

**Submission  
No 6**

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

**Name:** Vic Jurskis

**Date Received:** 11 May 2021

---

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

Submission by Vic Jurskis B.Sc. (For.), FIFA, MRAHS

I am an ecological historian with 45 years' experience in forest management and research, a Fellow of the Institute of Foresters of Australia and a Member of the Royal Australian Historical Society. I received a fellowship from J.W. Gottstein Foundation and an M.R. Jacobs Award from Australian Academy of Science to study forest decline across Australia. I represented NSW Forestry Commission at many International Conferences and published numerous papers about forest ecology and fire management. I was Silviculturist for Native Forests. I've published two books on firestick ecology and koalas as well as a chapter in a compendium on drought.

### **Summary**

The timber industry is not sustainable under current regulations which are based upon the wilderness myth and disproven ecological hypotheses. The regulations aim to conserve dysfunctional ecosystems and protect individual species by avoidance rather than restoring a healthy, safe, diverse and productive landscape. Management is not allowed to adapt, and in any case, official monitoring systems are entirely ineffective. Our policy and regulatory framework promotes forest decline, megafires, pestilence and extinctions.

Regulators are ignorant of the obvious cause and alarming progression of chronic eucalypt decline throughout our forests, which I have documented and presented in scientific media for twenty years. Natural Resources Commission (NRC) recently announced yet another million dollar program to identify the underlying causes of 'dieback'. Academics without knowledge and experience of the bush are paid to indulge their specialties whilst ecosystems continue to decline and explode in fire. Instead, we should re-establish healthy and safe landscapes by adaptive management. For example, see attachment A.

Policy and regulations support a *Lock It Up and Let it Burn* conservation paradigm. The uncertain future of the timber industry is but a portion of the huge problem of socially and environmentally unsustainable management across reserves and multiple use forests, both public and private. Black summer was a lesson we didn't need and haven't learnt. Only a paradigm shift can restore healthy, resilient and productive forests.

The Mabo Decision brought a shift in our land tenure paradigm, but the bureaucracy is blind to the implications for land management. Our National Forest Policy Statement (NFPS) seeks to protect 'wilderness' and NSW has a Wilderness Act. Happily, recognition is growing that traditional Aboriginal management maintained healthy and safe landscapes through 40,000 years of climate change. Victor Steffensen says the "*Western-trained mind*" struggles with holism and puts things in boxes. In saying so, he is confusing academics with experienced land and fire managers who know how to reinstate sustainable landscapes but are prevented from doing so by an academic/bureaucratic regulatory alliance driven by green ideology.

Real science indicates that eucalypt forests need mild fire at intervals of 3-6 years to sustain their health, safety, resilience and biodiversity<sup>1</sup>. But sustainable management is illegal in this State. Regulation seeks to protect all things, including irruptive species such as koalas, by avoiding them or buffering them, rather than actively managing for their health and safety. Success is judged on compliance with counter-productive regulations rather than on environmental outcomes. Unmanaged reserves and buffers and filterstrips and wildlife corridors are wicks for explosive wildfires.

The world-record Gospers Mountain holocaust of more than half a million hectares from a single natural ignition in the wilderness should be a 'tipping point' for our society. Forests need people to manage them. The timber industry, like all of Australia, needs healthy, safe and resilient forests. The first step must be to reinstate sustainable fire management. At the same time, the mindset of the regulators has to change. Regulations must be based on science rather than green ideology. Success or failure must be judged on environmental outcomes.

## **TOR 1 (b) the impact of external influences on the timber and forest products industry:**

### *Drought*

Drought is a natural factor that maintains balance in healthy ecosystems by reinforcing the dominance of drought-tolerant species. However, it exacerbates problems in forests that are sick due to lack of mild burning. Eucalypt roots decline in unhealthy soils and trees lose resilience.<sup>2,3</sup> Canopy decline follows root decline, and both promote growth of invasive scrub which makes it difficult to burn in mild conditions. During drought and severe weather, scrubs inevitably explode into uncontrollable firestorms.

### *Water*

#### Forest decline

Cyclic fluctuations in soil moisture maintain the natural distribution of ecosystems, so long as mild burning maintains healthy soils. When wet conditions bring droughts to an end, they exacerbate forest decline. Sick tree roots in unhealthy soils can't cope, whilst invasive scrubs are promoted. On the south coast, the wet that ended the Millennium Drought tipped the balance between invasive species and naturally drought-tolerant understoreys.

