Friends of the Earth (Australia)
National Liaison Office
Box 222
Fitzroy, VIC, 3065
Foe.org.au
[redacted]

Select Committee on Australia's Disaster Resilience
PO Box 6100
Parliament House
Canberra ACT 2600

Select Committee on Australia's Disaster Resilience

Friends of the Earth (Australia) (FoEA) welcomes the Senate Select Committee on Australia's Disaster Resilience inquiry and appreciates the opportunity to provide some comments.

FoEA is a federation of environmental and social justice campaign organisations and was established in 1974. It currently has member organisations in Western Australia, South Australia, NSW, Queensland and Victoria. Its key campaign areas include land and water, sustainable economies, and climate and energy.

We wish to focus our comments on the following terms of reference:

iv. the role of Australian civil and volunteer groups, not-for-profit organisations and state-based services in preparing for, responding to and recovering from natural disasters, and the impact of more frequent and more intense natural disasters on their ongoing capacity and capability;
(b) consideration of alternative models, including
i. repurposing or adapting existing Australian civil and volunteer groups, not-for-profit organisations and state-based services, and
ii. overseas models and best practice;
(c) consideration of the practical, legislative, and administrative arrangements that would be required to support improving Australia's resilience and response to natural disasters;

Context

We know that Australia is facing ever worse climate change driven disasters. Human induced climate change is turbo charging natural events like floods, droughts, heatwaves and fires. This has obvious implications for how state, territory and federal governments

respond to these disasters and how they support emergency services and affected communities.

We will focus primarily on fire in our response.

Reducing the impacts of future disasters

Because human induced climate change is super charging natural disasters, the first thing that we must do, of course, is to stop contributing to climate change. This means increasing state, territory and federal government ambition on climate change (for instance committing to a national 75% emission reduction target by 2030) and ending the development of all new fossil fuel projects. Reducing emissions now will reduce future climate impacts.

Increasing our capacity to fight fires

We also need to increase our ability to fight fires as seasons get longer and more intense. Australia's bushfire season is a month longer than it was 40 years ago, and extreme fire weather days are up by more than 50 per cent. CSIRO scientist Pep Canadell says that will grow further, depending on global efforts to tackle climate change.

If warming is limited to 1.5C – the primary target in the Paris climate pact – it is anticipated that the fire season will grow by another 11 days.

But if warming hits 4C – at the extreme end of scenarios considered by the Intergovernmental Panel on Climate Change – another 36 days would be added.

Some researchers have noted that there is no longer a 'fire season'. In some parts of the world, like California, landscape scale fire can now occur year round. As was noted recently by Kristy Dahl, a climate scientist at the Union of Concerned Scientists, "climate change has pushed a lot of these types of events into a new realm that is much more dangerous".

Overall co-ordination and response

- The federal government must review the Emergency Response Fund and other existing government response mechanisms to evaluate whether they are fit for purpose for ever greater climate change induced disasters, including bushfire, flooding, drought and heatwaves. The review should be carried out by an independent inquiry and consult deeply with first responders and community organisations involved in disaster recovery and prevention
- The government should review the Australian Bushfire and Climate Plan, developed by the National Bushfire and Climate Summit (2020) which brought together hundreds of participants to share their experiences, and to formulate recommendations to address the worsening risk of devastating bushfires fuelled by climate change.

Specific measures to consider

1/ Extra air capacity

Australia has a nationally co-ordinated fleet of about 150 planes and helicopters in an average fire season (with up to 500 aircraft available on call when needed). These are used for firefighting, winching fire crews into remote areas, intelligence gathering and guiding larger aircraft in their operations (Air Attack Supervision).

Large aircraft and helicopters are an essential part of these operations – Large Air Tankers, or LATs and Type 1 helicopters are used on large fires. In an average summer we will need at least 6 LATs. Australia is currently reliant on the United States for large aerial firefighting aircraft – only two large air tankers are currently permanently based in Australia, and only one is owned by the public. The fact that we lease most of our larger aircraft and type 1 helicopters has significant financial and logistical implications for Australia as seasons get longer in both the northern and southern hemispheres, often leading to last minute adjustments to which aircraft are available.

As was noted in reporting by Bloomberg after the Black Summer:

"Australia's National Aerial Firefighting Centre contracts a fleet of 150 firefighting aircraft across all states and territories, which goes up to 500 when including "on call" vehicles. At the beginning of the 2019-20 season, five large air tankers and nine large helicopters were contracted from North America, but as fires worsened in November, two additional tankers were leased. By January, $20 million in additional funding from the Australian government was used to add four more, including a DC-10 Air Tanker flown from Alabama thought to have cost AUD$1 million for the 50 days of its contract".

