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

Re TOR 1. (b) *the impact of external influences on the timber and forest products industry, including drought, water, fire, regulatory structures, habitat protection and local, state and federal policies regarding climate change.*

I'd like to thank the Chairman and Committee for the chance to talk with you today and give evidence tomorrow. I'll make a brief opening statement now and give you 4 documents which I'll table without further comment tomorrow, so that you've got the best possible opportunity to question me in the limited time available.

My evidence addresses TOR 1(b) the impacts of drought, water, fire, regulations, habitat protection and so on, on the industry.

Fire impacts not only the industry, but forests generally. Most public forests are reserved from timber production, and fire affects all the other external factors – drought, water, habitat etc., which relate to all our forests. The academics and bureaucrats who've created the regulations governing our industry and our environment in general, don't understand the critical importance of man-made fire. Black Summer demonstrated beyond shadow of doubt that our current management is unsustainable.

Your committee has a unique opportunity to challenge the green ideology, entrenched in NSW's bureaucracy, that is ruining our environment, our economy and our society. The timber and forest products industry should be our socioeconomic and environmental salvation.

Ecological Maintenance, not Hazard Reduction

Aborigines changed fire regimes and vegetation across Sahul/Australia from about 50,000 years ago. They burnt out dense dark megafaunal habitat, replacing it with open grassy ecosystems which they maintained by mild burning. Two centuries ago, the worst drought in 500 years greeted the first Europeans. There were three consecutive extreme fire seasons from 1790 to 1793. Aboriginal fires were burning 24/7, but there were no firestorms because fuels were light and discontinuous.

After 1798, smallpox and influenza affected Aboriginal management from Torres Strait to the Southern Ocean. European pastoralists followed and contributed to disruption of mild burning. Our world-famous small mammal extinctions had nothing to do with logging or clearing. They were in dry country, not forest, where scrub or heavy tussocks choked out diverse ground layers of herbs and seeds and truffles that fed the small mammals.

Lightning strikes ignited megafires in hot and dry seasons. Measurements of charcoal in sediment cores indicate an unprecedented level of biomass burning in 70,000 years of record after Europeans arrived. From the early 20th Century, forest services tried to suppress fire. By mid-Century, scrub-infested forests were suffering pestilence and holocaust. Thousands of hectares of hydro catchments were aerially sprayed with insecticides in diesel to control insects. Three towns in WA were destroyed by one megafire. Foresters woke up and employed broad-area burning with aerial ignition in the 1960s.

From the late 60s, forest health and safety improved as biomass burning/charcoal deposition decreased markedly against a trend of rising temperature. There were no outbreaks of chronic eucalypt decline (so-called dieback) in NSW's forests for a quarter of a century. From the 80s, academics began to argue that mild burning is bad for the environment. In 1987, NSW passed the Wilderness Act. In 1992, 'Lock It Up and Let It Burn' was enshrined in our National Forest Policy. Black Summer was an inevitable consequence, and there's worse to come.

The 2019/20 weather was not unprecedented, but we set a world record for the largest fire from a single lightning ignition in the new wilderness. Fairdinkum science agrees with traditional Aboriginal knowledge. Victor Steffensen says: *without the right fire we get upside-down country – thin on top and thick underneath – damp soils and sick trees with lazy roots*. Studies at Eden show that N accumulates in soil and C:N is reduced. Acidity and availability of microtoxins (e.g. Al, Mn) increases. Nutrients, especially P, are locked up. Tree roots get sick, canopies decline, shrub understoreys boom, including N-fixing acacias and casuarinas. Mulch/fuel accumulates. Increasing topsoil moisture compounds the process.

Mild fire at intervals of ~ 5 years can maintain dynamically stable nutrient cycling and healthy forests. It also maintains delicate and diverse ground layers. In a long-term burning study, 25 km southwest of Eden, we found that species richness declined within 3 or 4 years of burning, as common shrubs developed. A longer-term hydrology study 35 km south-southwest of Eden showed that the density of a few large shrubs increased by 1500 stems per hectare over 20 years after wildfire, choking out diversity and creating explosive ladder fuels.

Scrub is not flammable in mild weather, but explodes into unstoppable firestorms under extreme conditions, whether ignited by accident or arson or lightning. Sixty years of empirical data from WA show that mild burning reduces the extent and incidence of wildfires by preventing megafires in extreme seasons, provided that a minimum of 8-10% of the landscape is treated annually. The benefits persist for up to 6 years.