In chronically declining dry forests, invasive 'rainforest' species thrived through the drought. When it broke, leaves of banksias and burrawangs turned yellow, indicating phytophthora infection of their sick roots. During the Black Summer Drought, a considerable proportion of banksias died in forests from Bairnsdale to Bega. Invasive scrubs kept growing. Chronic eucalypt decline extended to ridgetop forests which had fully recovered from natural drought scorch during the Millennium Drought.<sup>4</sup> Many eucalypts died.

Senior NRC staff and academic advisors were shown all aspects of this formerly insidious, now stark process during a field trip in November 2019. In March 2020, NRC announced a \$1.3 million program of 'research' to identify the underlying causes of 'dieback'. They rejected the scientific observations of experienced managers who wish to deal with the problem. Academic ecologists/pathologists are ignorant of our ecosystems' fundamental requirements for mild fire. So-called pathogens are symptoms and contributors, not causes of eucalypt decline.<sup>2</sup> For a detailed explanation, please see Attachment B.

#### River red gum

Red gums formed lines or belts along rivers and creeks, in river bends, and around lakes and billabongs. Frequently flooded plains carried reedbeds, and higher plains carried grasslands or open woodlands. After Europeans disrupted Aboriginal burning, high floods during the 1870s established a dense growth of red gum scrubs. Foresters, lessees and jobless refugees from cities thinned the scrubs in the 1890s. River regulation from the early-twentieth century reduced natural flooding, and scrubs invaded lower reedbeds and swamps. These scrubs were also thinned to create forests, and regulators were installed on creeks and runners to manage water in the forests when there were high flows in the rivers.

A century after they were established, NRC 'saved' these 'iconic natural forests' from the communities that created them. The rationale was that climate change had reduced flooding and they would no longer regenerate. Ironically, the well-watered forests growing in what were originally reedbeds above the Barmah Choke were reserved, while the drought-stressed forests in former woodlands below the choke remained available for timber production. Taxpayers funded \$80 million worth of new ditches and dykes to water them. The floods which inevitably ended the drought watered them naturally before the project was finished.

Commercial operations in the drier forests had alleviated drought stress by thinning. After compensation was paid for destroying existing industries, some 'ecological thinning' trials occurred. The timber was left on the ground, interfering with access, aesthetics, recreation and fire safety. We have silly regulations, based on ecological fantasy, to protect 'Coarse Woody Debris'. Aborigines used it for cooking and heating and

building huts and traps. Mitchell travelled this country with bullock teams towing heavy carts and boats. CWD is unnatural heavy fuel. Academics imagine that it is ‘habitat’ providing ‘structural diversity’.<sup>5</sup>

In short

The industry need not be impacted by water management. It can be a part of a solution to water problems.

### *Fire*

Fire is having unprecedented impacts on the industry and our whole society and environment. Gospers Mountain epitomises the problem and the solution. The ‘Wollemi Wilderness’ has a rich human heritage going back more than 10,000 years. During the settlement drought in the early 1790s, Aboriginal fires burnt 24/7/365 in this sandstone country to the northwest of Sydney. Extreme weather conditions were no less frequent than today. In December 1790 at Parramatta, Tench recorded temperature of 43<sup>0</sup>C and NNW wind “*like the blast of a heated oven*”. In February 1791 it was even hotter (42<sup>0</sup>C in Sydney) and the northwest wind “*blew with great violence for three days*”. Lorikeets and flying foxes dropped dead en masse.<sup>6</sup>

In December 1792 “*the heat was extreme; the country was everywhere in flames, the fire had spread to [Arndell’s farm at Toongabbie]; but by the efforts of his own people and the neighbouring settlers it was got under [with hand tools], when an unlucky spark from a tree, which had been on fire to the topmost branch, flying upon the thatch of the hut, it blazed out. All the outbuildings, and thirty bushels of wheat, just got into a stack, were in a few minutes destroyed*”.

