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

Organisation: WWF Australia

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WWF submission to NSW Upper House

Inquiry into the long-term sustainability and future of the timber and forest products industry

11 June 2021

Submitted to:

Legislative Council Portfolio Committee No. 4 - Industry NSW Parliament House Macquarie St Sydney NSW 2000

By email: $\underline{PortfolioCommittee 4@parliament.nsw.gov.au}$

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TERMS OF REFERENCE

- 1. That Portfolio Committee No. 4 Industry inquire into and report on the long term sustainability and future of the timber and forest products industry and the role of the Forestry Corporation and other government agencies in supporting the industry, in particular:
- (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,
- (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,
- (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,
- (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,
- (i) 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 and
- (j) any other related matters

WWF-Australia proposes a major transformation of the NSW timber industry and state forests to address the challenges and opportunities of this coming Decisive Decade for nature and the climate based on 10 outcomes:

Outcomes

- 1. **Fair transition** out of native forest logging by 2030 and into a plantation-based timber industry that creates more jobs, grows regional economies, cares for the mental health and wellbeing of timber workers, and increases supplies of low-carbon wood products to help create a stable climate.
- 2. **Investment in innovation and R&D** to rapidly expand the plantation estate, silviculture, engineered wood products and hybrid construction, natural capital markets, accurate forest carbon accounting, and economic diversification.
- 3. **Policy stability** for the forestry sector, timber workers and wider community underpinned by a fair and orderly process supported by a multi-hundred million dollar structural adjustment fund to buy out wood supply agreements, grow new plantations, compensate business for lost income and asset write-downs, retraining, job creation and relocation support.
- 4. **Modern effective regulatory frameworks** exist to ensure Forestry Corporation NSW manages its operations lawfully and ecologically sustainably, the EPA robustly and effectively enforces compliance, and communities are afforded full third-party enforcement rights.
- 5. **Transparency** on all explicit and hidden subsidies and supply chain tracing, timely provision of information to the public, and choice for wood consumers to allow them to buy with confidence wood products that were not sourced from feed and habitat for koalas, gliders and other threatened wildlife.
- 6. **Economic and environmental values** of state forests are fully accounted and maximised for the people of NSW.
- 7. **Expansion** of the protected areas estate through transferring all state forests to management by NSW NPWS and handback to Indigenous traditional owners to provide land justice and create Ranger jobs.
- 8. **Nature-based solutions** to the nature and climate crises are implemented to manage forests to maximise carbon storage to reduce the state's carbon emissions as global heating worsens, generate rainfall and water supplies, and underpin nature- and culture-based tourism.
- 9. **Conservation** of threatened species and ecological communities affected by logging, the 2019/20 bushfires, droughts, weed and feral animal invasion and Bell Minor Associated Dieback.
- 10. **International** recognition through nominating tall eucalypt forests in northeast NSW for World Heritage listing.

Transition from native forest logging into plantations

WWF advocates the removal of native forest logging, which has not secured the highest level of third party sustainability certification, from timber and pulp supply chains in Australia by 2030, and earlier where possible, through a fair transition to a plantations-based timber industry that is supported by substantial funding for structural adjustment, economic diversification, retraining and timber mill upgrades.

WWF-Australia supports a transition by 2030 out of native forest logging and into plantations grown on already cleared lands and into FSC-certified logging. This transition is underway in Victoria following a policy commitment by the Victorian Government. The transition into a plantation-based timber industry is significantly progressed in NSW and requires significant additional public and private

investment to expand plantations, create new jobs, support timber communities through the transition, and manage native forests as nature-based solutions for the nature and climate crises.

The NSW government has a significant opportunity to manage its state forests – a public asset – as a globally significant forest carbon sink to provide a <u>natural climate solution</u>¹ in the global race to create a stable climate, rather than being managed for wood production, to underpin rapid emissions abatement under the Paris Agreement.

