

**INQUIRY INTO LONG TERM SUSTAINABILITY AND
FUTURE OF THE TIMBER AND FOREST PRODUCTS
INDUSTRY**

Organisation: Nature Conservation Council of NSW
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Submission to the NSW Upper House inquiry
into the long term sustainability and future
of the timber and forest products industry



Nature Conservation Council

The voice for nature in New South Wales





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3 June 2021

The Hon Mark Banasiak
Inquiry Chair
Portfolio Committee No. 4 Industry
NSW Legislative Council

Dear Mr Banasiak

We welcome the opportunity to contribute to this important and timely inquiry into the future of the timber and forest products industry.

The terms of reference for the inquiry are rightly ambitious in scope. A range of environmental, economic, and social trends mean the status quo cannot continue.

NSW needs a credible plan for a sustainable timber and forest products industry that protects biodiversity, supports jobs and helps mitigate climate change. We hope this timely inquiry will draw together evidence and ideas to help chart a course forward.

Logging public native forests is not sustainable - environmentally, economically, or socially

Habitat destruction, including native forest logging, is the biggest driver of biodiversity decline in NSW. The extensive damage of the 2019-20 bushfires, where 42 percent of NSW forests burnt, means conserving habitat more important than ever.

Despite this, Forestry Corporation NSW has recommenced logging in native forests, and on many occasions breach their operating conditions – felling protected giant trees with hollows, giant trees with hollows and koala feed trees. These offences, now being pursued by the EPA, have only been investigated because local community members voluntarily undertaking ‘citizen compliance’ monitoring.

The economic viability of native forest logging continues to deteriorate – with the Hardwood Division of Forestry Corporation making just \$400,000 profit in the 19-20 financial year, or just \$28 per hectare.

Forestry Corporation NSW also faces a ‘supply cliff’ as it scrambles to meet unsustainable wood supply agreements. Fire impacts on timber resources only compound this problem.

Native forest logging does not have a social licence to operate. A leaked survey by the Forest Wood and Products Association in 2018 found 65 percent of rural-based respondents thought native forest logging was unacceptable. After the bushfires, this percentage would likely be higher.

Local communities devastated by bushfire are now having to witness further unnecessary destruction of their local forests at the hands of Forestry Corporation NSW, knowing that this deters tourists, degrades landscape function, and increases fire risk.

The current policy framework for native forest logging requires complete re-evaluation.

Our native forests are worth more standing

NCC is calling for an end to public native forest logging and immediate expansion of the plantation estate, with a goal of reaching a 100 percent plantation-based timber industry.

Government should implement transition plans for regional forestry areas including employees and families directly impacted. Overall, an end to native forest logging could have a positive economic impact in regional areas. A transition to alternative timber supply and forest uses could provide employment to thousands through forest management and tourism jobs.

Managing state forests for nature-based recreation should include establishing and maintaining new walking tracks, boardwalks, lookouts, campgrounds with amenities and scenic driving routes, attracting tourists and supporting local economies.

A recent study by the University of Newcastle found that turning state forests on the north coast of NSW into a Great Koala National Park would create nearly 10,000 full time jobs and increase total economic output for the region by \$1.18 billion over 15 years.

Healthy forests are not only an economic opportunity for NSW but provide other vital ecosystem services. Allowing forests to grow old increases their ability to store carbon, filter water, support threatened species, reduce bushfire severity and adapt to climate change.

Expanding the plantation estate would have multiple benefits

If located strategically and managed well, plantations have many economic, environmental, and operational advantages. Expanding plantations onto already cleared land across the state is a huge opportunity to create jobs across the industry - from planting, harvesting operations, management, haulage and processing. Plantations can also sequester carbon, make use of degraded land and if well managed can be less vulnerable to fire than native forests.

Logging our native forests is unnecessary, destructive, and uneconomic. Our forests are worth so much more standing – both for biodiversity and people. We need a 21st century approach to forestry that embraces innovation and recognises climate impacts, imperatives, and opportunities.

We welcome further discussion on the matter and look forward to further participating in the inquiry. Your key contact is Ishbel Cullen, policy and outreach coordinator, available via 02 9516 4888 or icullen@nature.org.au.

Yours sincerely,



Chris Gambian
Chief Executive
Nature Conservation Council of NSW

Summary of recommendations

Recommendation 1: That the NSW Government expedite the NRC review of the environmental impact of the Coastal Integrated Forestry Operations Approval post 2019-20 bushfires and publicly release the findings.

Recommendation 2: That the NSW Government place an immediate moratorium on all public native forest logging until regulatory framework reflects the dual crises of habitat loss after the 2019-20 bushfire season and accelerating climate change.

Recommendation 3: If logging is to occur in public native forests, that the NSW Government requires FCNSW to return to discussions with the EPA to develop site specific operating conditions (SSOC) for every compartment.

Recommendation 4: That the NSW Government increase funding for the EPA to undertake independent assessments of logging compartments before and after harvesting to assess Forestry Corporation's compliance with regulations as detailed in the relevant harvest plan.

Recommendation 5: That Forestry Corporation NSW includes an additional 'plan status' stage on the online Plan Portal in between 'Approved' and 'Active' which provides better indication of the date when logging will actually commence in that compartment. The community should receive seven days' notice before the logging commencement date.

Recommendation 6: That the committee fully documents how much money from the Bushfire Industry Recovery Package grants has been allocated to native forestry operators and for what stated activities.

Recommendation 7: That the EPA investigate whether the proportion of low value timber (pulpwood and firewood) harvested from compartments in the Southern RFA and Eden RFA is consistent with legal requirements for the proportion of low quality forest products.

Recommendation 8: That the NSW Government announce an end date for public native forest logging along with a transition plan for affected industries and workers.

Recommendation 9: That the NSW Government undertakes research and consultation on the impacts and benefits that cessation of logging native forests will have, including opportunities made possible through protection of these lands for conservation and recreation.

Recommendation 10: That the NSW Government immediately announce the reservation of the Great Koala National Park.

Recommendation 11: That the NSW Government, in consultation with local communities, establish plans for recreational and tourist amenities that would be popular and ecologically sustainable in nearby state forests.

Recommendation 12: That the NSW Government facilitate a significant expansion of plantation estate on already cleared land across the state, with the aim to shift native forest workers into this field during a phase out of native forest logging.

