



# *The 2019/2020 Australian Bushfires – An evolving catastrophe*

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## Introduction

The Australian Commonwealth Government notes Australia to be the sixth largest country in the world, being one of the largest islands on the planet, the ocean territory is the world's third largest spanning three oceans and covering around 12 million square kilometres.



It is estimated that 7 million square kilometres, or 91% of Australia, is covered by native vegetation. Although this figure may seem high, many of Australia's desert landscapes are covered by native plants such as Saltbush and scrub. Thus, when considering the likelihood of bushfire, and where such fires may occur, the area is much more reduced, and contained to regions such as the South West of Western Australia, the Adelaide Hills and a large area of native bushland primarily along the East Coast of Australia stretching from Victoria in the South through to Queensland in the North. Figure 1 (see next page) is an image of the typical native forest location.

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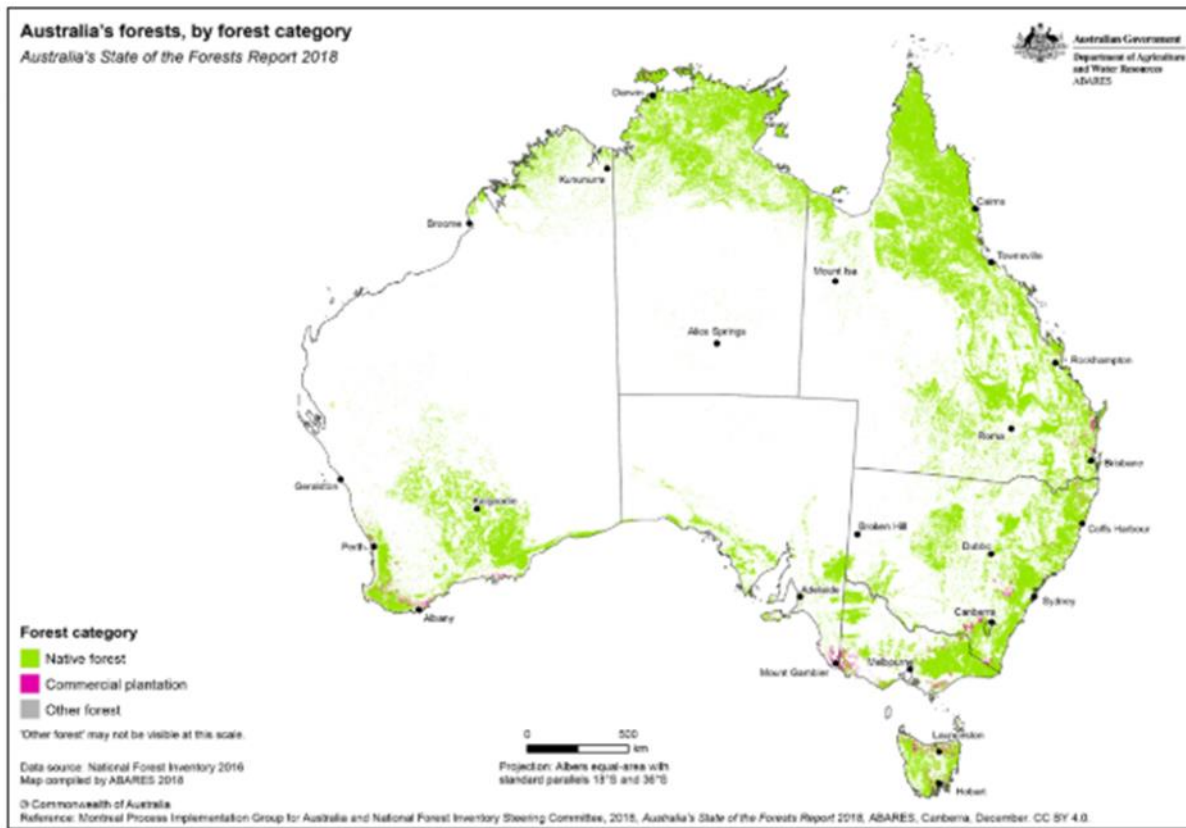


Fig. 1: Bushland forest locations within Australia (Source: Australian Government: Department of Agriculture)

It is estimated that approximately 80% of Australians live within 100 kilometres of the coast, with the primary concentration of populations located in the capital cities, all of which apart from Canberra, are located on the coast.

In considering the nature and composition of typical Australian bushland, the high diversity of flora includes large numbers of species including Acacia, Eucalyptus, Melaleuca, Grevillea and Allocasuarina. Acacias tend to dominate in dryer inland parts of Australia, while Eucalyptus dominate in wetter parts.

