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### **Submission on the Independent Bushfire Enquiry**

The Central West Environment Council, an umbrella group representing district environment, climate action and naturalist groups in the Central West of NSW, is pleased to have this opportunity to provide input into the Independent Bushfire Enquiry. These groups contain many members with specialist knowledge of bushfire management and ecology and several sit as representatives of the Nature Conservation Council of NSW on bushfire management committees such as the undersigned on the Canobolas Zone committee.

We are responding with particular reference to the Terms of References 1 and 2 in the Enquiry.

*ToR 1: The causes of, and factors contributing to, the frequency, intensity, timing and location of, bushfires in NSW in the 2019-20 bushfire season, including consideration of any role of weather, drought, climate change, fuel loads and human activity.*

It is very pleasing to see that climate change has been included in the terms of reference. It has become increasingly obvious to fire scientists eg Lucas (2007) that the warming weather is going to lead to earlier, longer and more dangerous fire seasons. The government's own Bureau of Meteorology (2020) has confirmed this. Apart from the obvious difficulties with the need for increased suppression capabilities, and a decrease in the window of opportunity for prescribed burning, one of the problems is that landowners are often caught unawares and try to burn off too late in the season. A more professional response is required to the question of permit approval and that needs resourcing.

One of the ways NSW manages its fuel loads is broad acre burning. CWEC has no problem with this strategy if it can be determined that the fire is a) for ecological purposes e.g. the vegetation type is one dependent on periodic fire and b) the timing of the burn fits into this fire frequency threshold. However, most forest types in NSW do not require frequent fire, and, in fact, the fuels within them will stabilise after a number of years ie when the deposition rate equals the decomposition rate. It's a myth that fuel build up is continuous, although under exceptional circumstances, such as our three year drought, deposition has almost certainly been higher than decomposition and this has been exacerbated by fallen branches due to storms.

Some climate models predict that higher rainfall is expected in southeast Australia as a result of climate change and it remains to be determined whether the temporal coincident of drought and high temperatures that accompanied the fires were both a direct product of human-induced climate change and the models predicting increased rain are flawed, or there was a coincidental fatal intersection of two independent but fatal meteorological phenomena.

What role did natural and anthropomorphic fire breaks like rivers, roads and clearing along power lines have on limiting fire spread? It would seem that these were mostly ineffective in limiting fires in high wind conditions. Should there be, or has there been, wider breaks developed marginal to these along which fuel load is reduced or is the width required impractical once fires are raging in forest canopies and /or spotting ahead of the fire front is driven by strong winds?

Do those agencies responsible for clearing vegetation that has fallen on to roads bear a responsibility to clear away the cleared vegetation? In many local areas of the Central West eg Blayney and Cabonne Shires much of this is left along the road verge adding to the potential fuel load.

Fuel management efforts should be focused on where it will have the most impact eg the Asset Protection Zones. Research after the major fires in Victoria has shown that the most effective way to protect houses is managing the fuel within one kilometre of a house and ‘intensively modifying fuel’ within 40 m (Gibbons et al. 2012).

To reduce all the forest fuel in NSW to a safe level would be a huge undertaking and very expensive (Bradstock et al. 2008). Insufficient funding is provided for research into the effects of hazard reduction on the flora and fauna. No funding at all appears to be provided even for basic fuel monitoring in one of our districts (Canobolas Zone).

## **RECOMMENDATIONS**

- 1. There should be a review of the procedures, planning and budgeting to account for this new climate reality. In particular District Bushfire Risk Management Plans should be revised to account for the effect of climate on ignition risk and suppression strategies.**
- 2. The RFS needs to be better resourced with a larger body of qualified, full-time staff to handle the increased demands brought on by climate change.**
- 3. The federal government needs to accept the scientific opinion and ensure compliance with the Paris agreement.**
- 4. Fuel management needs to be focused on where it is needed most to protect human life and property. Large scale burning should only be carried out for ecological purposes and after consideration of accepted fire-free thresholds.**
- 5. Targets for fuel reduction need to be revised in the light of the huge area of land impacted by wildfire over the last months.**
- 6. More research is needed into fuel reduction (including cultural burning) and its effects, both on nature and on human welfare. A particular need is for research into the time needed between a fire event and the time when the fuel stabilises and how this is affected by precipitation, increased storminess, and temperature. There should be a rigorous investigation of the application and efficacy of first nation cultural burning in differing bush/grass -fire prone Australian environments.**

*ToR 2: The preparation and planning by agencies, government, other entities and the community for bushfires in NSW, including current laws, practices and strategies, and building standards and their application and effect.*

Local Bush Fire Management Committees (BFMCs) prepare Bush Fire Risk Management Plans (BFRMPs) and other local plans. These committees are supposed to include input from Aboriginal people. In my experience, there has been no Aboriginal representation on the Canobolas Zone committee since inception, except for very short periods. Every time this has been raised, it's always been considered too hard. But it's really important, especially considering the growing popularity in some regions of 'cultural burning'. The latter could be a very important part of the RFS toolkit, but needs careful assessment prior to wholesale adoption as much of the technique comes from northern Queensland in landscapes quite different to most of NSW.

