

Submission Number: NND.001.01292

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What is your submission based on? I am making this submission based on my professional knowledge, qualifications or experience or on behalf of a group or organisation

What is your area of professional expertise? My personal situation as the owner of a fire-affected property

If you are lodging your submission on behalf of a group or organisation, what is the name of the group or organisation?

Your Submission

In your experience, what areas of the bushfire emergency response worked well?

Communications

There has never been better communication to the public in wildfire emergencies. Digital text and mapped information was frequently updated, and regular briefings from State fire authorities and State governments were exemplary. Facilitation via the public broadcaster was critical, and is a reminder that the ABC should always be adequately funded. Improvements that can, and should, be made became apparent however (see below).

Volunteers

The selfless efforts of large numbers of volunteers to help their community were outstanding. It is incumbent on governments to ensure there are no consequential hardships suffered by them.

Suppression

Ground and areal suppression operations generally worked as well as weather conditions allowed, with the notable exception of the water-bomber crash near Peak View, NSW. Ground crews seemed sufficiently well organised to avoid trying to save the unsavable.

Back-burning and Dozer Tracks

Sometimes these activities worked well. Other times they did not (see below). Both techniques need to be used more thoughtfully in future, and to better inform when they may be appropriate thorough investigations are needed into their recent impacts.

In your experience, what areas of the bushfire emergency response didn't work well?

Back-burning

Back-burning is an inherently dangerous activity as it introduces more fire into a landscape at the time when weather conditions are often volatile. It can be a valuable tool, but should be used sparingly as a last resort, not ubiquitously and not misused.

Our property suffered severe damage from back-burning in two different ways, and in both cases the back-burning may not have been necessary. The first instance was indirect. In response to the Aaminaby Complex Fire a hot back-burn was conducted on the opposite side of the road bordering our property. This caused major damage to Yaouk Nature Reserve, especially as a subsequent rain event resulted in sheet erosion from the affected steep slopes. The consequence was massive sediment deposition in the wetlands on our property. The second instance was direct. As widespread rain was approaching the Orroral Valley Fire, aerial incendiaries were dropped along the ridge bordering the ACT. This back-burn brought down mature trees in old growth mixed forest and jeopardised the survival of fire-sensitive stands of alpine ash. The second instance in particular was unlikely to achieve benefits considering the fire location and forecast weather.

There were even worse examples of back-burning problems on other fire grounds, such as in the township of Bilpin, NSW, where a number of houses were lost from an out-of-control back-burn.

Furthermore, back-burning not only has potential to increase the risk to life and habitation, but is invariably detrimental to wildlife survival and wildlife recovery. It works against patchy burns in the landscape, reducing those unburnt refuges so vital for wildlife.

Dozer Tracks

As opposed to maintained fire trails developed as part of a preparation strategy for use as access and as break lines, ad hoc dozer tracks constructed in response to approaching fire often do not work well and come at the cost of environmental degradation, sometimes in ecologically sensitive areas

In south-eastern NSW there were a lot of dozer tracks constructed during the bushfire emergency. There were tracks pushed through inappropriate places in the landscape, tracks that had overhead crown cover and would have been exceedingly unlikely to work as containment lines for out-of-control wildfire, others without mineral break that would barely have been adequate for trickle fire, and many that weren't even used after being constructed. An example on our property incorporated every one of these problems, and also damaged environmentally sensitive habitat.

Personnel

The extreme fire weather and extended fire season placed a heavy demand on volunteer fire-fighters. There is an obvious need to restore and bolster the ranks of professional fire-fighting staff in land management agencies. In past years there were generally more staff in National Park Agencies. Many fulfilled dual roles, for example, scientists with high level fire-fighting training were able to mobilise in elite crews for response in remote areas. The impact of cutbacks has been two-fold. Firstly, an intimate understanding of fire behaviour and fire ecology has

been diminished. Secondly, a protracted fire season, as has been experienced, drains the available manpower. Presumably, in part, to alleviate the latter, the Australian Defence Force was deployed. While enabling an extremely useful resource there was no preparatory planning and it did have substantial downsides. A particularly severe event occurred in the ACT which also impacted NSW when an intervention occurred in a place where there was no previous fire. It was accidental, but poor planning allowed a known potential source of ignition, a helicopter, into dry grass in difficult fire weather. Any future military use should be planned in advance to allow for appropriate training and for smooth integration with existing civilian authorities.

