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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?

If you are lodging your submission on behalf of a group or organisation, what is the name of the group or organisation? Extinction Rebellion Grey Power Vic

Your Submission

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

In the experience of members of Extinction Rebellion Grey Power Victoria and from accounts of many others, local responses to the fires were exemplary given the considerable resource constraints. Many individuals and local groups worked tirelessly to save people, property and livestock. The rescue of a burnt koala by the woman who wrapped it in her own shirt was one heroic example. There were many other examples of people not just working well but responding with the most noble qualities humans possess.

We believe the evacuation response saved lives in comparison with the 2009 Black Saturday bush fires in Victoria, and is appropriate in extreme conditions such as occurred in December 2019-January 2020.

Compassion expressed by people all over the world witnessing the terror on national and international news channels was important to Australians. During the crisis the ABC provided regular forecasts and updates about when to get ready to leave and also warnings about when it was too late to flee an area. Specialist funding must continue to be provided to the ABC for emergency communications and management. Disaster conditions are not a time when communities wish to be inundated with advertising.

The South Australian fire location and warning App was easy to download on a mobile and was linked with google maps, making it safer to drive, as problems could be anticipated and areas to avoid were flagged. This was not the case for Queensland, NSW or Victoria.

The outstanding, tireless and heroic work of the firefighters in their daily battle should be acknowledged and rewarded not just with good wages, but also with bonuses (such as holidays, dinners, and community ceremonies where their contribution is acknowledged). The efforts of pilots and crew of water dumping aircraft must also be acknowledged.

Aircraft water drops were an area of emergency response that worked well particularly in hard to access bushland. This is a technique that could be considerably expanded. Australia should purchase a number of aircraft capable of doing water drops and move away from leasing arrangements which will become less easy to access as the bushfire season becomes longer around the world.

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

The size and the spread of emergency responses across Australia were broad and diverse but overall failed to contain the spread of bushfires across Australia from August 2019 to February 2020. In January 2020 Australia's most senior firefighter acknowledged that as a nation we had to wait for rain to put out the bulk of the fires burning across our huge continent. What was apparent was the lack of sufficient resources to secure containment and extinguishment of fires within the timespan of a few days, and we suggest that it is this timespan that is a necessary target to avoid the catastrophic consequences experienced in this latest bushfire season.

The pollution caused by the fires significantly reduced the air quality in all our major cities for up to three months. The smoke and ash from fires added significantly to Australia's carbon emissions and was detrimental to the health of many Australians.

It is perhaps understandable that the focus of firefighting was on saving lives and property. However, the cost to the natural environment has been extreme and will be long-lasting, especially in the context of the huge pressures on natural systems being experienced as a result of global warming.

The impacts of bushfires on World Heritage Areas was extreme in some areas and is summarised in the following quote from the Centre for Disaster Philanthropy, 2020: "As of Feb. 15, 2020, more than 46 million acres (72,000 square miles) of land were burned in thousands of fires since June 2019. At least 80 percent of the Blue Mountains World Heritage area in NSW and 53 percent of the Gondwana World Heritage rainforests in Queensland (QLD) were burned."

The impact of the fires on biodiversity and threatened species was also extreme. Preliminary results indicate that:

- * 49 listed threatened species have more than 80% of their modelled likely or known distribution within the fire extent;
- * 65 listed threatened species have more than 50%, but less than 80%, of their modelled likely or known distribution within the fire extent;
- * 77 listed threatened species have more than 30%, but less than 50%, of their modelled likely or known distribution within the fire extent;
- * 136 listed threatened species and 4 listed migratory species have more than 10%, but less than 30%, of their modelled likely or known distribution within the fire extent.

The threatened species include 272 plant, 16 mammal, 14 frog, nine bird, seven reptile, four insect, four fish and one spider species. An additional four listed migratory bird species are not yet listed as threatened.

The threatened species are currently listed as Critically Endangered (31 species), Endangered (110 species) and Vulnerable (186 species) under national environmental law. The listing status of some of these species should be reviewed by the Threatened Species Scientific Committee once the impacts of the fires are better understood.

These are urgent issues that the Royal Commission must address. We recommend that considerable resources be devoted to the regeneration of threatened species and that the results of programs devoted to regeneration of threatened species are regularly (at least annually) reported in a transparent fashion.

Prior to the onset of this disaster, the government did not meet with or take the advice of Greg Mullins and other fire chiefs who predicted these dangerous conditions. Extremes of weather are going to be a regular occurrence in the future because of global warming. The lack of attention paid to scientific expertise in this area, as with the climate crisis in general, contrasts markedly with the current reliance on health

experts in the face of the Covid 19 pandemic. The success of the science-based strategies for dealing with the pandemic also contrast markedly with the lack of success in the bushfire crisis, and to date, with Australia's abysmal record in responding to the climate crisis. It was unwise of the PM to go on a holiday to Hawaii when so many lives were at stake.

We must have a sufficient supply of trained personnel in Australia to staff aircraft that can dump water on fires in remote and inaccessible locations, where much of the greatest damage to the environment occurred. This response needs to be available to enable fires started by lightning strikes to be extinguished in their very early stages.