Recommendation 13: That any new plantations are established and managed with silvicultural best practice and strategically located to regenerate degraded land and minimise fire risk.

Recommendation 14: That the NSW Government encourage and facilitate carbon markets that provide financial incentives to protect and retain carbon stored in forests and maximise biodiversity co-benefits.

Recommendation 15: That the NSW Government reject the biomass fuelled Verdant Power Station and refuse subsidies to any forest bioenergy projects.

Recommendation 16: That the NSW Government finalise the private native forestry review and implement revised codes based on the best available science and a strong regime to enforce best practice ecologically sustainable forest management in private native forestry operations.

Recommendation 17: That the NSW Government honour its commitment to strengthen private native forestry codes to increase koala protection.

Recommendation 18: That the NSW Government invests further in meaningful incentives for private landholders to conserve forests rather than harvest them for timber.

Recommendation 19: That the NSW Government provide the Natural Resources Commission (NRC) with ongoing funding to continue the Forest Monitoring and Improvement Program beyond 2022.

Recommendation 20: That the committee draws upon the NRC's findings for relevant programs, particularly regarding wood supply, so it can utilise the best science available to them to inform decisions and recommendations.

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1. Policy context of public native forestry in NSW

1.1 Objectives of Commonwealth and NSW policy framework

At the Commonwealth level, native forestry is governed by the 1992 National Forest Policy Statement, of which NSW is a signatory, and the Regional Forest Agreements (RFAs). The RFAs are bilateral agreements between the NSW and Australian Governments. Alongside other objectives, they are designed to meet the requirements of the Environmental Protection and Biodiversity Conservation Act (EPBC), thereby exempting forestry operations under an RFA from additional compliance requirements under the EPBC Act.

The core objective of both the National Forest Policy Statement and RFAs is the concept of Ecologically Sustainable Forest Management (ESFM). The principles of ESFM are:

- Maintain or increase the full suite of forest values for present and future generations across the NSW native forest estate
- Ensure public participation, access to information, accountability and transparency in the delivery of ESFM
- Ensure legislation, policies, institutional frameworks, codes, standards and practices related to forest management require and provide incentives for ecologically sustainable management of the native forest estate
- Apply precautionary principles for prevention of environmental degradation
- Apply best available knowledge and adaptive management processes.¹

The NSW Forestry Act 2012 establishes Forestry Corporation NSW (FCNSW) and is the primary legislation regulating public native forestry. The NSW Forestry Act requires FCNSW to observe ecologically sustainable development (Division 2, Part 10(1)(c)) as defined in the NSW Protection of the Environment Administration Act 1991 (Part 3) including:

- the effective integration of social, economic and environmental considerations in decision-making processes
- application of the precautionary principle
- inter-generational equity namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations
- conservation of biological diversity and ecological integrity.

The Forestry Act provides for the Coastal Integrated Forestry Operations Approval (CIFOA), renewed in 2018, which determines FCNSW harvesting activities in NSW state forests at an operational level. The Environmental Protection Agency (EPA) is the regulatory body responsible for ensuring compliance with the CIFOA.

1.2 Policy frameworks have failed to adequately protect environmental values

ESFM is at the centre of native forestry governance. Relevant legislation enshrines the precautionary principle, inter-generational equity, and conservation of biological diversity. In practice, these policy frameworks have failed to meet their objectives and adequately protect environmental values.

Many reviews and consultations over several years have articulated the failure of RFAs in meeting their purpose. Research by Professor David Lindenmayer in 2018 concluded that the RFAs had:

- (i) failed to protect biodiversity and maintain ecosystem processes
- (ii) been characterized by poor governance and watered-down forest protection
- (iii) overseen a demonstrable lack of profitability of, and declining employment in, native forest logging industries
- (iv) led to the overcommitment of forest resources to wood production and
- (v) failed to account for other forest values that are often much greater than wood production.²

The 2016 National Parks Association report, *Regional Forest Agreements in NSW: have they achieved their aims?*, also documents a litany of failures. The report demonstrated that native forest operations in NSW had not achieved ecologically sustainable forest management and that the RFAs are a major economic burden to the citizens of NSW because of the taxpayer subsidies required to keep the operation afloat.³

When the CIFOA was renewed in 2018 it was criticised for compromising ecologically sustainable forest management. Designed to facilitate the policy goal of no net reduction in wood supply, the new CIFOA allows for controversial intensive harvesting and provides for inadequate tree retention rates and stream buffer protections.⁴ Since the implementation CIFOA, the devastating 2019-20 bushfires occurred, making its provisions even more dangerous for native forests in NSW. This is discussed further below.

1.3 Native forest logging does not have a social licence to operate

Public native forestry is an unpopular industry and increasingly lacks social licence to operate. A leaked survey conducted by the Forest Wood and Products Association in 2018 show that 65 percent of rural-based respondents believe that native forest logging is unacceptable.⁵ Following the Black Summer fires, there is no doubt this figure would be significantly greater given the outpouring of grief for our forests and wildlife impacted by these disasters, and growing conservation efforts to protect them. Polling conducted in 2018 commissioned by the World Wildlife Fund saw over 70 percent of respondents to the same survey want more national parks and reserves.⁶

2. Impacts and response to the 2019-20 bushfires season

Terms of reference addressed:

G) the environmental impact and sustainability of native forest logging, including following the 2019-20 bushfire season

H) the operation, effectiveness and outcomes of the implementation of the NSW Forestry Industry Roadmap and Bushfire Industry Recovery Package

2.1 The fires severely impacted ecosystems and wildlife

The NSW EPA has commented extensively on the impact of the 2019-20 Black Summer bushfire season. It is unequivocal that the bushfires of 2019-20 were unprecedented and the impacts on the environment substantial.

Reports have indicated a loss of over one billion native animals and possibly a 71 per cent loss of koalas in known koala habitats across northern NSW.⁷

State of the Forests 2018 stated that a total of 1,420 forest-dwelling fauna and flora species are listed as threatened species under the Commonwealth Environment Protection and Biodiversity Conservation (EPBC) Act 1999, of which 842 species are forest-dependent.⁸

In 2020, the Wildlife and Threatened Species Bushfire Recovery Expert Panel recommended immediate management action to exclude forestry impacts for 1837 plants listed as threatened by one or more of the interactive effects of fire and drought, short fire intervals, high fire severity, fire sensitivity and cumulative exposure to high risks.⁹

There is unequivocal scientific evidence, as demonstrated in relevant NSW threatened species assessments, that forestry operations in native forests will directly cause a decline in many threatened species and ecosystems. Most of these species lost a high proportion of their population and their resilience during the Black Summer bushfires.

