Cultural Burning – A Road Map for Future Broadscale Implementation

Background

The Australian biota (the animal and plant life of a particular region, habitat, or geological period) was shaped over tens of thousands of years by Aboriginal fire management. Aboriginal fire management regimes, in turn modified the impact that lightning caused fires had on flora and fauna across the continent.

Over the past two centuries this management regime has been removed from southern Australia. The loss of traditional management and reduced areas of low intensity burning by landowners and managers across private and public land, has increased the frequency and area burnt by high intensity bushfires. Consequently, flora and fauna diversity and overall health of the remaining native forests and other natural ecosystems has been compromised.

In recent years, small cultural burning programs have been undertaken on the NSW South Coast. These programs are a first step in restoring country over future decades.

Indigenous fire methods protect land before and after the Tathra bushfire - ABC News

Cultural burning and soils testing with the Batemans Bay Local Aboriginal Land Council | NSW Environment and Heritage

If the scale of cultural burning is to be increased, there are a number of barriers that must be addressed.

Barrier 1: Legislative Framework

Some Relevant Legislation.

NSW Biodiversity Conservation Act 2016

SCHEDULE 4 –KEY THREATENING PROCESSES

High frequency fire resulting in the disruption of life cycle processes in plants and animals and loss of vegetation structure and composition.

The listing of *"high frequency fire"* as a threatening process stems from the failure of ecologists and legislative bureaucrats to understand that high frequency, high intensity fire is THE threatening process for biodiversity, soil and water and other landscape values. High frequency, LOW INTENSITY fire is more typical of fire regimes prior to 1788.

However, the legislative red tape is focussed on managed fire, creating barriers that stifle current broad scale low intensity planned burns. As the cultural burning footprint expands, with potentially shorter return times, current legislation will also obstruct a broader adoption of this megafire mitigation and country restoring program.

Extracts from the NSW Rural Fires Act 1997 below, show the paperwork that needs to be prepared by landowners and managers, before any planned burning can be undertaken. It is somewhat ironic, that despite the ecological consequences of the 2019-20 high intensity megafires on the Greater Blue Mountains World Heritage Area (GBMWHA), nothing has changed from a legislative perspective. The area burnt in the GBMWHA was 15.55 percent of the total area burnt in NSW. See the table below.

Eden Community Access Centre Inc.

GBMWHA Burnt

GBMWHA Burnt	Area (Ha)	Burnt (Ha)	% Burnt
Wollemi NP	502,600	380,826	76
Blue Mountains NP	269,200	196,381	73
Yengo NP	167,600	155,927	93
Kangangra-Boyd NP	71,600	62,646	87
Nattai NP	50,660	43,467	86
Gardens of Stone NP	15,120	12,693	84
Jenolan KCR	3,142	3,078	98
Thirlmere Lakes NP	662	292	44
Total GBMWHA	**1,080,588**	**855,310**	**79**

GBMWHA Native Fauna Impacted

Fauna	Number Impacted by GBMWHA Fire
Mammals (Excl. bats)	15.0 million
Birds	17.7 million
Reptiles	110.4 million
Total GBMWHA	**143.1 million**

[* Density of mammals, birds and reptiles in NSW is based on C. Johnson, H. Cogger, C. Dickman and H. Ford (2007), *Impacts of Landclearing: The Impacts of Approved Clearing of Native Vegetation on Australian Wildlife in New South Wales*, WWF-Australia, Sydney.]

https://bluemountains.org.au/bushfires.shtml

Three billion (3,000,000,000) birds, mammals and reptiles was the estimated national fauna death toll resulting from the 2019-20 megafire disaster.

Despite this disaster, NSW and federal environmental regulatory frameworks remain silent on the risk that high intensity megafires pose to the environment and human lives, property and infrastructure. In contrast, the use of managed low intensity fire is highly regulated.

Some relevant sections of the *Rural Fires Act 1997,* (RF Act) that apply to bushfire hazard reduction work (including burning), are below. The Acts referenced in Section 100C (4) the RF Act, also impose environmental barriers to low intensity burning, but are also silent on the disastrous social, environmental and economic consequences of high intensity megafires.

