

GROUNDHOG DAY IN THE BUSH

Why do we never seem to learn from bushfires,
asks **Jim Hoggett**

Every few years an extreme summer bushfire occurs. Our perpetual surprise at this seeming inevitability is one of the characteristic constants of modern Australian innocence. Each extreme fire is followed by an inquiry that invariably produces a set of essentially unchanging conclusions. This is an Australian version of Groundhog Day. The same sequence of events is repeated on a sinister loop. The hapless actors (us) seem unable to stop, divert or even understand what is happening.

Bushfires happen

Big fires destroy property, kill people, devastate native vegetation and cause the deaths of millions of native animals. In the 2002-03 fires in Victoria, New South Wales (NSW) and the Australian Capital Territory (ACT) some three million hectares burned, more than 15,000 stock died, over 600 houses were destroyed and seven people died.¹ An immediate and immense loss of biodiversity occurred. Billions of trees, plants, insects and animals died including several endangered species. There was limited success in containing the fires.

There have been other major bushfires with more human lives lost, the most deadly being the Black Saturday fires in Victoria in February 2009 when 173 people died. Overall, an estimated 552 people have died in bushfires in the last century, making bushfire one of the leading causes of death from natural disasters.²

Economic costs are very high. Insured losses from the 2009 Victorian fires now exceed a billion dollars.³ The actual fire fighting costs are also substantial and ongoing. The use of both ground and expensive airborne control methods has both direct and indirect costs.

Current thinking is that global warming is worsening the potential risk, severity and actual frequency of major fires.⁴ Blaming bushfire disasters on the inevitable consequences of climate change, however, obscures other factors at play.

Our current response

Recent summer bushfires in Victoria saw 116 homes destroyed in the Otways National Park fire over the Christmas period. Some 69,000 hectares were scorched in Western Australia, two people died and the small community of Yarloop was nearly wiped off the map.

Why are we trapped in this cycle?

The answer is not lack of study. The Bushfire Cooperative Research Centre program produced 45 PhD graduates in 11 years before its funding ran out in 2014. The CSIRO conducts bushfire research on everything from householder psychology to native and agricultural plant physiology. Environmental and forestry agencies make or sponsor continuing research efforts.⁵

Moreover, all levels of government regularly issue media messages to prepare ahead of bushfire seasons. And fairly recently, the fire danger rating system was changed by upgrading the categories on roadside signs so that the base level is now Low Moderate instead of Low and the



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upper limit is Catastrophic instead of Extreme. Thus the official judgement is that we are under continuous threat of bushfire.

At the same time, there are programs of ‘hazard reduction’ burning that can take place subject to stringent conditions. In National Parks these conditions may include detailed planning, lengthy advance notice and environmental impact statements. These burns are also subject to weather conditions on the nominated day. This can be a time-wasting, expensive, inflexible and frequently abortive process.

Ultimately there is the last line of defence—namely, the reaction to a blaze in progress. Then, potentially large teams of professional and volunteer fire fighters are deployed for days and sometimes weeks to contain and extinguish the flames. Major bushfires will often be temporarily uncontrollable with fire fighters falling back to protect property and not always succeeding. Methods and equipment have become increasingly sophisticated but nothing beats Mother Nature in a rage.

Even the might of the telegenic giant water bombers provides only short respite. As Bushfire Front WA chairman Roger Underwood pointed out after the recent WA fires, these bombers make little difference to intense fires and can’t be used at night or in high winds. ‘You may as well take an aeroplane load full of dollars, fly up over the flames and let them loose. It’s money being wasted’, he said.⁶

How did we get here?

The answer is fairly simple, but it is counter-intuitive. And the ways out of the Groundhog Day loop are complicated and involve difficult practical choices.

In making these choices, we must face two inescapable facts. First, large areas of our country continuously accumulate highly flammable fuel. It is accumulating in thousands of tonnes as you read this. Second, that fuel will inevitably ignite and burn, either in a controlled or uncontrollable fashion.

