Independent Forestry Panel

Public submission

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

The logging of native forests is not sustainable, and as the impacts of climate change continue to amplify, so will the increasingly urgent requirement to protect native forests from logging and transition to a sustainable, plantation-based timber industry. In the context of water management, the increasing severity and frequency of droughts, bushfire, and intense rainfall events will further necessitate this transition.

As NSW's population grows, it will become ever more important to responsibly manage the provision of clean, reliable, sustainable water supplies. Meanwhile, increasingly erratic rainfall patterns and a higher likelihood of extensive drought events will add further complexity to this challenge. Responsible management of precious water resources means native forest logging must cease in all vulnerable coastal catchments. This is because logging naturally reduces catchment water yields and dries out the landscape due to the higher water intake requirements of growing young trees, in some cases decreasing catchment yields by up to half (Vertessy et al., 2001). Previous modelling for Melbourne's largest drinking water catchment found that if native forest logging there did not cease, the resultant yield reduction would be the equivalent of losing the supply required for 650,000 people, having a larger impact on the city's water supply than climate change itself (Taylor & Lindenmayer, 2019). That is, in this instance, climate change's impacts on water supply could have been counteracted simply by ceasing native forest logging within the catchment.

In 2020, the NSW Natural Resources Commission (NRC) released a report evaluating the impacts of native forest logging on waterway health in NSW's coastal catchments (NSW Natural Resources Commission, 2020). The report found the impacts of native forest logging on water quality are likely to become more profound and long-lived" due to the more frequent intense rainfall and bushfire events caused by climate change. While native forestry already imposes significant adverse impacts on the water quality of afflicted catchments, these future projections have major implications for the health of our coastal waterways and downstream primary industries. The NSW government must act now to prevent these already unacceptable impacts on communities and the environment from worsening as climate change amplifies the damage caused by this industry to our water resources.

References:

NSW Natural Resources Commission, 2020. ˜Review of the current state of knowledge for the monitoring of forestry impacts on waterway health in NSW coastal forests', available at: https://www.nrc.nsw.gov.au/Water%2520quality%2520-%2520Monitoring%2520plan%2520-%2520Waterway%2520and%2520wetland%2520health%2520v2.pdf%3Fdownloadable%3D1

Taylor, C., & Lindenmayer, D.B., 2019. ˜The adequacy of Victoria's protected areas for conserving its forest-dependent fauna', Austral Ecology, 44, 1076-90.

Vertessy, R. A., Watson, F. G. R. & O²Sullivan, S. K., 2001. ˜Factors determining relations between stand age and catchment water balance in mountain ash forests', Forest Ecology and Management, 143, 13-26.

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

When left to grow, native forests provide a litany of benefits to the people of New South Wales. Their value as part of NSW's natural environment, for biodiversity and threatened species, is immeasurable. In the context of water management and waterway health, these contributions are profound.

If a native forests' trees are given the chance to mature, and its' soil given the opportunity to recover from damaging compaction caused by the logging process, the monetary value of recovered water alone will often significantly exceed the value of the timber products that could be extracted if the forest were logged (Australian Conservation Foundation, 2009). This consideration is often ignored in monetary analyses of the continued taxpayer funded subsidisation of native forestry. This increased water yield occurs because mature forests with non-compacted soil are excellent water managers, keeping the landscape hydrated, as well as generating and distributing significantly more water to the wider catchment than disturbed environments such as recently logged forests. Furthermore, healthy forest vegetation purifies the water, benefiting not only aquatic environments, but also downstream communities and primary industries such as fisheries and oysteries.

In contrast, logged native forests dry out the landscape due to young trees requiring significantly more water to facilitate growth than mature stands. Furthermore, soil compaction caused by the logging process will inevitably result in increased hillslope erosion rates in some areas when compared to undisturbed forests. according to the NSW Natural Resources Commission (NSW Natural Resources Commission, 2020). In addition to increased sediment runoff from crossed drainage lines, tracks and roads (which themselves form 10-20% of forest compartments) and log landings, this erosion of sediment into waterways can have severe impacts on aquatic ecosystems. This is particularly true for wetlands, where flows lack the energy to disperse this sedimentation and thus can be smothered and overwhelmed by it.