However, any breach of the legislation by private and some public land managers undertaking planned burning are subject to court action, fines and penalties. Penalties are applied, regardless of whether there is any measurable environmental harm.

100C Carrying out bush fire hazard reduction work.

(4) Bush fire hazard reduction work may be carried out on land despite any requirement for a licence, approval, consent or other authorisation for the work made by the Biodiversity

Conservation Act 2016, the National Parks and Wildlife Act 1974 or any other Act or instrument made under an Act only if--

(a) the work is carried out in accordance with a bush fire risk management plan that applies to the land, and

(b) there is a bush fire hazard reduction certificate in force in respect of the work and the work is carried out in accordance with any conditions specified in the certificate, and

(c) the work is carried out in accordance with the provisions of any bush fire code applying to the land specified in the certificate.

The decline in the annual area of fuel reduction carried out in NSW since 1999-2000 until 2023 is recorded in the table below. Figures are from the Rural Fire Service annual reports.

SOURCE: RFS ANNUAL REPORTS			AREA OF FUEL REDUCTION BY BURNING & MECHANICAL MEANS (Ha)										
Year	Cost of RFS ($'000)	Fire Mitigation ($'000)	RFS*	BFMC/PP	NP&WS	FCNSW	Crown Land	Councils	Other Govt Agencies	Total FR	Total FRB Only #	Aircraft Hire ($'000)	Percentage of 20 Million Hectares
1999-2000	$84,129			474,009						474,009	355,507		2.37%
2000-01	$93,200			589,319						589,319	441,989		2.95%
2001-02	$179,218			581,825						581,825	436,369		2.91%
2002-03	$240,989			457,947	2,003	54,504	20,624	938		536,016	402,012		2.68%
2003-04	$141,074			178,776	65,451	75,540	2,801			322,568	241,926		1.61%
2004-05	$152,269		24,390	12,627	36,377	36,403	943	22,652	883	109,885	79,378		0.55%
2005-06	$177,519		15,759	3,647	32,026	38,008	1,286	31,387	1,388	107,742	71,861		0.54%
2006-07	$253,294		13,003	8,892	23,840	43,716	911	25,495	1,385	104,238	78,012		0.52%
2007-08	$223,312		19,517	21,656	49,514	30,719	2,503	10,464	9,701	124,556	98,198		0.62%
2008-09	$247,234		26,443	8,897	60,117	30,652	2,456	12,304	8,908	123,335	103,686		0.62%
2009-10	$316,080	$7,207	44,531	16,758	95,673	36,216	5,786	16,091	4,181	174,706	154,504		0.87%
2010-11	$307,470	$12,040	14,717	7,398	58,092	10,884	4,195	31,573	5,491	117,633	74,858		0.59%
2011-12	$286,771	$6,507	28,748	9,702	49,791	19,703	8,677	34,757	15,583	138,211	89,884		0.69%
2012-13	$374,110	$10,226	26,408	13,220	209,594	21,468	4,955	20,310	11,945	281,492	252,734		1.41%
2013-14	$412,051	$6,877	40,319	10,819	114,154	7,259	4,222	16,066	4,702	157,222	136,102		0.79%
2014-15	$311,185	$4,253	25,957	8,936	116,251	2,165	3,770	15,707	5,329	152,157	130,911		0.76%
2015-16	$326,590	$5,724	34,282	11,348	205,889	34,022	8,188	14,864	11,089	285,401	264,927	$ 4,267	1.43%
2016-17	$357,679	$8,432	7,929	7,906	86,942	17,332	5,391	19,030	4,045	140,646	115,223	$ 29,355	0.70%
2017-18	$371,370	$8,077	18,531	10,047	102,121	9,054	7,216	14,887	4,302	147,626	129,472	$ 38,405	0.74%
2018-19	$585,122	$8,793	-	6,187	137,764	34,079	3,794	9,144	8,281	199,248	184,294	$ 42,553	1.00%
2019-20	$993,031	$5,427		5,674	29,400	2,811	4,220	7,742	5,701	55,548	34,189	$ 255,510	0.28%
2020-21	$487,301	$7,837		89,454	55,967	9,581	4,442	8,191	8,864	176,499	161,958	$ 7,299	0.88%
2021-22	$502,006	$14,792		2,639	31,153	3,284	1,002	1,675	5,889	45,642	36,266	$ 20,988	0.23%
2022-23	$663,159	$18,186		4,270	71,768	6,016	1,902	4,254	2,501	90,710	82,393	$ 55,433	0.45%
	FRB Decline Between 1999-2009 & 2010-2023			43%			FRB Decline Between 1999-2004 & 2005-2023				68%		
		Average FRB 2000 - 2009 (Hectares)		230,894			Average FRB 2000 - 2004 (Hectares)				375,561		
		Average FRB 2010 - 2023 (Hectares)		131,980			Average FRB 2005 - 2023 (Hectares)				119,939		
	FR Decline Between 1999-2009 & 2010-2023			50%			FR Decline Between 1999-2004 & 2005-2023				71%		
		Average FR 2000 - 2009 (Hectares)		307,349			Average FR 2000 - 2004 (Hectares)				500,747		
		Average FR 2010 - 2023(Hectares)		154,482			Average FR 2005 - 2023(Hectares)				143,816		
*RFS fuel reduction areas are part of the land management agency totals.													
# Mechanical FR is not reported separately for 1999-2004.													
Mechanical & other means averaged 25 percent of the total area fuel reduced from 2005-09.													
Total fuel reduced areas for 2000-2004 have been discounted by 25 percent to provide a conservative FRB only estimate.													
1996 -99	RFS Performance Audit Report page 90 reports 1.8 million hectares for the 3 years and 660,000 for 1997-98.												
1999 - 2000	19 committees did not provide data, so actual area is likely to be under reported.												

