



— Centre of Excellence —
**PRESCRIBED
BURNING**

National Position on Prescribed Burning



A PRODUCT OF THE NATIONAL BURNING PROJECT

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Australian Government
National Recovery and
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Australian Institute for
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Introduction

Much of the Australian landscape has evolved with fire. Fire is a certainty and necessary for the continued survival of fire dependent species and ecosystems. Indigenous Australians understood this relationship and effectively used fire to manage in the landscape landscapes for multiple purposes.

Today, land managers undertake prescribed burning for a number of objectives including risk reduction, ecological health, silvicultural or cultural purposes

Complexities in achieving these objectives arise when natural areas are fragmented and interspersed with communities and fire vulnerable assets such as homes, primary industries, businesses, infrastructure, and social and economic networks.

Prescribed burning is placed in the landscape at a range of scales; from the local level to protect communities and infrastructure, to a landscape level which provides risk reduction and broader ecological benefits (AFAC, 2014). Well planned and implemented prescribed burning is an essential, practical and cost-effective tool for reducing risk to life, property and the environment (AFAC, 2015b).

For a detailed synopsis of the evidence of the extent and effectiveness of prescribed burning see *Overview of Prescribed Burning in Australasia* (AFAC, 2015a).

Supporting discussion

Bushfire in the Australian landscape is inevitable and there have been many inquiries into bushfires and major bushfire events that examine how prevention, preparedness, response and recovery can be improved into the future. Ellis et al. (2004) examined common themes found in inquiries from 1939-2003 and found that concern about the need for protective burning has been a common theme since 1939. This has continued with other inquiries and royal commissions with the Victorian Royal Commission in 2009 prompting the development of national approaches to prescribed burning and this national position.

The National Burning Project, an initiative of AFAC and Forest Fire Management Group, funded by the Commonwealth Government, brought AFAC Members and other stakeholders together to develop *Best Practice Guidelines* (AFAC 2014, 2016a, 2017), *Risk Management Frameworks* (AFAC 2015b, 2015c, 2016b, 2016c) and to work collaboratively on decision support tools and training materials. The extensive and collaborative work undertaken pursuant to the National Burning Project has produced a body of work which has been used in conjunction with embedded scientific research and knowledge gained through operations to inform the development of this national position.

Definition

Prescribed burning is defined as 'The controlled application of fire under specified environmental conditions to a predetermined area and at the time, intensity, and rate of spread required to attain planned resource management objectives'. It is undertaken in specified environmental conditions. Prescribed burning is also referred to as planned burning; hazard reduction burning; controlled burning; prescription fire; fuel reduction burning; planned fire and prescription burning (AIDR, 2021).

Position

AFAC and FFMG Members take the position that fire is an integral part of the landscape in Australia and prescribed burning has an essential role for cultural, economic, and ecological outcomes whilst providing risk reduction to life and property.

Each fire and land management agency has different legal, political, organisational, social, economic, and environmental requirements, and responds in its own manner in providing its prescribed burning programs.

Under the National Burning Project, extensive consultation with agencies drew out and identified common approaches which are defined in the principles below. The context of each principle describes the understanding AFAC and FFMG Members have of the environment from which these principles are drawn.

PRINCIPLE: Prescribed burning has multiple benefits

Prescribed burn planners must integrate multiple disciplines into their prescribed burning programs. These include ecological, climate, social, technical, legal, economic, geographical and policy factors. Some factors are more relevant in strategic planning, whilst others have relevance for implementation.

Prescribed burning can be used to assist ecological system requirements such as:

- forest production
- water catchment yields
- erosion
- responses of fauna and flora within that system to fire
- fire dependency of the system required for regeneration
- weed responses to fire
- predation.

Prescribed burning can also be used to protect social and cultural values:

- lives
- homes
- infrastructure
- historical cultural assets
- environmental assets.

Bushfires will never be eliminated from the environment. Prescribed burning can help to reduce the risk and severity of impacts that these events have on life, property, community, and the environment. Prescribed burning can be used to reinvigorate ecosystems that are at risk from fire exclusion, or for promoting regeneration in silvicultural systems.