So, unless at least half the landscape is properly maintained, there will be megafires in bad seasons. But whether or not there are megafires, sick trees die in droughts as dark green invasive understoreys continue to thrive. As trees decline, their pests proliferate. The Eden Burning Study showed that mistletoes, sap-sucking psyllids and bellbirds which eat psyllids, all proliferated in the absence of maintenance by low intensity fire.

Eucalypt forests require mild fires at 3 to 6 year intervals to maintain their health, safety, resilience, biodiversity and productivity. Sustainable fire management is currently illegal in NSW.

Re-friending Fire – the Key to Sustainability

When forest services were set up early in the 20th Century, they tried to suppress fire. After pestilence and megafires, they reintroduced mild fire in the 1960s with broad area burning and aerial ignition. Forest health and fire safety improved. In the late 70s and early 80s, green academics started to argue that mild burning would harm the environment.

In the 1990s, *Lock It Up and Let It Burn* was enshrined in our National Forest Policy which stems from a wilderness mentality. Burning was reduced, pestilence and holocaust increased. In 2003, after four people were killed and 500 homes were destroyed in Canberra, a Federal Parliamentary Inquiry took evidence from experienced land managers across Australia and concluded that lack of mild burning was the problem.

NSW bureaucracy did not participate. A Greens member wrote a dissenting report based on a submission from Professor Whelan of Wollongong University, who said that burning threatened biodiversity. Council of Australian Governments set up another Inquiry in 2004, headed by an ex-fire chief from South Australia, a professor of forestry at ANU and Whelan. There were no public hearings and no input from experienced managers who know fire as a friend.

The COAG Inquiry gave us 'education' – "*learning to live with bushfires*", evacuation and emergency response instead of sustainable land and fire management. Since then, more than 200 people and countless millions of animals have been killed. The same year NPWS gave us Guidelines for Ecologically Sustainable Fire Management – the Bradstock Intervals – which now make it effectively illegal to burn properly.

Whelan set up a bushfire research group at Wollongong Uni and recruited Bradstock who took over the running in 2006. Since then they've consumed more than $18 million, which would have been much better spent by experienced managers on preventative maintenance. In 2015, the academics published a model which 'proves' that burning doesn't work in most of southeastern Australia.

Sixty years of empirical data in the southwest prove that burning is the only thing that can prevent megafires in bad seasons, providing a minimum of around 10% is burnt each year. But NSW was burning about 1%. The academics said burning doesn't work in the southeast because the bush is different. NSW gave them $4 million to set up the Bushfire Risk Management Research Hub. Ongoing bad advice from these academics gave us Black Summer.

Early in 2019, I predicted that all the eucalypt forest from Bairnsdale to Sydney would explode in the next bad season. There's a bit to the northwest of Eden that didn't, because we didn't get the extreme northwesterly weather. When you look at the devastation south of Eden you need to remember that this happened under relatively mild southerly weather, and could have been prevented by backburning under ideal conditions a few days earlier. Eventually we'll get the bad weather and Eden will burn too.

After Black Summer, NSW's Independent Inquiry took advice, not evidence, from the Bushfire Hub. The result was a foregone conclusion. It is a bitter irony that they are now effectively telling us how and where to burn. They've teamed up with academics from Melbourne Uni. to impose fire behaviour modelling on the planning system. We will have some wide computer-designed 'fire breaks' around suburbia, instead of healthy and safe landscapes. Firebreaks don't work. It's dangerous lunacy.

NSW Natural Resources Commission supposedly "*provides independent, evidence-based advice to sustainably manage natural resources*". Late last year NRC announced: "***Threatened species habitat at risk from a hotter climate:*** *University of Wollongong/NSW Bushfire Research Hub, conducted the research on behalf of the NRC. According to the lead researcher, Emeritus Professor Ross Bradstock, "The 2019/20 fires mean now only 10 percent of forested areas are currently within their recommended fire frequency thresholds".*"

This indicates a critical systemic problem for the sustainability and future of the timber industry. The problem is compounded because the Chief Scientist, who is supposed to provide independent advice to Government at a higher level, is also Commissioner of NRC.

