

FIRE MANAGEMENT IN CALM

A paper for the National Parks and Nature Conservation Authority

by R J Underwood

I have written this as a personal reflection on the issues, rather than a scientific paper. It is presented as a companion to the paper on fire suppression prepared by Rick Sneeuwjagt which will also be delivered at this meeting.

By the very nature of our charter and the breadth of our responsibilities, CALM is involved in many controversial issues. There is timber cutting in State forests (utterly opposed by some, a livelihood for others); recreation in national parks (an anathema to those who believe national parks are for nature conservation only, a source of supreme pleasure to others); the establishment of sanctuary areas in marine parks (which always seem to overlay a traditional fishing spot) and so on, and so on.

But there are few more controversial areas than fire. No matter what action we take with respect to fire, some constituency is passionately opposed. Even our fire ecology research work was the subject of criticism from one environmental group!

It is therefore no coincidence this is the fourth time in the last five years that fire has been a major topic of discussion at the NPNCA. Since CALM was formed I have had to speak at numerous public meetings and workshops on the issue: the interest is insatiable. Each time we do a management plan, we agonise most over the fire management section; each year when our burning commences in the South-West, critical calls pour in to the talk-back radio programs and anguished letters pour in to the Minister's office. At the first whiff of smoke in the metropolitan area, the media bursts with messages of doom. And whenever there is a serious fire, farmers, shires and neighbours cry out that we haven't done enough to prevent it or to mitigate its effects.

Why is fire management so controversial? And why do we cop it?

In my view there are five main reasons:

1. Humans have an ambivalent psychological attitude to fire. On the one hand, it is a good servant (in the stove and the hearth) but on the other it can be an uncontrollable, killing force. The cry "FIRE!!!!" instils fear in all. The idea that such a horrible thing as fire could be a perfectly natural ecological factor is quite beyond the imagination of most people, especially most city people.
2. The short-term effects of fire in the bush are dramatic: beautiful flowers and shrubs are reduced to a drift of ash on the wind; roos pick at the wreckage or depart for greener pastures; and there is an eerie silence in the bare, ruined choirs where once birds sang. This greatly upsets people, especially people who have never studied, or fail to notice what happens after a fire. The recovery processes in the Australian bush are so rapid, that few people heed them. I have often dealt with complaints from people that we have "destroyed" an area by burning it, when the area had in fact been burnt only five or six years previously.

3. Some people accept that fire is a natural factor of our bushland environment, but cannot condone the deliberate lighting of fires. In this argument, bushfires started by lightning are okay (and should even be let run naturally until extinguished by rain), but fires deliberately lit by humans are un-natural and therefore ecologically "bad". Linked to these people are those who simply cannot accept the fire-caused death of a single animal, even though the species will recover.

A subset of the people who do not accept any deliberate burning, are those who accept fires only at a particular time of the year. Winter, spring and early summer fires are regarded as "bad"; late summer and early autumn fires are regarded as "good" - irrespective of the weight of ethnohistorical information and research.

4. Another view comes from people who live next door to bushland, and who have experienced the difficulty of controlling wildfires or who have suffered fire damage. They regard the threat of unconstrained bushfires (whether started by lightning or not) running through their crops, houses and flocks as entirely unacceptable. Along with the people whose responsibility it is to actually fight fires when they occur (as opposed to most of the population who only watch them on TV from the comfort of their armchairs), most people who feel threatened by fire are quite happy to see adjoining bushland burnt under controlled conditions very regularly.
5. Then there are the scientists and professional land managers - a tiny subculture of society who constantly think and worry about the whole business, who are generally up-to-date on fire ecology and can see what should be done from an ecological standpoint (but are nevertheless acutely aware of all the unknowns, all the interactions and all the biological puzzles yet to be resolved), and who have first-hand knowledge of the manifold economic and social values of CALM land, but whose responsibility it also is to actually develop acceptable fire management plans, carry them out, fight the fires which do occur, and (worst of all) stand accountable for everything in the final analysis. That's us. We are the only people involved in this whole affair who not only have to try to resolve conflicting viewpoints, but who have to do the work and then take the consequences.

The above summary necessarily simplifies many aspects and arguments; the aim is to highlight the main social and scientific dilemmas involved, not deal with them all comprehensively. I have also avoided discussion of the purely political dimension of the issue - as we all know, there is a very small, but vocal element of the community who deliberately promote controversy over CALM's fire management as a means of achieving a political end, viz, the end of CALM!

I have also skipped over the classical problem of land management - how to meet non-compatible objectives. The best example of this is found in the karri forest national parks, where we could happily allow intense wildfires to occur (these are perfectly natural ecologically), but the result would be to convert mature stands to even-aged regrowth, the very process which gets us into so much hot water when the regeneration follows logging rather than wildfire. In fact what people seem to really want in the karri forest are stands of mature healthy trees; and the only way to preserve these is to carry out fuel-reduction burning so as to minimise the risk of stand-killing high intensity fires.

CALM and the NPNCA have attempted to find a path through all this. Over the years, the approach we have developed is as follows:

- Firstly we have developed and published a policy on fire management. This serves two purposes: it sets out the goals and principles to guide staff and the strategies to be followed in the field; and it provides the public with an opportunity to suggest how these things can be improved. The policy has been in the public arena for

some years now, and appears to have general acceptance. It has never been attacked. On the contrary it has been widely plagiarised by agencies elsewhere in Australia and overseas!

