Comments on the 2006 Victorian summer fires

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I have conducted research on the forests of Victoria and elsewhere in south-eastern Australia for the past 43 years. I have published 1001 peer-reviewed scientific articles and 50 books on forests, woodlands, biodiversity and fire. I am one of the most highly cited forest ecologists globally (see https://scholar.google.com.au/citations?user=4a2XbLwAAAAJ&hl=en). I have been honoured with many awards for my work and the work of my outstanding team of scientists.

I can only briefly summarize some key points in this submission, but would be happy to pay for my own travel to Victoria to provide further evidence in person.

1. There is a deep fixation in Victorian fire policy on fuel loads, including in the models used to predict fire (often somewhat inaccurately). This issue of fuel loads is not particularly relevant to large parts of the area burned in Victoria in 2026 which related to agriculture land, where supposed fuel loads were actually grass cover which is food for livestock or cropland. Factors other than fuel load are critical in fast-moving grassland fires (Collins et al. 2014). In addition, there are now competing scientific approaches to the highly simplified fuel load paradigm; for example, ecological control theory (Zylstra et al. 2023). The Victorian Government needs to revisit its thinking on this issue and the simulation models that it uses. This is particularly pertinent to thinking about fast-moving grass fires, farm planning, and strategic vegetation management such as the establishment of shelterbelts in agricultural landscapes to slow windspeeds (see (Cleugh 2003) (Lindenmayer et al. 2022b)).
2. Many fire managers in Victoria are proposing to implement thinning programs in forests to limit fire risks. There is actually very little evidence that thinning will be effective in controlling fire severity or other measures of fire behaviour (e.g. (Bowman et al. 2025)). Indeed, for some forest types, rigorous empirical evidence

indicates that thinning operations will make them more flammable not less (Taylor et al. 2020, 2021). There are also forestry manuals highlighting the fire risks associated with thinning (Buckley and Cornish 1991) (Fagg 2006). Beyond its limited or perverse effects on fire, thinning will have other major negative impacts on the environment (Lindenmayer et al. 2026), including contributing significantly to Greenhouse Gas emissions and hence to climate change (which is in turn a contributor to wildfire risks (Canadell et al. 2021)). The Victorian Government needs to dispense with ill-informed large-scale mechanical thinning programs.

3. The Victorian Government has spent enormous sums of money on so-called firebreaks. I have visited many of these so-called firebreaks as part of my own field work in parts of the Victorian forests. These so-called firebreaks would be very unlikely to limit the spread of fire across forest landscapes (in part because of spotting distances; see (Storey et al. 2020)). I am convinced that, in many cases, they also would be unlikely to be safe places from which to conduct backburning. (Noting that backburning adds significantly to overall fire size). At the same time, the firebreaks have had substantial negative effects on forest integrity and habitat suitability for a range of forest-dependent data (such as the Endangered Southern Greater Glider) (Lindenmayer et al. 2025). The Victorian Government needs to revisit many aspects of its so-called firebreaks program and reassess cost-effectiveness and ecological effectiveness.
4. The Victorian Government has spent large amounts of resources on prescribed burning, often in remote parts of the state where its efficacy in protecting people and property is questionable. Indeed, work conducted elsewhere in Australia is increasingly indicating that remote-area prescribed burning is likely to be **increasing** medium-term forest flammability rather than reducing it (Zylstra 2018) (Zylstra et al. 2024) (Zylstra et al. 2022, Zylstra and Lindenmayer 2025). The Victorian Government needs to revisit many aspects of its prescribed burning program and reassess cost-effectiveness and ecological effectiveness.
5. There is a clear and expanding body of evidence that demonstrates the link between logging and increased fire severity. This includes work from Victoria (Taylor et al. 2014), Tasmania (Furlaud et al. 2021), New South Wales (Lindenmayer et al. 2022c) (Wilson et al. 2022), as well as the USA (Levine et al. 2022, Levine et al. 2025) and Canada (Mackey et al. 2025). The increased frequency of fire in Victoria (see (Lindenmayer et al. 2023)) means that few areas will ever grow trees to suitable

sawlog age (Cary et al. 2021) – meaning there is no financial certainty in native forest logging in the State. Plans to bring back logging in Victoria need to be shelved because of the increased fire risks that it creates and the increased threats to the safety of rural and regional communities.

6. Some people have argued that windblown trees and fire-damaged areas are major fire risks and they need to be subject to salvage logging; sometimes deceptively labelled "storm debris removal". There is no evidence that dead trees add significantly to fire risk (see (DellaSala et al. 2025)). In fact there is evidence that salvage logging can increase fire risks (Donato et al. 2006). Conversely, there is a substantial body of evidence highlighting the wide range of major detrimental environmental impacts associated with salvage logging (Lindenmayer et al. 2008) (Lindenmayer et al. 2017, Thorn et al. 2018), including evidence from studies in Victoria on soils (Bowd et al. 2019), plants (Bowd et al. 2018), mammals (Lindenmayer and Ough 2006), and birds (Lindenmayer et al. 2018). The Victorian Government should ban all salvage logging operations and related kinds of operations labelled with duplicitous alternative terms such as storm debris removal.
7. Past logging operations coupled with prescribed burning in remote areas has likely contributed to the elevated levels of flammability seen in many areas of forest and other vegetation in Victoria – termed disturbance-stimulated flammability (*sensu* (Lindenmayer and Zylstra 2024)). This increased flammability creates major challenges for all Victorians. It is essential for fire agencies to stop doing things that increases flammability such as logging, salvage logging, thinning, and remote area prescribed burning. At the same time, there is a need for greater investment in new technologies to detect ignitions more quickly and extinguish them more rapidly (Yebra et al. 2022, Yebra et al. 2024) (Lindenmayer et al. 2022a). There is also a need to invest more heavily in on-the-ground firefighting capabilities – both professional and volunteer fire fighting capabilities.

As indicated above, I would be happy to pay for my own travel to Victoria to provide further evidence in person and provide further context to any of the statements made in this submission

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8.