Because we often share LATs whereby one is deployed in WA at the start of their season, then transferred to the east coast later in the summer, we face the real possibility of a shortfall in the large aircraft being that are available within Australia because there will be extended fire seasons in the west, south and east of the continent.

For instance, in February 2023, Coulson Aviation announced that their C-130 Large Air Tanker, which had been deployed to Western Australia early in the summer had its contract extended until the end of March. Tanker 132 is contracted to the WA Department of Fire and Emergency Services (DFES) and is based out of Busselton. If shared resources like Tanker 132 are needed locally, this impacts on resource sharing with other states.

The dilemma is that as our fire seasons get longer (potentially going from September to late March), the same thing is happening elsewhere in the world. For instance, parts of the western United States face wildfire seasons more than a month longer than they were 35 years ago, according to a 2015 study by the U.S. Forest Service.

"According to California's agency responsible for fire protection, Cal Fire, the length of the fire season in the Sierra Mountains has increased by about 75 days. Fifteen of the 20 largest fires in California history have occurred since 2000, and research shows the amount of area burned in the state has increased by a factor of five since the 1970s. In some U.S. states,

large fires are occurring well past the traditional summer months of July through September, with some of the largest fires occurring in December. Fires often burn later in California following hot, dry summers, fanned by fall's warm Santa Ana winds.

This in turn can lead to greater internal competition between state and federal agencies in both the USA and Canada, leading to a shortfall in the number of available aircraft. According to reporting in Slate Business, 'America's fleet of air tankers has been spread thin for years now. Despite some recent attempts to rebuild it, the number of planes under federal contract has shrunk by 59 percent since 2002. And with wildfire season starting earlier and burning more intensely each year across the West, states like California are worried about having access to the tools they need to combat the flames'. This can, of course affect how many planes are available for lease and use in Australia, and drive up the price of securing aircraft.

There has been a long conversation in Australia about establishing a publicly owned fleet of large aircraft. Back in 2020, Bloomberg noted:

"State and federal organizations may move toward an ownership model as the unpredictability of fire seasons begins to strain the system—but developing one would be costly. Last May, the New South Wales government became the first in Australia to purchase its own large air tanker, the Boeing 737 Fireliner Marie Bashir, for $26.3 million. Cal Fire—which already owns the largest state fleet, including 23 airtankers, 11 helicopters and 14 air attack aircraft—recently bought seven C-130 water bombers, which should be ready by 2021 once pilots and crew are trained.

"There's more competition for the tankers than ever before as climate change and land use patterns expose new areas to fire risk. Bolivia contracted the largest firefighting craft in the world—a retrofitted Boeing 747 owned by Global Supertanker—to help combat historic fires in the Amazon last August. Six months earlier, 10 Tanker, a New Mexico-based private aerial firefighting company, sent a DC-10 from California to Chile to fight the country's forest fires after a state of catastrophe was declared in some regions.

The Royal Commission into National Natural Disaster Arrangements interim report recommended that Australia

- Invest in a "modest, Australian-based sovereign [very large aerial tanker/large aerial tanker] capability" as the climate emergency means that northern and southern hemisphere fire seasons are running together.

The report also says:

- There may also be a need to explore contracting models that encourage Australian industry involvement in the development of future aerial firefighting capability.
- In order to ensure Australia's fire fighting aerial capacity capitalises on existing assets and is made up of the right mix, the Commonwealth should conduct a trial on the feasibility of retrofitting RAAF C130 aircraft with airborne fire fighting systems to provide the Australian Defence Force with the capacity to augment aerial fire fighting during major disasters.

- The Commonwealth should work with states and territories through the National Aerial Firefighting Centre to review the current mix of aviation assets and determine whether it is fit-for-purpose, noting the current lack of mid-sized fire fighting aircraft.

We note that it is sometimes argued that leasing rather than buying LATs has an advantage as it allows skills maintenance in crews. However, as noted by the Australian and New Zealand National Council for fire and emergency services (AFAC), even if Australia owns them, they can still be deployed to the northern hemisphere (which will also provide leasing income which will offset some of the costs of owning the planes).

It also needs to be noted that LATs are currently largely deployed in Queensland, NSW, Victoria and Western Australia. As fire seasons become more severe around the country, we must also be preparing for greater use of these aircraft in lutruwita/ Tasmania and the ACT.

