

FOREST FIRE MANAGEMENT



CONTEXT

Fire has been part of the Australian environment for millions of years; it is an essential element and can't be removed without ecological consequences. Aboriginal people developed appropriate fire management practices to maintain their culture and Country. Australia has experienced an increased occurrence of severe bushfires, that result in substantial impacts on life, property, forest biodiversity, water quality and quantity, forest products and uses as well as on the health and resilience of forest ecosystems. Australia's knowledge and systems of forest fire management are based on decades of bushfire research and lessons from previous bushfire inquiries. The COAG-endorsed National Bushfire Management Policy Statement for Forests and Rangelands brings this knowledge together to provide appropriate goals and strategies for reducing the occurrence, severity, and impacts of bushfires as well as for enhancing the resilience of forest and rangeland ecosystems.

FORESTRY AUSTRALIA ADVOCATES THE FOLLOWING:

- Regardless of tenure, all land managers should actively manage forests and rangelands to minimise the risk of, and undesirable impacts from, severe bushfires on environmental, social, cultural and economic values.
- Greater awareness within communities is needed that fire has an important and ongoing role in maintaining biodiversity and ecological processes in Australian forests and rangelands.
- Land managers should facilitate increased engagement and empowerment of Traditional Custodians to implement cultural burning practices integrated with science-based approaches to achieve more ecologically sensitive and culturally appropriate approaches to forest fire management.
- Forest fire management strategies and programs should be prepared at the landscape level based on the best available information about fire behaviour and appropriate fire regimes for maintaining forest ecosystem health. They should apply the principles of 'prevent, prepare, manage'; relying on 'response and recovery' only as needed.
- Landowners need a long-term commitment to implement the strategies documented in the National Bushfire Management Policy Statement for forests and rangelands. Their progress towards meeting the national goals should be reviewed annually using a consistent national framework of key performance indicators relevant to Specific, Measurable, Achievable, Relevant and Time-bound objectives.
- Protection of plantations from bushfires must be a high priority in bushfire management strategies and responses.
- Increased investment in prevention and preparedness activities is essential to achieve enhanced management of fire in the landscape and address the increased risk of more frequent and severe bushfires. This should include:

- Well-planned, risk-based strategic programs of fuel reduction, silvicultural management, fuel breaks and track maintenance, with appropriate public consultation;
- Prescribed burning by trained and experienced land managers, complemented where possible and appropriate by reintroduced Traditional Custodians' fire management practices; and
- Surveillance and bushfire response, appropriate to the threat, by well-trained personnel, resourced with equipment suited to rapid and aggressive on-ground response, day and night, with reliable communication systems and efficient and effective aerial support.

SUPPORTING NOTES

In Australian forests and rangelands, fire is integral to maintaining ecological processes such as nutrient cycling, habitat formation and the maintenance of ecosystem health and resilience.

The National Bushfire Management Policy Statement indicates that *"Inappropriate fire regimes (especially ones that predispose the landscape to catastrophic fires) exacerbate the risk of major economic impact on regionally critical industries"*). Uncontrolled bushfires can lead to the loss of life, homes, infrastructure and services; loss of amenity, habitat, soil and soil nutrients; loss or degradation of other forest values such as timber; and impact on water flows and water quality. Smoke from bushfires or planned burns can reduce visibility, adversely affect human health, and damage crops, such as wine grapes, across regions.

In many fire-dependent ecosystems, the frequency, intensity and seasonality of fire determines which species persist and which disappear from an ecosystem. Fires at too-short or too-long intervals can lead to a loss of flora and fauna species. Inappropriate fire regimes are the second-most cited reason for threatened species listings in Australia. Forest scientists are increasingly recognising that the increased frequency and severity of large bushfires is having major impacts on the forest biodiversity.

POSITION STATEMENT

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In forests the spread and intensity of bushfires varies with vegetation type, weather conditions, topography, fuel load and characteristics. Of these, the only variable within human control is fuel level, which is influenced by the time since it was last burnt. Well-planned prescribed burning is an effective tool for managing forest fuel accumulation, as well as for maintaining ecosystem processes and achieving silvicultural outcomes. Forest fuels can also be reduced through physical removal, mechanical and chemical control treatments and in some situations by grazing.

Research has shown that the severity of the 2019-20 bushfires was significantly decreased in about half of the areas in which prescribed burning had been conducted within the past five years. Prescribed burning is implemented to achieve defined objectives and under appropriate weather conditions. Areas in which prescribed burning has been conducted provide multiple benefits when bushfires occur. These include:

- Protection of assets, houses and infrastructure
- Increased safety and success of direct attack suppression
- Increased options for safely implementing large backburns
- Reduced impacts on flora and fauna caused by intense fire
- Reduced soil erosion in water catchments

Conducting prescribed burns can be challenging. Seasonal 'windows' of suitable weather conditions are becoming shorter; the spread of human settlement has introduced concerns about community health, safety and amenity;

and environmental regulation constraints may need to be resolved first. Furthermore, well-resourced, experienced personnel with local knowledge are not always available to conduct prescribed burns that meet burn objectives and enjoy widespread community acceptance.

The integration of Aboriginal cultural burning practices with forest science-based practices and technologies offers the prospect of implementing widespread, more frequent, low-intensity, and patchy managed fires to reduce bushfire risk and create sustainable biodiverse landscapes resilient to climate extremes.

To protect human life and biodiversity, fire must be strategically planned and managed at a landscape scale and over long timeframes, even though its impact, at any one time, may be local and immediate. To this end, fire in forests must be supported by legislation, government policy and ongoing research and be managed by professionally trained, experienced, and accredited forest managers in partnership with Traditional Custodians, not just emergency service agencies.

With the reduction of native forest timber harvesting across Australia, commercial forest plantations have become critical for meeting Australia's future timber requirements and maintaining private sector investment and prosperous regional economies. In the Black Summer bushfires 129,000 hectares of commercial plantations were burnt, including about one-third of the established plantations in three regions of NSW, which will cause significant impacts to long-term timber supplies in those regions.

Further reading

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