The Role of Fire and its Management in Australian Forests and Woodlands

IFA Forestry Policy Statement 3.1

The Institute of Foresters of Australia (IFA) advocates a better appreciation of the important and complex role that fire plays in the evolution and maintenance of Australian ecosystems and its potential to significantly impact on social, economic and cultural values. The IFA also advocates for better management of bushfires and prescribed fires, including the need for further scientific research and the systematic monitoring and review of fire management with the results being made available to policy makers, land managers, fire services and the community.

Fire is one of the most important factors in the ecology of Australian forests and woodlands. Hence, the managers of both public and private forests must understand the role of fire both in meeting land management objectives and in minimising the potential for adverse impacts on human life and property.

The Issues

Fire is an essential element of the Australian natural environment that cannot be removed. It is integral to maintaining environmental processes such as nutrient cycling, adaptation and evolution via gene expression and redistribution, faunal and floral composition and structure, hydrological processes and habitat formation and maintenance.

However, uncontrolled fire can also be destructive, potentially leading to human death, loss of houses, infrastructure and services, loss of amenity, impact on water flows and water quality, loss of habitat, loss of soil and soil nutrients and loss or degradation of other forest values such as timber. The impact of fire can also extend beyond the burnt area with smoke from bushfires or planned burns having potential to cause visibility problems, adversely affect human health, and damage crops such as wine grapes.

To manage for the protection of human life and biodiversity, fire must be viewed 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 the natural environment must be managed by professionally trained, experienced and accredited forest managers, not just emergency service agencies.

There has been an increasing reliance on the use of tools and technology, such as aircraft, firefighting vehicles, fire suppression chemicals, computer models and voluntary evacuation ("leave early") to control fires and reduce the loss of human life. This has been at the expense of rapid and aggressive early fire control using experienced and well trained ground crews in direct attack strategies early in the fire's development which, in most cases, is more likely to be effective than indirect attack strategies.

Position Statement

The IFA recognizes that:

- Fire is an essential ecological factor, which has an important and ongoing role in maintaining biodiversity and ecological processes in Australian forests and woodlands.

- The ecological effects of fire vary according to the season, frequency, intensity, patchiness and scale of burning within a landscape.

- Bushfires can have effects that are significant at local, regional and global spatial scales and operate on timescales from the immediate to impacting over decades or centuries.

- Bushfires can be a very real threat to human life, property, economic and cultural values, social function and environmental values.

The IFA considers that:

- Every fire management program should be objectives-based and outcome-focused. The objectives should be set out in management plans based on legislative requirements, government policy and public consultation. Objectives must cover the protection of human life, property, economic and cultural values, social function and environmental values.

- Short-term fire management objectives should be consistent with long-term, landscape-scale fire and land management objectives.

- A decision to deliberately exclude fire from naturally fire-prone forests and woodlands will have adverse consequences for ecosystem productivity and function in the long-term.

- Because of the complex interaction of factors affecting fire and land management, there can be some uncertainty about the outcomes of different strategies and operations, therefore a risk-based assessment is a good way to approach fire management. Given the uncertainty in all the contributing factors and their interactions, the application of sound risk management principles gives the best likelihood of achieving specific management objectives. Having an outcomes focus, with well-defined performance measures, will lead to a system whereby the results of fire management strategies can be identified and measured over a long timeframe.

- The Australian, State and Territory governments have a responsibility to provide adequate resources for coordinated research and systematic monitoring of the behaviour, environmental effects and social impacts of bushfires and use of fire for managing forests and woodlands, and to provide inter-generational continuity of skills, capability and resources.

- The focus in all fire management programs should be around Prevention, Preparedness, and Fire Regime management and there needs to be a move away from relying primarily on Response and Recovery.

- The use of fire in the landscape by many Traditional Owners is acknowledged. Traditional knowledge and burning practices have great potential to contribute to positive social and environmental outcomes. Fire management can be used to reintroduce traditional knowledge to communities where it has been lost.

- All fire management operations should put a high priority on fire-fighter safety. However, the level of risks taken should be commensurate with the potential benefits to be gained, cognisant of the fact that fire-fighting is inherently risky and that trying to avoid all risk may inhibit the capacity to control fire in a timely manner and result in greater impacts and losses.

- Fire-fighting aircraft, tools and technology are not a substitute for effective on-ground fire-fighting. The primary focus of fire control should always be around on-ground efforts with aircraft, tools and technology being used to make on-ground efforts safer and more effective.

- Planned burning must be undertaken to enable forests and woodlands to be managed sustainably in the long-term, including the ability to evolve and adapt to climate change, physical disturbances, pests and diseases.

- Communication and consultation between forest managers, emergency response agencies and other stakeholders is vital to establish management objectives, including levels of "acceptable bushfire risk" for successful planning and fire management activities.

- Adaptive fire management ("learning by doing", monitoring and recording with scientific analysis) should always be used.

- Many aspects of forest fire management are common globally. It is important to exchange knowledge and expertise nationally and internationally to extend the range and depth of knowledge and experience in bushfire policy, research and management.

Supporting Documents

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Department of Environment and Conservation (2008). *Code of Practice for Fire Management. Western Australia*, Dept. Environment and Conservation. 26pp. https://www.dpaw.wa.gov.au/images/documents/fire/fms-code-of-practice.pdf

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Pyne, S.J. (2006). *The Still-Burning Bush*. Scribe, North Carlton, Victoria, Australia. 137pp.

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