



Title	Ms
First name	Anne
Last name	Corbett
I am making this submission as	General public
Submission type	Personal
Organisation making the submission (if applicable)	
Your position in the organisation (if applicable)	na
Consent to make submission public	Public
Your story	<p>I live in Sydney and have not been directly affected by the bushfires, other than air pollution. However I am very seriously concerned about the impact of the fires on biodiversity and ecological systems. I am also concerned about the apparent failure by governments at both state and federal level to take seriously the advice and warnings of the dangers of increased fire risk and to act appropriately both in relation to preparing for fires and mitigating climate change. I was in southern Queensland in September and was more directly affected by fires there as I had to change plans due to threatened fires. I experienced the smoke and restrictions on activities in national parks at that time. Because of this I experienced the fire season from early September to late February.</p>
1.1 Causes and contributing factors	<p>I'm not going to labour the obvious. I can only hope that this inquiry is conducted in good faith, makes robust recommendations and that the government, and future</p>

governments, also act in good faith to respond to the increased risk of bushfires, including their frequency, extent and intensity. There is significant scientific evidence that bushfires are likely to be more frequent and more intense given the changing climactic conditions.

The State of the Climate 2018 includes information about many aspects of climate and makes the following observations:

- There has been a long-term increase in extreme fire weather and in the length of the fire season across large parts of Australia since the 1950s.
- Fire weather conditions are mostly worsening, particularly in the south and east.
- Rainfall has been very low over parts of southern Australia during April to October in recent decades.

Useful maps and diagrams are available in the same resource.

It references relevant climate predictions from

www.climatechangeinaustralia.gov.au which indicate that over coming decades Australia will experience:

- Further increase in temperatures, with more extremely hot days and fewer extremely cool days.
- A decrease in cool-season rainfall across many regions of southern Australia, with more time spent in drought.
- An increase in the number of high fire weather danger days and a longer fire season for southern and eastern Australia.

The Australia Institute – Discussion paper March 2020 Out of Season – Expanding summers and shrinking winters in subtropical and temperate Australia

The impact is not only relevant to bushfires:

The continuing changes in seasons will have increasingly profound implications for life in Australia. Longer hotter summers mean longer hotter fires seasons, more heatwaves and greater exposure to heat related illnesses. People working outdoors or in un-airconditioned spaces will be particularly at risk. Outdoor activities that we take for granted such as socialising and playing sport will become less enjoyable and more dangerous.

Agricultural crops will be damaged and livestock will suffer. Entire ecosystems are at risk.

The Climate Council has produced the following reports and papers relevant to the bushfire crisis:

- Briefing paper - 'This is Not Normal': Climate change and escalating bushfire risk 12.11.2019

Which includes the following key findings:

- o The fire season has lengthened so substantially that it has already reduced opportunities for fuel reduction burning. This means it is harder to prepare for worsening conditions.
- o The costs of fighting fires are increasing. Australia relies on resource sharing arrangements between countries and states and territories within Australia. As seasons overlap and fires become more destructive, governments will be increasingly constrained in their ability to share resources and the costs of tackling fires will increase.
- o The government must develop an urgent plan to (1) prepare Australian communities, health and emergency services for escalating fire danger; and (2) rapidly phase out the burning of coal oil and gas which is driving more dangerous fires.
- Fact sheets
 - o Setting the record straight on hazard reduction
 - o Full list of emergency chiefs' recommendations to federal government.
 - o Government must fund ongoing bushfire research

See Weather bureau says hottest, driest year on record led to extreme bushfire season The Conversation 09.01.2020 for a summary.

Please listen closely to experts from the relevant fire fighting bodies in relation to the implications of the information about the changing climate on fire and to ecologists and other experts in relation to the impact on biodiversity, what is required to

conserve and restore biodiversity and how to avoid, or minimise, such destruction in the future.

