Can we reduce the impact of bush fires made worse by climate change?

Ian Brown, 24 January 2020

Six million hectares and counting. Thirty-three human lives and more than 2000 houses. More than a billion vertebrate animals. Possibly whole species gone. Amidst the horror of this season there has been much talk of the fires being unpredictable and unmanageable, of 'mega-fires' that were too big to put out. Its true that we have seen unprecedented dryness in the landscape (driven by climate change), burning on a vast scale and shocking fire behaviour. But a sense of helplessness is not helpful.

Firefighting and community efforts have not been helpless, they have been heroic and admirable, but are there things we can do, at the operational level, to manage fires better? Could we reduce the size of fires and hence their impact on both people and the environment, even in these difficult times? Many fire managers and fire scientists think so.

Maybe some of the houses lost and the 80% of the Greater Blue Mountains World Heritage Area that has burnt could have been saved by using some different approaches. Media attention has focused on bomber planes, planned burning and volunteerism. These are vital discussions, but other fundamental and systemic issues are getting little coverage.

Initial attack

All the recent fires in the Greater Blue Mountains seem to have been ignited by lightning. NPWS remote area fire fighting teams (RAFT) using helicopter access put out many such fires nearly every summer – but you only hear about the ones that get away. Four did get away this season: Gospers Mountain, Ruined Castle, Green Wattle and Kowmung (the latter two later merged). Why? This is not yet clear to anyone outside the operations. Its possible nothing could have got them in time, if conditions were bad enough. But we do know that in the early phases of these fires, other blazes were already running in NSW. RAFT crews and helicopters for crew transport and water-bombing were in heavy demand and short supply. The attack on at least one of these lightning ignitions was pulled off and sent to another fire.

Later, RAFT action succeeded in holding the Causeway Creek edge of the Ruined Castle fire and a breakout of the Grose fire on Wentworth Creek, to mention just two examples. What if some of the huge resources later applied to the 'got away' fires had been instantly deployed at the start? This is a vital issue for any fire review to investigate and report on.

Containment strategies

Many fire fronts in the Greater Blue Mountains burnt to their 'natural limits', where bushland joins settled areas or cleared agricultural land. But not all. Some were stopped before that. The fires were not on a never-ending rampage. Fire fronts did make big runs on hot, dry and windy days but then quietened down in more benign weather. Fronts also slowed down or stopped overnight, in deep gorges (eg. Gospers Mountain fire in Bungleboori Creek, Green Wattle fire in Coxs River) and in some

previously burnt areas (eg. 2018 Ruined Castle planned burn, 2013 State Mine Gully fire area).

Cunning strategies used these advantages to control some burning edges or entire fires, and to manage what the fires would do on ‘blow-up’ days. Successes include the eastern advance of the Grose fire, parts of the Ruined Castle fire and the northern advance of the Erskine Creek fire. These ‘close containment’ and ‘partial containment’ strategies require detailed understanding of the local landscape, vegetation, fire history, weather and fire behaviour. People with these skills are a critical but too-scarce resource. Some experienced staff have been lost in recent ‘restructures’ of NPWS and RFS. Another review item.

Other strategies tended to rely on lengthy backburns from roads to establish containment lines. Backburns are a valuable and proven option and can be very effective if well planned and implemented. But some fail, impacting communities and enlarging fire to new areas. Examples include the December 14 breakout near Mt Wilson that became the damaging Grose fire, escapes on Newnes Plateau and the outbreak that hit Balmoral. There have been others in previous years.

These are difficult and gut-wrenching decisions for fire controllers to make, even if backed by the best information. Are backburns being over-used? Could ‘fall forward’ strategies have worked? What else could have been done? Are there ways to better assess the risks and to help incident controllers in their unenviable task?

A full and independent review

Only a well-resourced, independent and evidence-based review can properly investigate these and other questions. It must carry out an expert forensic analysis of all fire operations and report to the public. Anything less is unacceptable.

Ian Brown spent 20 years with NPWS and worked on more than 100 fires. He has walked and worked in the Blue Mountains landscape for 40 years. With other former fire managers, ecologists and fire scientists, he has been watching this season’s unfolding crisis with intense interest and concern, as well as déjà vu.