Recommendations

The NSW Government should

- 1. commit to a transition from native forest logging into plantations and FSC-certified logging by 2030, through a well-funded structural adjustment program, economic diversification for timber communities and new economic drivers based upon protected areas and ecosystem services.
- ensure enhanced verification and traceability through forest products supply chains to enable consumers to confidently choose timber products that do not come from trees that provide food or habitat for threatened species.
- 3. place a moratorium on native forest logging in areas of forest that did not burn, or burnt at low or moderate severity, during the 2019/20 bushfires to protect critical wildlife refuge habitats until rigorous on-ground flora and fauna assessments are undertaken.
- 4. commission a review of the science regarding tipping points for NSW forests.
- 5. sunset or buy out wood supply agreements to hasten the transition of state forests to protected areas and for provision of conservation, carbon storage and water provision services.
- 6. develop a comprehensive system of environmental and economic accounts for public forests across the state to quantify economic values generated by a broad range of existing and potential uses.
- 7. protect habitat for threatened species from native forest logging under a revised Coastal IFOA, through increasing the number of feed and habitat trees that must be left uncut, expanding buffers and mandating rigorous on-ground flora and fauna assessments prior to a logging cycle.
- 8. review and significantly strengthen the Coastal IFOA to grant the EPA stronger powers to prevent FCNSW from undertaking forestry operations which it deems are not ecologically sustainable, particularly in the event of major bushfires, and to enhance transparency and third party involvement in decision making.
- 9. commit to phasing out native forest logging by 2030 through a well-funded structural adjustment process to diversify economic opportunities for timber communities, invest in jobs based upon protected areas, and maintain ecosystem services.
- 10. review the NSW Forestry Industry Roadmap and associated funding to support major expansion in the softwood and hardwood plantation estate.

Additional information regarding these ten outcomes are provided below, and address a range of the Terms of Reference.

Introduction

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¹ Griscom, B, et al., 2017. Natural climate solutions. Proceedings of the National Academy of Sciences, 114, 11645-11650; DOI: 10.1073/pnas.1710465114

WWF is one of the world's largest and most experienced independent conservation organisations, with over five million supporters and a global network active in more than 100 countries. WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by conserving the world's biological diversity, ensuring that the use of renewable natural resources is sustainable, and promoting the reduction of pollution and wasteful consumption.

The submission aligns with WWF-Australia's <u>Towards Two Billion Trees</u> plan to save and grow two billion trees across Australia by 2030.² The plan underpins our vision for a transition from being a global front for deforestation and forest degradation³ to reforestation and plantations-based timber production.

WWF's *Towards Two Billion Trees* plan is part of our 5-year \$300 million <u>Regenerate Australia</u> plan to help restore wildlife and habitats, rejuvenate communities impacted by the 2019/20 bushfires, boost sustainable agriculture and future-proof our country.

2019/20 Bushfires

The 2019/2020 bushfires burned 5.8 M ha of temperate broadleaf forest in NSW and Victoria through a series of megafires. Climate scientists and forest ecologists project increasing frequency and severity of forest fires as atmospheric concentrations of CO_2 increase. The evolving science of attribution is increasingly being used to draw a causal relationship between climate change and forest fires. Climate scientists have developed strong cause-and-effect links between climate change and bushfires, with one study finding global heating has boosted the risk of the hot, dry weather in Australia that's likely to cause bushfires by at least 30%.

Climate scientists project more extreme hot weather as atmospheric CO2 levels rise. The 2019/20 bushfires clearly demonstrate that the NSW forestry industry

Review and strengthening of the Integrated Forest Operations Approval post 2019/20 bushfires

The Integrated Forest Operations Approval should be reviewed and substantially strengthened following the 2019/20 bushfires. IFOAs do not provide a fit-for-purpose regulatory mechanism that can ensure a rapid curtailing of logging and roading operations following major bushfires, such as those in 2019/20.

The Coastal IFOA in particular is a demonstrably inadequate framework for regulating forestry operations following the fires, evidenced by correspondence from the NSW EPA to the CEO of Regional NSW and A/CEO of Forestry Corporation NSW in September 2020:

'the EPA's position that a return to operating under the CIFOA alone in all areas of the State as you propose is not tenable at this time. The EPA is keen to ensure that the principles of ESFM are applied, including maintaining a range of forest values for future and present generations. The EPA is concerned that; your proposal may not achieve these principles.'

² Blanch, S, and Taylor, M, 2019. *Towards Two Billion Trees*. WWF-Australia, Sydney, 20pp.