Now we have mass evacuations because fire engines and waterbombers can’t save buildings with steel or tile roofs. The sandstone country was healthy and safe 200 years ago because it had light discontinuous fuels. Surveyor-General Mitchell rode his horse through it “*on many a dark night*” whilst Aboriginal youths set grasstrees on fire with stringybark torches to show him the way. Today, it’s virtually impossible to walk through in broad daylight and routinely explodes in severe fire seasons. The endangered broad-headed snake is extinct in Ku-Rin-Gai Chase National Park because scrub has shaded out its basking habitat.<sup>6</sup>

Sixty years of empirical data from forest management in WA show that prescribed burning reduces the incidence and extent of high intensity fires provided that a minimum of 8-10% of the landscape is treated each year. Burning makes little difference in average fire seasons. The benefits occur mostly in extreme seasons, because firestorms and megafires can’t develop in properly managed landscapes.<sup>7</sup> Hence Aborigines survived drought and weather extremes for 40,000 years without boots, overalls, fire engines or advice from academics and fire chiefs.<sup>8</sup>

Wildfire is hugely impacting the industry because governments take advice from academics lacking experience in land and fire management. They don’t understand that fire should be a friend. NSW gives these ‘experts’ millions of dollars. They’ve made models ‘proving’ that prescribed burning doesn’t work and actually threatens biodiversity. They ignorantly claim that landscape maintenance by mild fire has no effect in extreme weather conditions. The experts have never learnt to do it, nor experienced the benefits in severe conditions.

Since we disrupted Aboriginal management there’s never been enough burning done in most of southeastern Australia to make any difference. For example, over a decade at the turn of the Millennium, 0.4% of the Sydney Basin was treated each year by prescribed burning while ten times the area, on average, was incinerated by wildfires. But the experts are worried about the environmental impacts of prescribed burning! Regulations to ‘protect’ individual species or habitats routinely exclude burning or other actions that could give them real protection.

Professor Ross Bradstock provided expert advice to Government on bushfires for more than 13 years leading up to Black Summer. Incredibly, he was an advisor to the subsequent Inquiry. In effect he was invited to judge his own work. The report was entirely predictable. A glance at the Executive Summary shows that the Inquiry failed in its job. It starts with Climate Change and Drought, calls for more research,

emphasises emergency response and evacuation, and mentions some operational matters that are no news to anyone with firefighting experience.

The sting is in the tail “*recommendations for an area-based target [for mild burning] on public land, have now been superseded by more strategic, risk-based approaches driven by much better data and modelling*”. The implications, for community protection, for the (un)sustainability of forest industries and for environmental conservation in general, are horrendous. Strategic breaks around suburbia can’t stop firestorms. Only landscape management can. Disastrous megafires will be a regular occurrence in severe fire seasons. Expenditure on emergency response and ‘recovery’ will continue to escalate. Many more people will die unnecessarily along with many more millions of animals.

The forest industry has always been a part of the solution to sustainable fire management by providing access and resources for management as well as response. Its contraction at the hands of governments informed by green ideology is a part of the increasing fire problem.

### *Regulatory Structures*

These are killing the timber industry because they prevent adaptive management. They are populated by academics/bureaucrats who have never managed land and fire. The regulators have never had to learn from their mistakes. They believe in wilderness and try to minimise active management rather than improving it. If these well paid public servants had deliberately set out to increase costs, reduce productivity and achieve perverse environmental outcomes, they could not have done a better job.

Unfortunately, industry and the forestry profession have embraced our NFPS and Regional Forest Agreements (RFAs) as a socially saleable solution to the threat of green ideology. For example, in 2018, an editorial and accompanying article in *Australian Forestry* by senior environmental bureaucrats reported that RFAs have delivered “*a world-class protected area network for Australia’s forest biodiversity*” and effective monitoring for “*continuous improvement and adaptive management*”.

I wrote to the editor, pointing out that our ‘protected areas’ are suffering chronic decline, megafires and loss of biodiversity. He declined to publish the letter. The NFPS states that we will conserve biodiversity by establishing:

*“dedicated nature conservation reserve systems to protect native forest communities The reserve system will safeguard endangered and vulnerable species and communities”*

Nothing could be further from the truth.<sup>9</sup> After many people and countless millions of animals were immolated in Black Summer, another editorial in *Australian Forestry* reported that “*The fires have shown that current fire management will not ... sustain the full range of ecosystem processes and biodiversity, nor reduce to an acceptable level the impact of wildfires on local and rural communities, forests and ecological communities, biodiversity and wood resources*”.