Reduced fuel hazards assist the success of suppression activities and reduce the intensity, extent and impacts of subsequent bushfires.

PRINCIPLE: Landscape health is linked to fire and fire management

Fire, or its absence, has directly influenced the evolution of the Australian landscape. Many native plant species have evolved in fire-prone environments and are dependent to various degrees on fires to maintain ecological cycles. In contrast, rainforest ecosystems developed in the absence of fire and are highly vulnerable when changed conditions, such as prolonged drought, increase their susceptibility to fire. The effect of fire on the ecology of the landscape is mostly shaped by fire regimes — the pattern of fires, including their extent, seasonality, frequency, intensity and patchiness — and, to a lesser extent, by individual fire events. Climate change is already affecting the nature of fire risk and increases the need for effective fire management to protect people and property in a way that recognises the role of fire in biodiversity management. (Commonwealth of Australia, 2019)

Managing fire in the environment can help to create a mosaic of diverse fire regimes across the landscape. This aims to provide an improved range of habitats and ecosystems. Fire management also aids in the exclusion of fire from fire sensitive ecosystems by reducing adjacent fuel hazards. Maintenance of biodiversity can contribute significantly to the resilience of ecosystems in the face of bushfires and other threatening processes such as climate change and weed invasion.

PRINCIPLE: Engagement with community and business stakeholders

Community support for prescribed burning programs is essential to their success. Engagement is a two-way model (e.g. IAP, 2016) whereby the intentions of agencies are communicated to stakeholders and concerns and knowledge held by stakeholders are identified and considered at all levels of prescribed burning planning and during the burn. In this way, the benefits to land managers

and the broader community are optimised and any adverse impacts are minimised as far as practicable. Community engagement also serves to increase awareness of the benefits of prescribed burning for risk reduction and ecosystem health.

PRINCIPLE:

Traditional Custodian use of fire in the landscape is recognised and respected

Fire is culturally significant to Traditional Custodians and the landscape has been shaped by their practices since the Dreaming. The depth of First Nations peoples' spiritual and cultural knowledge and connection to Country is highly valued. Engaging with Traditional Custodians should be carried out with respect to their ownership of their knowledge; delivering environmental, social, cultural and economic benefits for Indigenous people. Where Traditional Owners have not been able to continue these practices, the depth of spiritual and cultural knowledge and connection to the land is maintained through stories and memories. Where knowledge gaps exist, agencies should work with Traditional Owners to build that knowledge, and where appropriate, assist with reviving practices.

PRINCIPLE:

Prescribed burning is done in the context of measurable outcomes

Objectives of individual prescribed burns should be clearly stated, preferably as measurable objectives. Clearly stated objectives facilitate the formation of suitable burn prescriptions, fire implementation tactics and allow evaluation of burn success for adaptive management purposes. Objectives of individual burns should be guided by and service strategic objectives. Strategic objectives include broad organisational level goals that are further detailed through performance measures that allow an organisation to monitor the success of burn programs.

PRINCIPLE:

Prescribed burning programs are informed by research, knowledge, and experience

Our knowledge of fire, including fire behaviour, ecological responses to fire and the measurement of risk reduction from prescribed burning, can all be informed by sharing research and experience. Informed knowledge comes from research outputs from academic institutions, effective measurement, monitoring and evaluation of the operational programs undertaken by agencies, and from across the community

including the knowledge of Traditional Owners. Applied knowledge will allow communities and managers to respect fire as a tool as well as a hazard. Knowledge can always be enhanced, so fire managers must engage in an adaptive management process to ensure improvements can be made across all processes and activities in a continual improvement framework.

PRINCIPLE:

The practice of prescribed burning requires ongoing capability development

Whilst the theory of fire behaviour and fire ecology can be taught in a formal setting, the skill of placing prescribed fire in the landscape to meet stated objectives requires more than teaching. Practical experience can only be gained under variable operational conditions. The controlled application of fire in the landscape also allows practitioners to develop an understanding of fire behaviour and suppression tactics that are critical skills for managing bushfire incidents.

