

Why do we need to protect north-east NSW's public native forests?

Dailan Pugh, North East Forest Alliance, March 2023

This fact sheet addresses Frequently Asked Questions about logging in relation to public native forests in north eastern NSW. North East NSW refers to the Regional Forest Agreement region, including the Central Coast, Hunter Valley, North Coast and part of the New England Tablelands. North Coast is taken to be that part of region north of the Hunter River which broadly correlates with the [Australian bioregions](#) of NSW North Coast, the NSW section of the South-east Queensland (basically north from the Clarence River) and New England Tablelands.

Is our reserve system adequate?

The area of North Coast (north from the Hunter River) totals 8.5 million hectares. Of this around 4 million hectares (47%) of native vegetation has been cleared, with 1,497,000 ha (17.6%) of the region in national parks and reserves, and 841,000 ha (9.9%) in State forests (of the State Forests 50,000 ha is zoned as hardwood plantations and 30,000 ha as softwood plantations). For one of the world's 36 [Biodiversity Hotspots](#), it is clear that we need to protect all native vegetation on State forests to progress the State and Federal Government's goal to protect [30% of our land area by 2030](#).

Is logging native forests sustainable?

Native forests in NSW have never been logged sustainably, rather it is akin to a mining operation with a 79% reduction in hardwood log volumes over the past 19 years. According to [ABARES](#), in NSW native hardwood log production reduced from 1.9 million m³ in 2002/03 down to 0.9 million m³ in 2018/19, primarily due to over-logging, with a further reduction down to 0.4 million m³ in 2020/21 after the fires. Over the same period softwood log production increased from 3.3 million m³ to 5.7 million m³. In 2020/2021 native hardwood logs comprised just 6% of NSW's log production.

Forestry Corporation data reflects these reductions. Without any substantive change in the area available for logging, the volume of large high quality sawlogs committed from north-east NSW's State forests almost halved from 269,000 m³/yr in 1998 to around 143,000 m³/yr in 2018. Even then to maintain this for a bit longer they had to rezone 140,000 ha for clearfelling, increase allowable logging intensity by 25%, remove protection for most mature trees (required to be retained for fauna), and reduce stream buffers. Regrowth is not allowed time to grow into big trees before it is cut again.

They are not just running down log volumes, increased erosion is depleting soils and polluting waters, regrowth is reducing streamflows, frequent disturbances are increasing weeds, wildfires are increasing, and the survival of forest species are being increasingly threatened.

How much forest do they log?

The North Coast (north from the Hunter River) encompasses 3,734,713 ha of remnant native [eucalypt](#) forests, of which 1,026,971 ha (27%) is protected in national parks, of this 571,036 is mapped as oldgrowth forest, indicating over 40% of national parks have previously been logged. There are some 667,198 (18%) on State forests, of which 268,348 ha (7%) (mostly oldgrowth forest, and narrow riparian buffers) are protected from logging. At the time of logging a further 10-12% of the net logging area (ie around 42,000 ha) is required to be excluded from logging, leaving 356,850ha (9.6%) available for logging.

The balance of 2,040,544 ha of eucalypt forest is on private land, [DPI \(2018\)](#) identify that all regulatory exclusion categories (including oldgrowth) cover 25.6%, of the total area of private native forest in north-east NSW, indicating that around 1.5 million hectares of the North Coast is potentially available for logging, and the government has been trying for years to open up environmental zones on private lands for logging. **Currently, across all tenures around 1,856,850 ha (50%) of remnant eucalypt forests on the north coast are available for logging.**

Over the 10 years to 2018, an average of 10,858 ha/annum (2.7%) of the loggable area of native forests on North Coast State forests was logged.

What is happening to forest wildlife?

It is the bigger trees that have the most nectar, browse, invertebrates and stability for nesting and roosting, and it is not until they are over 120 years old they begin to develop the [hollows in their branches and trunks](#) that seventy species (28%) of vertebrates in north-east NSW rely upon for dens, nests and roosts, and not till they are over 220 years old do the hollows get big enough for larger animals. Animals that rely upon the resources provided by older trees are becoming increasingly endangered as their foods and homes are lost, populations decline and social systems collapse. Other species reliant upon specialised understorey habitats or reliable stream flows are being similarly affected.

Before the 2019/20 wildfires Koalas had declined by [50% over 20 years](#) on the north coast, and because of the fires there is expected to be a long term decline of more than [25% of remaining populations](#), this is on top of the other threatening processes, including the logging and clearing of habitat. They are expected to be extinct in the wild by 2050, yet the Forestry Corporation is allowed to go on logging their core habitat, with only the retention of 5-10 small potential feed trees per ha. In good habitat they can log over 90% of potential feed trees, including all the larger ones Koalas prefer, with a requirement to wait for a Koala (if they see it) to leave its tree before they cut it down.

How is climate change affecting forests?