Our management systems hadn’t suddenly changed. It simply took an unprecedented disaster to alert the editor, who was a senior Federal bureaucrat, that they weren’t working.

NSW has, in any case, been willing to subvert RFAs in the cause of green ideology. For example, in 2016, a critically important volume of mature timber was quarantined in a new koala park. The Government was persuaded by misinformation published by NPWS, to ‘save’ koalas irrupting in dense 35 year old regrowth forests. The timber resource was in unlogged coupes which had been set aside in 1980 to dilute any immediate impacts of logging over time. Declaring a National Park would have overtly contravened the RFA and the approved management system. Instead, four new State Forest Flora Reserves were established and placed under NPWS control.<sup>10</sup>

The RFA had provided multimillion dollar subsidies for new drying and dressing facilities to add value to the reduced timber resource as a result of new National Parks designed to conserve koalas, amongst other

things. NPWS got another bite of the cherry and the last Eden sawmill with its expensive new facility that was supplying beautiful timber for classy furniture in the city, closed down.

The NFPS states that “*there will be complementary management outside reserves, in public native forests that are available for wood production*”. In fact, NSW regulatory framework reinforces the dual problems of ‘protection’ by avoidance and site by site by species by species assessments of imagined environmental impacts. It is further complicated by separate layers of assessment and enforcement through NRC and Environment Protection Authority (EPA). This is exacerbated by regulations based on green ideology rather than science, and monitoring of compliance with these regulations rather than environmental outcomes.

### *Habitat Protection*

#### Koala

Koalas rely on soft young shoots for nutrition, so they are rare in healthy mature forests. Since Aboriginal burning was disrupted, they have repeatedly irrupted in dense new growth, and in forests constantly resprouting as they decline from lack of mild fire. In 1991, research on the north coast found that there were 3 times as many koalas in dense young regrowth forests and plantations compared to old growth forests.

In 1992/3 radiotracking of a koala in a mosaic of unlogged and intensively logged coupes at Eden showed that it was spending a disproportionate amount of time in the ‘woodchipped’ coupes. The food value of the retained trees had increased with their improved access to sunlight, water and nutrients, and the koala was obviously enjoying the flush of new growth.

*Sydney Morning Herald* published an article headed: *Report attacks koala research:*

*Forestry Commission’s research program should be taken over by experienced biologists, according to two Government reports. The reports claim the research will not properly assess the impact of logging on the koalas. In one of the leaked reports, NPWS calls for a moratorium on logging.*

We subsequently found more evidence that koalas on other sites were favoured by logging, and our research was shut down by NPWS. At the same time, young regrowth forests and plantations at Coffs Harbour were reserved as National Park to ‘save’ koalas. Since then, increasing reservation and reduced burning have caused chronic eucalypt decline to extend through the forests. Now there are five times as many koalas on the north coast as previously thought and they are no longer concentrated in young forests.

Dr. Brad Law of Dept. of Primary Industries (DPI) recently found that koalas are not affected by “*timber harvesting intensity, time since harvesting or local landscape extent of harvesting or old growth*”, but he claimed that “*localised studies are needed to optimise prescriptions for koalas*”. The obvious question for Dr. Law is why? NRC didn’t ask this question. Instead, they’ve given Law an additional \$300,000 to study the impacts of logging on koalas.

#### Glossy Black Cockatoo

These birds rely on seeds from ‘cones’ on sheoak trees which occurred naturally as mature individuals scattered through open grassy forests. They are naturally sparse. Lack of mild burning has promoted development of dense sheoak scrubs of spindly young trees. There are less seed cones on the spindly bushes and the birds have to swing around in them like gymnasts to get the seeds. Naturally, they prefer feeding in mature open grown trees. Mild burning with or without thinning and selective logging can speed the development of mature trees. Instead, the regulations protect the scrubs which are hazards that can carry lethal fire into the older trees.

#### Eastern Brown Treecreeper and Hastings River Mouse

The eastern brown treecreeper disappeared along with its open grassy habitat, when two State forests in northwestern NSW were converted to national parks and ‘protected’ from grazing and burning. Hastings River mice thrive in grazed and burnt forest. They’ve been lost from ‘protected’ areas in national parks in northeastern New South Wales, where their grassy habitat has been choked out by scrub and overrun by

bush rats and antechinus. Incredibly, the environmental bureaucracy has banned grazing and burning as well as logging from the habitats of these mice in State Forests.