Some people think that fuel accumulation can be dealt with benignly. This is consistent with elements of green thinking where humans are urged to minimise disturbance of the landscape.⁷ The

emotive terms ‘pristine landscape’ and ‘stable state environment’ are often heard. Green groups view regular fuel reduction burns in remote areas and National Parks as unnatural and argue that such burns destroy biodiversity.⁸ Benign neglect is considered preferable to controlled pre-emptive burning over wide areas. Yet large amounts of accumulated fuel lead to bigger and more intense bushfires, and these do more serious—sometimes irreversible—harm to biodiversity than controlled burns. The magnitude of the ACT firestorm in 2003 created permanent changes to forest ecology.

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Others believe that major fires can be managed. Most fire-fighting organisations, for instance, do not necessarily dismiss controlled burning, but hold that the best approach is to minimise fires rather than mitigate fire risk. This might be called the control theory. Its practical expression is the policy known as suppression. Thus, with a modicum of hazard reduction and detailed fire control regulations we can suppress fire. In an emergency, a massive application of fire fighting can avert disaster. Or, as a default option, maybe we can protect property and human life so that mainly trees and animals die.

Both approaches regularly collapse in the face of the facts. But they persist. Those adhering to the ‘pristine’ theory do not want to contemplate solutions that might imply early human intervention. Adherents to suppression policy still believe we can control Mother Nature in a bad mood.

Compounding the problem

We have also created some complicating factors.

Our town planning and building codes often fail to give full weight to fire risks. We continue to sing the refrain ‘Give me a home among the gum trees’ as our towns and cities spread. In Canberra town planners even created native vegetation reserves reaching from the perimeter into the

heart of the city. This allowed the 2003 fire access to more homes. Elsewhere, local efforts to reduce fire risk through hazard reduction burns come second to complaints about smoke pollution. We thus create sitting ducks for the next fire event with inevitable destruction of the environment, loss of property and even human life.

To add fuel to the fire, so to speak, in recent decades a massive shift in land management has taken place in high fire risk areas. We have been engaged in creating vast fuel factories called National Parks. There are now over 700 National Parks totalling more than 34 million hectares. With other publicly protected areas, they represent about 18% of the area of Australia.⁹ In New South Wales the increase has been from about one million hectares in 1970 to around six million hectares now. There is continuing political pressure to add to the system.

With fuel accumulating continually, the probability of more major fires in and adjacent to Parks must be about 100%.

These under-resourced areas are subject to similar burning controls as private landowners. Their pitifully small staffs are expected to control fire over millions of hectares along with programs to control soil erosion, noxious weeds, feral pigs, dogs, cattle, horses, camels and goats. With fuel accumulating continually, the probability of more major fires in and adjacent to Parks must be about 100%.

Many Parks were originally State forests where the record of fire management was generally more active. In NSW, through the 1990s, State Forests effected three times the hazard reduction undertaken in Parks.¹⁰ The arguments against State forestry and limited logging tend to lose credibility when we recall that the 2002-2003 fires consumed three million hectares compared with 60,000 hectares logged annually at the time.¹¹ And a major fire can have a far deeper environmental impact than logging.

This is not sustainable land management. Yet we appear incapable of learning despite the heavy cost of continuing to do what we have always done.

Is there another way?

A good start would be to ask how the landscape before 1788 came about. The answer is that the land was privately managed by myriads of Aboriginal tribes. They acted independently but within a profoundly traditional framework and set of practices. Their omnipresence ensured wide coverage of their land management practices, which centred on the systematic use of fire according to seasonal, annual and longer cycles. This use of fire seems to have been determined by the need to create open space, principally to influence the movement and presence of game. But it was consistent with their knowledge that most native Australian plants need or tolerate regular mild fire.

Regular clearance of grass and 'underwood' through low-intensity 'cool burns' resulted in a largely open landscape described by the first European explorers as 'park-like' and painted as such by early European artists. There used to be a cultural cringe that criticised these artists for sentimentally attempting to reproduce European-looking landscapes instead of what they saw. Yet the contemporary written descriptions of the landscape actually tally with the paintings.