Most of the said vegetation types have adapted to arid conditions. Australia's forests have a total of some 134 million hectares which is equivalent to 17% of Australia's land area. It is these forests which are susceptible to bushfire, particularly in the southern states. Eucalyptus (or Gum Trees) can burn particularly aggressively given their natural flammable oil that resides within their leaves.





Prior to European settlement of Australia in 1788, the local indigenous population, which had a fairly nomadic approach, often managed the local bush through instigation of fires, as it was known that a build-up of fuel load could lead to devastating and uncontrolled fires. The situation today is however more complicated with various environmental restrictions and the controlling of back burning being made by local governments.

Bushfires within Australia often occur during the summer period which tends to be between October through to March. It has been noted in recent decades that this fire season may well be increasing in length and severity. Some notable fires of the recent past include:

- The Black Saturday fires of February 2009 in Victoria (173 people killed, and more than 3,000 buildings destroyed)
- Ash Wednesday in February 1983 in Victoria and South Australia (75 people killed, and 1,900 homes destroyed)
- Black Friday January 1939 in Victoria (71 people killed, and 650 houses destroyed)

This paper discusses the background to the current 2019 / 2020 fire season, which has been fuelled by record breaking temperatures and months of severe drought across Australia, and also explores some of the recent and long term impacts.

## The Commonwealth Scientific & Industrial Research Organisation (CSIRO)

The Commonwealth Scientific and Industrial Research Organisation (CSIRO) of Australia has been undertaking research into climate change and bushfire activity for many years. The CSIRO notes that Australia's climate has warmed by just over one degree Celsius since 1910, leading to an increase in the frequency of extreme heat events. There has been a long term increase in fire weather and the length of the fire season across large parts of Australia since the 1950's. CSIRO states that human induced climate change has resulted in more severe and dangerous weather conditions for bushfires in recent decades in many regions of Australia.

The current projection suggests that hot days will become more frequent and hotter, and the seasonal average rainfall will decrease in most States. Importantly, there is a prediction that the likelihood of drought will increase, and the period of droughts will increase over Southern Australia, particularly in





areas that are forested. This will be material to future bushfire behaviour. Figure 2 below provides a temperature history for Australia in the past 100 years.

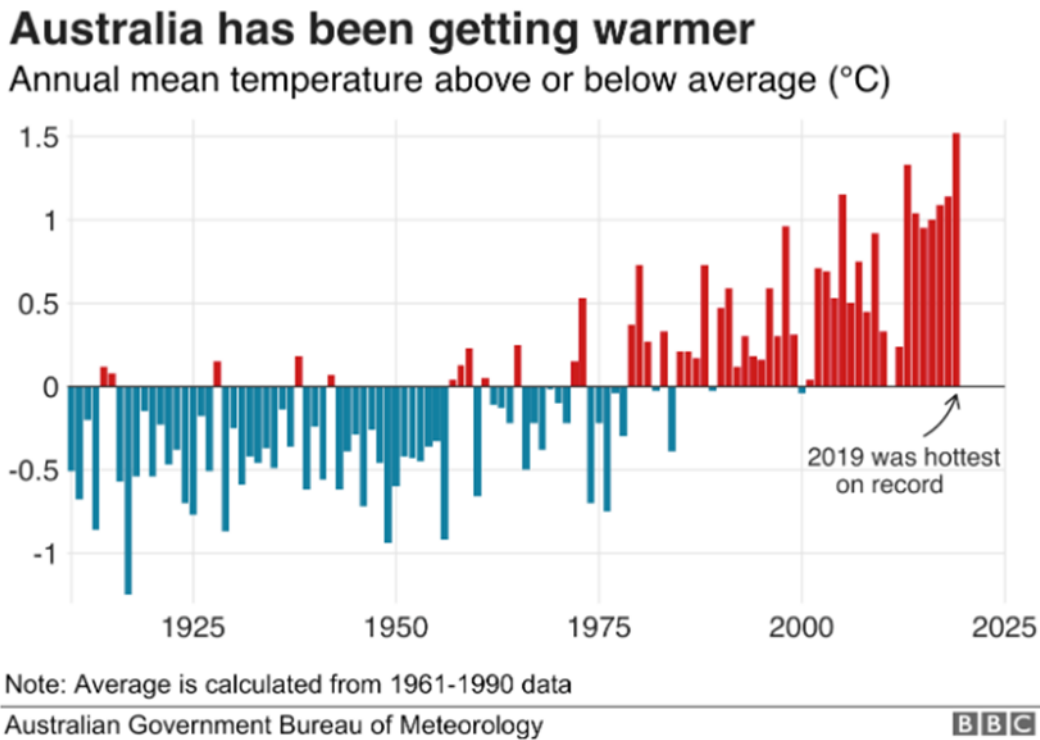


Fig. 2: Australian Annual Mean Temperatures on the rise (Source: Australian Government Bureau of Meteorology)

### 2019/2020 fire season so far

On the back of a significant drought, affecting much of the East Coast of Australia, the bushfire season has commenced earlier than normal with some fires being recorded particularly in New South Wales and Queensland in August 2019. As of mid-January 2020, multiple fires have estimated to have burnt some 18.6 million hectares (186,000 square kilometres – larger than the 2019 Amazon Rainforest Fires) and destroyed in excess of 5,900 buildings (including some 2,700 homes or more). 30 people have sadly lost their lives through these events, and there is at least several more months of severe fire activity expected.