³ Pacheco, P., et al., 2021. Deforestation fronts: Drivers and responses in a changing world. WWF, Gland, Switzerland.

⁴ Boer, M.M., Resco de Dios, V. & Bradstock, R.A. Unprecedented burn area of Australian mega forest fires. *Nat. Clim. Chang.* 10, 171–172 (2020). https://doi.org/10.1038/s41558-020-0716-1

⁵ Phillips, N, and Nogrady, B, 2020. The race to decipher how climate change influenced Australia's record fires. Nature, News Feature, 23 January 2020. Available for viewing at https://www.nature.com/articles/d41586-020-00173-7

In March 2021, the EPA's expert advice was ignored in relation to logging on the NSW South Coast as forestry operations were resumed. This demonstrates the weak regulatory oversight provided by the NSW Government to the EPA in ensuring compliance by the Forestry Corporation of NSW.

The bushfires demonstrated the failure of the CIFOA to ensure ecological sustainability, and adoption of the precautionary principle, in the face of the priority to provide sawlogs to mills under wood supply agreements. The CIFOA also fails to provide sufficient transparency and third party engagement in decision making to allow communities to enforce compliance with relevant legislation.

Implication of the Leadbeater's Possum cases

Logging within the NSW Regional Forest Agreement areas are exempt from application of the *Environment Protection and Biodiversity Conservation* Act (Cth). Recent decisions by the Federal Court in relation to logging in the Central Highlands and protection of Leadbeater's possum are relevant to regulation of the NSW native forest logging industry. The full court affirmed⁷ key findings of an earlier case heard by Justice Mortimer⁸ that widespread serious breaches of the Victorian forestry code did not remove the exemption under Part III of the EPBCA in relation to forestry operations in RFA areas. The cases highlight the centrality of the role of state governments in legislating strong regulatory frameworks in relation to native forest logging operations and enforcing compliance to protect threatened species.

Tipping point for NSW forests

The scientific basis for forest tipping points is perhaps best understood for the Amazon rainforest.⁹ The combination of ongoing deforestation (i.e., conversion to pasture for beef or to soy crops), forest degradation (i.e., logging, deliberate burning, road construction) and global heating has established positive feedback mechanisms which is leading to an acceleration in the transition from rainforest to savanna in a process called savannisation.¹⁰

Australian temperate eucalypt forests, upon which the native forest logging industry is based in NSW, are identified by various experts as ecosystems most vulnerable to tipping points. The clarity with which these assessments have been made have increased as environmental degradation and global heating have worsened. In 2011, Laurance *et al.*, stated that

'In our view, temperate eucalypt forests are 'dippers'—ecosystems that could suffer dramatic future changes but only in part of their geographic range.... Among the most important future threats to temperate eucalypt forests are changes to fire regimes arising from climate

⁶ Sparks, H, 23 March 2021. *Forestry Corporation ignores EPA and resumes logging in heavily burnt forests*. About Regional. Available for viewing at https://aboutregional.com.au/forestry-corporation-ignores-epa-and-resumes-logging-in-heavily-burnt-forests/

⁷ VicForests v Friends of Leadbeater's Possum Inc [2021] FCAFC 66

⁸ Friends of Leadbeater's Possum Inc v VicForests (No 6) [2020] FCA 1199

⁹ Lovejoy T, and Nobre, C, 2019. Amazon tipping point: Last chance for action. *Science Advances*, American Academy for the Advancement of Science, 5, 12. DOI: 10.1126/sciadv.aba2949. Available for viewing at https://advances.sciencemag.org/content/5/12/eaba2949

¹⁰ Montaigne, F, 2019. *Will Deforestation and Warming Push the Amazon to a Tipping Point*? Yale Environment 360 interview with Carlos Nobre, available for viewing at https://e360.yale.edu/features/will-deforestation-and-warming-push-the-amazon-to-a-tipping-point

change... . In the future, wet eucalypt forests are likely to experience elevated levels of fire activity. $^{\prime 11}$

A decade later, and after the catastrophic 2019/20 bushfires, the Climate Council stated that

'[D]uring the massive Black Summer fires, we may have crossed a tipping point for Australia's temperate broadleaf and mixed forests In any typical fire season, 2-3% of these forests burn, but during the Black Summer 21% burned'. 12

The 2019/20 bushfires substantially reduced the quantity and quality of eucalypt hardwoods available for logging in NSW state forests, and hence resource available to meet contracted wood supply agreements. This illustrates the existential risk facing the NSW native forest logging industry in coming years, particularly when considered in the context of other ongoing threats such as increasing atmospheric CO₂ concentrations, logging which can increase forest flammability, ¹³ BMAD and weed infestation.