The risk management plans also do not contain enough information on ecological assets and how to protect them. Vegetation maps, with their known optimum fire-free thresholds, are improving, but are at a very coarse scale. Boundaries between different fire districts are also a cause for concern as there is no coordination in respect of refuges areas during hazard reduction.

After a fire there is a very good opportunity for managing feral plant and animal invasions, so consideration should be given to providing resources for this.

Another area where there has been inadequate data gathering is in the clearing of vegetation under the 10/50 Vegetation Clearing Code of Practice where self-assessment has led to over-clearing either deliberately or due to lack of understanding the complex code.

Hazard reduction projects need to be assessed by trained staff and CWEC does not believe that any weakening of the process via Hazard Reduction Certificates should be permitted. As mentioned above, hazard reduction should be focused on the areas immediately (within 100 m) close to built up areas and would need to be done more frequently, at least every four years for some vegetation types. In extreme conditions, these areas could still burn, of course, but it would help to reduce the intensity.

Grazing, especially in large natural areas, is not a suitable alternative for reducing fuel. It can promote shrubby understorey that promotes more fire (Williams et al. 2006) and can be detrimental to biodiversity unless carefully managed.

Post-fire logging of native forests should not be considered. It does not help to reduce future fire severity (Stone et al. 2003). Furthermore, logging threatens the recovery of animal and plant populations necessary for the ecological restoration of the forest.

### **Recommendations**

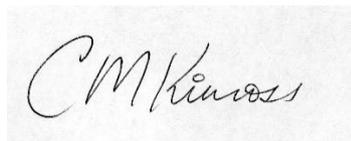
- 1. Districts should make a more concerted effort to ensure Aboriginal representation on their local Bushfire Management Committees.**
- 2. More research is needed on the appropriateness of cultural burning in the different NSW vegetation types.**
- 3. Vegetation maps need fine-tuning and ecological assets need to be more comprehensively mapped and managed.**
- 4. Better coordination is needed when planning hazard reduction burns to ensure that areas are far enough apart to permit refuge areas, especially areas along boundaries with other zones.**

5. **The RFS should undertake a review of the 10/50 Vegetation Clearing Code of Practice, including the possibility of alternative strategies such as cultural burning being assessed.**
6. **There should be a continuation of provision of Hazard Reduction Certificates by trained personnel.**
7. **Hazard reduction should focus on areas within 40 - 1000 m of human assets**
8. **Post-logging should not be permitted, especially after large scale wildfires.**
9. **Grazing should not be considered a means of fuel reduction in natural areas.**

## References

- Bureau of Meteorology. (2020). Bushfire weather. <http://www.bom.gov.au/weather-services/fire-weather-centre/bushfire-weather/index.shtml>
- Bradstock, R, Davies, I, Price, O and Cary, G. (2008) Effects of Climate Change on Bushfire Threats to Biodiversity, Ecosystem Processes and People in the Sydney Region. Final Report to the New South Wales Department of Environment and Climate Change: Climate Change Impacts and Adaptation Research Project 050831.
- Gibbons P, van Bommel L, Gill AM, Cary GJ, Driscoll DA, Bradstock RA, et al. (2012) Land Management Practices Associated with House Loss in Wildfires. PLoS ONE 7(1): e29212. <https://doi.org/10.1371/journal.pone.0029212>.
- Lucas C et al. 2007. Bushfire weather in southeastern Australia: recent trends and projected climate change impacts. <http://www.climateinstitute.org.au/images/stories/bushfire/fullreport.pdf>.
- Stone, C., Hudak, A., Morgan, P. Forest (2003) Harvest Can Increase Subsequent Forest Fire Severity. Proceedings of the Second International Symposium on Fire Economics, Planning, and Policy: A Global View. p.525 General Technical Report PSW-GTR-208. US Forest Service
- Williams, R.J., Wahren C., Bradstock, R.A. and Muller, W.J. (2006) 'Does alpine grazing reduce blazing? A landscape test of a widely held hypothesis'. Austral Ecology, Vol. 31, pp 925-936.

We thank you for the opportunity to have input into this enquiry.



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**Central West Environment Council**