2.2 The current policy framework is not appropriate to manage fire damage

CIFOAs were not developed to account for the scale or severity of the fires experienced during the 2019-20 Black Summer bushfires. The EPA has stated that “the unprecedented fires of 2019-20 have significantly impacted the environmental values of the state forests of coastal NSW. Subsequent timber harvesting in areas impacted by fire pose a major environmental risk to the extent that ecologically sustainable forest management (ESFM), as required under the NSW Forestry Act 2012, is unlikely to be achievable under a business-as-usual approach.”

A report commissioned by the EPA concludes that FCNSW’s environmental safeguards are inadequate after the Black Summer fires.¹⁰ With 5.5 million hectares of forest burnt in NSW, many ecosystems and threatened species are under increased pressure, pushing them closer to extinction. Current legislative and regulatory frameworks are not meeting their objectives, are no longer fit for purpose and are not conserving biological diversity and ecological integrity.

The NSW government has requested that the Natural Resources Commission (NRC) provide independent, evidence-based advice on forestry operations under the CIFOA as the NSW public forest estate recovers from the 2019-20 bushfires. However, the NSW Government does not intend to make this advice public.¹¹

The findings of this review are critically important in understanding the impact that the return of logging under pre-bushfire CIFOA regulations will have on our forests and implications for FCNSW wood supply. It is in the public interest for the findings of this review to be released.

Recommendation 1: That the NSW Government expedite the NRC review of the environmental impact of the Coastal Integrated Forestry Operations Approval post 2019-20 bushfires and publicly release the findings.

Recommendation 2: That the NSW Government place an immediate moratorium on all native forest logging until the regulatory framework reflects the dual crises of habitat loss after the 2019-20 bushfire season and accelerating climate change.

2.3 NSW Forestry Corporation has continued logging, regularly breaching conditions

Initially after the 2019-20 bushfires, FCNSW and the EPA negotiated Site-specific Operating Conditions (SSOCs), which imposed more stringent environmental protections for harvesting operations, additional to the CIFOA. This was in recognition of the vulnerability of burnt forests and the importance of remaining unburnt areas.

However, despite forests taking decades to recover from fire, in September 2020 FCNSW walked away from SSOC negotiations and returned to logging burnt forests under the old CIFOA rules, which were already pushing species to extinction, even before the fires. This demonstrates complete disregard for the precautionary principle and ecologically sustainable forest management.

Over the last two years, community groups and the EPA have investigated FCNSW for serious breaches of environmental laws and stop-work orders have resulted. The regularity of reported breaches in harvest operations is incredibly concerning.

Instances include:

1. Felling protected giant trees in Wild Cattle Creek state forest (SF).¹²
2. Damaging four giant 'hollow-bearing trees' and six marked small tallowwood koala feed trees in Wild Cattle Creek SF.¹³
3. Felling dozens of protected hollow-bearing trees in South Brooman SF.¹⁴
4. Felling protected hollow-bearing trees in Mogo SF.¹⁵
5. Choosing the most heavily burnt forests to meet retention requirements of wildlife habitat clumps in Myrtle SF (against the protocol which states that priority must be to establish wildlife habitat clumps in unburned areas).¹⁶
6. Felling 10 trees in protected zones in Ballengarra State Forest near Port Macquarie.¹⁷
7. Not including records of the critically endangered swift parrot in planning of harvest operations in forest that had historical records of this species.¹⁸
8. Felling a tree over 1m diameter in Mogo State Forest 180A, in contravention of FCNSW's own commitments.¹⁹

Many of these breaches have only been discovered because members of the public voluntarily undertake 'citizen compliance' activities; monitoring logging coups, measuring stumps, counting trees and sending detailed records to the EPA when FCNSW breaches their operating conditions.

Several NCC member groups have been doing this important work, such as CoastWatchers, the North East Forest Alliance and Friends of the Forest. We draw the Committee's attention to their submissions, which provide first-hand accounts of their admirable civic minded efforts. Oversight of FCNSW operations should not be up to these community groups.

For example, Nick Hopkins from Friends of the Forest Mogo, reflects on his experience of citizen compliance:

'We started to monitor compliance of logging operations, a massive undertaking considering the complexities of the then IFOA and the large and distant areas involved. We quickly realised that Forestry Corp couldn't be relied upon to manage their contractors to operate within the IFOA.'

...We...entered the forest in April 2020 shortly after post-fire logging recommenced in Mogo and South Brooman State Forests finding hollow bearing trees scattered all over the forest floor and 3 giant trees felled.

...It took the community reporting of over 100 incidents in South Brooman and over 75 in Mogo State Forest to prompt the EPA in action which was at best only halted the breaching for a period of time.

...It shouldn't be up to us to do this work. We are the only actors in this sector who are not paid and yet every else is on a wage or salary and they have variously failed in their remit.'

Recommendation 3: If logging is to occur in public native forests, that the NSW Government requires FCNSW to return discussions with the EPA to develop SSOC for every compartment.

Recommendation 4: That the NSW Government increase funding for the EPA to undertake independent assessments of logging compartments before and after harvesting to assess Forestry Corporation's compliance with regulations as detailed in the relevant harvest plan.

2.4 Native forest logging after fire compounds ecosystem impacts

Native forest logging has adverse impacts on several environmental values, including water quality, soil health, carbon storage and biodiversity. These impacts are of increasing concern to Australians as climate change accelerates, and especially concerning after the forest devastation in the Black Summer fires.