### Rocky Outcrops

Specialised wildlife rely on the unique combination of sunshine, moisture and lack of soil afforded by outcrops. Under Aboriginal management they were protected from fire by low and discontinuous fuels in surrounding forests as well as lack of fuels on the outcrops themselves. Now, environmental regulations ‘protect’ them with buffers. That is, the prescriptions promote scrub growth which shades them out and delivers fuels which can carry high intensity fires into these formerly safe habitats for fire-sensitive geophytic plants.

During harvesting of eucalypt regrowth around outcrops in a failed section of pine plantation on Brown Mountain, the industry was prohibited from felling pines that were shading the outcrops and littering them with dead needles. Yet, considerable funds have been spent on either felling to waste or poisoning pines in National Parks where there aren’t any outcrops. The regulators and enforcers seem to revel in achieving perverse outcomes by enforcing compliance with inappropriate regulations.

### Spotted Gum

Seeds are dispersed from eucalypt canopies by sunshine and wind. Eucalypt seeds are very fine with negligible reserves of food and moisture. They germinate as soon as they experience sufficient warmth and moisture and then mostly die before their primordial roots can penetrate the soil. Occasionally, seeds land on moist ground recently bared by a mild fire. If they germinate and establish roots before the surface soil dries out, seedlings can survive. Spotted gum seedlings, like most eucalypts, develop a fire-resistant woody ‘tuber’ of resprouting tissue at the ground surface. Once the roots have a grip on the soil, they can feed a developing lignotuber for decades whilst its shoots are continually burnt back to the ground by mild fires.

The shoots cannot develop into saplings until a mature tree dies or falls to create a sunny and airy gap in the canopy. In the absence of frequent mild burning, lignotubers die. They are shaded out by invasive understoreys and plagued by pests and pathogens in the increasingly damp and still microclimate. Our forests require frequent fire to maintain their health, resilience and regenerative capacity. In 1985, NSW’s Silviculturist wrote about “*The South Coast Problem*” where “*moister sites often lack a lignotuber pool*”.

Twenty years later, Professor David Keith, an academic advisor to the regulators, described spotted gum forests suffering *the south coast problem* as *wet sclerophyll forests*. The Bush Fire Environmental Assessment Code (BFEAC) specifies a minimum of 15 years between low intensity fires in these forests. After 15 years it is virtually impossible to reintroduce low intensity fire to declining scrubby moist forest. Most of our forests require rehabilitation and reintroduction of mild fire regimes. However, this is illegal. The health, resilience and regenerative capacity of our native forests is being destroyed by regulations.

There is an outlier of so-called *Southern Lowland Wet Sclerophyll Forest* in Sydney, known as *Pittwater Spotted Gum Forest*. It is listed by the Threatened Species Scientific Committee as an Endangered Ecological Community. It is one of many EECs that are officially threatened by “High Frequency Fire” – listed by the TSSC as a Key Threatening Process. The **real** KTP is non-management of forests in accordance with the unscientific deliberations of the TSSC.

Five years ago, DPI identified 44,000 hectares of so called BMAD<sup>a</sup> on the north coast, comprising 4% of the survey area. This is a huge underestimate of the area of sick forest, representing only areas of dead or near dead canopy. Forestry Corporation has identified that about a third of the forest has impenetrable understorey. Probably as much again is not quite impenetrable, and other types of sick forest have thick litter layers or groundstoreys. The majority of the forest is declining in health.

<sup>a</sup> chronically declining forest plagued by psyllids and, consequently, by bellbirds which eat psyllids

Habitat loss and degradation by regulation

**I would like to provide more detailed information and examples, in the forest, to the Inquiry.** Resilient, open, grassy and safe habitats with a diversity of wildlife are being lost to dangerous homogenous scrubs as a direct result of environmental regulations. Regulators and their advisors typically lack the most basic understanding of ecology and sustainable fire management. We urgently need a shift in our conservation paradigm and a culture change in the bureaucracy.

