

**Submission Number: NND.001.01279**

**Submission Of: Janet Stein**

### Your Details

Email address:

Phone:

Preferred means of contact: Email

What is your submission based on? I am making this submission based on my personal situation

What was your personal situation in relation to the 2019-20 Bushfires? I am a landowner in an area affected by bushfires and suffered personal and financial loss

Where do you live? Snowy Monaro Regional (A)

### Your Submission

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

In my experience, a number of areas of the bushfire emergency response worked well.

The community response was impressive, none more so than the large numbers of volunteer firefighters who made significant personal sacrifices to fight fires in difficult and dangerous conditions. I was heartened too by the willingness of the community to work together and support each other during the bushfire emergency, providing shelter to those who had lost their homes, rescuing and caring for injured wildlife, providing food to volunteer firefighters and fire evacuees, and donating money and goods.

Communication strategies also worked well during the bushfire emergency. I felt that I was generally well informed about the bushfire emergency. Critical information was conveyed through press conferences, ABC TV and radio broadcasts and news websites and via the websites, social media pages and emergency apps of State and Territory emergency service agencies. The press conferences held by State and Territory Premiers and Chief Ministers, Emergency and Fire Service Commissioners, and Incident Controllers inspired confidence in the overall management of the bushfire emergency response.

I commend the ABC for their comprehensive coverage of the bushfire emergency. Their reporters provided timely and reliable information often in extremely difficult circumstances. With the ABC Listen app I was easily able to listen to radio South East coverage and keep up to date with the fire threat to our property at Yaouk even when required to be in Canberra. I was however, very disappointed to read that the ABC, already dealing with successive budget cuts, would need to make further cuts to staff and programs to help cover the costs of the emergency broadcasting (Meade, 2020).

I found the NSW Bushfire Information line to be a particularly valuable source of information about the fires. Staffed by fire service officers, the information line provided up to date, detailed advice on the fire location enabling us to decide whether or not it was safe to travel to our property. The NSW Fires NearMe App also worked well, providing a mostly seamless integration of major fire extent mapping across the NSW and the ACT. I appreciated the frequent updates of the mapping enabling me to closely monitor the fires threatening our property. However, the text fields appeared to be less often updated. On occasions they appeared to be seriously outdated for example, describing fire conditions easing across the fire ground even after the fire alert level had being upgraded.

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

There were many instances of unintended damage arising from the emergency bushfire response. Indeed, one of the major bushfires was initiated by the heat from the landing lights of an army helicopter preparing the ground for access by emergency services personnel in the event of a fire (Levick, 2020) while a number of houses were destroyed in the Blue Mountains when back burning operations "got away" (Noyes et al, 2020). Backburning and the construction of containment lines and fire trails can also have large negative impacts on biodiversity (Driscoll et al 2010) as unfortunately, we experienced on our property at Yaouk. The property sustained significant infrastructure and environmental damage, in large part, the unintended consequences of the actions taken to combat the bushfire, rather than the wildfires directly.

The property has important conservation values. It contains areas of Tablelands Snow Gum Grassy Woodland, an endangered ecological community and is home to threatened species such as the Alpine Tree Frog, Litoria verreauxii alpine, and the Scarlett Robin, Petroica boodang. Recognizing its significant natural values, the property was registered with the NSW Land for Wildlife Scheme in 2016. Until this summer, fire had been absent for more than 100 years yet there was little fuel on the ground. The constant turning over of the litter by lyrebirds and wombats ensured that the litter was quickly broken down and fuel loads were low.

