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Environment and Communications References Committee

Subject: Inquiry into Australia's faunal extinction crisis: re-adoption

Dear Senate Committee,

I led a submission to the Inquiry into Australia's faunal extinction crisis focusing on Regional Forest Agreements and threatened species. I then led a field tour of the wet forests of the Central Highlands of Victoria and was interviewed by the three committee members.

Since my initial submission and testimony some additional information has come to light that is important and highly relevant to the Senate Committee. I summarize that information below.

1. Additional field data gathered over the past 8 months has indicated a rapid deterioration in populations of some threatened, forest-dependent species in the wet ash-type forests of the Central Highlands of Victoria, including the Critically Endangered Leadbeater's Possum and the Greater Glider. A new peer-reviewed scientific paper summarizes the deteriorating status of these species and, indeed, the Critically Endangered (Mountain Ash) ecosystem in which it occurs (Lindenmayer et al. 2019.
2. We have completed a detailed assessment of Victoria's forest reserve system and its ability to conserve threatened forest-dependent species. Our analysis shows unequivocally that the current reserve system does not meet Comprehensive, Adequate of Representative (CAR) criteria that are part of the specifications for reserves under the Regional Forest Agreements. Moreover, ongoing logging is impacting areas of very high value for the distribution of Victoria's 70 threatened forest-dependent species. Logging coupes designated for harvesting under the current Timber Release Plan have highly significant conservation values for these species (Taylor and Lindenmayer 2019).
3. We have recently completed resource conflict analyses indicating that ongoing logging of Melbourne's largest water catchment – the Thomson catchment – is having severe negative impacts on water security for Melbourne and many towns and agricultural business north of the Great Divide (Taylor et al. 2019). Indeed, the amount of water lost at the moment is equivalent to the water requirements of 250 000 people, and is set to be equivalent to 600 000 people's water by 2060 (or the current population of Tasmania). Notably, this logging is also have significant negative impacts on biodiversity because it is occurring in areas of high conservation value for threatened forest-dependent species (Taylor and Lindenmayer 2019) (see point #2 above). Moreover, alternative sources of water (e.g. from a desalination plant) are extremely expensive, as documented in a recent paper on water accounting (Vardon et al. 2019).

I have provided the references for the new scientific articles that have been cited above and I will be more than happy to provide print copies of these documents, as well as appear before the committee to provide further details of this work.

Yours sincerely

Professor David Lindenmayer AO

References

Lindenmayer, D.B., Blair, D., McBurney, L., Banks, S., and Bowd, E. (2019). Ten years on – a decade of intensive biodiversity research after the 2009 Black Saturday fires in Victoria's Mountain Ash forest. *Australian Zoologist*, (in press).

Taylor, C., Blair, D., Keith, H., and Lindenmayer, D.B. (2019). Modelling water yields in response to logging and Representative Climate Futures. *Science of the Total Environment*, 688, 890-902.

Taylor, C. and Lindenmayer, D.B. (2019). The adequacy of Victoria's protected areas for conserving its forest-dependent fauna. *Austral Ecology*, (in press).

Vardon, M., Keith, H., and Lindenmayer, D.B. (2019). Accounting and valuing the ecosystem services related to water supply in the Central Highlands of Victoria, Australia. *Ecosystem Services*, (in press).