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Environment and Communications Reference Committee
Department of the Senate, Parliament House
Canberra ACT 2600

ACF submission to the Inquiry on the Response to, and lessons learnt from, recent bushfires in remote Tasmanian wilderness

To the Members of the Environment and Communications Reference Committee,

The Australian Conservation Foundation welcomes the opportunity to contribute to the Inquiry on Tasmanian World Heritage Area Bushfires. We have a long history of working on climate change and nature protection. In 1965 the ACF was founded by Francis Ratcliffe in response to land clearing and forest destruction across eastern Australia. In 1970 we published a paper calling for action on air pollution including carbon dioxide emissions, and have since campaigned consistently for climate solutions including the carbon price in 2011.

This Inquiry presents an opportunity to face up to the reality of climate change, both in terms of climate adaptation and climate mitigation. As Australia's emissions continue to rise, we are already feeling the impacts of climate change. World Heritage Areas in the Tasmanian Wilderness and the Great Barrier Reef are being destroyed by fire and coral bleaching respectively.

We must immediately transition our energy sector to avoid further warming, and do what we can to prevent and adapt to future climate related disasters. There is growing consensus that this is the new normal – that we must protect our communities and natural places from expanding and intensifying fire seasons.

RECOMMENDATIONS

In order to adequately prepare for future fires in remote areas, and do what is possible to prevent further fires of this scale, ACF recommends:

- Acknowledging the role climate change played in these fires, and preparing for the 'new norm' of extreme fire seasons in remote areas through adequate fire prevention and fire-fighting resources
- Acknowledgement and preparation for global warming implications for future fire management in World Heritage areas and other remote natural areas
    - including new weather stations in western Tasmania to improve access to data and monitoring of conditions
- Tackling climate change by introducing strong pollution targets, transitioning Australia's

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energy to renewable sources, and prioritizing carbon sequestration in our land use sector

- A significant increase in resources to help fire fighters and land managers prevent fires and respond early as soon as they start
    - A more explicit policy of active fire suppression and prevention in fire-sensitive ecosystems should be implemented, given predictions of increased dry lightning strikes and reduced reliability of rainfalls under global warming
    - Adequate numbers of remote area fire-crews should be made available to be deployed quickly, including air-borne fire-fighters and specially trained personnel

BACKGROUND

The internationally renowned Wilderness World Heritage Area (WHA) is fundamental to Tasmania's culture, identity and economy.

Tourists flock to Tasmania to experience natural environments, however during January and February 2016 many of Tasmania's National Parks and walking tracks were closed to tourists and bushwalkers because of the unprecedented fire danger.

This began on the 13th January 2016, when unprecedented dry lightning strikes sparked numerous fires in unseasonably dry wilderness areas. The fires grew from an initial 13 fires to spread through thousands of hectares of dry wilderness over the course of 6 weeks.[1]

More than 19,000 hectares of the precious Tasmanian World Heritage Area were burnt in the fires.[2] The fires engulfed ancient rainforests, killed native animals and destroyed sensitive alpine ecosystems and the deep peat soils on which they depend. They also polluted massive amounts of greenhouse gas emissions into the atmosphere and destroyed precious carbon sinks, contributing more to the climate change that caused them in the first place.[3]

Much-loved and iconic areas at risk included the Walls of Jerusalem, the South-West and Franklin–Gordon Wild Rivers National Park. University of Tasmania fire ecologist Professor David Bowman has said: "we've crossed a threshold, I suspect. This is what climate change looks like."[4]

This tragedy is a major climate-related loss of Australia's iconic natural heritage, on par with

[1] ABC Catalyst, 'Tassie Fires' transcript, 5th April 2016, http://www.abc.net.au/catalyst/stories/4437596.htm
[2] ABC, 15th February 2016, 'Tasmanian Fires: crews could be battling for months, TFS says', http://www.abc.net.au/news/2016-02-15/tasmanian-bushfire-crews-prepare-for-worsening-conditions/7167264
[3] ABC Catalyst, 'Tassie Fires' transcript, 5th April 2016, http://www.abc.net.au/catalyst/stories/4437596.htm
[4] The Conversation, 28th January 2016, 'Fires in Tasmania's ancient forests are a warning for us all', David Bowman, https://theconversation.com/fires-in-tasmanias-ancient-forests-are-a-warning-for-all-of-us-53806

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coral bleaching events on the Great Barrier Reef. These places are well-known by most Australians, they are global significant – and deserve national attention.

