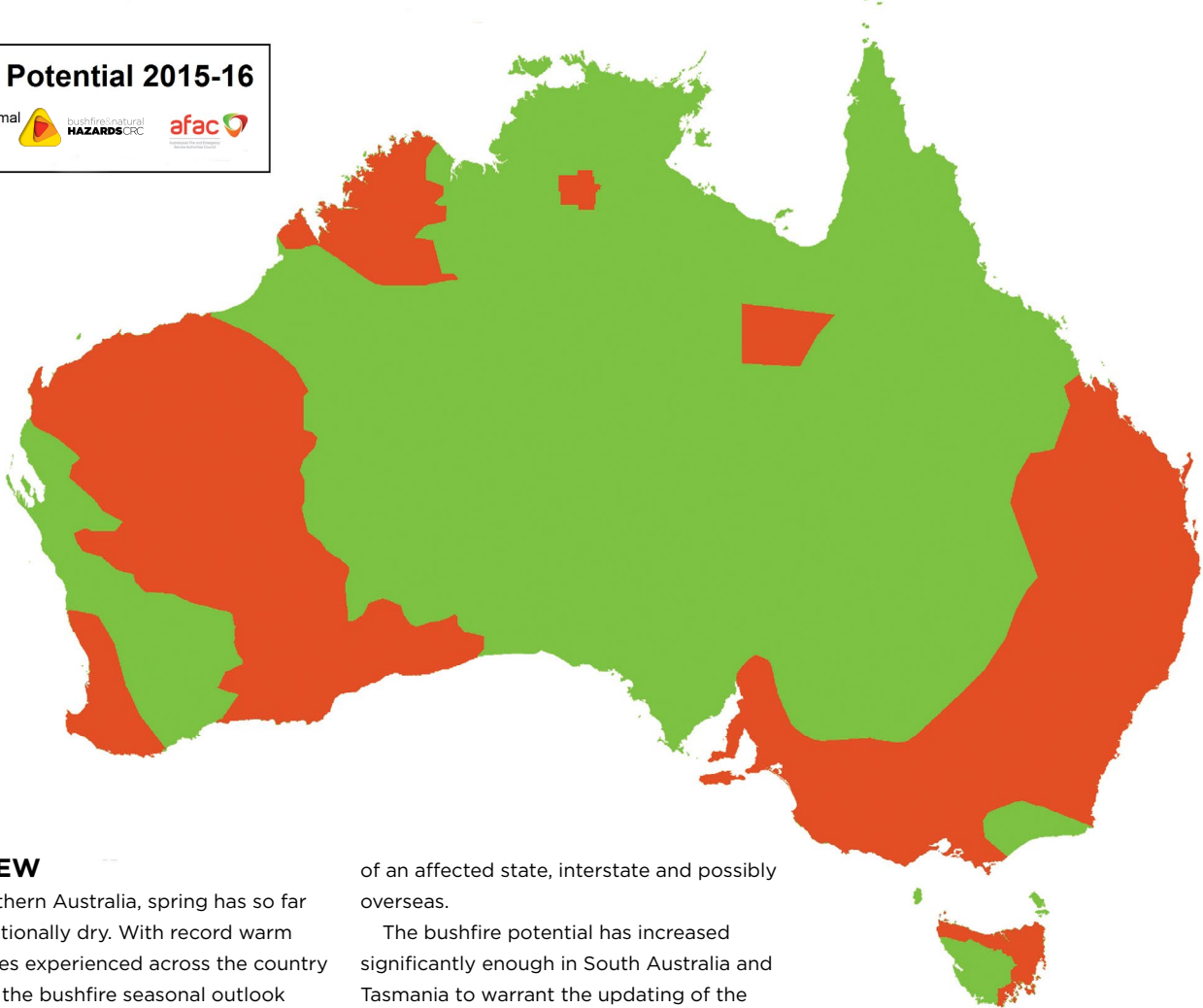


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TOPICS IN THIS EDITION | FIRE WEATHER | FUEL MANAGEMENT

SOUTHERN AUSTRALIA SEASONAL BUSHFIRE OUTLOOK 2015-16: NOVEMBER UPDATE

Bushfire Potential 2015-16



OVERVIEW

Across southern Australia, spring has so far been exceptionally dry. With record warm temperatures experienced across the country in October, the bushfire seasonal outlook for 2015-16 has been re-examined for South Australia and Tasmania.