Communications

There needs to be consistent protocols to ensure outdated advice on apps and websites is not interpreted as current advice. This is vitally important when advice is changing rapidly regarding evacuate or stay. Discrepancies occasionally became apparent between twitter and face book feeds and app and website information. This has the potential to be very dangerous at the individual level, and even more so at the community level if broadcast by media, which sometimes happened. Better communications could be also be made about road closures. In NSW very current advice was given for major roads, but for minor roads advice was patchy at best and often non-existent.

While each State and Territory has developed admiral apps and websites, there would certainly be a role to nationally standardise these and also the nomenclature used. Natural disasters don't respect borders, so people living near borders would surely benefit.

In your experience, what needs to change to improve arrangements for preparation, mitigation, response and recovery coordination for national natural disaster arrangements in Australia?

The over-arching issue affecting many natural disasters is climate change, manifesting as severe climate disruption. There has been a spectacular failure at the national level to address the causes. Appropriate action by all levels of government is obviously the best mitigation. The unprecedented scale of wildfire in 2019/2020, over both area and length of time, is only one such example of natural disaster. It was caused by extreme drought exacerbated by record high temperatures.

Given these climatic conditions leading up to the 2019/2020 season, experts in the field, including former fire chiefs, tried to discuss the financial need for logistical preparedness. Inexplicably it seems the Commonwealth Government failed to heed these warnings. This should never be repeated.

Current land management practices need fundamental reassessment and to consequently move away from ones that are not evidence-based to ones that are. One of the most pertinent is that of prescribed burning. In contrast to widely held community views, the major analysis conducted by Gibbons et al (2012) of house-loss from the Victorian Black Saturday fires in 2009 revealed remote-country prescribed burning made negligible difference, whereas vegetation management within 40 metres of a house was significant. Furthermore there is evidence emerging that prescribed burning may increase fuel hazard rather than reduce it (Dixon et al, 2018) by maintaining forest in an early successional state. Though probably counter-intuitive to many, these findings come from a systematic study in montane dry sclerophyll forest in SE Australia and show highest fuel hazard consistently occurred in the period soon after fire, whereas lowest hazard occurred in long-unburnt forest. Given there is considerable doubt about benefits provided from prescribed burning, except possibly annual burning in the close vicinity of dwellings, and that prescribed burning had already been increasing over recent years leading up to last summer, it would seem foolish to recommend further increase. Furthermore, to recommend areal percentage targets based on arbitrary thresholds, as did the Victorian Royal Commission in the absence of current knowledge, would be absurd.

As well as hot burns, cool prescribed burns can be severely damaging. As a former researcher I was able to observe the ecological impact of the first prescribed burn (2009) at Collins Creek in the ACT after an extremely hot wildfire (2003) in the Cotter Valley. It was a textbook cool burn in appropriate weather, a trickle fire not much higher than knee height, yet it brought down many mature trees that had survived the wildfire but hadn't recovered sufficiently to withstand smouldering at the base. Post-fire recovery needs to be carefully considered. Authorities should be very wary of prescribed burning too soon (if at all in remote country) after wildfire.

The previous paragraphs relate to changes needed for preparedness, mitigation and recovery. Regarding changes needed for response, the following comes from my discussions in the previous sections.

Conducting back-burns and pushing through dozer tracks are responses that should be less ubiquitous and need to be used more thoughtfully in future. To better inform when they may be appropriate thorough investigations are needed into their recent impacts.

There needs to be consistent protocols to ensure outdated advice on apps and websites is not interpreted as current advice. Closures of minor roads need to be communicated. National consistency would be beneficial.

There should be advanced planning if future military interventions are considered appropriate.

Is there anything else you would like to tell the Royal Commission?

Dixon KM, Cary GJ, Worboys GL, Seddon J and Gibbons P, (2018), 'A comparison of fuel hazard in recently burned and long-unburned forests and woodlands', International Journal of Wildland Fire, 27, 609–622, CSIRO Publishing (<https://doi.org/10.1071/WF18037>)

Gibbons P, van Bommel L, Gill AM, Cary GJ, Driscoll DA, et al. (2012), 'Land Management Practices Associated with House Loss in Wildfires', PLoS ONE 7(1): e29212. doi:10.1371/journal.pone.0029212

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