Independent Forestry Panel

Public submission

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Topic 1. Sustainability of current and future forestry operations in NSW

I fully support an end to native forest logging.
I request an immediate moratorium on core greater glider and koala habitat. Native logging is not sustainable. It provides little benefit and many disadvantages and risks. Please see these spelled out further in my submitted pdf. Here is a summary of the major disadvantages and risks of native forest logging.

- Intensifies deadly fires
- Emits carbon, adding to climate change risks
- Reduces rainfall and makes and already arid land even dryer
- Endangers already endangered wildlife
- Reduces biodiversity
- Changes the forest in ways that permanently alter habitat
- Removes an ecological asset from which people benefit
- Makes little economic sense and requires State govt funds to prop it up.

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

Native forests provide many significant benefits. Here is a summary. Please see my submitted pdf for details.

- Reduce bushfire risk
- Cool the earth
- Sink carbon
- Clean the air
- Increase rainfall and help the water catchment
- Help mitigate flooding
- Sustain biodiversity of unique value
- Provide vital habitat to endangered species
- Offer humans a place to reduce stress and enjoy nature
- Are of important cultural significance to Aboriginal Australians
- Offers as yet undiscovered scientific breakthroughs

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

There is less demand on native forests for these products. These enterprises should draw on grown plantations, recycled timber and products made from other sustainable materials such as green steel and concrete, bamboo and hemp.

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

All Native Forestry should cease. Private landholders should be encouraged to see the value of planting native forests for wildlife. If incentives are offered, they should be tracked scientifically. This needs to become part of our culture so that hostility does not arise between stakeholders. Where there is money, there is the potential for corruption. In the case of Native forests including forests that have been logged in the past should be managed by knowledge-guided models where scientific approaches collaborate with traditional Aboriginal knowledge, and these should take over from the forestry model.

Topic 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

State forests need to be preserved and the end of native logging will save money for the state. The money saved can be turned to better enterprise such as transitioning workers, wildlife research, funding Aboriginal custodian programs and development of sustainable tourism.

Topic 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

Native and old growth forests keep the carbon in the ground. Logging emits the carbon and contributes to global warming. Offsets should not be applied to native logging.

Submission to Forest Industry Action Plan
https://www.ipcn.nsw.gov.au/cases/2024/08/independent-forestry-panel

If you have a resource of great beauty that also reduces carbon emissions, cleans water and air, slows dangerous flooding, reduces bushfire risks, is culturally important to Indigenous Australians, healing for everybody and home to a huge diversity of unique species, would you destroy it? Or consider it a national treasure?

There is no real argument. Why do we even need to have another round of debate? If you have a national treasure, common sense says you preserve it and don't destroy it.

Australia is an arid country, prone to "droughts and flooding rains", to quote Dorothea Mackeller[1]. This old country has evolved its own ways of mitigating environmental risks. For evidence, just look at how plant species have evolved to use fire for germination. The forests are a key part of the way nature has adapted to the aridity of the land. If sustainability is the goal, the role of the forests, specifically the older growth forests must be considered and preserved.

In NSW, National Forests are protected but State Forests are subject to frequent damage through native logging. We have never before seen such industrialised logging practises where a forest that has taken hundreds of years to evolve is cut down in a few days. In this submission, I consider the benefits of forests and the disadvantages and risks of logging.

Fire

In the fires of 2019-20, 33 people died from ferocious bushfires that caused untold damage to health, property and our natural environment and fauna. Whether watching it from the ground or on TV, Australians were shocked by the intensity of these fires.

Scientists working with the the Bushfire Recovery Project, using 51 peer reviewed studies, found two key findings:

1. Logging can make native forests more flammable and lead to greater fire severity for decades.
2. Mechanical thinning also increases fire risk.

Why?

Old growth forests have a large number of protective factors to dampen fire. They are typically wet underfoot because they hold water and foster wet undergrowth such as ferns. Their huge canopy prevents drying and reduces wind speeds on fire danger days.

The scientists found that the likelihood of "crown burn" ie. the burning of the canopy, is

[1]Mackellar, D. (1908) "Core of My Heart" (My Country), *London Spectator Magazine*.
https://www.dorotheamackellar.com.au/history/

about 10% in old growth forests vs 70% in a forest logged as long as 15 years ago.[2] This detrimental effect drops steeply as the forest continues to age, but remains elevated for decades.

According to a team of scientists from four different Australian universities, the presence of crown fire is a key consideration in fire suppression, because crown fires are extreme and very hard to control.[3] They pulse such intense heat, they can form thunderstorms which generate lightning and destructive winds. That's what we witnessed in horror in 2019-20, including in the town where I grew up.