Forest carbon storage and accounting

Native forests and woodlands offer highly significant nature-based solutions (NbS) to both the nature and climate crises. Tall dense wet sclerophyll forests, in particular, are generally biodiverse and carbon-rich. Forests growing in areas of NSW with higher rainfall and higher nutrient soils are very significant forest carbon sinks that should be managed to avoid becoming a nett source of greenhouse gases. Forest regrowth following logging, bushfire, weed infestation and Bell Minor Associated Dieback also offers significant opportunities to sequester carbon over coming decades. New revenue opportunities should be developed based upon carbon abatement and sequestration for native forests, including on public lands, that reduce greenhouse gas emissions from the land sector and grow revenue opportunities for regional communities.

In addition, moving away from native forest logging and establishing new sustainable plantations offers great carbon storage potential. There are examples in Australia and internationally of sustainable forest management being combined with carbon sequestration, to deliver additional revenue streams for forest managers. This includes plantation forestry projects registered under the Australian Government's Emissions Reduction Fund that since 2017 have created a total of 50,000 Australian Carbon Credit Units. Engagement with the Australian Government to harness the carbon storage potential of forests should be a priority. In addition, innovative new approaches to sustainable forestry are being explored globally, for example <u>Gresham House</u> has established a \$500 million fund that is intended to deliver 10,000 ha of production forest, sustainable capital growth and carbon credit returns to investors.

¹¹ Laurance *et al.*, (2011). The 10 Australian ecosystems most vulnerable to tipping points. *Biological Conservation*, 144, 1472-1480.

¹² Climate Council, 2021. *Aim High, Go Fast: Why emissions need to plummet this decade*, see page 36. Available for download at https://www.climatecouncil.org.au/resources/net-zero-emissions-plummet-decade/

¹³ See, for example, Lindenmayer *et al.*, 2020. Recent Australian wildfires made worse by logging and associated forest management. *Nature Ecology & Evolution*, 4, 898-900. Available for viewing at https://www.nature.com/articles/s41559-020-1195-5?proof=t

¹⁴ MVG 2 - Eucalypt Tall Open Forests (Wet Sclerophyll Forests), Fact sheet. Available for viewing at https://www.environment.gov.au/system/files/pages/c838080e-2efb-4718-9342-472bf9da70e6/files/mvg2-eucalpyt-tall-open-forest-draft.pdf

¹⁵ See, for example, Fensham R, and Guymer, G, 2009. Carbon accumulation through ecosystem recovery. *Environmental Science & Policy*, 12, 367-372.

National accounting rules that underpin *Forest Land Remaining Forest Land* in the Australian Government's National Inventory Report¹⁶ require amendments to allow state forests to attract carbon offsets.

Threatened species conservation

Native forest logging has been identified as a threat, or potential threat, to a range of threatened species.

Transitioning state forests to conservation management offers one of the really significant opportunities to help slow and avert further species extinctions.

Smith and Andrews (1997)¹⁷ concluded that 'logging which reduces the structural and floristic diversity and limits the availability of preferred food trees would reduce the quality of koala habitat, and that logging may predispose koalas to disease.'¹⁸ The federal Threatened Species Scientific Committee's listing advice in 2011 stated that '[k]oala habitat may also be lost due to logging, however the effect at the population level is a function of the management regime...Thus the level of threat posed by logging is situation-specific and is determined by the appropriateness of the management regime, and adherence to its prescriptions.'¹⁹

The federal Threatened Species Scientific Committee in its 2016 Conservation Advice for Greater Glider (*Petauroides volans*) stated the consequence rating of timber production on the species as being 'severe' over a 'moderate' range.²⁰