FIRE AND THE IMPACTS OF CLIMATE CHANGE

Fires need ignition, fuel and the right climate to burn. Climate change is increasing the regularity and intensity of all these factors. In the Tasmanian WHHA context, climate change is increasing the regularity and intensity of the lightning that ignited the fires, drying out environments and fuel loads, and lengthening and intensifying the fire season.

Regularity of lightning and storms

Research from the United States shows that climate change is increasing the regularity and intensity of lightning storms. Their research shows a 12% increase in lightning per degree of global warming. With current warming already at 1 degree Celsius, it can be estimated that lightning is already increasing in regularity from climate change.[5]

Research from NASA supports the direction of this research in a global setting, although using different methodology. A 1993 study shows a 30% increase in lightning activity for 4 degrees of warming.[6]

ACF could not find direct research on climate impacts on lightning in Australia available on the public record, however history is showing us that lightning fires are increasing in regularity and impact. To name a few, in February 2015 120 bushfires were ignited in a single week from lightning in Western Australia,[7] and in 2013, a large remote fire was sparked by lightning in the Giblin River, burning more than 45,000 hectares.[8] In 2006, the longest running fire in Victoria's history was sparked by lightning, burning for 69 days in the Victorian Alps. This fire went on to burn 1.2 million hectares, mostly in national parks.[9]

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[5] Romps et al (2014), 'Projected increase in lightning strikes in the United States due to global warming', *Science* 14 Nov 2014: Vol. 346, Issue 6211, pp. 851-854
[6] Price, C.G., 1993: *Global Lightning Activity and Climate Change*. Ph.D. thesis. Columbia University, accessed 11/04/2016, http://pubs.giss.nasa.gov/abs/pr08100v.html
[7] DFES (Department of Fire and Emergency Services) (2015) Media release: firefighters call for support as WA faces further fire risk. Issued Monday 2 February 2015. Accessed at http://www.dfes.wa.gov.au/mediareleases/Pages/MediaRelease.aspx?ItemId=737
[8] The Conversation, 28th January 2016, 'Fires in Tasmania's ancient forests are a warning for us all', David Bowman, https://theconversation.com/fires-in-tasmanias-ancient-forests-are-a-warning-for-all-of-us-53806
[9] The Conversation, 2nd February 2016, 'Firefighting in the wilderness: lessons from Tasmania', https://theconversation.com/fighting-fire-in-the-wilderness-learning-from-tasmania-53948

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Dryer environments and fuel load

Tasmania experienced a record breaking dry spring, and a rain-free and consistently warm summer. In the lead up to the fires most of the weather stations in western Tasmania recorded less than 50 mm of rain. This left wilderness areas unusually dry and susceptible to fire. Normally wet rainforests have a natural protection against fire, as they are cooler and wetter ecosystems than surrounding environments. The preceding dry spring and summer meant that this natural protection was compromised, and once the lightning sparked a flame, the amount of dry fuel above ground and dry peat below meant that the fires spread incredibly rapidly and were difficult to control.[10]

Climate change has been linked to the NSW bushfires in 2013, particularly because of the quantity and dryness of fuel available. The ARC Centre of Excellence for Climate System Science has documented the increased quantity of fuel, the dryness of this fuel, and the ambient weather leading to dramatic fire conditions.[11]

Extreme weather

The 2014 and 2015 bushfires in Western Australia have also been linked with climate change. The Climate Council cited the increased intensity and frequency of heatwaves as a contributing factor to increased bushfires, with 50% more heatwave days in Perth since 1950. Fire seasons are becoming longer and more intense because of climate change.[12] The Climate Council has also linked climate change induced extreme heat to fires in South Australia, ACT, and Victoria.[13]