The patches of unburnt or lightly burnt forests that are threatened by logging are critical, often tiny, refuges for wildlife. An EPA review released in September 2020 found the *"fauna populations surviving in fire refuges in state forests are at risk of elimination by timber harvesting under the normal CIFOA which could prevent recovery, and cause catastrophic population decline in species such as the Koala, Greater Glider and Yellow-bellied Glider."*²⁰



(Logging operations in bushfire affected Mogo State Forest 180A in May 2021)

Forests that are logged after being burnt will not be able to ever fully recover, permanently altering the ecological community of vast areas of forest. Research clearly shows *“post-fire logging is the most damaging form of logging. Logging large old trees after a fire may make the forests unsuitable habitat for many wildlife species for up to 200 years... Forests logged after a fire have the lowest bird biodiversity relative to other forests, including those that burned at high severity (but which remain unlogged). Critical plants such as tree ferns are all but eradicated from forests that have been burned and then logged.”*²¹

Case example: the Greater Glider

The Greater Glider is listed as threatened in Australia based on demonstrated declines in its population size and geographical range. These declines are caused largely by the loss of large hollow-bearing trees in which it shelters and the reduction in contiguous forest in which it forages. The Australian Threatened Species Scientific Committee (ATSSC) noted that the species is highly dependent on forest connectivity and large mature trees. There is a progressive decline in numbers of such hollow-bearing trees in production forests as logging rotations become shorter and as dead stags collapse.²²

The NSW Fire and the Environment 2019–20 Summary concludes that 100 per cent of the 413 records of the endangered Yellow-bellied Glider habitat on Bago Plateau and 81 per cent of the habitat records of the endangered population in Eurobodalla was burned.²³

The Greater Glider's prime habitat coincides largely with areas suitable for logging.²⁴

Three primary conservation actions are recommended by the ATSSC:

1. Reduce the frequency and intensity of prescribed burns.
2. Identify appropriate levels of patch retention, habitat tree retention, and logging rotation in hardwood production.
3. Protect and retain hollow-bearing trees, suitable habitat, and habitat connectivity.

The ATSSC also note that “in production forests some logging prescriptions have been imposed to reduce impacts upon this species, however these are not adequate to ensure its

recovery."²⁵ This, and the third conservation action, mandate a cessation of logging in areas inhabited by the Greater Glider.



(Image: Greater Glider, NSW South Coast)

In 2017, the Victorian Government noted that "timber harvesting in Greater Glider habitat has been proven to cause declines and/or local extinctions of greater glider populations."²⁶ In 2019, the Victorian Government committed to the immediate protection of more than 96,000 hectares of State Forest; the immediate end of timber harvesting in old-growth forest; a phase-out of native forest timber harvesting by 2030 and a state-wide prescription to provide additional protection in timber harvesting coupes where 5 or more Greater Gliders per spotlight kilometre are observed. No such commitment to the Greater Glider has occurred in NSW.



(Pic: Greater Glider hollow in burnt tree, NSW South Coast)

2.5 Native forest logging increases future fire risk

Studies undertaken by forest ecologists have shown that areas of native forest which had been previously logged were more likely to have burnt, and at a higher severity, during the

2019-20 bushfires. Specifically, the likelihood of crown fire occurring in logged forests is far greater, which is the most intense and ecologically destructive fire.²⁷

Logging creates a lower density forest and results in a promotion of mono-culture regrowth. Regrowth tends to be dominated by preferred logging hardwoods. Overall, logged areas produce lower density forests of predominantly younger trees, at uniform height and with less species diversity (favouring the flammable eucalypt species) which results in increased fire-proneness.²⁸ On the south coast for example, regrowth is dominated by Mountain Silver Ash/Silvertop Ash, which is incredibly flammable.

Professor David Lindenmayer has said, *“Every empirical analysis so far shows logging eucalypt forests makes them far more likely to experience crown fire...Research shows forests became dramatically less likely to burn when they mature after a few decades. Mature forests are also less likely to carry fire into the tree tops.”*²⁹

2.6 Native forest logging is taking a toll on fire effected communities

Many regional communities are still reeling from the impacts of the 2019-20 bushfires. Many people lost their homes and experienced severe trauma. The recommencing of forestry operations in fires affected landscapes adds a further psychological burden.

Local communities are not provided with enough notice before logging operations begin. When a compartment becomes listed as “Approved” on the FCNSW Plan Portal, it can become an “Active” compartment (meaning logging is occurring there) overnight. Additional notice indicating when logging will occur in a compartment, in between the Approved and Active stages, is required for the community.

Recommendation 5: That FCNSW includes an additional ‘plan status’ stage on the online Plan Portal in between ‘Approved’ and ‘Active’ which provides better indication of a date when logging will commence in that compartment. The community should receive seven days’ notice before the commencement date of logging.

2.7 The Bushfire Industry Recovery Package is a missed opportunity

The NSW Government Bushfire Industry Recovery Package - Supply Chain Support Grants program, announced in response to the 2019-20, provided funds to agriculture, horticulture and forestry operators across the state. Of the \$139 million spent under the program, \$68 million was granted to support the existing forestry industry, by far the most funding of any industry.³⁰

The crisis of the 2019-20 bushfires, and the subsequent government support through programs such as the Bushfire Industry Recovery Package, provided an ideal opportunity to facilitate a transition out of native forest logging. Instead, these programs have poured more public money into sustaining an industry that does not stack up economically or environmentally.

Recommendation 6: That the committee fully documents how much money from the Bushfire Industry Recovery Packaged grants has been allocated to native forestry operators and for what stated activities.

3. The deteriorating economics of native forest logging

Terms of reference addressed:

(A) the nature of, and relationship within, the value chain between the timber and forest products industry, logistics companies, manufacturers, retailers, exporters and their relationship with timber supply and environmental management, and opportunities to enhance supply chains,

C) projections for softwood and hardwood supply and demand over the next 30 years

D) transparency and data reporting of timber supply

3.1 Forestry Corporation NSW's Hardwood Division is loss-making

The native forestry (hardwood) division of FCNSW is loss-making. The high cost, low return of hardwood harvesting is only offset by FCNSW's softwood plantations, which generate most of the corporation's annual earnings.³¹

FCNSW's revenue is set to decline \$100 million, or 25 per cent, from next financial year, with predicted losses of about \$15 million a year from 2022 to 2024.³²

FCNSW is a government owned corporation, so the NSW Government is ultimately liable for keeping it afloat. This means taxpayers are subsidising the destruction of our native forests and paying to drive species to extinction.

3.2 Forestry Corporation NSW is increasingly shifting to lower value products

To stay viable, FCNSW has adopted more intensive logging, encroaching even closer to sensitive areas such as steep slopes and waterways. This puts more pressure on our environment than ever.