While two major fires approached to within a few kilometres of our property, the Adaminaby Complex fires to the west and later, the Orroral Valley Fire that raced through the ACT spotting into Scabby Range just to our north, neither wildfire reached our property. Rather it was the fires initiated by the aerial incendiaries dropped on Scabby Range during back -burning operations that burnt the fire sensitive Alpine Ash forests on the upper-slopes of our property just days before widespread rainfall. Additionally, the extensive back-burning operations undertaken to contain the Adaminaby Complex fires, burnt out large refuge areas that had survived the initial wildfire, priming the hillslopes of the Yaouk Bill Range for the devastating flash flooding and accompanying erosion and debris flows that inundated Bradley's Creek and the marshes, destroyed our fences, and shed, even washing away our water tank. As our neighbour described it, a massive landscape transformation had taken place. A track was also bulldozed along the lower slopes of Bradley's Creek, felling a number of mature trees. This was previously intact woodland that provided important wildlife habitat.

Another area of the bushfire emergency response that didn't work well in my experience was communication of the local roads that were closed due to the bushfires. It was for instance, difficult to find out whether Yaouk Road was open and thus whether we could access our property after fire conditions had eased. The NSW Live Traffic app was a valuable source of information but only on main road closures and conditions. I could not find a list of local road closures on the Council website. I also phoned the NSW Bushfire Information helpline and the Cooma Fire Control Centre but they too were unable to tell me whether or not Yaouk Road was open.

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 preparation, mitigation, response and recovery coordination for national natural disaster arrangements could be improved by:

1. Ensuring land management aimed at reducing the natural disaster risk is based on the best available science with clearly articulated objectives
2. Funding research into fire suppression effectiveness and the trade-offs that may be involved to support emergency response decision making
3. Strengthening national environmental protection legislation
4. Assisting jurisdictions with funding support for recovery actions
5. Urgently adopting strong measures to reduce greenhouse gas emissions

#### 1. Land management

Land management is principally the responsibility of State and Territory governments. Greater national coordination and accountability could be achieved through common national standards that require land management be based on the best available science and clearly articulated objectives and by requiring jurisdictions to be accountable for the evidence base on which land management decisions are made.

However, there should not be mandatory percentage area targets for hazard reduction burns. Such targets and calls to “name and shame” jurisdictions which don’t meet required targets (SBS news, 2020) need to be strongly rejected. Area targets are difficult to achieve with narrowing windows of suitable weather (Hughes et al 2020). They encourage large areas to be burnt in remote locations where there is little risk to infrastructure and property but the likelihood of significant detrimental impacts on the environment and little reduction in fire risk (Victorian National Parks Association, 2020).

Fuel loads likely played very little role in determining the severity and extent of the bushfires under the exceptionally hazardous bushfire conditions (Australian Government Bureau of Meteorology, 2020) that prevailed during the 2019-2020 bushfire season. Broadscale hazard reduction burns do little to moderate fires during extreme fire weather (Price and Bradstock, 2012; ABC News Online; 2019; Penman et al, 2020). Indeed, the media reported numerous examples of hot fires spreading through recently burnt areas with low fuel loads (ABC News Online, 2020a). Frequent hazard reduction burns, in fact, may have increased landscape flammability by encouraging the regrowth of flammable woody shrubs and the retention of early successional forest stages (Dixon et al, 2018; Zylstra, 2018). Protection of property is much more likely to be achieved by strategic clearing of vegetation or burning close to the property (Gibbons et al, 2012). Furthermore, hazard reduction burns can have serious detrimental impacts on human health (Borchers Arriagada et al 2020) and may causing significant loss of property and other infrastructure if they break containment lines (Burrows, 2017).

Nevertheless, there is a strong view in the community that simply increasing hazard reduction burning will remove the bushfire threat. Land management agencies have been widely criticised for insufficient hazard reduction burns, despite a doubling of the area burnt over the last decade (ABC News online, 2020b). To reduce the pressure on agencies to conduct inappropriate hazard reduction burns the Government needs to fund a communication strategy to inform the public about the need for a more scientifically informed approach to bushfire risk reduction.

#### 2. The emergency response

The emergency response should be reviewed after any natural disaster. This is certainly so for the 2019 – 2020 bushfires where large fires burnt uncontrolled for many weeks and there was serious unintended damage from the actions taken to combat the bushfires.