Lock It Up and Let It Burn for Koalas

Before Black Summer, I wrote in *The Great Koala Scam* that "*Koalas are a rare species in healthy forests. Where they are plentiful, their numbers must inevitably crash, and fires will inevitably explode*".

They were naturally rare because they eat soft young shoots which are a rare commodity in healthy mature forests. There are many more koalas over a much wider area than there were when Europeans arrived. They didn't live in the grassy valleys. After mild burning was disrupted, dense young forests grew in the foothills. Koalas irrupted and invaded the valleys where declining paddock trees were continually resprouting soft young shoots.

Growing populations accelerated the decline and they exceeded the carrying capacity. Koalas suffered malnutrition and disease. People shot them and sold their fur. But the more adults that were shot, the more young survived. Populations were still increasing when the Federation Drought frizzled all the leaves and killed most of the trees. Koalas disappeared from the valleys, but healthy, stable, low-density populations persisted unnoticed in the forests.

From the mid-20th Century, intensive harvesting operations on the north coast using dozers and chainsaws created dense young regrowth forests where koalas thrived and multiplied. By 1991, koalas were 3 times more abundant in dense regrowth and plantations than in oldgrowth or selectively logged forests. So young forests were locked up to 'save' koalas.

National Parks and Wildlife Service started a campaign in 1990 using koalas to increase their estate at the expense of multiple use forests. They manipulated data from postal surveys to misrepresent that koalas are declining and the remaining few are concentrated in timber producing forests. As more areas have been locked up and mild burning has been generally reduced, chronic decline has affected young, mature and oldgrowth forests. Koalas have increased across the landscape and are re-invading the now rural-residential and suburban areas from which they disappeared in the Federation Drought.

In 2017, surveys by Department of Primary Industries using effective methods established that north coast koalas were five times more abundant than previously reported and their density/distribution is totally unaffected by harvesting operations. The 'site occupancy' (by males) was 64% irrespective of: whether there had been any logging; the intensity of logging; or time since logging.

DPI misrepresented these findings as well as the results of earlier studies showing that intensive harvesting of healthy forests favoured koalas. They reported that: "*Retention forestry has a significant role to play in mitigating harvesting impacts, but localised studies are needed to optimise prescriptions for koalas*". Natural Resources Commission gave them more money to study the non-existent effects of current harvesting on koalas.

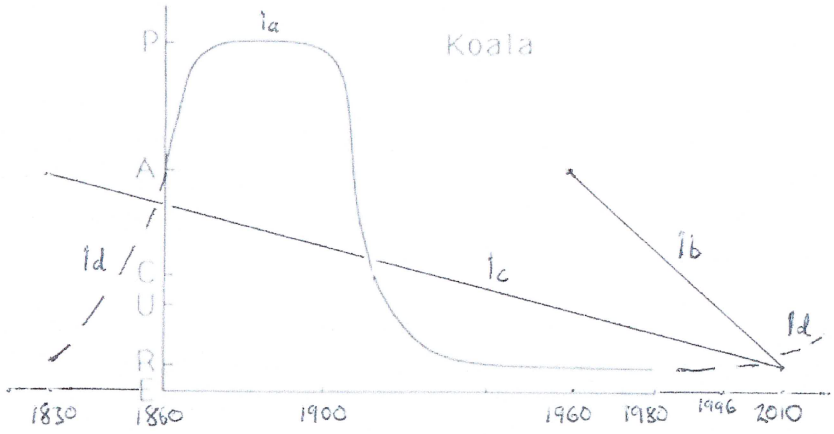
In 2020, a before and after study showed that selective harvest had no impact on koalas and a retrospective study showed that there was no difference in koala numbers on sites that had been heavily logged 5-10 years earlier. **Koalas were still increasing throughout the forests, with average occupancy now up to 97%. Incredibly, the DPI researchers didn't bother to discuss the possible reasons**.

DPI reported that "*Regulated timber harvesting does not reduce koala density*". NRC said "*Overall, the research findings suggest that the range of selective harvesting rates applied at the research sites consistent with the Coastal IFOA conditions and protocols did not adversely impact koala density*".

In my opinion, wasting time and money on research of an irruptive species under no threat is bad. So is the wasted effort on survey and application of unnecessary prescriptions. But the failure of both DPI and NRC to properly analyse the data and the implications, in the context of historical information and other published scientific research, indicates a major systemic failure in NSW's environmental bureaucracy.