Native forest logging is intensifying deadly fires. That's not good for anybody.

Carbon & Cooling

It is a no-brainer that forests cool the earth with their shady canopies. Forests are carbon sinks as well. Even when trees reach a very old age, they continue to grow and do not stop accumulating and storing carbon.[4] Old forests store far more carbon than a logged and regrown forest. And our tall, wet eucalypt forests are some of the most carbon-dense environments on earth.

Both soils and trees contain carbon. Disturbing soils and cutting down trees releases carbon dioxide.[5] Forestry gives little thought to the rich diversity within the soil. Forestry machinery smashes it up, compresses it and leaves it exposed.

Products of native logging have short lifetimes before they are burnt or left to decompose, releasing their carbon to the atmosphere. The process of removing the trees in itself creates emissions.

Alarmingly, the current practise of NSW Forestry is to discard large amounts of debris, scrape them to one side and later set fire to them in a process called regeneration burn. These burns create vast amounts of smoke and such pollution can travel hundreds of kilometres, having a major impact on human health.[6] According to ecology[7], "Replacing a large tree with seedlings is akin to turning diamonds into coal. It is a flawed offset".

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[2] Hutchins, C. (2021) Logging and thinning of forests can increase fire risk, *Griffith University News and Analysis, 10 February*; citing Mackey B. & Norman, P.
https://news.griffith.edu.au/2021/02/10/logging-and-thinning-of-forests-can-increase-fire-risk/

[3] Brownbill, A. (2021) Native forest logging makes bushfires worse - and to say otherwise ignores the facts, *The Conversation, May 20*; citing Zylstra, P, Wardell-Johnson, G., Watson, J & Ward, M.
https://theconversation.com/native-forest-logging-makes-bushfires-worse-and-to-say-otherwise-ignores-the-facts-161177

[4] Lindenmayer, D. (2024) *The Forest Wars*, NSW: Allen & Unwin.

[5] MIT Climate Portal Writing Team (2024) Does harvesting wood contribute to climate change even if the wood is used for permanent structures like houses, *MIT Climate Portal, May 14*; citing Cameron, T., Environmental Engineer.
https://climate.mit.edu/ask-mit/does-harvesting-wood-contribute-climate-change-even-if-wood-used-permanent-structures#:~:text=Harvesting%20wood%20is%20a%20major,soils%20and%20trees%20contain%20carbon.

[6] Lindenmayer (2024).

[7] Ibid, p181

Air

Science 101 tells us that we breathe in oxygen and breathe out carbon dioxide whereas plants take in carbon dioxide and give out oxygen back into the air. In fact, trees and rain forests produce about 28% of the world's oxygen with ocean plants producing the rest.[8] Australia has a responsibility with the rest of the world to preserve the forest lungs of the world.

Water

In this arid land, forests play a vital role in wetting the land. Forests are biotic pumps[9] that recycle water from the soil back into the atmosphere by transpiration, creating rainfall. They stop water in their tissues, the root soil and under their canopies. Along with transpiration, this water is channelled into streams through the groundwater system. Thus they regulate the runoff.

Deforestation and degradation of vegetation causes reduction of rainfall and increase in land temperatures. It can also disrupt and poison the water table as salinity rises to the surface - something we have seen along the Murray because of the over-logging of the great red gums.

The pattern of water after logging is an initial increase in the runoff for a few years. Then water yields decline because the regrowth (new plants) consume 50% more water than old growth. It can take over 150 years to restore to the original water yields. At the same time, rainfalls decline due to clearing, thus causing a negative cycle instead of the positive cycle of the unlogged or older forest.

Forestry also sprays pesticides on cleared land without regard for the extent to which such poisons work their way into the water sources downstream that serve both animals and people. It is a lazy management, whereas there are people who are willing and able to work with forest permaculture and eliminate weeds from forests without industrial poisons.

Forests also play a key role in the mitigation of flood damage. The large roots of big trees bind and consolidate soil, stabilising river banks and reducing erosion. They can also act as a physical barrier to the force of water, slowing it's speed. In a natural forest, flooding rainfall is slowed by leaves and branches on its way to the ground, then sucked up through tree roots to be stored and later transpired.[10] The forest floor is full of organic matter from composted leaf and natural debris which acts like a sponge to absorb and retain a larger amount of water compared to unforested land. Forests are a bulwark in the management of flooding.

