



CONSERVATION COMMISSION OF WESTERN AUSTRALIA

Position Statement No. 1

March 2011

FIRE MANAGEMENT

Background

While fire is seen as a fundamental component of the Australian landscape, it is the alteration of fire regimes, particularly over the last 200 years or so since European settlement with the resultant changes to ecosystems and habitats, that has caused the greatest concern for biodiversity conservation. Inappropriate burning regimes now threaten a significant portion of Australia's biodiversity including more than fifty bird species, making fire second only to land clearing as a major threat to the conservation of biodiversity.

Fire, particularly wildfire, is a major threat to human life and property, infrastructure, and biodiversity where areas burnt contain fire sensitive plants or animals, or where conservation reserves are small in area.

Fire management requires an understanding of the ecology of plants and animals as a prerequisite for developing prescriptions aimed at introducing fire into an area either to reduce fuels as a means of protecting life and property, or in the maintenance or rehabilitation of habitats. For example, the mallee fowl is found to be most abundant in areas not burnt for long periods, probably because of its reliance on litter for building its nest.

Fires may have varying effects on biodiversity due to a range of factors including:-

- Fire intensity - high or low;
- Spatial patterns, including size, location in the landscape, contiguity;
- Frequency; and
- Habitat requirements of plants and animals.

Other factors now becoming more evident include changes in climatic conditions such as increasing temperature, and reduced rainfall in the south west of Western Australia.

The ecological inter-relationships of our plants and animals are so complex that generic fire management guidelines cannot apply to all landscapes. Some species, particularly mobile species, may be relatively immune or even benefit from regular burning while others may be intolerant and negatively affected. It is suggested that almost half of south-western Australia's mammals and birds may be negatively impacted by altered fire regimes.

The impacts of altered fire regimes, while becoming more recognised now, indicates a lack of understanding of important environmental issues, and, unfortunately a shift towards crisis management.

Increasing housing and land development and associated infrastructure within bushland settings places increase pressure on land and fire management agencies to ensure fire risk is maintained at levels to protect life and property in the event of unplanned fire. However, it must be understood that it is virtually impossible to fire proof our environment and even the best plans may not prevent disastrous impacts in some situations.

In general, it appears that there is a limited understanding of fire and its impact on the environment and on other important infrastructure assets including those associated with urban areas. It is therefore important that as a community, we improve our understanding of fire management, particularly within the conservation estate, and its impact on wildlife and the environment as a whole.

Role of the Conservation Commission of Western Australia

The Conservation Commission (the Commission) is a statutory body established under the *Conservation and Land Management Act 1984*. The State's terrestrial conservation reserve system and State forests are vested in it, and the Commission has responsibilities related to the preparation of management plans, assessing and auditing the activities of the Department of Environment and Conservation (DEC), and policy advisory functions. It provides independent expert advice to the Minister for the Environment.

DEC is responsible for fire management within the conservation estate. The Commission is of the view that the need to protect human life is of the highest priority and will continue to support the work conducted by DEC in this regard.

The Commission will continue the maintenance of its performance assessment of fire management as a priority in its ongoing work program.

Investing in Environmental Fire Management

Both the Commission and the Department will, in the end, be judged by what is done, not simply by what they say they are going to do.

There is clear recognition that active programs of prescribed burning and wildfire suppression require a great many resources. However, even with increased operational resources and all the activities that they may be put to, this will not necessarily prevent major fire outbreaks nor the sort of catastrophic impacts seen in the history of this State and elsewhere.

Given the number of species that are threatened by fire, and the strong focus of the Australian community on the effects of out-of-control wildfires, it is appropriate that a greater investment in research into ecologically sustainable fire management and practices that are consistent with community safety is made. It is appropriate to do this now that climate change effects are upon us, with the threat of increased fire frequency and intensity.

There is also a need to increase the community's knowledge and understanding of our environment as, given our country's high level of urbanisation, many people have little understanding of the effects of biodiversity loss and environmental degradation. Urban development planning, including the location of important public assets, requires sound understanding of fire management in a drying and warming environment.

Implementing Change

The Commission encourages Government, the private sector, and DEC to invest in public awareness and education programs so that community members and leaders in infrastructure planning processes gain an improved understanding of fire management issues and needs. Given the high level of urbanisation in the Australian community, this will prove no small challenge and will require co-ordination of educational providers, industry, and government agencies.

There is a concomitant need to increase investment in research into fire management requirements across the State to include the full array of ecosystems occurring in the conservation reserve system from the Kimberley to the Nullarbor. Underpinning this research is the need for establishing yardsticks, or baselines; without these baselines monitoring change is meaningless.

The creation of biodiversity monitoring programs is important if long term trends in change are to be determined and evaluated. Knowledge derived from long term monitoring programs may allow us to determine causal factors, make predictions about outcomes in similar ecosystems exposed to similar management activities, and potentially reduce impacts of threatening processes such as fire. Unfortunately, long term monitoring programs are vulnerable to short term budgetary planning by governments who may have changing priorities to deal with.

The Commission's Position

The Commission would like to see fire management established on the basis of ecological sustainability, with full recognition of biodiversity and environmental requirements. It recognises that DEC will need a range of approaches to prescribed burning regimes and practices based on location and that the objectives of carrying out introduced fire practices will differ in relation to management issues. In situations where the protection of life and property or major public infrastructure is the primary objective, it is likely that a more strategic approach to fire management will be undertaken. Equally, where habitat rehabilitation or species protection is the primary objective, fire prescriptions will reflect ecological, species or habitat requirements.

The Commission strongly supports an increase in fire related research given the breadth of landscapes and ecosystems now vested and managed by DEC, with many of these perhaps requiring new approaches to fire management activities. This research, coupled with operational activities will require targeted long term monitoring programs to quantify through time the effectiveness of management approaches taken.

A sharper focus on the dissemination of knowledge and understanding of fire management in an environmental context should be a key objective of DEC and should be made a high priority for action.