*Impact of Local, State and Federal Policies Regarding Climate Change and Plantation Establishment*

Policies regarding climate change

Government policies seem to be based on a false presumption that all sorts of species and ecosystem processes are threatened by climate change. On this basis, additional ‘protections’ are applied which have adverse impacts on industry and, at best, no benefits for target species/processes. The resilience of species and ecological processes can be restored by reinstating sustainable fire regimes and thinning unnaturally dense stands.

There is a large volume of literature on adverse environmental impacts of climate change, which can be disproved by the most basic scientific observations. Numerous examples all over Australia, where healthy and declining stands occur side by side, illustrate that lack of appropriate management is our major environmental problem. For examples, please see attachment A.

Policies regarding climate change and plantation establishment

I’m not familiar with these policies, but I assume that they seek to address potentially greater use of natural water resources by timber plantations compared to alternative land uses. Any such policies will have unnecessarily adverse impacts on the industry unless they are based on science. Luckily, there is a wealth of scientific knowledge that can inform them.

For example, break of slope plantations can repair lowlands damaged by salinity as a consequence of rising watertables caused by clearing. Since plantation establishment at the expense of native vegetation is no longer permitted, policies need to be based on a realistic assessment of potential impacts of plantations compared to the natural vegetation before post-European clearing and development. They must also be considered in the context of catchment-specific water impoundment, diversion and utilisation developments.

Both plantations and native forests can be successfully managed to obtain any desired balance between timber production and water yield whilst enhancing biodiversity.<sup>11</sup> Blanket policies are inappropriate. Regulations should specify required outcomes for particular catchments and allow managers to determine how best to achieve them. Outcomes can then be objectively monitored.

**TOR 1 (f) the role of the government in addressing key environmental challenges to the industry, including funding and support to encourage improvements in land use management**

Government is failing to address **the** key environmental challenge in Australia. That is unsustainable fire regimes causing decline of forest health, safety, biodiversity and productivity as well as unprecedented death and destruction. Forest decline and megafires are two sides of a coin. Standing timber is burnt whilst growth is lost in unburnt forests. There are long term reductions in stream flow as a result of increased evaporation from dense scrub in long unburnt forests and increased transpiration from dense eucalypt regrowth generated by high intensity wildfires. Massive carbon emissions from entirely preventable megafires are not being brought to account.<sup>12</sup>

Homogenisation and loss of biodiversity in long unburnt forests is exacerbated by dense germination and resprouting of invasive species after high intensity fires. Flooding rains bring an end to droughts and, nowadays, to uncontrollable megafires. Heavy rains on bare, hydrophobic soils cause massive erosion, siltation which fills dams and smothers critical habitats in streams, pollution, fish kills and so on.



The vast majority of funding which is supposed to encourage improved land management is having the opposite effect because it is entrenching the failed lock it up and let it burn conservation paradigm at the expense of active adaptive management. However, an even bigger problem is the huge ever-increasing expenditure on emergency response and ‘recovery’ at the expense of improved management.

### **TOR 1 (g) the environmental impact and sustainability of native forest logging, including following the 2019/20 bushfire season**

Native forest logging could have great cost-effective environmental benefits, especially following Black Summer, if it were regulated on scientific principles rather than green ideology. It needs to be directed by experienced land and fire managers rather than academic bureaucrats. Native forestry is a fundamentally sustainable industry using a renewable solar-generated resource which can be harvested and processed with minimal external inputs. It can efficiently recycle waste or use it as bioenergy.

The green ideology currently driving forest mismanagement across all tenures is remarkable in its hypocrisy. Native forestry has not been responsible for any species extinctions. Unsustainable fire regimes have caused most of our famous extinctions. Those extinctions have been in areas that have never been commercial forests. Yet our environmental bureaucracy continues to focus on constraining or eliminating the forest industry and imposing unsustainable fire regimes across the landscape.<sup>9</sup>

After Black Summer, the only way that we can hope to re-establish sustainable fire management is in co-operation with the industry. We’ve already seen cost and efficiency benefits to post-fire rehabilitation by salvage of timber from roadside clearing. We need to target salvage logging to maximise the potential benefits in rehabilitation to minimise post-fire erosion. We must use harvesting to assist control of scrub growth stimulated by wildfire, and to set our forests up for reintroduction of sustainable fire regimes.