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[8] Clawson, G. (2024) How much oxygen does a tree produce? *One Tree Planted, October 1*. https://onetreeplanted.org/blogs/stories/oxygen-tree#:~:text=Typically%2C%20old%2C%20mature%20trees%20produce,what%20the%20average%20human%20needs.

[9] *North East Forest Alliance*. Forests Increase Rainfall and Store Water. https://www.nefa.org.au/water_yields#:~:text=Forests%20are%20key%20components%20of,they%20actively%20generate%20their%20own.

[10] Shepherd, B (2022) Opinion: Can trees protect us from future floods, *Richmond Valley and Kyogle News, May 15*. https://indynr.com/opinion-can-trees-protect-us-from-future-floods/

Habitat

Forests are the heart of diversity in our dry country. A typical forest contains hundreds of different species of heterotrophs (those that feed on other things), living in a great variety of places.[11] Most of these are small and numerous. One eucalyptus tree might be home to possums; a variety of adult and larval insects browsing on leaves and buds; bugs of all kinds - cicadas, scale insects and lerps feeding on the sap; insects and termites living in the wood; various anthropods (mites and ticks) under the bark; and fungi in different parts of the tree. It's a whole community.

There is an evolved interconnectedness of species. Consider the sudden drop of population of the native bogong moth. Their springtime mass migration is the stuff of urban legend but they were added to the endangered list in 2021.[12] Cave dwellers, their decimation is thought to be due to land clearing and climate change. Scientists have identified six animal groups which are known to depend on these moths, including the Mountain Pygmy Possum.

We cannot estimate the huge number of species living in a forest, from the tiniest organism to the tallest tree, or their ecological significance. In a recent visit to Clouds Creek Forest, near Coffs Harbour, I was fortunate to be shown tadpoles of the Stuttering Frog - a species that dates back millions of years to Gondwana era. Another Gondwana species in NSW forests is the ancient Rufous Scrubbird whose song physiology has not changed since dinosaur times.

The forests of eastern Australia are a global biodiversity hot spot. They are the habitat to the most unique wildlife on earth, including the iconic koala, greater glider, red goshawk, swift parrot, regent honeyeater, Albert's lyrebird and eastern bristlebird.[13]

Forestry shows little regard for this complex inter-related ecology. It is not good enough to leave a few trees for wildlife, as is sometimes current practice. Like us, wildlife move around. They move through the forest to forage, find mates, reduce crowd competition and change their dens or trees (moving house). Koalas are fussy about the type of tree food. They also need to move along the ground safely. Great gliders fly from higher trees to lower trees. Removal of den trees and disruption to natural corridors has lethal consequences.

Alarmingly, our uniquely precious species, the great glider and koala are now endangered, mainly due to habitat loss. Since NSW government allowed forest removal from western Sydney for development, it is estimated that as high as 49 koalas were killed on Appin Road so far this year[14]. Confused koalas turn up in urban areas, which makes the international press - a further result of lost habitat.[15]

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[11] Morgan, D. (Ed) (1973) *Biological Science: The Web of life, 2nd Edition*, Australian Academy of Science; p335.

[12] Greenslade, P (2022) Why all this fuss about a moth, *National Parks Association of NSW, March 1*. https://npansw.org.au/2022/03/01/why-all-this-fuss-about-a-moth/

[13] *WWF* (2023) The Power of Trees: The race to end deforestation and restore nature's climate control, 14 September. https://wwf.org.au/blogs/the-power-of-trees-the-race-to-end-deforestation-and-restore-natures-climate/

[14] macarthurwildlifewarrior (2024) Enough is Enough, TikTok, 6 October. https://www.tiktok.com/@macarthurwildlifewarrior/video/7422177687118040321

[15] Hassan, J. (2024) Intrepid koala caught wandering train station, dangerously close to tracks. The Washington Post, October. 8. https://www.washingtonpost.com/world/2024/10/08/koala-sydney-train-station-rescue/

When you consider the way the koala is used by a range of companies as a cute logo, or the animal that tourists love to spot, it's hard to fathom that we have been so negligent, or indeed, actively destructive towards the koala habitat. The koala is the canary of the forest. If the koala goes, so too will many other species follow.

Industrialised forestry kills animals as they take down the trees. Logging disrupts the evolved ecology and permanently changes the forests. It fragments wildlife corridors, changes wind patterns and shelter, alters the ability for flora to regrow and exposes animals to the risk of road kill and feral attack.