The majority of the major fires were initiated by lightning in remote areas (Nguyen et al, 2020). How many of these fires might have been suppressed before getting out of control if a rapid aerial response and/or remote area firefighting teams had been readily available? If supported by a review of their effectiveness, the Government should increase the funding for aerial firefighting assets and Remote Area Firefighting Teams and ensure they are strategically located for rapid response to fires initiated in remote areas. The Government should also remove the funding support rules that require an imminent risk to lives and property before funding jurisdictional use of aerial firefighting capacity and so disincentivises rapid response to remote ignitions (Foley and Smith, 2020).

More generally, there appears to be limited published research into the effectiveness of wildfire suppression measures and means to reduce their adverse impacts in the Australian context. A review by Driscoll et al (2010) found that fire management strategies including back burning, the use of chemical fire suppressants and the construction of fire trails and containment lines might not substantially reduce the threat to property yet had serious negative impacts on biodiversity. There is thus a clear role for nationally funded research into fire suppression effectiveness and the trade-offs that may be involved to support emergency response decision making.

#### 3. National environmental protection legislation

National environmental protection legislation might need to be strengthened to include additional matters for national environmental significance triggers following natural disasters. Long unburnt forest areas for instance, are critically important refuges for wildlife and provide a seed source for revegetation of neighbouring burnt areas. Large areas of unburnt forest are likely to be exceptionally rare nationally after the extensive fires of this summer yet will not be protected under existing national legislation. It is vital that such areas be identified and protected from further disturbance, such as hazard reduction burning, logging or grazing.

#### 4. Natural disaster recovery

The Commonwealth has an important role in natural disaster recovery, assisting jurisdictions with funding support for recovery actions and establishing mechanisms for resource and data sharing that encourages national coordination of recovery efforts.

Post disaster control of invasive species is important to assist recovery. Large populations of feral horses for instance, are causing further damage and threatening the recovery of sensitive vegetation in fire damaged areas of Kosciusko National Park (Pittock, 2020). Direct responsibility for management of established pest species lies with State, Territory and local governments. However, the Commonwealth can assist with long-term guaranteed funding support and by establishing and encouraging the use of codes of practice that ensure effective and humane methods of control (<https://www.environment.gov.au/biodiversity/invasive-species/publications/model-codes-practice-feral-animals>)

#### 5. Climate change

The risk of natural disasters is likely to increase significantly as the climate changes (Glasser, 2019). Climate change was undoubtedly, a significant contributing factor making the severe fire weather experienced this summer more likely (Nolan et al, 2020; Hughes et al, 2020). As in most of the previous years of the last decade numerous maximum temperature records were broken. 2019 was the hottest December on record in NSW and the summer of 2019-2020 the second hottest on average (Australian Government Bureau of Meteorology, 2020). The extreme positive Indian Ocean Dipole (IOD) was a strong contributor to the drier than normal conditions in the second half of 2019 (Australian Government Bureau of Meteorology, 2020). Historically rare, such IOD events are becoming more common due to anthropogenic climate change (Wright et al, 2020). The early start to the fire season is also consistent with predictions of climate change mediated lengthening of fire seasons (Jolly et al, 2015; Hughes et al, 2020)

Australia must declare a climate emergency and act upon it before it is too late. The Government must urgently adopt strong measures to reduce our greenhouse gas emissions and call upon other countries to do likewise. The science is clear. Without action there will be many more summers like that we have just endured. No amount of natural disaster risk management, preparedness or adaptation will avoid future catastrophes

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

Do you agree to your submission being published? Yes I agree to my submission being published in my name

Supporting material provided:

JanetStein\_Submission\_NaturalDisastersRoyalCommission\_References.pdf

## Royal Commission into National Natural Disaster Arrangements: Submission by Janet Stein

### References

ABC News online (2019) Are hazard reduction burns effective in managing bushfires? The answer is complicated, RMIT ABC Fact Check, Updated 20 Dec 2019, 6:11pm

<https://www.abc.net.au/news/2019-12-20/hazard-reduction-burns-bushfires/11817336>