1.2 Preparation and planning

Building homes in fire prone areas

Many, though certainly not all, of the homes and other buildings destroyed in the fires appear to have been in areas that are inherently dangerous and were not designed to withstand fire, either in terms of how they were situated in relation to vegetation and geographical features or in how they were designed and constructed.

Serious consideration should be given to whether buildings, particularly homes, should be permitted in areas of high fire risk. If buildings are permitted in any areas with a foreseeable fire risk, they should be designed, built and maintained to withstand fire. It is unreasonable to place the lives and well-being of firefighters and other emergency personnel at risk unnecessarily. There is also an unnecessary financial cost on the community when fires impact on homes that are poorly situated, built or maintained.

Providing emergency shelters

More thought needs to be given to planning and constructing emergency shelters capable of sheltering the local population in the event of a calamitous fire. For example, all schools and hospitals should be designed, constructed and maintained to withstand fire and continue to function. Other community buildings, such as community centres, libraries, sporting facilities should be designed, constructed and maintained to serve as evacuation centres if required. These buildings should also have the capacity to stockpile essential items including food, water, medical supplies and tools.

Power and water supplies

Plans should also be made to ensure power supplies are maintained or are able to be reinstated with minimal disruption. Options may include local electricity generation or underground power connections.

Similarly, water is an essential need of all humans and needs to be available following any emergency. How this can be ensured will vary in different areas. Local input will be required to determine the best options.

Emergency assistance

It was concerning to see the limitations to the assistance provided to people on the NSW south coast and Victorian coast. It was extremely fortunate that the Princes Highway opened allowing people to evacuate. If this had not occurred, casualties may have been high.

Liaison with federal services is necessary to improve the response in future emergencies. There should be plans which include ensuring the availability of food, water, medical supplies and the ability to transport them when required.

Similarly, there should be plans to evacuate if required. These plans need to be developed in conjunction with both federal and regional authorities as they will need to be tailored to local conditions.

It was concerning to witness the delay in mobilising the navy to evacuate people from Mallacoota and the time it took to undertake the activity.

1.3 Response to bushfires

A concerted effort should be made to assess the impact of the fires on our natural environment and develop both short and long term plans to conserve and restore the ecology of our state. NSW wildlife recovery plan to stress protection of unburnt areas SMH 02.02. 2020

NSW recovery plan

- According to the Wildlife and Conservation Bushfire Recovery Plan:

- o the impact of fires that have scorched 5.3 million hectares so far

- o blazes have hit the habitat of 84 of the most vulnerable animals, while 46 threatened plant species have more than 90

per cent of their recorded range in fire zones

- o 26 threatened plant species - such as the Creswick apple box and Kelton's leek orchid - have their entire recorded ranges in fire-affected areas
- o 37 per cent of the national parks estate burnt
- o estimates 24 per cent of the marsupial's habitat in eastern NSW has been scorched, a number that could rise given 41 per cent of wet sclerophyll forests have been hit

Effective response is complicated. Numerous media reports contain information about the impact of the fires on biodiversity (and contain useful links and references) including:
The Australia Institute Bushfire Response: International Experts Open Letter Call for Native Logging Ban
An open letter signed by Australian and international forestry and climate experts has called for the immediate nationwide cessation of all native forest logging in response to the climate, fire, drought and biodiversity loss crises currently facing Australia.

- Expert panel says 113 species need urgent attention after Australia's bushfires
The Guardian 11.02.2020
- o the northern corroboree frog and the Blue Mountains water skink are among 113 species that need urgent attention after the bushfire crisis

- Fears for wildlife as brumbies compete for reduced Kosciuszko grassland
SMH 22.01.2020.