Logging impacts are being compounded by climate heating raising temperatures. As temperatures rise the frequency and intensity of droughts, heatwaves and wildfires are also increasing, putting trees and wildlife under increasing stress, with multitudes dying in extreme events. [Forests are degrading](#), and without major intervention will continue to degrade. [Half of our threatened species](#) are considered vulnerable to the impacts of climate change. A [recent NSW assessment](#) identified that of the 24 threatened species assessed, 15 are likely to lose in the order of 15-50% of their climatically suitable habitat by 2030, adding to the threats to their existence. Many species are being increasingly restricted to climatic refuges, such as wetter areas near streams and cooler sheltered sites, or cooler areas at higher elevations, and we are logging these too. The urgency to [identify and protect climate and fire refuges](#) has been identified for numerous species, including the [Koala](#), [Southern Greater Glider](#) and [Yellow-bellied Glider](#).

What were the effects of the 2019/20 fires?

A 3 year drought, culminating in record-setting drought and hot temperatures, resulted in 2.4 million hectares of north-east NSW being burnt from August 2019 until January 2020 in fires of unprecedented extent and severity, with rains then washing heavy sediment and nutrient loads into waterways. Impacting around half the remnant native vegetation, including 59% of National Parks, 35% of rainforests and 66% of oldgrowth forests. Over 456,000 of State Forests burnt, with the canopy fully burnt on 16%, and partially burnt on 40%. In the heavily burnt forests [all trees smaller than 30cm diameter and half those larger were killed](#), along with nearly all [Koala](#), [Southern Greater Glider](#) and [Yellow-bellied Glider](#), amongst others. The losses in the partially burnt forests were significant. Species were [variably affected](#), with a [variety of species identified](#) as likely to experience long-term (>10 year) declines of >25% of their overall populations, including in north-east NSW; Pughs Frog, Rufous scrub-bird, Long-nosed Potoroo, Southern Greater Glider, Mountain Frog, Hastings River Mouse, Sphagnum Frog, Koala, New Holland Mouse, Oxleyan Pygmy Perch, and Yellow-bellied Glider. After the fires the [EPA](#) and [NRC](#) recommended that unburnt and lightly burnt forests should be protected in the firegrounds, with experts advising unburnt forests be protected [for over 20 years](#) to enable recolonisation of burnt forests, and the NRC effectively advised that 24 of the largest trees per hectare be retained as hollow-bearing trees and future hollow-bearing trees to replace some of those lost, but the NSW Government ignored the advice, and 2 years later extended pre-fire [timber commitments to loggers for a further 5 years](#), while allowing the Forestry Corporation to continue logging as if nothing had happened.

How does stopping logging help address climate change?

Native forest logging in New South Wales [emits around 3.6 million tonnes of carbon](#) each year, equivalent to the annual emissions of 840,000 cars. In north-east NSW, when a tree is logged around

two thirds is left in the forest (roots, stumps, tree heads), with larger logs taking decades to decompose. Of that removed most ends up as sawdust or short-lived products, with at best [12.8% ending up in longer lived hardwood timber products](#) with various carbon retention times of 15 years to over 100 years (where buried in landfill). The removal of some 400,000 m³/annum of logs from north-east NSW's public forests results in the quick emission of 820,000 tonnes of CO₂ per annum from tree biomass, and the creation of legacy emissions of 700,000 tonnes of CO₂ per annum that will be released over decades as logs left in the forest decay and wood used in buildings reach the end of its useful life. Legacy emissions from the past continue.

Avoided emissions is one benefit of stopping logging, the greatest benefit comes from allowing regenerating forests to recover their lost carbon from the atmosphere. The carbon stored in logged forests has [more than halved](#), with repeated logging keeping it below this level. Just by stopping logging the growing trees can slowly regain their lost carbon, a single 100 year old tree (100 cm diameter) can store as much carbon as 270x10 year old trees (10 cm diameter). The bigger they get, the more carbon they sequester and store, with a 150 cm diameter tree storing as much carbon as 724x10cm diameter trees. One [2008 assessment](#) concluded that just by stopping logging, forests in south-east Australia could sequester the equivalent of 24% of Australia's then annual net greenhouse gas emissions, for the next century.

Does logging increase bushfires?

[Logging makes forests more vulnerable to wildfires](#) and increases their flammability by drying them, increasing fuel loads, promoting more flammable species, and changing forest structure. This includes increasing the risks of canopy fires by reducing canopy height, increasing tree density and increasing fuel connectivity from the ground into the canopy. These impacts are compounded by [Lantana invasion](#) as a result of logging.

Does logging increase weeds?

Logging promotes weeds by removing canopy trees and letting more light in, while creating opportunities for weeds to invade by removing understorey and disturbing soils, while machines move weed seeds around. One outcome is that Lantana, one of the worst weeds in Australia and a [key threatening process](#), has invaded vast areas of logged forests, and [increases with each logging event](#). It can prevent regeneration of native species, form dense impenetrable stands, hinder Koalas, and increase fire risk and intensity.

At its worst it results in [Bell Miner Associated Dieback](#), which occurs when colonies of Bell Miners take advantage of the open overstorey and dense lantana, forming dense colonies, chasing away most other native species, and facilitating infestations of sap-sucking psyllids that drain the life out of eucalypts. This [ecosystem collapse](#) has affected in the order of 100,000 ha of north-east NSW's forests and is getting worse as forests become increasingly stressed by climate heating. Despite its seriousness the Forestry Corporation continues to log affected and susceptible forests, compounding the problem.