ABC News online (2020a) Victorian fire chief says calls for more fuel reduction burns are an 'emotional load of rubbish' Updated 7 Jan 2020, 9:49pm

<https://www.abc.net.au/news/2020-01-07/fuel-reduction-burn-debate-rubbish-says-vic-fire-chief/11849522>

ABC News online (2020b) Has NSW seen more than twice the amount of prescribed burning in national parks this decade compared with the last?, RMIT ABC Fact Check, Updated 5 Feb 2020, 4:38pm,

<https://www.abc.net.au/news/2020-01-22/prescribed-burning-nsw-backburning-hazard-reduction/11878316>

Australian Government Bureau of Meteorology (2020) Special Climate Statement 73—extreme heat and fire weather in December 2019 and January 2020, 17 March 2020

<http://www.bom.gov.au/climate/current/statements/scs73.pdf>

Borchers Arriagada, N., Palmer, A.J., Bowman, D.M., Morgan, G.G., Jalaludin, B.B. and Johnston, F.H. (2020), Unprecedented smoke-related health burden associated with the 2019–20 bushfires in eastern Australia. *Med. J. Aust.*. doi:[10.5694/mja2.50545](https://doi.org/10.5694/mja2.50545)

Burrows, N. (2017) The Great Escape, Bushfire and Natural Hazards CRC,

<https://www.bnhcrc.com.au/news/2017/great-escapes>

Dixon K., Cary G., Worboys G., Seddon J. & P. Gibbons (2018) A comparison of fuel hazard in recently burned and long-unburned forests and woodlands. *International Journal of Wildland Fire* 27, 609-622

Driscoll, D.A., Lindenmayer, D.B., Bennett, A.F., Bode, M., Bradstock, R.A., Cary, G.J., Clarke, M.F., Dexter, N., Fensham, R., Friend, G., Gill, M., James, S., Kay, G., Keith, D.A., MacGregor, C., Possingham, H., Russel-Smith, J., Salt, D., Watson, J., Williams, D. & York, A. (2010), Resolving conflicts in fire management using decision theory: asset-protection versus biodiversity conservation. *Conservation Letters*, 3: 215-223. doi:[10.1111/j.1755-263X.2010.00115.x](https://doi.org/10.1111/j.1755-263X.2010.00115.x)

Foley, M. & A. Smith (2020) Ex-fire chiefs say 'ridiculous' bushfire funding stymies waterbombing, *Sydney Morning Herald*, February 28, 2020

<https://www.smh.com.au/politics/federal/ex-fire-chiefs-say-ridiculous-bushfire-funding-stymies-waterbombing-20200228-p545dz.html>

Gibbons, P., van Bommel, L., Gill, A. Malcolm., Cary, G. J., Driscoll, D. A., Bradstock, R. A., Knight, E., Moritz, M. A., Stephens, S. L. & Lindenmayer, D. B. (2012). Land Management Practices Associated with House Loss in Wildfires. *PLoS One*, 7 (1), e29212

<https://doi.org/10.1371/journal.pone.0029212>

Glasser, R. (2019) Australia needs a national plan to face the growing threat of climate disasters, *The Conversation*, March 8, 2019 <https://theconversation.com/australia-needs-a-national-plan-to-face-the-growing-threat-of-climate-disasters-113107>

Jolly, W., Cochrane, M., Freeborn, P., Holden, Z., Brown, T., Williamson, G., & D.. Bowman (2015) Climate-induced variations in global wildfire danger from 1979 to 2013. *Nature Communications* 6, 7537 <https://doi.org/10.1038/ncomms8537>

Hughes,L., Steffen,W., Mullins, G., Dean, A., Weisbrot, E., & M. Rice (2020) Summer of Crisis, Climate Council of Australia Limited <https://www.climatecouncil.org.au/wp-content/uploads/2020/03/Crisis-Summer-Report-200311.pdf>