### **TOR 1 (i) best practices in other Australian and international jurisdictions in relation to the sustainability of the timber and forest products industry.**

Yale University has an Environmental Performance Index for forest management. When I visited Lithuania in 2013, I found that they ranked No. 1 in the world on Yale’s index. Australia ranked near the bottom at 123 out of 132 countries. Back then, 1% of Lithuania’s forests were in conservation reserves, compared to 21% of Australian forests. Lithuania sold 8 million cubic metres of logs from 2 million hectares of forests. With a gross annual increment of 16 million cubic metres, this is clearly a sustainable yield.

NSW sold 5 million cubic metres from 17 million hectares. No reliable figures for increment in multiple use native forests are currently available in NSW, because real volume X age measurements have been discontinued and losses due to forest decline, megafires and quarantine by regulation haven’t been measured. Yields are allocated on the basis of crude estimates based on political imperatives rather than science. Current yields obviously cannot be sustained unless we change our conservation paradigm.

### **Recommendations**

NSW must revise policies and regulations to allow active, adaptive management and restore sustainability:

- Restrictions on mild burning must be eliminated, especially the BFEAC.
- The Centre for Environmental Risk Management of Bushfires and NSW Bushfire Risk Management Research Hub should be disbanded. The funding should go towards on ground works, directed by experienced land and fire managers, to restore a healthy and safe landscape.
- Regulation of forestry must be revised to reflect science rather than green ideology.
- The roles of Chief Scientist and Commissioner of NRC must be separated.
- The Chief Scientist should be directed to review the oversight of forest monitoring and research by NRC and regulations/enforcement of compliance by EPA.
- Use of selected academics to assist reviews/inquiries should cease. Evidence from industry, land managers, academia and bureaucracy should be judged on its merits.

## References

- <sup>1</sup> <https://www.bushfirecrc.com/resources/pages-129-138-human-fire-maintains-balance-nature>
- <sup>2</sup> <https://www.sciencedirect.com/science/article/abs/pii/S0378112705003130>
- <sup>3</sup> <https://www.sciencedirect.com/science/article/abs/pii/S0378112708005008>
- <sup>4</sup> Jurskis, V. 2008. Drought as a factor in tree declines and diebacks. In *Droughts: Causes, Effects and Predictions*. Ed. J.M. Sanchez. Nova Science Publishers Inc., New York. pp. 331-41.
- <sup>5</sup> <https://www.sciencedirect.com/science/article/abs/pii/S0378112711001551>
- <sup>6</sup> <https://fireecology.springeropen.com/articles/10.4996/fireecology.0903008>
- <sup>7</sup> [https://www.academia.edu/13060928/Long\\_term\\_impacts\\_of\\_prescribed\\_burning\\_on\\_regional\\_extent\\_and\\_incidence\\_of\\_wildfires\\_Evidence\\_from\\_50\\_years\\_of\\_active\\_fire\\_management\\_in\\_SW\\_Australian\\_forests](https://www.academia.edu/13060928/Long_term_impacts_of_prescribed_burning_on_regional_extent_and_incidence_of_wildfires_Evidence_from_50_years_of_active_fire_management_in_SW_Australian_forests)
- <sup>8</sup> <http://www.sciencepublishinggroup.com/journal/paperinfo?journalid=231&doi=10.11648/j.eeb.20200504.17>
- <sup>9</sup> [https://www.parliament.vic.gov.au/images/stories/committees/SCEP/Ecosystem\\_Decline/submissions/S288\\_-\\_The\\_Howitt\\_Society\\_Redacted.pdf](https://www.parliament.vic.gov.au/images/stories/committees/SCEP/Ecosystem_Decline/submissions/S288_-_The_Howitt_Society_Redacted.pdf)
- <sup>10</sup> <https://www.environment.nsw.gov.au/news/nsw-government-protects-south-coast-koalas-and-local-timber-industry>
- <sup>11</sup> Bi, H., Jurskis, V., Cai, S. 2001 Models for multiple use management of regrowth forests in southeast New South Wales, Australia. In: Proceedings of IUFRO conference on Forest Modelling for Ecosystem Management, Forest Certification, and Sustainable Management, August 12-18, 2001, University of British Columbia, Vancouver, Canada.
- <sup>12</sup> <https://www.sciencedirect.com/science/article/pii/S0378112721001973?dgcid=author>

Please note that I am happy to supply the Committee with full copies of the references which are not linked and the linked references which are not open-access.