This has resulted in an update to the *Southern Australia Seasonal Bushfire Outlook*. This new edition, released as *Hazard Note 12*, replaces the previous Outlook for these two states, published as *Hazard Note 10* in September 2015.

The significant change in this Outlook is that more parts of south eastern Australia are now expected to experience above normal fire conditions. In these areas, it is more likely that the resources required to fight bushfires from within a region will be insufficient, with resources required from other areas

of an affected state, interstate and possibly overseas.

The bushfire potential has increased significantly enough in South Australia and Tasmania to warrant the updating of the national perspective. The above map reveals the updated bushfire outlook for southern Australia through to 2016.

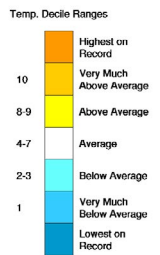
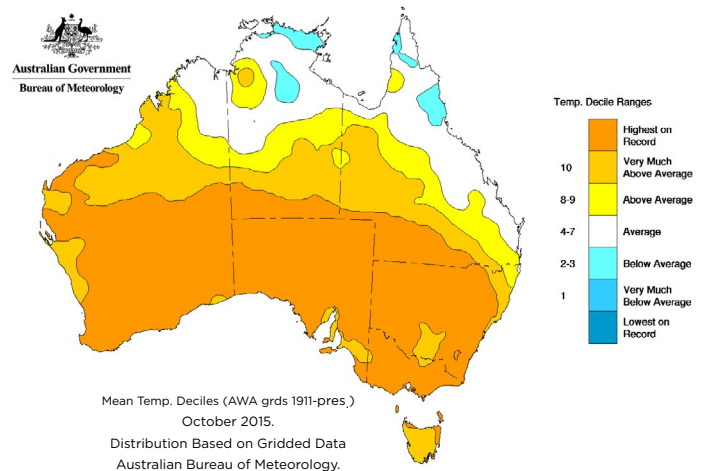
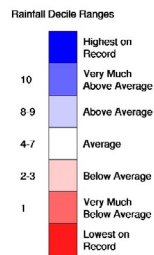
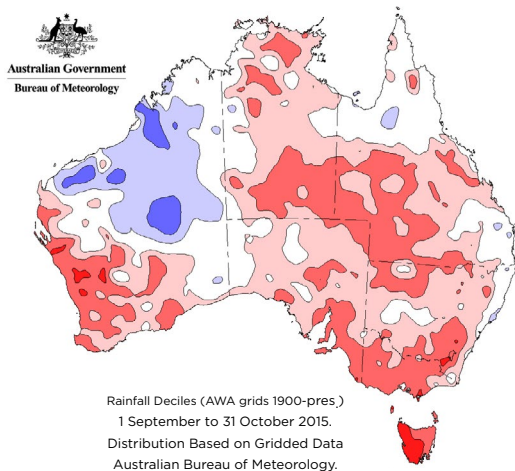
This map has been combined with the outlook for the northern fire season, released in July 2015, to show the areas of fire potential for all of Australia in 2015-16 (see *Hazard Note 7*).

RECENT CLIMATE CONDITIONS

September and October have been exceptionally dry months for much of Australia (Figure 1, next page) with large areas recording less than 20% of their average rainfall. Rainfall has been particularly low in

Tasmania, South Australia, southern Western Australia, Victoria, and much of New South Wales west of the Great Dividing Range. The low rainfall has contributed to a rapid and early drying of vegetation.

