets. The reason for this is that in carbon markets, issuing credits and claiming that additional emission reductions have taken place (i.e. where they otherwise would not have) will have impacts for Australia’s GHG inventory. It will essentially send a false signal, claiming that emission reductions have taken place (based on the uncertain scenario of what NSW native forestry will look like in the future), and that therefore there is overall a reduced need to decrease emissions in other sectors. This is counterproductive, and sounds a bit like the trick Australia played when trying to transfer previous credits from the Kyoto protocol to the Paris agreement.

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