Sufficient resources must be devoted to firefighting to ensure that fires do not burn for months in wilderness areas. For example the Currawan fire in NSW burned for 72 days while gathering momentum to become a firestorm that exploded on 31 December 2019. Firestorms such as this provide extremely dangerous working conditions for firefighters, the emphasis must be on stopping fires long before the stage where they are generating their own weather systems.

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

In the last 12 months Australians have directly experienced and witnessed two significant existential threats to our country, its unique environment, its economy and its health. Both of these events can be classified as Natural Disasters. Both have links to the other, less visible and slower but ultimately more catastrophic existential threat that we face, the climate crisis.

The horror of the bushfires in 2019 and 2020 demonstrated and confirmed the reality of global warming and its impact on Australia through the destruction of communities and the natural environment, and their impact on our economy and mental health. This is important given the reluctance of governments and policy makers to acknowledge any significant causes or effects of climate change within Australia. This is still the case despite scientific agreement on a clear link between the prevalence of bushfires and global warming that has been recognised since at least the 1980's (Beer et al., 1988), and reiterated to the Australian parliament in 2009 (Booth, 2009). The science described in those articles is clear: that the increasing frequency and severity of bushfires is a consequence of climate change.

What we know following this summer of horrors is that global warming and the bushfires it causes and exacerbates do not respect boundaries, whether they are State, regional, private property or Heritage lists. Rivers, waterways, forests and Songlines do not stop abruptly at map lines or fences. Thus a commonwealth overview and perspective is needed in addition to regional and localised perspectives.

The current world pandemic of Covid-19 reveals the interconnected world we all, even on our island, now inhabit, and how it and global warming create economic and health threats to our way of life.

These two existential threats and our responses to them provide an extraordinary opportunity for Australia to shift focus, build an Australia that acknowledges and protects our unique environment, integrates Indigenous knowledge into the care of our land, and respects and listens to science, including climate science.

We now know that our politicians can act quickly and effectively in the national and international interest as they have done in the 2020 pandemic. Politicians can respect the best scientific advice and listen to it and act on it in Australia's interest in the face of a serious health threat. They must now adopt the same approach in listening to and acting on the advice of experts in relation to bushfire mitigation and management, including the fact that bushfire mitigation efforts will have little impact if they do not include action on the climate crisis.

The Royal Commission must recommend immediate action to protect our environment and biodiversity and cannot be subverted by the politicisation of climate science. Rather, it must use scientists' research and Indigenous knowledge to guide all future decisions about our environment and also accord these fields of knowledge the same respect and influence in decision making that has been appropriately and effectively afforded to our medical scientists.

An independent citizens' assembly that includes expert scientists and Indigenous experts in the protection and restoration of environments can plot an effective and safe path towards mitigating and addressing global warming in Australia and thus protect us from severe bushfires and regenerate our unique environmental riches, and leave a legacy for future generations.

We consider it is very important that Indigenous Australians themselves should be embedded within the recommendations and outcomes in the ways that they consider appropriate and that this should be resourced. Indigenous Australians have invaluable knowledge to contribute in both environment and heritage management, and in particular in relation to fire regimes. The Uluru Statement from the Heart could be an appropriate starting point.

Action must be planned, undertaken and resourced at a national level. Imminent climate catastrophes necessarily require bigger than a state by state response. A specialist defence against climate disasters needs to be funded. Prevention will be far more cost-effective than attempts to 'manage' the disasters (e.g. fires, floods, droughts, cyclones and rising sea levels) that will inevitably increase in frequency and intensity as climate change kicks in.

Specifically in relation to short-term actions to control future bushfires:

- we need more aircraft and specialist personnel for water drops for fires burning in inaccessible terrain.
- We need to intervene early into those fires with the use of water drops in order to save large amounts of native forests and wildlife habitat and to prevent those fires turning to firestorms.
- Emergency Shelters and provisions must be at the ready – and fire evacuation safe places built well ahead of the fire season. This has been a recommendation of a number of enquiries into bushfires across several states yet to date it has not happened.
- We need complementary legislation between State and Federal governments to prevent land clearing after fires. Logging of native forests continues, beset by the same problems as land clearing. Some old growth forest is still being clear-felled in April 2020. "Overall, Australia has lost nearly 40% of its forests, but much of the remaining native vegetation is highly fragmented. As European colonists expanded in the late 18th and the early 19th centuries, deforestation occurred mainly on the most fertile soils nearest to the coast. In the 1950s, southwestern Western Australia was largely cleared for wheat production, subsequently leading to its designation as a Global Biodiversity Hotspot given its high number of endemic plant species and rapid clearing rates. Since the 1970s, the greatest rates of forest clearance have been in southeastern Queensland and northern New South Wales, although Victoria is the most cleared state. Today, degradation is occurring in the largely forested tropical north due to rapidly expanding invasive weed species and altered fire regimes. Without clear policies to regenerate degraded forests and protect existing tracts at a massive scale, Australia stands to lose a large proportion of its remaining endemic biodiversity. The most important implications of the degree to which Australian forests have disappeared or been degraded are that management must emphasize the maintenance of existing primary forest patches, as well as focus on the regeneration of matrix areas between fragments to increase native habitat area, connectivity and ecosystem functions." Bradshaw, 2012
- Ships can be useful to evacuate people in a crisis as with Malacoota population's situation (or e.g. cyclone in Innisfail). They must be able to quickly deploy to the disaster location, and equipment needs to be resourced so that evacuation of people of all ages and abilities is possible.
- The early season burn backs were not possible due to the shortened window of safe fire time. Many more rangers – particularly indigenous rangers with specialist fire knowledge and training - need to be employed in this field to establish fire trails and fire breaks, in that short burst of time when conditions allow.
- The population who suffer from respiratory problems need to have an evacuation location for a smoke free zone established before the fire season. This will mean accommodating a temporarily itinerant population.
- Water shortage and drought exacerbated the fire conditions. There must be a ban on use of water for mining and farming irrigation when people living in towns need basic riparian rights.