Experienced practitioners are a highly valued commodity and can enhance the learning of others. The knowledge of experienced practitioners should be captured through targeted development, mentoring and training programs to increase agencies' human capital and to feed into agencies' continuous improvement.

PRINCIPLE:

An integrated approach is required

An integrated and cooperative approach across all tenures and programs is the best way to minimise bushfire risk to lives, property and the environment. Responsibility for risk reduction should be shared between all landholders and agencies and achieved by risk treatment within the boundaries of their own property and cooperatively with neighbours to increase these benefits across their shared landscape. Education on risk reduction is required in some cases to increase the understanding of the benefits of prescribed burning.

PRINCIPLE:

Prescribed burning is carried out under legislative, policy and planning requirements

Agencies that carry out prescribed burning are required to comply with Commonwealth and relevant respective state or territory legislation that address facets of land management, environmental protection, and indigenous cultural heritage, among other requirements.

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Disclaimer

This document has been developed from consultation and research between the Australasian Fire and Emergency Service Authorities Council Limited (AFAC), its members and stakeholders. It is intended to address matters relevant to fire, land management and emergency services across Australia, New Zealand and the Pacific region.

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Supporting Documentation

AIDR , 2021, Australian Disaster Resilience Knowledge Hub, knowledge.aidr.org.au/glossary/?wordOfTheDayId=&keywords=prescribed%20burning&alpha=&page=1&results=50&order=AZ (verified 8th September 2021)

AFAC, 2014, *Review of Best Practice for Prescribed Burning, Report for National Burning Project – Sub-Project 4*, Australasian Fire and Emergency Service Authorities Council, Melbourne

AFAC, 2015a, *Overview of Prescribed Burning in Australasia, Report for National Burning Project – Sub-Project 1*, Australasian Fire and Emergency Service Authorities Council, Melbourne

AFAC, 2015b, *Risk Management and Review Framework for Prescribed Burning Risks Associated with Fuel Hazards, Report for National Burning Project – Sub-Project 3*, Australasian Fire and Emergency Service Authorities Council, Melbourne

AFAC, 2015c, *Risk Management Framework – Smoke Hazard and Greenhouse Gas Emissions, Report for National Burning Project – Sub-Project 3*, Australasian Fire and Emergency Service Authorities Council, Melbourne

AFAC, 2016a, *National Guidelines for Prescribed Burning Operations*, Australasian Fire and Emergency Service Authorities Council, Melbourne

AFAC, 2016b, *Risk Management Framework for Ecological Risks Associated with Prescribed Burning, Report for National Burning Project – Sub-Project 3*, Australasian Fire and Emergency Service Authorities Council, Melbourne

AFAC, 2016c, *Risk Management Framework for Operational Risks Associated with Prescribed Burning, Report for National Burning Project – Sub-Project 3*, Australasian Fire and Emergency Service Authorities Council, Melbourne

AFAC, 2017, *National Guidelines for Prescribed Burning Strategic and Tactical Planning*, Australasian Fire and Emergency Service Authorities Council, Melbourne

Commonwealth of Australia, 2019, *Australia's Strategy for Nature 2019–2030*, Commonwealth of Australia

Ellis S, Kanowski P and Whelan R, 2004, *National Inquiry on Bushfire Mitigation and Management*, Commonwealth of Australia, Canberra

IAP, 2021, International Association for Public Participation iap2.org.au/wp-content/uploads/2019/07/IAP2_Public_Participation_Spectrum.pdf (verified 01 October 2021)

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Australasian Fire and Emergency Service Authorities Council Limited (ABN 52 060 049 327)

Level 1, 340 Albert Street
East Melbourne Victoria 3002

Telephone: 03 9419 2388

Facsimile: 03 9419 2389

Email: afac@afac.com.au

Website: afac.com.au