How does logging affect regional water supplies?

Forests are key components of the earth's water cycle. Forests do not just respond to rainfall, they [actively generate their own](#). They recycle water from the soil back into the atmosphere by transpiration, create the updrafts that facilitate condensation as the warm air rises and cools (cooling surrounding lands in the process), create pressure gradients that draw moist air in from afar, and, just to be sure, release the atmospheric particles which are the nuclei around which raindrops form.

Streamflow in drier periods is the "[left-over rainfall](#)" that isn't evaporated or the vegetation doesn't use. Regrowth forests use [2-3 times](#) the water of oldgrowth forests, which has been attributed to their [higher volumes of sapwood](#). Stream flows are most impacted during periods of low rainfall when there may be no water surplus to the regrowth's needs. Water yields begin recovering after around 20 years, though [take centuries](#) to fully recover.

Loss of understorey, [tracks concentrating flows](#) and soil [compaction](#) from logging reduces soil water storage and increases storm runoff following logging. As well as increasing floods, [this transports](#)

bared and disturbed soils into streams. One of the most effective ways of reducing runoff volume and sediment entering streams is with undisturbed riparian buffers to trap sediments and disperse flows, for headwater streams [30m](#) buffers have been identified as required, in 2018 NSW reduced buffers from 10m down to 5m.

Do we need to log forests to address the housing crisis?

According to [ABARES](#), in 2020/2021 native hardwood logs comprised just 6% of NSW's log production (and a similar proportion of sawnwood), with some logs coming from hardwood plantations, though most coming from pine plantations. Houses are now built with pine frames, so when they talk about a shortage for building they are talking about pine.

In north east NSW the principal products obtained from native forests are structural timber, hardwood flooring, decking, power poles, mining props, and fencing. There are a variety of [composite timber products](#) sourced from plantations as alternatives for structural timber. Solid hardwood flooring is an expensive product with far cheaper engineered, laminated and hybrid alternatives. Composite decking made from recycled plastic and wood fibre is a cheaper and more durable alternative to solid timber. There is no longer any need to log public native forests to build houses. In north-east NSW around a third of hardwood logs come from private properties, so hardwood products will still be available if public native forests are protected.

How many jobs does logging support?

There are various figures for direct regional employment based on logging public native forests (including hardwood plantations) for north-east NSW (north from the Hawkesbury River), with an [Ernst and Young 2019](#) (Appendix A3) claim of 566 direct jobs, and a [Natural Resources Commission 2021](#) (Table 10) claim of 590 jobs before the 2019/20 fires likely to reduce to 500 after the fires. People often add multipliers to account for other workers indirectly affected in a region, though this is a questionable assumption, and open to inflated claims, with [Ernst and Young 2019](#) claiming a multiplier of 1.46 (ie additional jobs affected for every one lost) with the [NSW Department of Primary Industries 2018](#) using a multiplier of only 0.6 for the north coast timber industry.

To put this into perspective, [Australia's State of the Forests Report 2018](#) identifies that from 2006 until 2016 timber industry employment in NSW declined from 23,792 persons to 16,396 persons, a shedding of 7,396 jobs in just a decade, due to '*consolidation of processing into larger facilities with higher labour efficiencies, and restructuring of the sector*'. [ABARES](#) identifies the further shedding of 613 jobs by 2021. Nobody seemed concerned by these losses, or talked about multipliers.

How much does it cost to log public forests?

The Forestry Corporation generally operates at a financial loss on native forest logging, with a total loss of \$95 million (M) over the past 14 years. Over the last 2 years they lost \$29 million (\$ -19.6M [2020/21](#), \$-9M [2021/22](#)) from logging public native forests, this is despite receiving \$16.9M in Government handouts for Community Service obligations in 2020/21 and \$17.8M in 2021/22. From [2008/9 until 2014/15](#) the Forestry Corporation operated at an annual average loss \$-11M per annum on native forests. From [2015/16 until 2019/20](#) they had a marginal "positive result" with profits averaging \$2.3M per annum over the 5 years. So over the past 14 years (2008/9 to 2021/2) it has cost \$95 million to log public forests, without accounting for funding for Community Service Obligations, research undertaken on their behalf by DPI, work by the Natural Resources Commission or regulation by the EPA.

The Forestry Corporation also get frequent equity injections from the NSW Government, in recent years receiving [\\$24 million](#) in 2018/19 for acquiring new land for plantations over four years, [\\$46 million](#) in 2019/20 for bushfire recovery as part of the larger \$100 million COVID-19 package to stimulate regional economies, [\\$4 million](#) in 2019/20 from the NSW Government's Regional Growth - Environment and Tourism Fund, and [\\$60 million](#) in 2021/22 for "flood damaged" roads.

Then there are the costs of losses of mature trees and carbon storage, increased carbon emissions, reduced carbon sequestration, reduced streamflows, degraded soils, increasing erosion, increasing weeds, and declining populations of threatened species.