People

Our delightfully unique fauna capture the imagination of people. Despite our technology, we are natural creatures and we directly benefit from exposure to the natural surroundings. That is, after all, the whole point of having public parks.

Research from the Outdoor Challenge Program in US Forests[16] discovered the psychological gains of being in the wilderness and how rapidly these benefits emerged. The participants described the wonders of silence, reduction of stress, surprising discovery, an alive feeling, greater awareness of natural beauty, a sense of accomplishment and enhanced happiness.

Forestry

I have heard of some disingenuous practices by Forestry, such as counting nocturnal wildlife in the daytime or counting from the the road side rather than *in* the forest. One would not like to think that Forestry is motivated to minimise the habitat value of a forest to enable logging where it shouldn't be. If the current situation remains political rather than scientific, it fosters a hostility between stake holders.

In any case, counting is a moot point. A forest, by definition, contains organisms and, if the native forest is left alone, it will attract and provide homes for endangered species. The easiest way to save species from extinction is to leave their home intact.

The definitions of native forest must also rely on the science not the Forestry's ambitions. Cloud's Creek Forest, for example, was logged 10 years ago but has since regenerated with minimal non-native pests. Having once been logged, it is tempting for commercial interest to label this forest as a "plantation" and thus justify further logging - yet, it is a truly native forest providing essential habitat.

Indeed, it is a gateway to the proposed Great Koala National Park (GKNP). I note that the people of NSW were promised the GKNP at the last election. However, once having obtained electoral success, the NSW Labor party has allowed logging to continue in the area of GKNP - with no end in sight. This is destroying corridors before the park is even formalised - a clear betrayal of the voters who were influenced by the promise.

[16] Kaplan R & Kaplan S (1989) *The Experience of Nature*, US: Cambridge; citing research by Hanson, R.A. and others.

And for what? Madly, forestry is running at a loss. "In 2019-20, the NSW Forestry Corporation received $246.9 million in grants, but its hardwood division made a loss of $28.2 million."[17] Native forest logging in NSW made about 160 times less than the plantation score in the same region, with losses of $20M in 2020-21 and $9M in 2021-22. If we stopped native logging, we would save NSW taxpayers between $45-62M. One wonders why a government would resist the transition out of native logging given that there is no economic argument for its continuance.

There is a compulsive need to monetise everything. But ironically, in relation to native forests, the less done (ie. leaving them alone), the more money the state retains, which can be directed to other forest-related issues such as severance or retraining for workers, research to protect endangered species and funding Aboriginal forest custodianship. If NSW had a rethink, we might become internationally known for forest protection and, given the uniqueness of Australian forest flora and fauna, we might expand the tourist dollar. This should be done in a careful way that minimises disturbance of the ecology while providing education and experience in a forest setting.

There are many new programs where western scientific approaches collaborate with Aboriginal traditional ecological knowledge. Transition away from native forest logging to this knowledge guided model will ensure that natural and cultural tradition about plants, animals, Country and culture are harmoniously captured and managed in ethically appropriate ways, for sustainable outcomes.[18]

Why it's important to cease all logging in native forests

There needs to be shift from blind exploitation with minimal positive returns and a lot of negative ones. As Thomas Berry put it: "Nature has, during some hundreds of millions of years through numberless billions of experiments, worked out the ecosystems that were flourishing so abundantly when humans and human civilisations emerged into being. It is a brash and destructive thing for humans to intrude on this system without carefully observing just how these ecosystems function and how humans are best present within this context".[19]

Native forest logging is driving towards extinction a number of uniquely Australian fauna and will contribute to climate change, increase bushfire risk and add to the dryness of the land. It is permanently changing our landscape in a self-destructive way - and for paltry gain.

I fully support an immediate end to native forest logging and a future industry based on sustainable plantations. Further, there should be an immediate logging moratorium placed on core greater glider and koala habitat while the FIAP process is underway. There is a very real danger that this important debate will delay the preservation and saving of endangered species.

[17] Lindenmayer, p120

[18] Wensing E & Callinan T (2020). *Desk-top review of Indigenous engagement in the National Environmental Science Program (NESP)*, prepared for the Australian Government Department of Agriculture, Water and the Environment, SGS Economics and Planning, Canberra; cited in Commonwealth of Australia (2021) Australia State of the Environment.

[19] Berry, T. (1988) *The Dream of the Earth*, US: Sierra; p65

It is beyond time to end native forest logging. Native forests belong to everybody. Speedy transition is the only sensible and sustainable way forward, with immediate moratorium on koala and great glider habitats.

Thank you for reading this submission,
T. White, October 2024.