Around the state, access to large trees to produce high-quality sawlogs (HQS) for use in high-value endeavours like decking, flooring and furniture, is declining. Years of over-extraction and mismanagement, compounded by recent fires, means that HQS are making up less and less proportion of compartment yield. On the south coast this is especially true, where the Eden RFA region sees compartments logged predominantly for low value firewood and pulpwood (sent for processing at the Eden Chip mill).

In the Eden RFA region, the definition of high-quality sawlog has been changed to allow for smaller logs to meet the definition. HQ25 is a new sawlog definition allowing logs of 25cm small end diameter, down from the previous 30cm sawlog definition.³³

In the Southern RFA Region, which historically has been logged for sawlogs, an increasing proportion of the harvest is taken for firewood and pulpwood. Recent logging of Mogo State Forest compartment 180A only produced 37.5 percent of the yield as HQS (both small and large), with 50 percent for pulpwood and firewood.³⁴

2. Expected Species and Yield

Species for harvest	Species Mix % (sawlog)	Product Removal	Volume (m ³)
Spotted Gum	70	HQ Large Sawlog (Quota)	1,000
Iron Bark	10	HQ Small Sawlog	500
Blackbutt	10	Low Quality (Salvage)	500
Stringybark	5	Pulpwood	1,000
Other	5	Firewood	1,000
Total	100	Total	4,000

(Fig: Mogo State Forest Compartment 180A harvest plan Expected Species and Yield figures³⁵)

Responses to 2021 Budget Estimates questions revealed that for the entire 2020 calendar year, nearly half of all native timber extracted from forestry operations in the Southern RFA region was for pulpwood and firewood.³⁶ In the 2019 calendar year, this figure was still over 40 percent for the Southern RFA Region.

For the Eden RFA region in 2020, which has been intensively logged for decades and has exemptions to log primarily for the purpose of harvesting pulpwood, more than 97 percent of all timber harvested was for pulpwood. In 2019, this figure was 85 percent.

This highlights the shift that FCNSW's sustainable yield report indicates, which is that HQS stocks are down, and to make up for it, FCNSW are increasing the percentage of their harvest for low-value products.

Vital habitat for threatened species is being destroyed for firewood, pulp wood and chips, by a loss-making business, at a cost to the NSW taxpayer.

(*) Figures below relate to calendar years.

(a)

Product	Southern Region (m3)	Eden Region (m3)
Poles, Girders, Veneer	1,055	138
High Quality Sawlog	77,054	15,773
Low Quality Sawlog	31,548	1,161
Pulpwood	45,742	112,460
Firewood	29,893	3,968

(b)

Product	Southern Region (m3) ^(*)	Eden Region (m3) ^(*)
Poles, Girders, Veneer	274	-
High Quality Sawlog	29,514	1,361
Low Quality Sawlog	10,902	-
Pulpwood	12,043	51,988
Firewood	16,007	856

(Fig: Forestry Corporation response to David Shoebridge's Budget Estimates Questions on Notice)

Recommendation 7: That the EPA to investigate whether the proportion of low value timber (pulpwood and firewood) harvested from compartments in the Southern RFA and Eden RFA are consistent with legal requirements for proportion of low quality forest products.

3.3 Demand for native hardwood is declining

The demand for native forest products has also reduced, as consumers demand sustainable materials and builders switch to engineered plantation-based timber products that are cheaper and easier to work with.

Treated pine and laminated veneer-lumber (LVL) has replaced hardwood for framing purposes, while engineered floorboards that use only a veneer of hardwood provide improved dimensional stability as well as reduced cost. For decking, composite products are now widely available that require lower maintenance such as Modwood, Eva-last and Duralast. Treated pine is also used for decking.

Native forest logging has become the typewriter of the modern timber industry, and FCNSW must adapt by focussing on sustainable, economical, modern plantation-based timber products.

3.4 NSW Forestry Corporation is approaching a supply cliff

Research in 2014 shows that FCNSW was already preparing to face a supply-cliff by 2023 for North Coast sawlogs.³⁷ FCNSW was increasingly unable to fulfil their wood supply agreements (WSAs) for certain species.

The report outlined some of the desperate measures which would need to be sanctioned for FCNSW to gain access to the timber resources to meet their contracts. These included expanded logging operations in core koala habitat, logging on steep slopes above 27 degrees and opening logging in national parks. This research also highlighted the increasing importance of plantations in meeting supply of species such as Blackbutt.

On top of this looming supply limitation, the 2019-20 Black Summer Bushfires had a wide-reaching impact across the entire forest estate of NSW, including on forests managed by FCNSW.

In total, 5.5 million hectares burnt in the state during this season. The breakdown of damage by land tenure is as follows:

- National Parks Estate: 2.7 million ha
- Native State Forests: 831,000 ha
- State Forest Timber plantations: 57,000 ha
- Private Land: 1.57 million ha³⁸

With nearly 1 million hectares of state forests burnt, there has been a huge impact on FCNSW operations, and the ramifications will be felt for years to come. FCNSW 2019-20 sustainable yield review found that the fires have resulted in deep losses to overall harvestable sawlogs.³⁹ This is especially pronounced in the south coast region.

Many in the community have questioned FCNSW's figures from its 2019-2020 sustainable yield review (below) given the massive discrepancy between the amount of forest burnt throughout NSW in the State Forest estate and small losses of logs in some parts of the state (for example the North East).⁴⁰

Little is publicly known about the assessment method used by FCNSW to come to the yield figures. FCNSW should provide more transparency regarding the process and methods used and allow greater scrutiny of these figures.

Table 1: Overview of fire impact on short-term wood supply for NSW RFA regions

Annualised sustained yield for first three reporting periods			
RFA region	Year range	High-quality logs (m ³)	Modelled Reduction due to fire Impacts %
North East	2020 - 2031	230,000	4%
Eden	2020 - 2034	22,700	13%
South Coast	2020 - 2034	35,000	30%
Tumut	2020 - 2034	25,800	27%

(Fig. FCNSW 2019-2020 Sustainable Yield Review, p. 6)

3.5 Supply shortage must not lead to desperate, destructive measures

The known problems with meeting wood supply contracts are dramatically exacerbated by fire impacts. There is low community trust in the decisions and behaviour of FCNSW.

NCC member groups and communities around state forests, who are subject to the impacts of logging, fear what decisions will be made in order to comply with supply agreements and the potential impact on native flora and fauna.