It is essential that Australia establish a publicly owned fleet of at least 6 Large Air Tankers.

2/ Balancing air support and ground based first strike capacity

Air support continues to be an absolutely essential part of tackling fires as they are developing, particularly for fast moving grass and crop fires. Aircraft are, of course, also very expensive to deploy. In open farming areas where ground crews can get on scene relatively quickly, and aircraft are based locally, they are incredibly useful for first strike interventions, which aim to hit fires early in their development to stop them becoming unmanageable blazes. They are equally useful in remoter areas where it will take time to get ground crews on scene, and there are a limited number of crews who can be deployed by rappel from helicopters. Aircraft and helicopters are moved around the country and within states based on local need. For instance, early in the season in Victoria, aircraft will be deployed in the north west to be available for fires associated with crop harvest. They may then be relocated eastwards as forested areas start to dry and hence burn.

Relying on volunteer brigades to bear the bulk of the ground fire fighting capacity places a burden on rural brigades that often have small numbers of operational members, whose membership is often older, and whose members may be involved in agricultural activity (making it difficult for them to take extended periods of time off work). While strike teams are usually deployed to assist local brigades where fires are at risk of becoming larger, it takes time to mobilise and deploy these groups.

There needs to be a balance found between rapid first strike on the ground and the availability of aircraft.

A model that could be used is based on our proposal below to create a volunteer force explicitly recruiting from urban communities (people living in capital cities and large regional centres). *Please see below for additional details*. If an urban based volunteer force is established in each state and territory, firefighters could nominate to be pre deployed for a set period (eg 5 to 7 days) during high risk periods over summer (crop harvest, public holidays, as needed based on the local grass drying index). They could be pre deployed and hosted locally in regional centres and sent to new start fires as needed for rapid response

first strike firefighting alongside local brigades. Even if these teams were premptively deployed for key holiday periods (mid December to the end of February) it would give local brigades a break to be able to sustain activity through to the end of a long fire season.

3/ More capacity on the ground

3.1/ A national remote area firefighting team. As fire threatens World Heritage Areas and high conservation areas within national parks across the country, it is time to establish a national remote area firefighting team, which would be tasked with supporting existing crews in the states and territories.

Long fire seasons stretch local resources, and sometimes remote areas need to be abandoned in order to focus on defending human assets. Having an additional, mobile national team that could be deployed quickly to areas of greatest need would help us protect the wonderful legacy of national parks and World Heritage Areas across the country. We know that increasingly remote area crews are being used to protect fire sensitive vegetation (for instance the Wollemi Pines in the Blue Mountains or Gondwanic vegetation in lutruwita/ Tasmania). During the 2020 fires, firefighters were deployed on the ground to defend the only known natural grove of the world-famous Wollemi pines, in a remote part of the Blue Mountains. Fire crews were dropped into the area to operate an irrigation system that was set up to protect the trees. Recently prominent researchers in lutruwita/ Tasmania argued that as wildfires increase in severity and frequency as a result of climate change, that Australian authorities will need to adopt a landscape scale plan to protect old trees in the way that land managers are doing in the USA. They note that fires in 2003, 2010, 2012, 2016 and 2019, mostly 'ignited by lightning storms under drought conditions, destroyed 17 of the world's largest eucalypts. In these circumstances, individual stands of important trees can be protected provided suitably trained personnel are available.

It is clear that we will need more specialist remote area crews who are able to carry out this sort of protection work. While the states and territories are responsible for funding local remote area teams and volunteer teams, there is a role for the federal government as well in establishing a national team.

Teams could be allocated to staging points in specific areas at high risk of fire and deployed alongside local strike teams and brigades, with a specific focus on protecting significant ecological assets.

This was recommended by a Senate inquiry after the devastating fires in Tasmania of 2016.

3.2/ Create opportunities for urban people to volunteer as firefighters

Existing volunteer firefighting services such as the Rural Fire Service and Country Fire Authority rely on attracting members who live close to fire stations so they can deploy quickly. This means that the vast majority of Australian citizens cannot become volunteer firefighters. We propose that new remote area volunteer teams be established which could focus on attracting and training younger people in major cities and regional centres who could then nominate for deployment in major campaign fires.

The current volunteer model means that the burden of fire fighting continues to fall on rural and regional communities, while the benefits of effective firefighting are experienced by all Australians.

