



Managing fire in Australian forests and woodlands

Forest Policy Statement No. 3.2

The Issue

In most Australian forests and woodlands weather conditions occur every year during which, given sufficient fuel, bushfires can be virtually impossible to contain. Uncontrolled fires pose a serious threat to human life, property, community assets and forest values and these potential impacts need to be minimised by effective management. Fire also plays an important role in the maintenance of biodiversity and ecological processes and is an essential tool for silviculture and forest management. Forest managers are required to integrate a broad range of fire-related issues and to implement management programs that address objectives related to natural resource management and community protection.

Background

Management of fire in forests and woodlands is principally governed by legislation passed by State and Territory governments. This may include general legislation relating to fires in rural areas, as well as specific provisions in the legislation that governs the management of public native forests, conservation reserves and plantations. The Commonwealth Environmental Protection and Biodiversity Conservation Act imposes requirements in relation to fire management activities. Common law provisions also impose a duty of care on forest owners and managers with regard to fire.

Planning for fire management requires systematic assessment and analysis of the threat of bushfires to forest and community values. Hazards and risks associated with bushfires are addressed through strategies for the prevention of, preparedness for, suppression of and recovery from fire. Fire prevention activities include public education and awareness programs, minimising the risk of fire outbreaks from forest operations and recreation activities, enforcement of fire regulations, and thorough investigation of the cause of fire outbreaks.

Preparedness involves the management of fuels, detection of fires, provision of firefighters, equipment and communications systems, access and infrastructure and development of response plans to be activated in the event of unplanned fires. Collaboration between forest managers and other agencies responsible for fire management in rural areas is important in ensuring that resources are used efficiently and that the response to fire emergencies is effective and well coordinated.

Forest management agencies have a requirement to maintain an effective workforce available for fire management tasks, and to allocate sufficient resources to this task in order to meet their duty of care to the community, volunteer firefighters, and their own employees. Safety of personnel must be a paramount consideration in all operations associated with fire suppression or the planned use of fire.

Forest fire suppression is a difficult and dangerous task that requires well trained and experienced firefighters together with appropriate equipment and effective management systems, such as the AIIMS Incident Control System. The ability to conduct backburning during wildfire suppression operations requires specialist skills and considerable experience, which is most effectively gained by involvement in prescribed burning programs.

Prescribed burning is the planned application of fire under specified environmental conditions to meet particular management objectives. Prescribed burning is an important tool for forest

management and is used for a range of purposes including forest regeneration, site preparation, fuel reduction and habitat management.

Scientific studies have demonstrated that the speed and intensity at which a forest fire burns is related to the amount and arrangement of fuel comprised of leaves, twigs, bark and understorey shrubs. In many eucalypt forests, the amount of fuel increases with the time since last fire, and may continue to accumulate for several decades. Prescribed fire can be used to reduce the amount of accumulated fuel, thereby reducing the intensity and difficulty of suppression of unplanned fires, and minimising likelihood of severe damage to forest values. Prescribed burning can also have an important role in providing heterogeneity of fire regimes at a landscape scale.

Fire management programs should be based on the best available information about fire behaviour, the role of fire regimes in the environment, and the influence of fire on communities and society. This requires a commitment to ongoing research in a range of disciplines, and a commitment to technology transfer to ensure that new information is made available to decision makers and practitioners. Scientifically-based decision support systems are an important tool for integrating a wide range of information and can assist managers to make consistent and transparent decisions about complex issues. Decision support systems are currently being used for smoke management and to plan the use of prescribed fire for biodiversity conservation.

There is a need for forest managers to engage the community during the development and implementation of fire management programs, particularly where publicly-owned forests and woodlands are involved and forest adjoins urban and settled areas. Fire-related issues likely to be of interest to the community include asset and environmental protection, risk management, and the relationship between bushfire smoke and human health. Effective communication and consultation with the community leads to greater support for fire management programs, and ensures that knowledge available within the community is made available to forest managers.

Policy

The Institute of Foresters of Australia (IFA) advocates the need to actively manage fire in Australian forests and woodlands in a comprehensive, integrated manner that considers risks, ecological and forest management requirements as well as the protection of life, property and other assets.

The IFA recognises that:

- Fire plays an important role in the maintenance of Australian ecosystems but uncontrolled fires pose a serious threat to life, property and forest values;
- Prescribed fire is an effective tool for managing fuel accumulation, maintaining ecosystem processes and achieving silvicultural outcomes in forests and woodlands;
- Comprehensive fire behaviour knowledge is critical to the effective management of fires in forests and woodlands.

The IFA considers that:

- Management plans for forest and woodland landscapes should recognise the important ecological role of fire and provide strategies to ensure that fire regimes are compatible with broad land management objectives and ecological characteristics;
- Forest managers have a responsibility to minimise adverse impacts on society caused by uncontrolled forest fires, and should allocate adequate resources to manage fire risk in an effective and safe manner;
- There is a need to manage the accumulation of flammable litter and understorey fuels in strategic areas of forest in order to limit the intensity and difficulty of suppression of fires;

- Effective communication and consultation between forest managers and other stakeholders is critical to successful planning and implementation of fire management activities;
- Effective communication and awareness of the general public that fire is an important part of the landscape is essential;
- Forest fire suppression requires active involvement of well trained and experienced forest land managers who have considerable experience in prescribed burning.

The IFA supports:

- The use of the AIIMS Incident Control System and inter-agency agreements to facilitate co-ordinated management of wildfires, including resource sharing, standardisation of training and equipment, and mutual aid during fire emergency situations;
- The development and use of scientifically-based decision support systems to inform forest fire managers during strategic planning, resource allocation and operational decisions;
- The development of performance indicators to provide meaningful information about the effectiveness of fire management in terms of environmental, social and economic outcomes.

Further information

Bradstock, R., Williams, J. and Gill, M. (2002). *Flammable Australia - fire regimes and biodiversity of a continent*. Cambridge University Press. 462 pp.

Burrows, N. D. (2004) Implementing fire mosaics to prevent large wildfires and enhance ecosystem health. Proceedings of the 11th Annual AFAC conference. Perth. pp 19-25.

Cary, G., Lindenmayer, D. and Dovers, S. (2003) *Australia Burning: Fire Ecology, Policy and Management Issues*. CSIRO Publishing. 268 pp.

Cheney, N. P. (2004) The role of land management agencies in protecting the community from bushfire. Proceedings of the 11th Annual AFAC conference. Perth. pp 13-18.

Luke, R. H. and McArthur, A. G. (1978). *Bushfires in Australia*. Australian Government Publishing Service, Canberra. 359 pp.

Pyne, S. J. (1991). *Burning bush - a fire history of Australia*. Henry Holt & Co., New York. 520 pp. <http://www.bushfirecrc.com>

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