We have seen in 2018 the government start work to remap old-growth forests to increase access for timber harvesting. After community outrage, this investigation was abandoned.⁴¹ Any moves to increase access to protected areas of forest is socially abhorrent and ecologically irresponsible.

4. Future forest jobs: transition can be a win-win-win

Terms of Reference addressed:

B) the impact of external influences on the timber and forest products industry, including but not limited to drought, water, fire, regulatory structures, habitat protection and local, state and federal policies regarding climate change and plantation establishment

E) opportunities for the timber and forest products industry and timber dependent communities and whether additional protections, legislation or regulation are required in New South Wales to better support the forestry products industry and timber-dependent communities, including opportunities for value adding

F) the role of the government in addressing key economic, environmental and social challenges to the industry, including funding and support to encourage improvements in forestry practices, training, innovation and automation, workplace health and safety, industry and employee support, land use management and forestry projects

H) the operation, effectiveness and outcomes of the implementation of the NSW Forestry Industry Roadmap and Bushfire Industry Recovery Package

L) best practices in other Australian and international jurisdictions in relation to the sustainability of the timber and forest products industry, including social sustainability, community and Indigenous engagement and multiple uses of the forest estate

4.1 The NSW Government needs a plan to transition out of native forest logging

The NSW Forestry Industry Roadmap (2016) was underpinned by a commitment to manage the NSW forestry estate in line with the principles of Ecologically Sustainable Forestry Management (ESFM). This commitment is clearly not being fulfilled. We need a new roadmap that recognises the operating context has fundamentally changed post-fires.

The NSW Government must develop and implement an industry transition package to end native forest logging and transfer the most ecologically significant state forests to the national parks estate.

There are many instructive examples of structural adjustment to learn from - both what has been done well and where to improve. The industry support package for the protection of river red gum forests in the Riverina-Murray region, announced in 2010, and the Forest Industry Structural Adjustment Packages for the south-east forests in the 1990s and 2000s, provide valuable insights on this topic.

More recently, in 2019 the Victorian Government announced a \$120 million Victorian Forestry Plan Transition Package for the phase out of native forest logging by 2030. This transition package makes commitments to business owners and employees in the industry to provide compensation, training or re-skilling to ensure that they are no worse off.⁴²

Recommendation 8: That the NSW Government announce an end date for native forest logging along with a transition plan for affected industries and workers.

4.2 Ending native forest logging does not mean job losses

In NSW, 850 people are currently employed in public native forestry.⁴³ The majority of timber industry jobs are within the plantation industry, which employs 11,600 people.⁴⁴ An end to native forest logging does not necessarily mean industry job losses to those reliant upon this work. On the far south coast of NSW alone, for example, national parks and reserves employs 920 people.⁴⁵

There are several scenarios that could generate increased employment through protecting our state forests such as shifting to plantation-based industry, increased processing and manufacturing of modern timber products, managing forests for tourism and recreation, fire-management and carbon storage.

4.3 Tourism and recreation in state forests are economic and social opportunities

A recent study by the University of Newcastle found that turning state forests on the north coast of NSW into a Great Koala National Park would create nearly 10,000 full time jobs and increase total economic output for the region by \$1.18 billion over 15 years.⁴⁶

Many other great opportunities exist across the state to transform state forests into tourist attractions, managed by FCNSW or as national parks. This could include the creation and maintenance of new walking tracks, horse-riding trails, boardwalks, lookouts, campgrounds with amenities and scenic driving routes, bringing in revenue for forest management and local communities.

The cessation of native forest logging would allow for the redirection of existing grants and avoided losses, providing funding for investment and ongoing management.⁴⁷

Protected natural areas also support the social well-being of local communities. Research shows that time outside and in nature has beneficial effects on wellbeing, calm and balance experienced by individuals.⁴⁸ The Covid-19 lockdown period in 2020 saw a surge in visits to NSW national parks.⁴⁹ Communities that live adjacent to accessible land managed for conservation are happier, healthier and wealthier. Communities near national parks have been found to be 17 percent wealthier in the US.⁵⁰

Research has found that the economic benefits of national parks and their natural amenities extend beyond tourism and recreation to the ability of protected lands to “attract and retain people, entrepreneurs, businesses, and retirees.”⁵¹ New reserves can provide “new opportunities for local businesses, employment and even improve local housing value.”⁵²

Recommendation 9: That the NSW Government undertakes research and consultation on the impacts and benefits that cessation of logging native forests will have, including opportunities made possible through protection of these lands for conservation and recreation.

Case example: Mountain Biking

Mountain Biking (MTB) is one of the fastest growing sports in Australia and is well established in communities with significant forest estates. There is a huge opportunity to massively expand the available trails and infrastructure for MTBs in state forests, if developed in an ecologically sensitive way.

Logging operations in state forests disrupt existing trails and limit the construction and expansion of new trails and amenities. A focus on working with communities to construct recreational tracks that respect local ecology is an opportunity for NSW to take advantage of its forest estates in a new way. MTB trails and infrastructure provide recreational options for local community members and draw in tourists from further afield, bringing money into regional towns.

The draft Mogo Adventure Trails Hub, developed by firm Dirt Art, is currently being considered in the Eurobodalla on NSW's South Coast. It is an example of how state forests can be utilised for MTB's and the tourism it is possible to generate.

*The plan "identifies a 155km trail network, comprising about 125km of new trail and formalisation of the 30km of existing mountain bike trails in Mogo State Forest and Deep Creek Dam. The network would link directly into Mogo village and Batehaven, making it highly accessible...Dirt Art states the trails network has the potential to attract 45,000 visitors to Eurobodalla in its first year of operation, resulting in an estimated \$11.8 million injection to the local economy."*⁵³

The cases of Derby, Tasmania and the coal mining town of Collie, Western Australia, show the role that MTB can play in the transition of towns from extractive industries to service based/tourism economy. Derby's Blue Derby Trails is the template for success, with this once quiet and struggling town now one of the premier MTB destinations in the world, a thriving tourist hub in Tasmania.⁵⁴ Collie is attempting to emulate this success with proposed huge expansion of the MTB trails surrounding the town, which features the local scenery of the beach, forests and mountains. Recreation is seen as a key part of their plan to transition out of coal mining and push eco-tourism as the town's future.⁵⁵

We note that environmental impacts must also be carefully mitigated as poorly planned or informal mountain-bike trails impact sensitive ecological communities.