Adaptation to climate impacts

With increasing threats to our World Heritage Areas from climate change impacts, policy makers must prepare and resource our land management and firefighters appropriately. These fires were predicted by experts including Geoff Law, Dr Jen Styger and Dr Chris Bowman, but adequate resources were not available to respond. These experts make the

[10] ABC Catalyst, 'Tassie Fires' transcript, 5th April 2016, http://www.abc.net.au/catalyst/stories/4437596.htm
[11] ARC Centre of Excellence for Climate System Science, 25/10/2015, 'Links between climate change and NSW bushfires', accessed 11/04/2016, https://www.climatescience.org.au/content/395-links-between-global-warming-and-nsw-bush-fires
[12] The Climate Council (2015), 'The Heat is On: Climate change, extreme heat and bushfires in Western Australia', accessed 11/04/2016, http://www.climatecouncil.org.au/uploads/7be174fe8c32ee1f3632d44e2cef501a.pdf
[13] See Climate Council reports series 'Be Prepared: Climate Change', https://www.climatecouncil.org.au/category/reports

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point that multiplying the amount of weather stations in western Tasmania could increase the availability of data used to predict these situations in the future.[14]

With experts predicting this level of fire risk as the 'new norm', Parks and Wildlife must be given the appropriate resources to implement fire prevention and suppression activities within their land management programs.[15]

Once fires do start, however, remote fire crews must be resourced to respond immediately both on ground and air-borne. Rapid response can stop initial fires growing, linking up and becoming out of control.[16]

CAUSES OF CLIMATE CHANGE

Political leadership required

Government policy at all levels is contributing to global warming.

ACF urges political leaders not to lose sight of the underlying cause of these fires – climate change.

The recent Tasmanian fires should be a wake-up call for Australian governments. They provide a sobering reminder that urgent action is required to tackle the pollution that is causing global warming and threatening our environmental, social and economic futures.

The Australian and Tasmanian governments have a unique opportunity to show leadership.

The majority of emissions in Australia come from the mining and combustion of fossil fuels for energy, so an energy transformation is critical to avoiding further dangerous climate change. The Federal Government must lead in advancing our energy policy to prevent further climate change. Forestry and land use are also large contributors to climate change, and the Tasmanian Government has a responsibility to protect and restore our natural forested carbon sinks.

Governments at all levels should be held accountable for making decisions which are contributing to climate change – such as logging of carbon dense native forest and approving massive new coal mines.

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[14] ABC Catalyst, 'Tassie Fires' transcript, 5th April 2016, http://www.abc.net.au/catalyst/stories/4437596.htm
[15] The Conversation, 2nd February 2016, 'Firefighting in the wilderness: lessons from Tasmania', https://theconversation.com/fighting-fire-in-the-wilderness-learning-from-tasmania-53948
[16] Ibid.

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Energy

Governments have the responsibility to lead on climate change by implementing higher pollution reduction targets, and reaching them by support renewable energy, energy efficiency and phasing out coal-burning power stations. A full policy platform for an energy transformation is attached as an appendix.

Forestry and land clearing

The Tasmanian Government must commit to climate action at a state level. As well as emissions reductions from energy efficiency and renewable energy, Tasmania has a responsibility to protect and restore natural carbon sinks. Forestry and land clearing are large contributors to climate change. The direction of our land use sector must be reversed, to protect and restore carbon dense landscapes instead of prioritizing land clearing.

CONCLUSION

As a result of more ignition, more fuel and more hot and dry weather because of climate change, environmental change biologist David Bowman has cited this fire intensity as the new norm[17]. We must resource fire prevention and fire-fighting in remote areas to prepare for more intense fire seasons in the future.

We also must do all that is physically possible to prevent further climate change. Both state and federal governments have a responsibility to shift our energy sector away from polluting fossil fuels, and shift our land use sector towards carbon sequestration.

The ACF community speaks out for a healthy environment, Australia's special places, climate action and for lasting social and economic change.
www.acfonline.org.au

[17] The Conversation, 28th January 2016, 'Fires in Tasmania's ancient forests are a warning for us all', David Bowman, https://theconversation.com/fires-in-tasmanias-ancient-forests-are-a-warning-for-all-of-us-53806