The national recovery plan for the Spotted-tailed Quoll stated that '[i]n southern NSW and eastern Victoria, Spotted-tailed Quolls were found to avoid forest patches 0–5 years after selective logging (40–60% canopy cover retained).'²¹

Powerful Owl (*Ninox strenua*) is threatened by '[i]nappropriate forest harvesting practices that have changed forest structure and removed old growth hollow-bearing trees. Loss of hollow-bearing trees reduces the availability of suitable nest sites and prey habitat.'²²

Water production

Forests produce water. Trees release bioparticles from their leaves through photosynthesis, which rise in the air to help create clouds and hence rain. Forests also erosion by binding the soil, slowing water movement across the ground and causing water to seep into the soil.

¹⁶ National Inventory Report Volume 2, Australian Government Department of Industry, Science, Energy and Resources, 2019, see page 31. Available for download at national-inventory-report-2019-volume-2.pdf

¹⁷ Smith, A.P and Andrews, S. 1997. *Koala Habitat, Abundance and Distribution in the Pine Creek Study Area*. A Report to State Forests of NSW. Austeco Environmental Consultants, Armidale.

¹⁸ Cited in Department of Environment and Climate Change NSW, 2008. Recovery plan for the koala (*Phascolarctos cinereus*). NSW Government, Sydney, see p41.

¹⁹ Threatened Species Scientific Committee, 2011, *Phascolarctos cinereus* (Koala) Listing Advice. Koala Listing Advice to the Federal Environment Minister, Australian Government, Canberra, see page 11.

²⁰ Threatened Species Scientific Committee, 2016, *Petauroides volans* (greater glider) [non current] Conservation Advice to the Federal Environment Minister, Australian Government, Canberra, see page 3.

²¹ Department of Environment, Land, Water and Planning. 2016. National Recovery Plan for the Spotted-tailed Quoll *Dasyurus maculatus*. Australian Government, Canberra, see page 10.

²² Powerful Owl – profile, 2017. Threatened species information provided by the Office of Environment and Heritage, NSW Government. Available for viewing at https://www.environment.nsw.gov.au/threatenedspeciesapp/profile.aspx?id=10562

When a system of environmental and economic accounts²³ were used to inform decision making regarding impact of native forest logging in the Central Highlands of Victoria upon water supply to Melbourne,²⁴ the analyses found that native forest logging generated only \$12m in economic value compared to \$310m from water supplies, \$260m from tourism, \$49 M in carbon storage and \$30m in plantation timber. The analyses contributed to the Victorian Government establishing the \$120m Victorian Forestry Plan²⁵

'to assist the industry as it manages its gradual transition away from native forest harvesting [by 2030]. Under the 30-year plan, a \$120 million package will help make sure workers, businesses and communities have the certainty and support they need. This includes ensuring financial assistance, re-employment and re-training support, case management and wellbeing services are made available to any impacted workers.'

Supply chain transparency

Timber and forest products supply chains provide minimal or no visibility to consumers in relation to the impacts of forest products purchased in hardware stores upon food and habitat trees for threatened species (such as Koalas, Greater Gliders, forest owls, Spotted-tailed Quolls), forest carbon storage and sequestration, and hydrological cycles (that is, production of rain leading to generation of water supplies to catchments).

To illustrate, consumers of wood produced from NSW state forests are unable at point-of-sale to confidently chose wood products independently certified to not be food or habitat trees for Australian threatened species. WWF supports much greater verification and traceability through forest products supply chains.

Sunset and buy out wood supply agreements

Significant opportunities exist within the next decade to sunset or buy out wood supply agreements. In the NSW North Coast, particularly relevant timelines are in 2022/23 and 2028. Funds that would otherwise be required to continue subsidising FCNSW or pay out hold4es of wood supply agreements for failing to provide contracted resource volumes could instead be diverted to financing a suite of new protected areas, enhance the capacity of the NSW NPWS for land management and biodiversity conservation, contracting Indigenous Rangers to restore degraded state forests, and securing biodiversity conservation, carbon storage and water provision benefits.

Expansion of the protected areas estate through phasing out native forest logging

WWF supports the global goal of protecting 30% of land by 2030 to provide nature-based solutions to the biodiversity extinction and climate crises.