Recommendation 10: That the NSW Government immediately announce the reservation of the Great Koala National Park.

Recommendation 11: That the NSW Government, in consultation with local communities, establish plans for recreational and tourist amenities that would be popular and ecologically sustainable in nearby state forests.

4.4 Expanding the plantation estate can have multiple benefits

A plantation-based industry in NSW with more processing capacity for hardwoods would increase regional forestry jobs.

There are currently only 35,000 ha of hardwood plantations in NSW, with these exclusively based on the north coast.⁵⁶ Expanded plantations onto already cleared land across the state is a huge opportunity to see a growth of jobs in every part of the timber industry - from the initial planting stages, to harvesting operations, management, haulage and processing.

Victoria's 2019 announcement that it will phase out native forest logging by 2030 included a planned expansion of hardwood plantations in the state. Victorian Premier Daniel Andrews stated, *"we are going to replace those jobs currently employed with native timber, with jobs in planting, cutting down and hauling and processing plantation timber... That's the way this transition will be managed."*⁵⁷

Plantations that are not judiciously planned and managed can create perverse outcomes. With increasing climate risks, it is crucial new plantations are well planned and managed consistent with the best available science.

Recommendation 12: That the NSW Government facilitate a significant expansion of plantation estate on already cleared land across the state, with the aim to shift native forest workers into this field during a phase out of native forest logging.

Recommendation 13: That any new plantations are established and managed with silvicultural best practice and strategically located to regenerate degraded land and minimise fire risk.

5. Forests and climate change

5.1 Forests provide a crucial carbon sink

Loss of stored carbon through deforestation has contributed 35 percent of anthropogenic carbon in the atmosphere, and annually is around 10 percent of global anthropogenic emissions.⁵⁸ Maintaining and expanding the global forest estate is a critical aspect in the fight to contain runaway climate change. Forests store vast quantities of carbon.

Protecting natural forests can be part of a comprehensive mitigation strategy in two ways:

1. keeping the carbon in the forest ecosystem—that is, in the biomass and bound to soil particles
2. allowing the forests that have been logged previously to regrow and reach their carbon sequestration potential.⁵⁹

As forests age, they store more and more carbon in their roots and trunks. Unlogged temperate forests, for example, store 40-55 percent more carbon than logged forests, with large old growth sequestering carbon at three times the rate of smaller, younger trees. Destroying forests releases carbon that has been stored over the lifetime of the tree, contributing to climate change.⁶⁰

Recommendation 14: That the NSW Government encourage and facilitate carbon markets that provide financial incentives to protect and retain carbon stored in forests and maximise biodiversity co-benefits.

5.2 Native forests support landscape resilience to climate extremes

On the driest continent on earth, water and rain are incredibly valuable. Our hydrological system is sensitive and continued rapid deforestation will play a contributing role to changes to overall rainfall patterns.

Climate change is already generating a shift in precipitation patterns across Australia. In NSW, exacerbated droughts and a decline in long term average rainfall are evident. Maintaining the integrity and resilience of our forests to face these challenges is critical to giving them the best chance of surviving this pressure.

It is known that “natural forests are more resilient to climate change and disturbances than plantations because of their genetic, taxonomic and functional biodiversity. This resilience includes regeneration after fire, resistance to and recovery from pests and diseases, and adaptation to changes in radiation, temperature and water availability (including those resulting from global climate change).”⁶¹

5.3 Bioenergy is the worst of both worlds

In 2016 The Australia Institute reported that “in response to declining volumes, the native forestry industry has increasingly lobbied for forest waste products to be sold to biomass electricity generation plants as a feedstock.”⁶²

Proponents of bioenergy claim that it is a renewable energy source which generates net-zero emissions. Carbon accounting classes it as zero carbon in the energy sector, as trees are assumed to re-absorb the CO₂ when they grow back. This carbon accounting is

contested by scientists as carbon absorption through the regrowth of forests lags combustion, resulting in a 'carbon debt'.

Burning biomass emits CO₂ to the atmosphere, just as burning fossil fuels does. In fact, generating a unit of energy from wood emits between 3 percent and 50 percent more CO₂ than generating it from coal.⁶³

Burning forest biomass adds to greenhouse gas emissions at a critical point where we need to be reducing them. We have less than a decade to vastly reduce emissions. Carbon from the combustion of forest derived bioenergy cannot be recaptured within this timeframe.⁶⁴ Burning forest biomass also depletes the capacity of forests to continue drawing down carbon out of the atmosphere. The longer trees are left to mature the more carbon they capture and store.⁶⁵

Overall, biomass will not be an effective measure to support transition to net-zero carbon emissions, will not support the long-term profitability of the native forestry industry and will be devastating for our public forests.

The terms 'forest waste products' and 'residues' are also misused in NSW. While a reasonable person may expect these terms to mean sawdust and mill offcuts, the industry definition includes living trees that are too small or defective to produce sawlogs (i.e. pulpwood logs) as well as discarded branches and logs, which are all parts of a functioning ecosystem. The NSW POEO (general) Regulation was amended in 2013 to exclude these items from the definition of 'native forest biomaterial'.⁶⁶ Defining such a large fraction of forest biomass as 'waste' creates economic pressure to remove more biomass from forests, creating a more intensive, ecologically damaging logging regime that is a direct threat to biodiverse forests.

Case example: Redbank Power Station

Verdant Technology is seeking to reopen the 151MW Redbank Power station, in which it intends to burn over 1 million tonnes per annum of biomass, including wood and wood waste from native forests. This is likely to result in the release of over 2 million tonnes of CO₂ into the atmosphere each year.

The company says it plans to source biomass from forests within 400 kilometres of Singleton, a huge area stretching from Moruya in the south, Yamba in the north, and Dubbo in the west.

Recommissioning the power station, now called Verdant Power Station, would have a devastating impact on forests and forest wildlife. Forest residues are taken to include small and defective trees that are not suitable for sawlogs, therefore their removal will increase the intensity and impact of logging on biodiversity.

If this proposal is approved it will increase carbon pollution that is causing dangerous climate change and would undermine government policies intended to assist the orderly transition from high carbon polluting fuel sources of energy to genuine low-emissions renewables, combined with storage.