Aboriginal people were not practising 'hazard reduction'. This is a human-centred concept designed to protect lives and property. It treats fire as the enemy. For Aboriginal people, fire was a friend.

None of this is a revelation. The story has been told many times by explorers, farmers, historians and Aboriginal people. A recent classic on the subject is Bill Gammage's 2011 book *The Biggest Estate on Earth: How Aborigines Made Australia*.

Two facts emerge. First, our landscape was almost certainly actively fire-managed by humans for tens of thousands of years prior to 1788. Second, it was managed sustainably for humans, fauna and flora. With regular and widespread mild burning, massive fuel loads would not accumulate across entire landscapes. 'Cool burns' clear the on-ground fuel and undergrowth before it accumulates to dangerous levels. They permit landscape regeneration. The possibility of a three million hectare inferno, with crown fires in the treetops and destruction of plant life to a metre below ground and all animal life above, would be unlikely to arise.

In the 228 years since Europeans arrived we have no doubt many achievements to our name. But in land management our record often compares unfavourably with the regime of the previous owner-occupiers. In the control and use of fire especially, we have failed. Yet we continue to compound this failure by placing greater and tighter fire restrictions on private and public land managers. This is part of the notion that you will have fewer fire problems if nobody is allowed to light a fire unless it is raining—the control theory.

This does not need to happen

For the time being it is Groundhog Day. As mentioned, we have just had major summer fires in Victoria and Western Australia. As far back as 2009 former forester and WA Bushfire Front chairman Roger Underwood noted that:

... even in WA the system slipped in recent years as foresters battled to keep a fuels management program going in the face of cunning opposition from environmentalists and compliant politicians. WA has also seen an almost complete abandonment of effective bushfire management on private land over the last decade with local government opting out and no-one else filling the vacuum.¹²

Would the recent WA fires have been as severe with better policy? No doubt the inevitable public inquiry will tell us.

We cannot recreate the landscape of 1788 nor reinstate the diffuse and active Aboriginal land management of the aeons before that date. But if we want a set of sustainable practices that diminish destructive fire we need a revolutionary change in thinking.

As a priority, we need to abandon the naive and dangerous idea that the sustainable state of our landscape is achieved by neglect. The landscape was never in recorded or unrecorded history left to find some mythical sustainable level without human intervention. Neglect may be itself a form of management but it is likely to lead to bigger and more destructive fires and perhaps a final scrub landscape that bears no resemblance to the forests, woodland and grassland found by early European settlers.

We also need to challenge the fatalistic notion that catastrophic fires are an inevitable result of higher temperatures due to climate change. The Climate Change Institute recently produced a Fact Sheet on ‘myths’ about bushfires and climate change.¹³ Among the standard arguments for the severity of the climate change threat for fire, there is a short paragraph dismissing the notion that fuel is always the main factor in fire risk. This ignores the fact that both the official inquiries into the 2003 ACT fires (and numerous previous and subsequent inquiries) concluded that controlled burning to reduce the build-up of fuel loads was crucial to mitigating the risk of future firestorms.¹⁴

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Even if we accept the inevitability of global warming, the ‘do nothing’ advice surrenders the potential for effective response. A major fire can be a national disaster but it is not like an earthquake, volcanic eruption or even a cyclone. These events cannot be mitigated in advance. We have no control over their ferocity. With fire we do. We cannot control plant growth or the weather but we can do something about fuel accumulation.

The core of the solution is counter-intuitive. We need more not fewer fires. That means giving greater weight to private and public land managers, local bushfire brigades and others with on-the-ground knowledge and experience in the productive use of fire. This will involve some different risks. But we are not exactly avoiding risk with the current approach that paralyses action.

The policy response

Most policymakers accept this in principle. Even the NSW Greens acknowledge that ‘... uncontrolled bushfires are a threat to life and property and to ecological sustainability...’.¹⁵ They support hazard reduction burns on the fringes of town and cities to protect ‘essential’ assets, implicitly limiting increased burning elsewhere. Policy aims are informed by the ‘precautionary principle’, which is not a precaution against too little controlled

burning but against too much. So the ‘threat’ soon disappears under an avalanche of caveats and conditions.