- Secondly, we have an active fire research unit, focussing on both fire behaviour and fire ecology in a variety of ecosystems. Fire ecology questions are also being investigated in WA by CSIRO and some tertiary institutions, often with our support. We would like to do a lot more in this area, and will do so when we have the resources. We would certainly like to see more being done in WA by CSIRO.

Allied to our research effort is a commitment to change our fire management practices as we learn. CALM staff are used to change and have been raised in a culture which accepts new insights and new approaches and tries to make them work. I believe that this is one of our greatest strengths in CALM.

- Third, in national parks and nature reserves we are either following approved management plans (to which the public has been given proper opportunities to contribute) or are restricting ourselves to the minimum intervention possible to satisfy neighbours, protect us legally and break up very large fire runs. Most of this work is in the South-West where we have the capacity to get things done. Fire management in reserves in the Kimberley, Pilbara and arid inlands is still in its infancy.

In State forests we undertake regular prescribed burning for fuel reduction purposes, on the basis of Wildfire Threat Analyses (see companion paper by Rick Sneeuwjagt). The emphasis throughout the South-West is to protect human values, but at the same time the need to sustain biodiversity is recognised as a legitimate goal. In recent years there have been quite major developments both in our approach to, and our practice of prescribed burning in forest areas, and I see this process continuing.

- Fourthly, we have a well developed fire fighting force in the South-West of the state, and we have fire control emergency plans which can be activated as the need arises. Most of our field staff are trained to play a role when a fire occurs, and many are accredited as Fire Controllers and Fire Bosses and so able to take full command in big emergencies. We have also recently begun an ambitious program to train timber industry staff as well. Our fire equipment is modern and of high quality, and in the South-West we have a fire detection system based on aircraft and lookout towers which is said to be one of the best in the world.

Our relations with volunteer fire fighters and the WA Fire Brigade are very good in most areas.

- Fifth, all aspects of fire management are meticulously planned. Systems of reporting and checking have long been in place. While the system is subject to occasional human error, on the whole it works well. The problem is that we are dealing with a highly complex, physically demanding and dangerous area, and with situations where critical weather conditions cannot always be accurately predicted or the criminal work of arsonists prevented. We would like to be perfect, and this is the goal, but we are not yet there and may never get there.

[Of special note: no CALM fire-fighter has been killed during fire fighting operations for nearly 30 years, and no human life has been lost in WA as a result of a fire coming out of CALM lands. Compared with South Australia, Victoria, Tasmania and New South Wales (to say nothing of California!), this is a truly significant achievement.]

- Finally, we are trying all the time to improve public access to CALM's fire management work and public involvement in our fire plans and programs. This is being done by holding workshops and seminars, by popular scientific articles in *Landscape*, by setting up advisory committees to work with us on management plans and consultative committees to help us implement plans. Our staff regularly attend bushfire brigade meetings, shire bushfire advisory committee meetings, conservation group meetings and field days. We invite people to call on us, to come and look at our work, to help us, to challenge us. Above all, we try to share our problems with others - ie, to expose them to all sides of the argument, as we are.

Sometimes when we have copped another vicious attack from the environmentalists, I despair that all this is in vain. At other times we get glowing letters of appreciation from country people or high praise from our professional peers in other agencies around Australia or in the US or Canada, and this helps to restore morale. Nevertheless, I am acutely aware of two things:

1. We still have an enormous amount to learn about the basic science of fire ecology and the techniques of fire management for most Western Australian ecosystems. Of course we will never know everything about the effect of every possible fire regime on every species and about all the countless interactions. What we must try to do is keep within the natural range of robust flexibility with which Australian ecosystems are endowed, and we try our best to develop special prescriptions tailored to the needs of threatened species as these needs are progressively unravelled. I anticipate plenty of argument between scientists as we refine our thinking in these areas in the years ahead, but since we all share the same objective, I expect that progress will always be positive.
2. At the same time, what we **cannot** do is ignore our social responsibilities. The best ecological fire plans in the world will not save us from justified criticism (and probably litigation) if we fail to take steps to mitigate wildfires, and to protect people and their assets. We will therefore always be forced into developing fire plans which take into account both environmental and social responsibilities.

Because of this, our fire plans will in most cases turn out to be compromises. The problem with a compromise is that it never satisfies extremists. We will therefore always be subjected to criticism whether it be from those opposed to burning or those opposed to heavy fuels.

It is very difficult to hold firm in the face of persistent criticism, even if it is from extremists, who are often very skilled at manipulating the media. The NPNCA has shown itself prepared to tackle the hard issues, and to not be easily intimidated when its management plans have been attacked. I hope this continues. CALM staff out in the bush appreciate this support. We also hope you will continue to be tolerant when we are trying new things and don't always get them right first time.

None of this is meant to suggest that we should not listen to our critics, weigh up their arguments, and try to accommodate legitimate requirements. We will and do these things. But we will never satisfy everyone in this area - the spectrum of demands is simply too wide. I therefore expect - and so should the NPNCA - that fire will always be a hot issue.