Levick, E. (2020) Army helicopter starts major Canberra bushfire, *Australian Defence Magazine*, Sydney 30 January 2020 <https://www.australiandefence.com.au/news/army-helicopter-starts-major-canberra-bushfire>

Meade, A. (2020) Bushfires add \$3m to ABC emergency broadcasting costs as Coalition cuts funding, *The Guardian*, 3 March, 2020

<https://www.theguardian.com/media/2020/mar/03/bushfires-add-3m-to-abc-emergency-broadcasting-costs-as-coalition-cuts-funding>

Nolan, R.H., Boer, M.M., Collins, L., Resco de Dios, V., Clarke, H., Jenkins, M., Kenny, B. & Bradstock, R.A. (2020), Causes and consequences of eastern Australia's 2019–20 season of mega-fires. *Glob Change Biol*, 26: 1039-1041. [doi:10.1111/gcb.14987](https://doi.org/10.1111/gcb.14987)

Noyes, J., Moir, N., Chung, L. & P. Hannam (2020) Firefighters lose control of 'mega-blaze' backburn, homes destroyed, *Sydney Morning Herald*, December 16, 2019, <https://www.smh.com.au/national/nsw/homes-lost-after-firefighters-lose-control-of-mega-blaze-backburn-20191216-p53k98.html>

Nguyen, K. Brunero, T. & S. Thomas, Daniel Keane and Nicole Mills (2020) The truth about Australia's fires — arsonists aren't responsible for many this season *ABC News*, 18 January, 2020 <https://www.abc.net.au/news/2020-01-11/australias-fires-reveal-arson-not-a-major-cause/11855022>

Penman,T., Parkins, K & S. McColl-Gausden (2020) A surprising answer to a hot question: controlled burns often fail to slow a bushfire, *The Conversation*, November 15, 2019 <https://theconversation.com/a-surprising-answer-to-a-hot-question-controlled-burns-often-fail-to-slow-a-bushfire-127022>

J. Pittock (2020) Fire almost wiped out rare species in the Australian Alps. Feral horses are finishing the job, *The Conversation*, January 28, 2020, <https://theconversation.com/fire-almost-wiped-out-rare-species-in-the-australian-alps-feral-horses-are-finishing-the-job-130584>

Price, O. & R. Bradstock (2012) The efficacy of fuel treatment in mitigating property loss during wildfires: Insights from analysis of the severity of the catastrophic fires in 2009 in Victoria, Australia, *Journal of Environmental Management*, 113 :146-157, <https://doi.org/10.1016/j.jenvman.2012.08.041>

SBS News (2020) Bushfire hazard reduction 'as important as' emissions reduction, Scott Morrison says SBS, 21 January, 2020 <https://www.sbs.com.au/news/bushfire-hazard-reduction-as-important-as-emissions-reduction-scott-morrison-says>

Sharp, T. and Saunders, G. (2011). A model for assessing the relative humanness of pest animal control methods (Second edition). Australian Government Department of Agriculture, Fisheries and Forestry, Canberra, ACT. Printed by: New Millennium Print, [https://www.agriculture.gov.au/sites/default/files/style%20library/images/daff/\\_data/assets/pdf/0008/929888/humanneness-pest-animals.pdf](https://www.agriculture.gov.au/sites/default/files/style%20library/images/daff/_data/assets/pdf/0008/929888/humanneness-pest-animals.pdf)

Victorian National Parks Association (2020) Fire management in Victoria, 22 January, 2020 <https://vnpa.org.au/fire-management-in-victoria/>

Wright, N., Ellis, B. & A. Nerilie (2020) A rare natural phenomenon brings severe drought to Australia. Climate change is making it more common, *The Conversation*, March 10, 2020, <https://theconversation.com/a-rare-natural-phenomenon-brings-severe-drought-to-australia-climate-change-is-making-it-more-common-133058>

Zylstra, P.J. (2018), Flammability dynamics in the Australian Alps. *Austral Ecology*, 43: 578-591. doi:[10.1111/aec.12594](https://doi.org/10.1111/aec.12594)