- Wildlife refuges where there is plentiful water in creeks, lakes or dams must be zoned and allocated. High fences, which are normally for the protection of wildlife from travelling into roadways or farmland can cause a blocking for the escape of wild life so these fences must be easily able to retract or drop down.
- Revegetation with huge tracts of forest are needed to cool the warming planet. They must be endemic species which are either xerophytic or fire tolerant. We must repopulate our precious wildlife in safe zones.
- If Australia is to survive and flourish we need to urgently embrace renewables at a domestic and industrial capacity.
- Children will need to be briefed in schools about the potential hazards of extreme climate change, and they should be helped to develop coping strategies, particularly for calming when the distress of a situation becomes apparent, and in the longer term through action to protect their planet. Follow up counselling for trauma and ongoing sessions for victims needs to be anticipated and provided. There is evidence that in Townsville after the February 2019 floods, the evacuated population were still out of their houses a year later. Rent was over-priced and scarce and houses for sale produced a glut and hit the floor for real estate prices. There was also a correlation with increase in domestic violence and a troubled spike in crime which required a second police commissioner be located in Townsville a year later.
- The local professionals who are burnt out of house and property must have back up staff brought in as soon as is possible with makeshift shelters at the ready.
- There must be safe zones for rehabilitating wildlife populations. Many more rangers need to be employed in the field of wildlife and land rehabilitation.
- Food shortages because of the fires can be anticipated and alternate supply chains must be at the ready to support this issue.
- We need to move away from a heavy reliance on cattle and look to science for leading new technologies in food production. Money to support farmers to move to sustainable low-carbon practices will be more efficient than backing up antiquated practices which will be threatened annually with global warming.
- Local Council building regulations should take account of possible disasters and Councils should have the power to zone some areas off limits for building for either safety or ecological reason.
- The Royal Commission should include a review of insurance arrangements for national disasters and also provisions for property owners who are not insured or are under insured. Renters insurance should also be examined.

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

This submission comes from a knowledgeable, skilled, committed and concerned group of older people (over 50 years) in Victoria whose aim is to stimulate action to address the climate emergency and the devastation of the natural environment

We are affiliated with local, state, national and international Extinction Rebellion (XR) groups, and part of the movement which has developed to work towards international recognition of the urgency of working towards preventing and ameliorating climate change and its associated natural disasters, including species extinction, coral bleaching, bushfires, increasingly extreme weather events (to name a few).

Extinction Rebellion Grey Power VIC was formed to acknowledge the significant contribution that older people can make to the fight against time in the current climate crisis. It formed just before the bushfires that destroyed hundreds of thousands of hectares of native vegetation and killed up to a billion native animals.

Extinction Rebellion Grey Power Victoria has responded to this Royal Commission to provide our collective knowledge and wisdom on the matters into which the Commission is inquiring particularly Point c): Australia's arrangements for improving resilience and adapting to changing climate conditions and what actions can be taken into mitigating the impacts of natural disasters.

We have also commented on wildlife management and species conservation, management of native species and the land management of national parks and state forests and ways in which the land management expertise of Indigenous people can improve Australia's resilience to natural disasters -particularly bushfires.

This submission was prepared by people who have had long and respected careers related to climate science as well as those who have worked in psychology and health promotion . We understand strategies that support climate scientists to enable our communities to understand the importance and value of preventing climate change and its consequences, including bush fires and health pandemics.

We are also members of the generation currently in power, who can anticipate natural disasters associated with changing climate, who are willing and able to help plan to prevent and mitigate their terrible consequences for our children and grandchildren.

When we, members of Grey Power, were in our twenties, the greenhouse gas effect was known but rarely publicly noticed, though many scientists were already concerned. For today's children and young people, the climate crisis is a reality that is life threatening.

It is also a reality that it is possible to address, through acting urgently and decisively at local, state, national and international levels to intervene now to prevent additional damage and to respond quickly and proactively to potential disasters.

We are grateful for the opportunity to make this submission to the Royal Commission. Members of Extinction Rebellion Grey Power Victoria would be delighted to meet or speak with the commissioners when appropriate

REFERENCES:

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