For instance, hazard reduction must be ‘strategically planned’, implying centralised bureaucratic control. Frequent fire is a ‘key threatening process’. ‘Ecologically appropriate fire regimes’ would be required—a field day for green bureaucracy. The blind alley of physical fuel reduction is repeated; that is, the removal of fuel accumulation by heavy ground equipment. This would require the use of thousands of bulldozers and trucks and the resulting disturbance to the ecology would be far greater than the sensible alternative.

In a final blow to any hope of widespread effective hazard reduction, the Greens advocate strict controls to reduce the amount of rural burning ‘not required for essential asset protection’. Fire permits would be required all year including outside the bushfire season. So every bonfire on every farm could be subject to a bureaucratic process.

Such policies enmesh practical on-the-ground operations in detailed scientific and bureaucratic processes. So although we have a planning apparatus and widespread hazard reduction plans, the actual process at the local level and the increased risk of breaching ever more detailed regulations and legal requirements creates powerful disincentives to local action. While such policies pay lip service to the concept of fire management, the net effect would be to make active intervention almost impossible.

In mainstream political parties there seems to be a mix of ignorance, inertia and unwillingness to effect the bold necessary policies. Some politicians seem to favour suppression of fire over pre-emptive burning, and deny the evidence when suppression fails. Just recently, the Victorian Premier dismissed suggestions that widespread fuel reduction burning could have helped prevent disaster in the Otways fire over Christmas. In doing so, he contradicted his own Emergency Services Coordinator who insisted that the area’s heavy fuels prevented quick control of the initially small fire.¹⁶

We have made great progress in more sustainable agricultural practices by combining innovation with active farming. It is not beyond our capacity to

devise means to eliminate the more destructive fires and return to something closer to the traditional sustainable pattern of our landscape. As researchers Mark Adams and Peter Attiwill warn in a recent book on the science and politics of prescribed burning: ‘Unless we burn the bush in a controlled way, it is inevitable that the bush will burn uncontrolled leaving a legacy of death and destruction that will simply add strength to the view that ‘all fire is bad’.¹⁷

Some ways forward

Bushfires engage multiple policies—social, economic, agricultural, fire fighting, forestry, environmental, regional and others. We tend to apply these policies after the event, when the real need is for policies that prevent or mitigate major fire risk. These policy prescriptions are not new and can be found in most public inquiry reports. They overwhelmingly advocate more prescribed burning. Here are some practical steps:

- Change the policy thinking. This will require publicly abandoning the control theory by admitting not only that current policies are failing but also that the underlying rationale is faulty and needs revision.
- Redirect research funds to examine the operational implications of active use of fire in landscape management and to actual hazard reduction activity. The emphasis would be less on the effects of uncontrolled major fires and more on practical means of preventing them. Create opportunities for ‘cool’ burns.
- Devise a strategy for major hazard areas. This would involve identifying the most extensive areas of fuel build-up or potential catastrophe.
- Ease regulation of hazard reduction burning on private land by transferring responsibility back to private and public land managers. People generally respond to incentives. Even a minor easing such as the issue of permits for small hazard reduction burns over the telephone could encourage more active participation.

- Give National Parks and similar public conservation area managers greater flexibility to undertake reduction of fuel accumulation. This could involve giving managers more discretion as to the timing and extent of burns, obviating the need for repetitive applications and extensive reporting after the event.
- Severely tighten planning and building regulations to create and maintain wide fuel free zones around urban areas. This would mean not simply declaring certain cities 'bushfire prone' but accepting that virtually all our large urban areas are bushfire prone.
- Discourage planting of flammable native vegetation within areas of settlement—no more 'home among the gum trees'.

Conclusion

It will be difficult to turn this ship around given the momentum generated by a mainly urban electorate. And it would be naive to expect any policy to eliminate bushfires when the meteorological conditions are extreme. But current approaches are not working and if indeed climate change is upon us the need to shift policy course is even more urgent. The consensus of official reports into major bushfires almost unanimously favours greater emphasis on widespread hazard reduction. A coordinated approach to this form of risk reduction would be preferable to waiting for disaster to happen again.