East coast states could establish remote area teams by offering opportunities to people living in urban areas to sign on, be trained, and then be deployed at times of urgent need. This would mean we skill up new trained firefighters rather than draining the existing volunteer base of regional and rural brigades. This is more complicated and resource consuming than attracting people who already have fire qualifications and experience (ie who are already members of rural or regional brigades), but would allow people who love natural places to play a role in protecting them through committing time to firefighting efforts. Additionally, many project firefighters (people who have been employed by state governments over the declared fire period) live in cities and would bring valuable skills and experience to these teams.

For a modest investment, such a team would provide welcome extra capacity to our first strike capacity in extreme fire seasons. In lutruwita/ Tasmania, the state government put an initial investment of $2.3 million in to set up remote area teams, drawing from existing TFS brigades. They now have 140 qualified individuals. Tasmania also puts a small amount each year (currently $160,000 per year) to train up new recruits.

This would represent a new way of building firefighting capacity, help relieve the burden on existing rural and regional fire brigades who are expected to provide people for deployment as strike teams through summer, and could be delivered at a very small overall cost to the taxpayer.

Given the fact that many regional volunteer brigades are aging, this would bring considerable new capacity into volunteer brigades at a very low cost.

3.3/ Support our volunteers to make their contributions sustainable

We need to prepare our emergency services – both career and volunteer – for the increasing demands of climate-driven disasters. As flooding, fires and heatwaves become more common it is clear that the load on many existing volunteers will become unsustainable. We will need to transform how we respond to these disasters, with potential changes to resourcing for volunteers and their employers. Additionally there needs to be careful consideration to facilitating the involvement of people from a range of demographics to be involved in volunteer firefighting. Specific measures could be developed to allow people on unemployment, student, or other benefits to train as volunteer firefighters without any negative impacts on the benefits they receive.

First-responders are increasingly being overwhelmed by the size, intensity and frequency of unprecedented extreme weather events. It is essential that there is a review of budgets for all first responder organisations to ensure they are sufficient to the reality of the climate driven disasters of the 21st century.

We should also investigate opportunities to provide financial support for volunteer firefighters who need to take extended periods of time off work in long fire seasons. The 2019/20 season showed the impacts of a long season on local brigades and individuals, many of whom took long periods of time off work in order to fight fires. In 2023, extensive flooding resulted in members of fire brigades being deployed to flood areas (for instance CFA volunteers were sent to towns along the Murray River). Thankfully the 2023/24 fire season has been fairly mild. If it had started earlier and been more intense, it could have pushed many local brigades beyond their capacity to sustain activity through the summer after a busy spring of assisting flood efforts.

3.4/ Training our firefighters for the conditions that are coming.

The government also needs to investigate the need for new, standardised firefighter training modules that explicitly address dynamic fire behaviours and extreme bushfire development, given that these types of behaviours will increase in prevalence – even if sufficient climate action is taken by government. This could be included in the 'basic skills' curriculum that is taught to volunteer firefighters (for instance the General Firefighter qualifications used by the CFA in Victoria).

4/ Protecting fire sensitive vegetation communities

In bad fire seasons, such as the 2019/20 'Black Summer', huge demands are put on ground and air fire fighting resources. This means that incident controllers often need to prioritise some areas over others where there are insufficient resources to protect all areas. This often means that natural environments are left to burn in order to protect human assets. Citing one example from the Black Summer fires, authorities decided to prioritise saving a few farm sheds over 5,000 hectares of national park.

In these circumstances, it is essential that planners in incident control centres and emergency responders on the ground have easy access to information about the most important areas for conservation so these zones can be priortised.

The authors behind the book titled Australia's Megafires, which involved contributions from more than 200 scientists and experts found that across 13 agencies, just two threatened species were covered by a specific and accessible emergency plan during the 2019/20 season: the Wollemi pine and the eastern bristlebird. These plans told emergency responders what rescue action was needed.

For example, a plan was in place to protect the only known natural stand of Wollemi pines, in New South Wales. This prompted an extraordinary firefighting effort during the Black Summer fires. The effort was successful.

It is estimated that more than 1,800 plant and animal species in Australia are at risk of extinction. We must identify which are a priority, where they are, and how to protect them from bushfires. This information must be communicated to emergency responders and incorporated into regional fire management plans. This may require more staffing within government environment departments to ensure regional incident control centres all have

representatives who can feed ecological information into the decision making process around resource allocations (aircraft, appliances and crews) in real time, with details then relayed to ground and air crews so they are aware of what areas should be defended.
If the current decision making model continues, some of our most significant species and natural environments will be lost to repeat and intense fires.

It should be noted that legal obligations to protect biodiversity in fires are few. The current re-working of federal environment laws provides an opportunity to change this.