In NSW, significant opportunities exist to economically diversify regional communities through completing the phase out of native forest logging and transferring ownership and management of

²³ UN Statistical Commission, 2021. *System of Environmental-Economic Accounting—Ecosystem Accounting: Final Draft*. Report prepared by the Committee of Experts on Environmental-Economic Accounting, 1-5 March 2021. Available for download at Ecosystem Accounting | System of Environmental Economic Accounting.

²⁴ Experimental Ecosystem Accounts for the Central Highlands of Victoria. Heather Keith, Michael Vardon, John Stein, Janet Stein and David Lindenmayer. July 2017. Available for viewing at

https://www.nespthreatenedspecies.edu.au/media/w4scmjmg/ecosystem-complete-report v5 higher-quality-digital.pdf

²⁵ Department of Jobs, Precincts and Regions, undated. *Victorian Forestry Plan*, Victorian Government. Available for download at https://dipr.vic.gov.au/forestry/forestry-plan

state forests to the NSW National Parks & Wildlife Service or handback to Indigenous traditional owners. State forests should instead be managed as protected areas to generate additional ecosystem services (conservation, carbon, water, fire management) that will underpin new businesses and jobs in regional areas. Examples of major proposals for establishment of new protected areas include the 175,000 ha Great Koala National Park²⁶ and 7,000 ha Sandy Creek Koala Park²⁷ in the NSW North Coast. The University of Newcastle and Hunter Research Foundation Centre estimate that the Great Koala National Park would

'generate an increase in regional economic output of \$1.2\$ billion, of which \$531\$ million would flow into the region's economy including \$330\$ million in additional wages. The research also determined that the region would benefit from:

- the creation of 9,800+ additional full-time equivalent jobs
- new investment in the region of \$145 million in capital expenditure and \$128 million in operating expenditure
- a boost to the visitor economy of 1 million visitors who will spend \$412 million.²⁸

In relation to koalas, a focus should be on cessation of logging in state forests identified by the NSW Government as supporting koala hubs and Areas of Regional Koala Significance.

Transition to a plantations-based timber industry

The area of NSW plantations shrank by 0.3% in the decade from 2007/08 to 2017/18.²⁹ WWF strongly supports a major expansion of the plantation estate to substantially increase the availability of softwood and hardwood certified to the highest standards to Australian and international consumers. However, this needs to be based on sound business models to avoid repeating the mistakes of previous plantation support programs, credible science, constructive engagement with the plantations and processing sectors, and securing the social licence from local communities and farmers. Estimates of the additional softwood plantation estate in Australia required to satisfy demand to 2050 range from 200,000 ha to as high as 490,000 ha.³⁰ WWF notes these projections relate to softwood rather than projecting additional hardwood plantation estate that would be required to offset lost access to state forests as the phase out of native forest logging continues. Therefore, the additional plantation estate for both softwood and hardwood would be higher. Sustainably grown wood products from plantations have a crucial role in providing construction materials, flooring and finishes that are low carbon and have low embodied energy. Increased production of Australian wood products that are sustainable, appealing to consumers and costeffective are also critical in reducing demand for imports of forest products grown in countries where environmental laws are weak, corruption widespread, compliance enforcement lax and illegal logging common.

²⁶ Great Koala National Park, proposed by the NSW National Parks Association, available for viewing at https://www.gknp.org/ and at https://npansw.org.au/campaigns-2/great-koala-national-park/

²⁷ Pugh, D, 2020. *Proposed Sandy Creek Koala Park*. North Eats Forest Alliance, available for download at https://www.nefa.org.au/koalas

²⁸ University of Newcastle and Hunter Research Foundation Centre, 2021. *Great Koala National Park Economic Impact Analysis and Environmental Benefit Assessment*. Available for download at http://www.hrf.com.au/gknp

Downham, R & Gavran, M 2019, Australian plantation statistics 2019 update, ABARES technical report 19.2, Canberra, May. CC BY 4.0. https://doi.org/10.25814/5cc65ae71465f

³⁰ Whittle *et al. 2019. Economic potential for new plantation establishment in Australia: Outlook to 2050.* Report prepared by ABARES, Australian Government, see page vii.