Accompanying the low rainfall has been record high temperatures (Figure 2, next page). Following a slightly warmer than average September for Australia (mean temperature anomaly of +0.2°C), October has seen record warm temperatures across the country (mean Australian anomaly of +2.89°C, well above the previous October record of +2.14°C in 1988).



DEFINITION

Bushfire potential: The chance of a fire or number of fires occurring of such size, complexity or other impact (such as biodiversity or emissions) which requires resources (from both a pre-emptive management and suppression capability) beyond the area in which it or they originate. Bushfire potential depends on many factors, including weather and climate, fuel abundance and availability, recent fire history and firefighting resources available in an area.

It was also the warmest October on record in Tasmania, South Australia, Western Australia, Victoria and New South Wales. The combination of record heat and very dry conditions means that the 2015-16 southern fire season has commenced early in some locations.

The combination of an El Niño-linked drought, long-term rainfall deficiencies, drying in southern Australia over nearly 20 years, as well as warming global and Australian temperatures, sets the scene for above normal fire potential in large parts of southern Australia.

UPDATED CLIMATE OUTLOOK

The climate outlook for November to January is influenced by both the Pacific and Indian oceans. A strong El Niño remains in the Pacific Ocean, which is expected to

peak around the start of summer, and then subsequently decline. The Indian Ocean retains its record warmth, while a positive Indian Ocean Dipole event has started to decay. This combination suggests that rainfall is likely to improve in coming months.

The rainfall outlook for November to January (not shown) suggests some areas may experience above average rainfall, but many of these areas are seasonally dry and therefore unlikely to see a significant reduction in the antecedent fire danger. In the south east of the country (including Tasmania), average to drier than average conditions remain likely.

Temperatures leading into summer (not shown) are likely to be above average during November. Probability shifts are stronger in southern areas, where both maximum and minimum temperatures are likely (>80%) to be warmer than average.

The decline of both the positive Indian Ocean Dipole event and El Niño favours an improving rainfall outcome for Australia. However it is currently too early to determine how extensive this rainfall relief will be, and whether rainfall will fall in sufficient amounts to ease the fire season severity.

REGIONAL SUMMARIES

South Australia

As part of the ongoing monitoring and reviewing of conditions across South Australia, the updated outlook conditions indicate the most likely scenario is for above normal fire potential in parts of the Flinders, Mid North, Yorke Peninsula, Mt Lofty Ranges, Murraylands,

Riverland, Kangaroo Island, Upper South East and Lower South East. These areas have experienced rainfall deficiencies with very dry soil moisture, resulting in very dry fuels and earlier than average curing of grasslands.

Normal to above normal fire potential may see the need for firefighting resources over a longer period of time, together with a longer time for mop up post-fires. The districts where there is potential for above normal activity may pose resourcing issues during this fire danger season, should an above normal level of activity be experienced.

Tasmania

The potential for bushfire has been assessed as above normal across northern and eastern Tasmania, as well as in the Midlands and the South East. This is a significantly larger area than the September assessment. The bushfire potential in the remainder of the state is currently normal.

The first half of spring has seen very low rainfall for almost all of Tasmania, especially in the west. Above-average daytime temperatures have increased evaporation rates, which further increases fuel dryness. The fire season has commenced in the eastern half of the state, with many fires proving difficult to control because of the dryness of fuels.

Other states and territories

In New South Wales, the ACT, Victoria, Western Australia and Queensland, the *Southern Australia Seasonal Bushfire Outlook* remains as described in September's *Hazard Note 10*.

The Bushfire and Natural Hazards CRC is a national research centre funded by the Australian Government Cooperative Research Centre Program. It was formed in 2013 for an eight-year program to undertake end-user focused research for Australia and New Zealand.

Hazard Notes are prepared from available research at the time of publication to encourage discussion and debate. The contents of *Hazard Notes* do not necessarily represent the views, policies, practices or positions of any of the individual agencies or organisations who are stakeholders of the Bushfire and Natural Hazards CRC.

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