Endnotes

- 1 The fires burned 75% of Kosciusko National Park, most of Namadgi National Park in the ACT and large areas of the Gippsland forests. Almost 70% of ACT pastures, forests and parks were burned. Australian Bureau of Statistics (ABS), *Year Book Australia, 2004* (Canberra: ABS, 2004).
- 2 Australian Institute of Criminology (AIC), 'Cost of Bushfires', *Bushfire Arson Bulletin* 60 (Canberra: AIC, 8 December 2009).
- 3 As above.
- 4 For instance, Climate Change Institute CEO John Connor said recently that Victoria 'may suffer a Black Saturday level bushfire once every three years if the world fails to curb climate change'. Louie Bacani, 'Climate Change Fuels Bushfires Fear', *Insurance Business* (11 February 2016).
- 5 That said, only half a dozen of the 240 plus staff papers produced by the NSW Office of the Environment and

- Heritage deal with fire—way below the number devoted to climate change.
- 6 *ABC News* (3 February 2016).
 - 7 The notion of 'no-disturbance' stems in part from a 'fine-filter' approach to ecosystems where the focus is on individual ecosystems and their unique characteristics such as special habitats needed for a single species. But land managers cannot apply this approach over large areas as the interactions within and between ecosystems are not known. Attempting to preserve them results in huge costs or paralysis. See Jim Hoggett and Aled Hoggett, *When Will We Ever Learn?*, IPA Backgrounder 16:2 (Melbourne: Institute for Public Affairs, May 2004), p.9.
 - 8 Some academics argue not only that controlled burns destroy biodiversity but also that prescribed burning has little or no value in bushfire control. These misconceptions are debunked in Mark Adams and Peter Attiwill, *Burning Issues: Sustainability and Management of Australia's Southern Forests* (Canberra: CSIRO Publishing, 2011). See also Khulan Altangerel and Christian A. Kull, 'The Prescribed Burning Debate in Australia: Conflicts and Compatibilities', *Journal of Environmental Planning and Management* 56:1 (2013), 103-120, where the authors draw on a survey of a range of opinions including those opposed to any prescribed burning on the grounds that it is not scientifically proven and is ecologically damaging. For a more colourful analysis, see Roger Underwood, 'Academia's Flaming Nincompoops', *Quadrant Online* (28 December 2015).
 - 9 Commonwealth Department of the Environment, Collaborative Australian Protected Area Database 2014.
 - 10 Hoggett, *When Will We Ever Learn?*, p.9, Table 3.
 - 11 As above, p.2.
 - 12 Roger Underwood, 'Australian Bushfire Management: A Case Study in Wisdom Versus Folly' (March 2009).
 - 13 The Climate Institute, *True or False?: Facts and Myths about Bushfires and Climate Change*, Fact Sheet (February 2016).
 - 14 The McCleod Report said 'It is the view of the Inquiry that controlled burning is the only broad-scale practicable means of reducing the build-up of fuel loads in the extensive parks and forests of the ACT. The practice provides no guarantee that bushfires will be prevented, but when they do they will not be so fierce and they will be more amenable to early containment or extinguishment.' See Ron McLeod AM, 'Inquiry into the Operational Response to the January 2003 Bushfires in the ACT' (ACT, Canberra: 1 August 2003), p. vi. The ACT Coroner Maria Doogan's report recommended that 'That there be an ongoing program of back-burning and fuel-load management across the ACT'. See 'The Canberra Firestorm: Inquest and Inquiry into Four Deaths and Four Fires Between 8 and 18 January 2003' (Canberra: ACT Coroner's Court, 2006).
 - 15 NSW Greens, 'Bushfire Risk Management Policy' (NSW Greens, May 2014), <http://nsw.greens.org.au/policies/nsw/bushfire-risk-management>
 - 16 Mark Poynter, 'A Tale of Two Fires', *Quadrant Online* (6 January 2016).
 - 17 Mark Adams and Peter Attiwill, *Burning Issues* (see note 8).