The smoke generated from the fire's was clearly visible from Space and was recorded reaching the stratosphere at 17.7km high and has now circled the globe.

The devastation to the bushland has come at not only an economic cost, but also a significant fauna cost with some estimates suggesting in excess of 1 billion animals having been killed throughout the course of the 2019 / 2020 fire season. Figure 3 below is an indicative map of the fire activity recorded thus far this season.

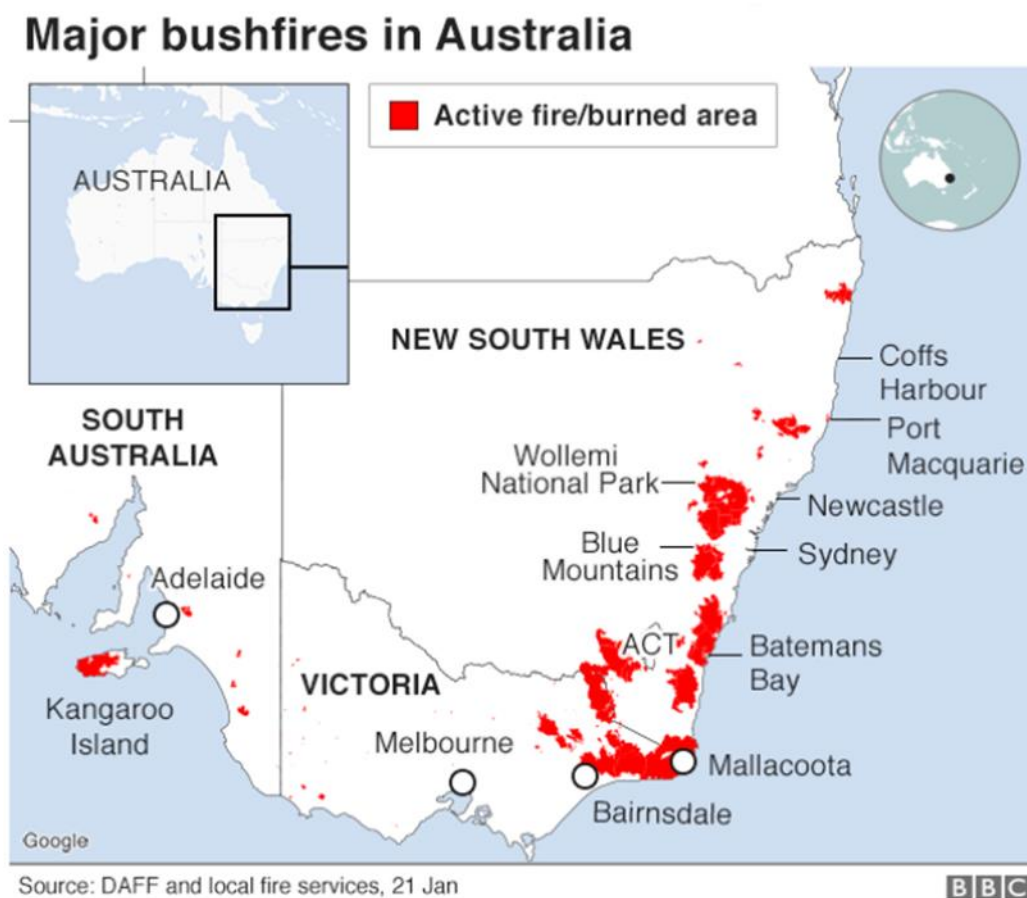


Fig. 3: Active fire areas 2019/2020 (Source: BBC World news / DAFF)

Specifically, from September 2019, the fires have primarily impacted the state of New South Wales, with more than 100 fires burnt across the state. In Eastern and North Eastern Victoria, large areas of forest burnt out of control for 4 weeks before the fires in late December reached residential areas, taking several lives and temporarily isolating the coastal towns of Corryong and Mallacoota. A state





of disaster was declared for East Gippsland. Furthermore, significant fires occurred in the Adelaide Hills and on Kangaroo Island in South Australia. And last but not least moderately affected areas included Southern Eastern Queensland and remote areas of Southern Western Australia, with a few areas in Tasmania and the ACT being mildly impacted also.