- 'Immortal clones': Plea for recovery plan to aid ancient rainforests
SMH 10.02.2020 excerpts:
 - o This season's bushfires damaged Gondwana rainforests, including trees with lineages dating back tens of millions of years, placing at risk the highest concentrations of threatened species in NSW.
 - o the unprecedented fires in northern NSW had likely killed at least 10 per cent of the world's only wild stand of nightcap oak.
 - o Other endangered species such as peach myrtles - possibility the oldest organisms on the planet with the "immortal clones" living a thousand years or more - and minyon quandongs were also badly hit
 - o the nightcap oak had only 120 mature specimens left prior to the bushfires.
 - o rainforest trees such as the nightcap oak, were very susceptible to fires. The Gondwana rainforests of that area of NSW were also home to 13 other threatened flora and 27 threatened fauna, making it the most concentrated region of endangered biodiversity in the state

- A season in hell: bushfires push at least 20 threatened species closer to extinction
The Conversation 8.01.2020

Potential responses:

- quickly protect unburnt refuge patches in otherwise burnt landscapes
- increase control efforts for pest animals and weeds that would magnify the impacts of these fires on wildlife
- strategically establish captive breeding populations of some threatened animals and collect seeds of threatened plants
- provide nest boxes and in special circumstances plant vegetation providing critical food resources
- care for and rehabilitate injured wildlife and establish monitoring programs to chart a hoped-for recovery.

1.4 Any other matters

In relation to the impact of the bushfires see concerns expressed by various scientists and other experts.

Bushfires not only affect those immediately impacted. They also affected many millions of people not in immediate danger, including the health impacts from air pollution on people in our most populous cities and there have been ongoing impacts on the economy both in the areas immediately affected and the tourism industry more broadly.

See The Australia Institute Survey Reveals: Bushfires Cost 1.8 million Work Days, Leave 5 Million Sick from Smoke:

- 57% of respondents reported some kind of direct impact from the bushfires and smoke.
 - o 26% of survey respondents experienced negative health impacts from the fires' smoke, representing 5.1 million Australian adults.
 - Health impacts were more widely reported in NSW (35%) and Victoria (29%).
 - o 17% of full time workers and 8% of part time workers, representing 1.8 million Australians, reported they had missed work due to the fires.
 - This alone is estimated to have costed more than \$1.3 billion in lost economic production, assuming only one lost day per worker.

An open letter to the Prime Minister from 248 concerned scientists was dated in early November, prior to the major fires in NSW. It states that Australia is amid an extinction crisis, provides examples and links to research to support their call for increased investment in nature conservation and strengthening of laws protecting nature.

The months following that letter saw the burning of in excess of 5.3 million hectares in NSW including 2.7 million hectares in national parks, including more than 80 percent of the Blue Mountains World Heritage Area and 54 percent of the Gondwana Rainforests of Australia World Heritage property. Vulnerable sections of Kosciusko National Park have also been seriously impacted. . It is possible that 70 percent of koalas on the NSW north coast have been killed.

The Australia Institute(TAI) has called for an end to native forest logging following the fires - The opportunity for Australia's native forests. The TAI calls on governments to resist calls for 'selective logging' and a 'massive harvest and haulage operation' of burnt forests. Such operations would further damage native forests and hinder opportunities to protect native wildlife.

Various submissions have already been made to the federal review of the Environment Protection and Biodiversity Act 1999 (EPBC Act) review. Although directed to federal law and protection, they contain much relevant information and recommendations which could, and should, be applied in NSW as part of the state response to bushfires and their impact on our natural world.

See: ACF Australia's Extinction Crisis: Protecting Critical Habitat This includes a case study of the southern corroboree frog whose habitat is limited to the Kosciusko National park.

APEEL Blueprint for the Next Generation of Australian Environmental Law

This recommends, amongst very many other things, that the interests and voices of Australia's indigenous peoples should be included in the making and implementation of environmental policy, programs, plans and decisions.

Please also see the submission I have made under the 'Response to bushfires' section. It may not be what is being considered in that section. I request that you include and consider that submission during the course of the inquiry.

The updated word document contains the links and endnotes to my submission.

Upload files