At the local government level, new generation Bush Fire Risk Management Plans state:

Environmental Approval for all Hazard Reduction: *Land management agencies will obtain environmental approval (through the Bush Fire Environmental Assessment Code, or other approval process) to undertake any activities that have the potential to impact the environment e.g. hazard reduction burning or vegetation removal. The environmental*

assessment process considers flora, fauna, threatened species, cultural assets, soil erosion, riparian areas, biodiversity fire regimes, weeds and air pollution (smoke).

Nowhere is there any consideration of the effects on flora and fauna, if hazard reduction/ecological burning is not carried out and the area (usually forested), is subjected to a high intensity bushfire. See the attachment To Burn or Not To Burn for more information on this issue.

Impact of High Intensity Bushfires on Native Forest 1 Month After the Fire

Recommended Action

LALC staff engage with the Rural Fire Service to determine what can be done to minimise the red tape relating to low intensity (cultural or other low intensity) burning approvals.

LALC staff continue to engage with the Rural Fire Service District Manager Far South Coast (Chris Allen) maximise ongoing Local Aboriginal Land Council (LALCS) representation on the Bega Valley and Eurobodalla Shire Bush Fire Management Committees (BFMC). During a meeting on 20 March 2024, Mr Allen said that a member from each LALC could be nominated for the relevant committee. This will allow multiple LALC representatives on each BFMC.

Barrier 2: Some High-Profile Ecology and Fire Academics Argue Regular Burning, Regardless of Intensity is Bad for the Environment

Some high-profile academics have had peer reviewed papers published that claim Aboriginal burning, prior to the arrival of Europeans was selective and applied to only a small portion of the Australian landscape.

These claims are underpinned by lack of experience in fighting high intensity bushfires and undertaking low intensity burning. Computer modelling data that underpins computer

simulations to support their hypothesis is not made publicly available for testing by other experts. Modelling does not seem to replicate the physics of fire behaviour "in the wild."

Some claim that by "cooperating with country" by long term exclusion of fire, the forests will be less flammable and have a lower risk of being affected by high intensity bushfires.

High Intensity Bushfire in Forests with Fine Fuel (<6mm) Loads of 25 – 40 Tonnes per Hectare

Fortunately, the research of scientists such as Professor Michael-Shawn Fletcher (Melbourne University) and Professor Simon Haberle (Australian National University) do confirm the landscape use of fire by Aboriginal people. Some frank comments by Professor Fletcher provide the rationale for some of the following recommendations.

