

New Thinking - New Approaches Available to Prevent and Detect Bushfires

Since 1938 Australia has conducted 18 formal inquiries including Royal Commissions into bushfires in Australia. The main focus has been on ‘how to better respond’ – accepting an inevitability of bushfires. While this is true to an extent, the frequency, magnitude and destructive consequences combine to raise a different perspective. Was and is it possible to reduce the number and consequences of bushfires?

To explore this, ARPI has applied its Strategic Risk Policy® (SRP) model. ARPI has redefined risk with a contemporary meaning:

1. Impacts of decisions and non-decisions;
2. Implications on networks; and
3. Implementation analysis of policy.

Consequently, SRP looks at potentiality – or possible or potential strategic risks – which ARPI views through ‘Vulnerabilities’ or ‘Exposures.’ As such, leaders have the opportunity to identify and ‘protect against’ those vulnerabilities or exposures to bushfires, reducing both the number and severity of bushfires. Protection against offers pre-emptive decision-making rather than waiting to manage actual risks or bushfires.

A single vulnerability or exposure exists which is common to many of the 18 reports and supported by public data concerning clearing and non-clearing of ‘fuel’ for bushfires, meaning that governments across Australia can do more to protect the country against the severity and number of bushfires. Examples include failing to reach minimum safety clearing targets – in some cases under 50% recommended and repeated over years – to extreme policy of deciding not to clear excessive fuel.

Fires don’t know borders so clearly, protection against bushfires must move to an ongoing national focus in co-operation with State, Territory and Local Governments. The cost of lives, property and to the economy demand nothing less.

Extensions of this logic includes a nationally integrated fire detection system which could be solar-powered. Placing detectors in forests seems simple today. Thus ARPI suggests new thinking, new approaches and new methods must create a new national, strategic and integrated leadership paradigm. Managing COVID-19 is an example Australia can draw on to build the new approach required.

ARPI’s affiliated European Risk Policy Institute (ERPI) is currently exploring the latest fire-detection technology developments in Europe, based on a solar-powered detection system.

Background

As the driest continent on the planet, Australia experiences bushfires every summer.

The fires of 2019-20 were some of the worst we have seen with 46 million acres burned,¹ 3,500 homes destroyed, 80% of the Blue Mountains World Heritage Area burned and 53% of the Gondwana World Heritage rainforests in Queensland burned as well. Between November 2019 and the middle of February 2020—when the majority of the fires were under control—bushfire losses are estimated to be \$1.9 billion.²

In terms of lives lost, Australia's most devastating bushfires were those of the 2009 Black Saturday Bushfires which resulted in 173 deaths. From a policy perspective we can see that in the ten years between the Black Saturday fires and the fires of last year that a different approach is required—the question we need to be asking ourselves is how can we better prevent bushfires from occurring and secondly how to detect bushfires more quickly.

Fire is a chemical reaction which needs three conditions—a sufficient quantity of fuel, oxygen and heat. We cannot reduce the level of oxygen in the atmosphere, and Australian summers are notorious for being extremely hot. This leaves fuel as the main vulnerability over which we do have control—prudent policy would be to conduct cool burnings in order to reduce the amount of fuel that is available to be burned.

By conducting controlled burns the possibility of a greater disaster subsequently occurring is drastically reduced. Indeed Indigenous Australians, leading the way across borders, have been conducting cultural burns which 'generally use small, cool, controlled flames' for tens of thousands of years in order to manage the landscape.³ Cultural burns are slightly different to 'hazard reduction' burns in that the latter are solely focused on reducing the fuel load for a given area. It should be noted that hazard reduction burns sometimes have a tendency to 'scorch areas that shouldn't be burned,' according to Oliver Costello from Firesticks Alliance Indigenous Corporation.

As obvious as it sounds, it can be seen that hazard reduction burning has not been adequately undertaken to reduce fuel loads in Australia's forests. Poor 'forestry management' which opposed necessary reductions of fuel loads and clearing of vegetation around home owners' properties,⁴ undoubtedly exacerbated the 2019-2020 fires. Those living in proximity to bushfire affected areas were aware of this, and despite their pleas for a reduction in fuel loads, these were not heeded. One example is that of the Jinks Creek Winery which was burned down as a result of fire engulfing the Bunyip—its owner Andrew Clarke had allegedly 'begged' for fuel reduction burns to protect his property.

The notion of vulnerability of a large fuel load clearly fits in with ARPI's Strategic Risk Policy® model—namely that the risk of a bushfire is the conjunction of the vulnerability of a large fuel load uncontrolled, multiplied by the threat of the Australian summer. As such it would be prudent for policy makers to put in practices and policies that allow for the timely clearance of excess vegetation. Obviously, such policies can harmonize with biodiversity issues and environmental outcomes - these are matters of science, and science should inform the Australian policy development and implementation process.

¹ [2019-2020 Australian Bushfires - Center for Disaster Philanthropy](#)

² [Aon reveals impact of the Australia fires on reinsurance | Insurance Business \(insurancebusinessmag.com\)](#)

³ [Indigenous fire practices have been used to quell bushfires for thousands of years, experts say - ABC News](#)

⁴ [Green ideology, not climate change, makes bushfires worse Green ideology, not climate change, makes bushfires worse \(volunteerfirefighters.org.au\)](#)