As noted by the NRC, bushfire can significantly worsen water quality in afflicted catchments, especially amplifying the water quality declines caused by recent or ongoing native forest logging operations. This is because bushfire increases soil erosion rates, and therefore sediment and organic material runoff into waterways (NSW Natural Resources Commission, 2020). There is now ample scientific evidence that native forest logging can increase bushfire risk due to soil drying, increased wind speeds, and heightened fuel loads in impacted forests. As a result, the flow-on effect for waterways is a significantly increased risk of severely damaging sedimentation events that can threaten coastal rivers, wetlands, and downstream communities and industries throughout New South Wales.

A case study for how native forestry can replace the community benefits of native forests with long-lasting negative impacts is the logging at the Kalang River headwaters in the Mid-North Coast region of NSW. Logging operations within this catchment have previously resulted in catastrophic inputs of sedimentation and turbidity into the Kalang River and Roses Creek, the impacts of which have lasted for decades, and still are threatened by future logging operations. Consistent with a statewide pattern of misconduct and mismanagement, in 1992 the Forestry Corporation of NSW was found to have breached its own (since weakened) guidelines that aim to reduce soil erosion. Due to native forest logging operations in the catchment, several major landslips occurred, choking multiple of the Kalang's tributary rivers with up to six feet of rubble, causing creeks to run red with sediment. This had significant impacts on downstream communities and industries, and caused untold environmental damage by smothering the catchment's rivers and wetlands with sediment. The resultant impacts of this mismanagement on threatened aquatic species are a strong reminder that native forest logging is driving numerous native species to permanent extinction in NSW, even beyond State Forest boundaries.

References:
Australian Conservation Foundation, 2009. ˜Woodchipping our Water: A case for reassessing the use of Victoria's Goulburn Catchment's wet montane forests', available at: https://www.acfonline.org.au/sites/default/files/resources/woodchipping_our_water-Goulburn_Catchment_Report.pdf
NSW Natural Resources Commission, 2020. ˜Review of the current state of knowledge for the monitoring of forestry impacts on waterway health in NSW coastal forests', available at: https://www.nrc.nsw.gov.au/Water%2520quality%2520-%2520Monitoring%2520plan%2520-%2520Waterway%2520and%2520wetland%2520health%2520v2.pdf%3Fdownloadable%3D1

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

A responsibly managed sustainable plantation timber industry, combined with a transition towards more sustainable construction materials, will allow NSW to meet its' demand for housing, construction, mining and retail.

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

A responsibly managed network of hardwood and softwood plantations can meet NSW's demand for timber products, without contributing to the permanent extinction of native species and the significant community costs generated by the current native forest logging industry.

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

As noted in responses to topic areas 1 and 2, ceasing the destruction of native forests within NSW is crucial for tackling the challenge of responsible water management in the context of climate change and continued population growth. Conserving native forests within reservoir catchments will increase water yields significantly, in some cases counteracting reductions caused by climate change, and monetarily often providing a bigger return from water yields alone than the potential value of timber products from logging. Furthermore, catchment water quality would be increased, and fire risk decreased by conserving native forests and transitioning to a sustainable plantation-based industry. See responses to topic areas 1 and 2 for additional detail and citations.

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

With climate change set to increase the frequency and intensity of rainfall events, droughts, and bushfire, the health of already stressed aquatic ecosystems will be placed under additional pressure. Ceasing native forest logging will prevent these climate impacts from being significantly amplified and causing potentially catastrophic sedimentation events in NSW's rivers and wetlands. See responses to topics 1, 2 and 5 for additional information and references on the links between climate change, water management, and native forest logging impacts.