"Yet this knowledge of how to live on country faces challenges. Now, you might assume this challenge comes from the overtly racist, the deniers, the history revisionists, those who seek to and cannot recognise that Aboriginal people are humans.

But the challenge comes from both sides. And perhaps more insidiously, from those who purport, and espouse an empathy for Aboriginal culture and the impact that the British Invasion has had on us.

I'm referring to the wilderness or conservation movement.

If we think about what 'wilderness' is, it's an idea that is born from a European ideology, European epistemology. It means an uncultivated, uninhabited and inhospitable region."

"This ideology of wilderness destroys country in Australia."

Our Country, Our way | Pursuit by The University of Melbourne (unimelb.edu.au)

Recommended Action

That the LALCS reach out Professors Fletcher and Haberle and seek their support to highlight the flaws in the 'science' that opponents of more widespread application of cultural burning will use to undermine future programs.

Barrier 3: Availability of Affordable Insurance

Many people in the broader community and key industry sectors do not understand the difference in fire intensity between different types of fire and the consequent risk to people and property.

For example, after the 2019-20 bushfire season, the public and products liability insurance costs for the fire operations for some northern Australian indigenous rangers tripled.

Indigenous rangers say fire mitigation work under threat after Black Summer bushfires triple insurance costs - ABC News

The number of insurers offering necessary insurance has reduced. On the NSW south coast, some Local Aboriginal Land Councils experienced difficulties in getting affordable insurance cover.

As cultural burning gains wider acceptance across Australia, leading insurers will need to be briefed on the lower risks of low intensity cultural burning compared to high intensity bushfires. They also need to understand that broader scale low intensity burning can reduce the risk bushfires pose to lives, property and livestock, as fire intensity associated with lower fuel levels is reduced, compared to fires burning in heavier fuel loads.

Insurance companies need to understand the role that broadscale cultural and other low intensity burning can play in reducing high intensity bushfire risk to insured (and uninsured) properties. If insurance companies recognise the low risk of managed cultural burns, compared to unmanaged high intensity bushfires, LALC insurance premiums should be reduced to reflect the lower risk.

If insurance companies support LALCs and other land managers to expand broadscale cultural and other low intensity burning, overtime, fire insurance payouts and premiums should decline.

Recommended Action

That LALCs engage with Firesticks or other peak Aboriginal bodies to determine if any progress has been made in reducing insurance cover costs for cultural burning programs.

If insurance premiums have not been reduced, engage with AbSec and Aboriginal Affairs to arrange meetings with the Insurance Council of Australia or leading NSW insurance companies to commence a program for insurers to recognise and support cultural burning.

Opportunity 1: Providing More Opportunities for Aboriginal People to Work on Country

LALCs have limited funding to employ and train rangers to manage LALC country. Both NSW National Parks and Wildlife Service and the NSW Forestry Corporation employ seasonal fire fighters.

If LALCs can form a partnership with NP&WS & FCNSW there may be opportunities to find more employment for Aboriginal people, that would help give connection to country. Work health and safety training as well as other skills development would be provided by the relevant government agencies.

Opportunity 2: Transport for NSW Pilot Cultural Burning Trial Along Major Highways

The NSW government has announced a pilot program that will see traditional owners manage land along key highways at four sites. The pilot program will run for two years and Transport for NSW is open to a state-wide rollout. Trial sites include the Hume Highway near Batemans Bay and Bega.

Opportunity 3: A Collective Group of Relevant Government Agencies

To provide one point for progressing the program and ensure a consistent government position, a collective of government will need to be formed to provide a one stop shop.

Relevant agencies that need to be engaged, include land management (NSW National Parks and Wildlife Service, Crown Lands and the Forestry Corporation of NSW) and regulators (Local Land Services, the Environment Protection Authority and/or the Department of Planning and Environment)

This program provides a great opportunity to demonstrate to the wider community that the right fire can be good for community safety and the environment.

Details for the proposed burning near Batemans Bay have not been finalised for autumn 2024. Some burning may yet be done on the Kings Highway.

LALCs will need to work closely with Transport for NSW and all landowners who have land adjoining the highway burns. The trial burns must be delivered successfully, if the trial is to give Transport for NSW confidence to roll out a statewide program.

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