Meanwhile, in 2017, The detection rate in a new koala park in Eden Region was 88% - higher than on the north coast. The park was created to save supposedly the last handful of koalas from a near extinct regional population. This subpopulation irrupted within two decades of high intensity wildfire and logging at Murrah-Mumbulla in 1980.

This graph indicates the true history of koalas in the Eden Region and two alternative versions by NPWS:



P plague, A abundant, C common, U Uncommon, R rare, E extinct

The solid line 1a, published by NPWS, shows that koalas were irrupting in 1860, in plagues at the turn of the century, that they crashed in the Federation Drought and that they remained in low densities in the forests. 1b and 1c show two alternative versions of the decline story used to justify the new koala park: a "*drastic decline*" either since Europeans arrived or since intensive harvesting commenced in the 1960s.

Dashed line 1d on the left shows the earlier history that NPWS neglected. Europeans arrived in 1830 and saw no koalas for three decades. 1d on the right shows the recent history that NPWS have also neglected. Field surveys by forestry and timber workers identified that koala densities were relatively high in the northeast by 1997. Given the latest survey by DPI, the true curve is probably steeper, reaching as high as U = uncommon at the end of the X axis.

I was in charge of Forestry Commission koala research at Eden in the 1990s. We found that koalas were happily living invisibly in large home ranges of ~ 100 hectares, with thousands of trees. They were travelling kilometers to breed. When we found evidence of a koala preferentially using recently harvested coupes, NPWS leaked 'information' to the media that we were incompetent and shut down our radiotracking program.

They organized postal surveys to show that koalas were disappearing from most of the region. We organized playback and listening surveys which found that koalas were present throughout the region, but were 10 times more abundant in the northeast corner. NPWS used koalas to take over forests at Tantawangalo and Murrah under the Regional Forest Agreement. Then they used volunteers on laborious and ineffective surveys for dung, in small areas, to paint a picture of koala decline.

In 2014 they published a model supposedly showing that koalas were extinct in the region except for a few in the 'climate refuge' in the northeast. The government announced a new koala park in the area. It is still State Forest, but under National Parks control. It contains some high-quality sawlog resource committed under the RFA but now locked up to burn. Dedicating it as National Park would have been a blatant breach of the RFA with the Federal Government. Dedicating it as State Forest Flora Reserve was, in my opinion, only a slightly more subtle breach of the agreement.

In 2019, I saw a koala crossing the Princes Highway south of Eden where they're supposedly extinct. I took photos and tabled them at NSW Koala Inquiry "*to illustrate the problem with koalas and fires*". After the

bush exploded in Black Summer, I asked the Chair for permission to table before and after photos: "*These two photos together are very clearly illustrative of the process of forest decline in the absence of mild fire, invasion of scrub, irruption of koalas, development of explosive, three-dimensionally continuous fuels, consequent crown fire and the subsequent recovery process.*" Ms Faehrmann wasn't interested.

I hope that this inquiry might be.

The koala is in the fork of a small tree in the right-hand foreground of the first picture. Koalas are one of many species which benefit from chronic eucalypt decline in the absence of sustainable fire management. Sap-sucking psyllids also respond positively to eucalypt decline, as do bellbirds, which eat psyllids. But we are doing 'research' to try and increase koalas at the same time as trying to reduce psyllids and bellbirds.

NRC is right now (4-5 April 2022) hosting a talkfest on 'dieback', including so-called Bell Miner Associated Dieback, amongst the recipients of $1 million wasted funding.

You can see in the second photo, the profusion of soft new growth soon after the fire. The Strzelecki koalas, supposedly the last natural population in Victoria, have experienced 20 megafires in 200 years including Black Thursday 1851, Red Tuesday 1898, Black Friday 1939 and Black Saturday 2009. They are still in unnaturally high densities.

Koalas are used by multimillion dollar multinational 'charity' organisations such as World Wildlife Fund and Australian Koala Foundation as a so-called flagship for conservation and an 'umbrella species' to help save the not so cute. Fact is that Lock It Up and Let it Burn is pushing the truly endangered species to extinction because they rely on diverse grassy understoreys which are choked out by scrub.