The response to these unprecedented fires has included the established State Rural Fire Services, Australian Defence Force and the deployment of International Fire Services from various countries including Canada, Fiji, New Zealand and the USA to name but a few.

Some of the fires from Victoria have merged with fires in NSW to perform “Mega Fires” which were extremely difficult to counter due to access and the sheer scale of the fire fronts involved.

Some of the consequences of these fires have manifest in different ways including:

- The obvious loss of property and life.
- Criticism of the Government response – climate change response and funding/resource issues for rural fire services.
- Air quality issues, primarily around Sydney and Melbourne.
- Issues of under insurance or no insurance.
- Crowd funding, donations and the deployment of additional firefighting resources and equipment from overseas.

## Insurance Perspective

Many of the local and domestic Insurers have sought to collaborate in respect of an insurance response. This has included the coordination of recovery efforts. The Insurance Council of Australia has launched a “local trades” register to aid in the bushfire recovery and has opened up various insurance customer “hubs”, such that claims can be registered and processed as soon as possible.

The Government, perhaps with a political angle, has now provided funds available for bushfire clean up and removal of debris.





Unfortunately, because many of the fires are active, access to the damaged areas is difficult and delayed. The vast area involved means that it may take some weeks or months to gain access to certain areas.

Some of the issues that will loom in respect of insurance response include:

- Underinsurance
- Policy trigger for Business Interruption
- Reinstatement challenges where building codes may have changed
- General stress and trauma associated with many of the Insureds

As at late January 2020 the Insurance Council of Australia notes the following statistics:

1. For the bushfire event declared on 8 November 2019, **a total of 20,000+ claims valued collectively at AUD1.65 billion have been registered.**
2. The bushfire catastrophe covers 183 postcodes across Queensland, NSW, Victoria and South Australia. Within the physical footprint of the bushfires, **the median building sum insured is AUD343,241 and the median premium paid is AUD843 plus taxes.**



*Fig. 4: Aerial view of NSW fires*





## Adjuster Challenges

At this time many of the adjusting firms in Australia have mobilised to respond to various claims received. Unfortunately access to commence the investigation has been somewhat of a challenge, however this is progressively improving as weather improves and / or fires have simply burnt through areas and are unlikely to return.

Whilst most of the claims at this time relate to domestic property, this will serve to cause some resource challenges for adjusting firms. Particularly in respect of other events which may occur throughout Australia this time of year, such as cyclones and / or hailstorms.

Where domestic dwellings have been destroyed, along with Insured's records, it will be difficult to confirm in some cases the nature and extent of contents in particular. When these issues arise, there is some leniency applied by insurance companies and a heavy reliance on the adjuster's conversations with Insureds to ascertain a fair and reasonable outcome under the policy.

In respect of commercial properties, a looming issue will be where a business has suffered economic loss due to access issues but not necessarily property damage to its customers or suppliers.

## Miscellaneous issues

Beyond the Insurance response there are other issues that flow from the bushfire events including:

- Downturn in tourism generally across the board for Australia due to the high media coverage.
- Substantial donation and fundraising, and the management of those funds such that payments are made in a timely and correct manner.
- The Commonwealth Government has pledged some AUD2 billion towards assistance, particularly for people who have no insurance. The allocation of these funds will no doubt require careful and bureaucratic approach.
- The Commonwealth Government has launched an enquiry into the bushfires of 2019/20. This is on the back of previous enquiries associated with other fires.

Beyond the above, it is also likely that there will be legislation changes in respect of the ability of land owners to clear land, and manage the bush on their property. There is also an expected response in







respect of building codes and legislation such that some improvement in design and products might be deployed during the reinstatement process. These types of issues will evolve throughout the year.

## Future Challenges

The catastrophic fires experienced thus far have put a spotlight on Australia, and also the links that such events may have to climate change. This is no doubt likely to jolt Governments into consideration of “future proofing” property in respect of high bushfire risk areas through mitigation measures and the like.

It is expected that some Insurers, whilst they already have different zones for fire risk, may well seek to revisit adequacy of these categorisations, and this may have a future impact in respect of premiums and / or whether insurance can be purchased.

At the conclusion of the subject bushfire season, it will take many years for the bush to fully recover, if indeed it can recover. This is likely the case for various fauna, and many people affected by the fires will also not return to their previous towns and residences to re-establish their lives.

On the flip side of all these devastating events, the human spirit has prevailed with many communities banding together, and a substantial trauma response / mental health consideration being made by local and Commonwealth Governments to assist those affected.

The 2019 / 2020 fire season will no doubt shape Australia’s approach to bushfires and environmental management well into the future.

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