Recommendation 15: That the NSW Government to reject the biomass fuelled Verdant Power Station and refuse subsidies to any future forest bioenergy projects.

6. Private Native Forestry

6.1 Regulatory framework for private native forestry must be strengthened

This submission has focussed on public native forestry. However, we recognise the increasing importance of private native forestry (PNF), particularly if there were to be an end to public native forest logging.

There have been several significant changes to the way PNF is regulated in NSW in recent years. Most notably the transfer of responsibility for PNF management from the Minister for the Environment to the Minister for Agriculture and Western NSW.

There is considerable uncertainty around how environmental values are being managed in PNF.

A private native forestry (PNF) review began in 2018 and draft PNF Codes of Practice were exhibited in early 2020.

In March this year, the Minister for Planning and Public Spaces made further changes, removing dual consent provisions for PNF from local councils. We have very significant concerns about this change, as it will lead to more habitat destruction and prevent local communities having a say about land use in their local government areas.

The Minister also committed to releasing new PNF codes by early April that would strengthen and improve koala protection. The new PNF codes have still not been released.

The PNF codes must provide strong environmental protections, based on the best available science, including protecting all environmentally sensitive land from logging and mandatory independent ecological surveys before harvesting. Compliance frameworks must ensure robust monitoring and compliance.

Recommendation 16: That the NSW Government finalise the private native forestry review and implement revised codes based on the best available science and a strong regime to enforce best practice ESFM in private native forestry operations.

Recommendation 17: That the NSW Government honour their commitment to strengthen private native forestry codes to increase koala protection.

Recommendation 18: That the NSW Government invests further in meaningful incentives for private landholders to conserve forests rather than harvest them for timber.

7. Research and evidence base to inform policy and decision making

Terms of reference addressed:

B) the impact of external influences on the timber and forest products industry, including but not limited to drought, water, fire, regulatory structures, habitat protection and local, state and federal policies regarding climate change and plantation establishment

C) projections for softwood and hardwood supply and demand over the next 30 years

D) transparency and data reporting of timber supply

E) opportunities for the timber and forest products industry and timber dependent communities and whether additional protections, legislation or regulation are required in New South Wales to better support the forestry products industry and timber-dependent communities, including opportunities for value adding

G) the environmental impact and sustainability of native forest logging, including following the 2019-20 bushfire season

7.1 Important research is underway by the Natural Resources Commission

The Natural Resources Commission (NRC) has two research programs which are directly relevant to the terms of reference for this inquiry.

Forest Monitoring and Improvement Program (2018-2021)

The Forest Monitoring and Improvement Program (FMIP) is a state-wide monitoring, evaluation, reporting and improvement program for NSW forests on all tenures. The program aims to improve the evidence-base for decision-making for forest management.

Projects under this program include:

- Establishing baselines and long-term monitoring for forest ecosystems, biological diversity and soil and water.
- Future scenarios and options analysis which will *'develop scenarios for the future of NSW forests. "These will include alternative futures that emphasise different forest values and community expectations from the short to long-term. Projected changes in climate will be incorporated into all scenarios."*⁶⁷

The FMIP was allocated \$7.2 million over four years, concluding in 2021-22 financial year. In the April 2021 annual progress report for the FMIP, the NRC identified the need for continued investment in this program beyond this financial year, in the range of \$17-\$43 million annually. We support this funding being provided.⁶⁸

CIFOA Monitoring Program (2019-2024)

The CIFOA Monitoring Program aims to establish if the CIFOA is achieving its objectives and outcomes. Projects under this program cover wood supply, forest health, biodiversity, water quality and reporting and adaptive management.

The wood supply project will hopefully provide more clarity around sustainable yield figures. The NRC will be monitoring the trend in actual harvest volumes and wood supply modelling to indicate whether the Coastal IFOA conditions are affecting wood supply over time and, if yes, evaluate volumetric impacts and the specific conditions that are impacting wood supply.

For the purposes of the monitoring program, 'wood supply' is defined as: *"the volume, species and grade of native forest high quality logs (large and small), that can be economically and sustainably supplied to the forestry industry from a given region over the short to medium term (5 to 20 years), while maintaining forest landscape values, as reflected in the Ecologically Sustainable Forest Management principles in Regional Forest Agreements, over the medium to long term (20 to 100 years)."*⁶⁹

This program also includes research by the University of Wollongong to investigate how predicted changes to fire intensity and regimes risk achieving outcomes under the Coastal Integrated Forestry Operations Approval. This project will evaluate:

- the specific risks to achieving the Coastal IFOA objectives and outcomes as result of the legacy landscape scale impacts of the NSW 2019-20 wildfire season
- the broad implications of predicted changing fire regimes on the achievement of the Coastal IFOA's objectives and outcomes
- options to mitigate risks.⁷⁰

Results from both the FMIP and the CIFOA Monitoring Program should become available over coming months. We encourage the committee to draw on this pertinent research in its investigation.

Recommendation 19: That the NSW Government provide the NRC with ongoing funding to continue the Forest Monitoring and Improvement Program beyond 2022.

Recommendation 20: That the committee draws upon the NRC's findings for relevant programs, particularly regarding wood supply, so they can utilise the best science available to them to inform decisions and recommendations.

8. Conclusion

The public native forestry industry in NSW is pushing threatened ecosystems and animals closer to extinction.

An already economically unviable industry, the 2019-20 bushfire season has undermined FCNSW's chances of meeting existing supply agreements while remaining ecologically sustainable.

Community groups across the state are consistently identifying incidences of FCNSW acting outside its operating agreements. There is no social licence for this behaviour.

Healthy protected native forests are not only an economic opportunity for NSW but provide vital ecosystem services. Allowing forests to grow old increases their ability to store carbon, filter water, support threatened species, reduce bushfire severity, and adapt to climate change.

There is enormous opportunity to realise economic and social benefits by ending native forest logging and making our state forests accessible for the whole community to enjoy.

Expanding the plantation estate, strategically and sustainably, can create jobs, sequester carbon, make use of degraded land and reduce timber supply vulnerability to fire.

Logging our native forests is unnecessary, destructive, and uneconomic. Our forests are worth so much more standing – both for biodiversity and people. We need a 21st century approach to forestry that embraced innovation and recognises climate impacts, imperatives, and opportunities.

We look to our elected representatives for leadership to make this future a reality for our state.

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