

Submission in support of petition 029 for an independent review of Department of Biodiversity, Conservation and Attractions (DBCA) prescribed burning environmental management.

Your petitioners request that the Standing Committee on Environment and Public Affairs conduct a formal inquiry into environmental management informing the current practices of broadscale prescribed burning (PB) conducted by DBCA.

Members of the scientific community and many other Western Australians agree on the urgent need for a comprehensive review, sharing a strong perception supported by substantial evidence that these practices are having severe detrimental impacts on ecosystems, particularly in the south-west of Western Australia with its increasingly hot and drying climate.

It is acknowledged that there is a role for the use of fire in mitigating wildfire threat, but any such PB practice needs to demonstrate both mitigation effectiveness, and a high priority for biodiversity and conservation outcomes. Below are some key areas of concern.

CURRENT PB ENVIRONMENTAL OBJECTIVES

The south-west of WA is an international mega-diverse hotspot due to the large percentage of endemic species under a high level of threat. Between 1999-2018, fauna species on WA's threatened species list in these forests increased from 19 to 42 and flora increased from 79 to 113.

As part of DBCA's environmental objectives it is stated that, from a biodiversity perspective, PB is undertaken to maintain a range of wildlife habitat types and protect threatened species, while conserving the resilience of ecosystems. However, large areas are ignited frequently, more often resulting in higher severity burns with excessive canopy scorch and tree mortality, in contravention of DBCA's success criteria. Their method of aerial ignition affords few escape routes for fauna.

Of the landscape managed by DBCA in the south-west forest region, PB aims to keep at least 45% (with no reference to an upper limit) with a 'fuel age' of less than six years. This leaves very few longer unburnt areas required for specific flora and fauna species. And, many fire-sensitive ecosystems, such as wetlands, peat swamps, granite outcrops and riparian zones in the south-west have been erroneously destroyed in the last decade with the implementation of extensive, severe PB.

There is little confidence that PB practices in the conservation estate meets DBCA's stated objectives to conserve biodiversity and maintain the resilience of ecosystems, as well as protect the unique flora and fauna within these refuges. The integrity of such environmental objectives warrants inquiry.

RESEARCH, MONITORING AND EVALUATION OF PB ECOLOGICAL IMPACTS

It is largely unknown as to the degree that DBCA monitors flora and fauna before and after PB, or evaluates the impact on ecosystems. Results of such investigations are not readily publicly available. Nor is it known if any monitoring programs are undertaken over sufficient periods to determine appropriate recovery time that takes the ecological condition of the species into consideration.

The lack of confidence in fire impact evaluation by DBCA appears justified by the recent PB in Perup with its impacted numbat population. The Upper Warren District is well recognised for its high occurrence of many such threatened species (14 fauna and 10 flora), the largest remaining non-coastal population of western ringtail possum, the largest known brush-tailed phascogale (wambenger) population and the most abundant chuditch population. Contradictory departmental responses to the media publicity gave a strong impression that the impacts on fauna were unknown.

There are numerous such PB incidents that call for an inquiry into the quality and quantity of evaluation that DBCA have undertaken into burn outcomes, and the degree that PB research modifies planning.

APPLICATION OF RELEVANT RECENT EXTERNAL PB RESEARCH

DBCA claims that the PB program is supported by peer-reviewed research. However, the scientific evidence in support of the effectiveness of prescribed burns in controlling the extent of bushfires is limited. In contrast, the assertion that broad-scale PB is having detrimental and irreversible impacts on threatened and fire-sensitive species, and on the health and resilience of ecosystems, is solidly supported by recent scientific research.

Research in other temperate forest regions, for example, indicates that long-unburnt vegetation may be less flammable than extensive regrowth from PB and other disturbances such as logging. This scenario needs urgent comprehensive investigation, given the possibility that mature habitat-rich forests may be being burnt for little return.

An independent inquiry would assess the DBCA PB programs to ensure they are aligned with best practice and the most up-to-date science to provide optimal conservation outcomes.

PROVISION AND INTEGRITY OF FIRE EXCLUSION REFERENCE AREAS

A Fire Exclusion Reference Area (FERA) system is put in place by DBCA to allow comparative research of PB impacts and sustainable fire management practices for differing ecosystems. To be effective, it requires many areas of different fire ages (time since last fire) and sufficient size, representing a diversity of ecological niches and vegetation associations across the landscape.

It seems likely that the number and size of current FERAs may be insufficient to be effective; In May 2020, there were 62 FERA's in all of WA, of which 10 have been partially or completely burnt by wildfire since being established. And two FERA's have been subject to PB since being established.

Effectiveness is also dependent on the system's long-term integrity. But currently, FERA's can be withdrawn or re-designated without Ministerial approval or stakeholder/community consultation. A former FERA of approximately 1,000 ha in the Warren District, last burnt in January 1997, was engulfed as part of an 8,600ha PB of the Denbarker forest block in November 2019. An adjacent 35 ha recently burnt (2014) block was apparently designated in its place. The current Fire Exclusion Reference Area (FERA) system would thus seem to warrant a comprehensive review.

ADAPTIVE MANAGEMENT FOR CLIMATE CHANGE, DISEASE, DROUGHT AND WILDFIRES

The health of most of our ecosystems are under intense pressure from the cumulative effects of climate change including heat waves, decreasing rainfall and episodic drought, disease, and the associated increasing risk of frequent and/or severe fires. In particular, PB practices need to be adaptive to account for the heating and drying of the climate.

Current research indicates many ecosystems will continue to be altered by climate change, which in turn can affect 'fuel' dynamics and accumulation, species composition, tree mortality, stand structure and recovery time of ecosystems after fire.

It is questionable whether there is the capacity for adaptive management in the face of these stressors, given that the driver of prescribed burning in the southwest forest management area is the annual target to burn on average 200,000 hectares per year.

The restriction of flexible response posed by an area target or percentage of land is arbitrary and of specific concern for biodiversity, given large areas of the conservation estate (as distinct from production forest areas) are bearing the brunt of this policy. Adaptive ecological management by DBCA needs to be independently reviewed.

TRANSPARENCY, ACCOUNTABILITY AND PUBLIC CONSULTATION

There is a perceived lack of transparency, accountability, and consultation at many levels of ecological management, monitoring and outcomes surrounding PB conducted by DBCA.

Poor transparency is highlighted by the absence of a formal process for both public involvement and research collaboration, no platform for open-source data on the conservation estate, and fire plans being only available for viewing during office hours at DBCA offices. And accountability is in question; there is no independent auditing of PB; with only a single agency being responsible for planning, implementing, and evaluating PB 'success'. There is an obvious dearth of oversight.

And there are no formal consultation processes with stakeholders, for example in the design of the 3-year burn program, the annual indicative burn program, or the intent and planning of individual PB.

CONCLUSION

This submission outlines only some of the key concerns with regards to the DBCA practices of broad-scale PB, limiting the perspective to environmental management. It is certain that an inquiry into these concerns will reveal many other issues across the whole program that appear to warrant investigation.