

FIRE NOTE

ISSUE 14 OCTOBER 2007

SEASONAL BUSHFIRE ASSESSMENT 2007-2008

AUSTRALIAN FIRE SEASON OUTLOOK - OCTOBER 2007

SUMMARY

Fire potential refers to the chance of a fire, or a number of fires of such size, complexity or other impact occurring that requires resources from beyond the area which it or they originate.

Fire potential is an amalgam of many factors including weather and climate, timing and duration of the fire season, fuel abundance and availability and fire-fighting resources available in an area.

Normal to above-normal fire potential is expected for much of Australia for the 2007-8 fire season.

Above normal potential is expected in eastern Queensland, northern and far western New South Wales, large sections of Western Australia, central Northern Territory, southeastern Tasmania, much of Victoria and the agricultural areas of South Australia. Below-normal fire potential is expected in the centre of the country and in the eastern Kimberley.

These are the main conclusions of the Seasonal Bushfire Assessment Workshop, held 13-14 August in Melbourne.

This workshop, coordinated by the Bushfire CRC, brought fire managers, severe weather meteorologists and climatologists together to evaluate the fire potential for the upcoming season for the southern parts of Australia.

The results have been combined with those from the Northern Seasonal Bushfire Assessment held in Darwin in May to create the national outlook in the map (at right). The map reflects the outlook through to February 2008.

This document is a brief summary of the full Seasonal Bushfire Outlook, which is available to Bushfire CRC members at www.bushfirecrc.com

ANTECEDENT CONDITIONS

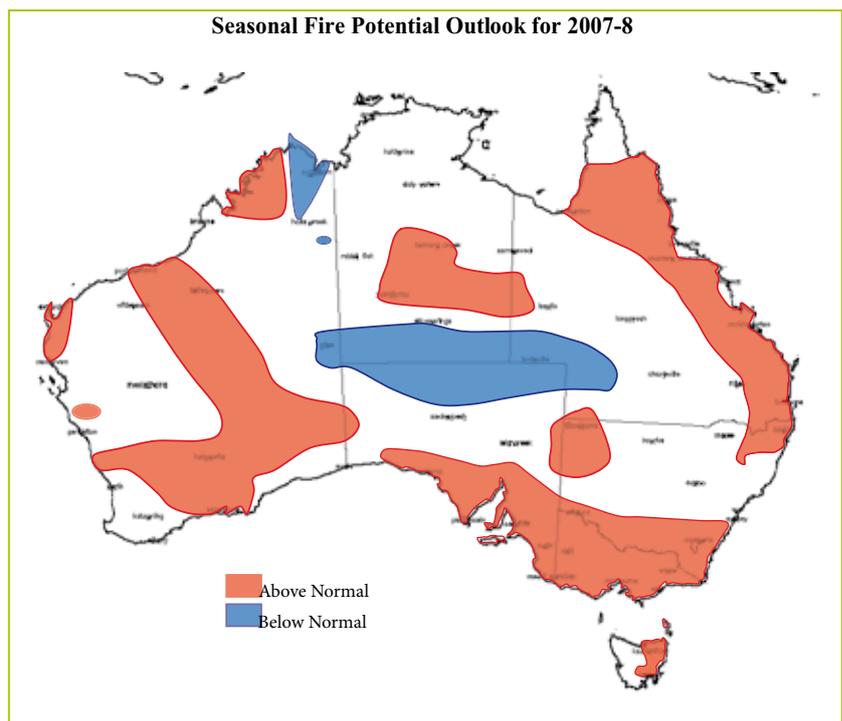
For much of southern Australia, the last year has been dominated by drought. During 2006, southeastern and far western Australia experienced below average rainfall, while the northern and east coast regions experienced above-normal rainfall. In these wetter regions, much of this rain has fallen in a relatively few events, which caused some flooding. These areas include southeastern Queensland, the southern New South Wales coast and Gippsland. The broad band of rainfall across the north was also related to a single event. Over New South Wales, Victoria, south-east Queensland and southwest Western Australia, the below-normal rainfall conditions have been observed over the last five to 10 years. While some relief has been seen during

2007, many areas remain affected by drought conditions. Tropical cyclones only impacted Australia over the Pilbara region of Western Australia this year.

The El Niño that dominated the weather in Australia during 2006 has broken down. A La Niña-like pattern has replaced it, with below average sea surface temperatures in the eastern Pacific. However, this pattern has not been strong or consistent enough to date to qualify as a full La Niña.

CLIMATE OUTLOOKS

For the remainder of 2007 and into early 2008, weak La Niña conditions are expected to persist in the tropical Pacific. However, the event will remain weak and no strong cooling is expected.



Historically, La Niña is associated with higher rainfall over Australia. Despite this relationship, the latest seasonal rainfall outlooks from the Bureau of Meteorology for the upcoming three months (October-December) suggest only minor shifts in the odds towards above-median rainfall over most of New South Wales and southern Queensland, with slightly higher probabilities for South Australia and the Northern Territory.

Good chances of above-normal rainfall are expected over much of Western Australia, although this is usually low at this time of the year in much of the region. Tasmania and southern Victoria have a 60 to 70% chance of below average rainfall. Both maximum and minimum temperatures are likely to be above normal across most of the country.

REGIONAL SUMMARIES

NORTHERN AUSTRALIA

The fire potential outlook for the northern portions of Australia was presented in the report of the Northern Seasonal Bushfire Assessment Workshop in May. It forecast normal to above normal fire potential over the dry season for much of Queensland, the Northern Territory and Western Australia. This report can be found in the Bushfire CRC members area of www.bushfirecrc.com

SOUTH EAST QUEENSLAND/NORTH COAST NEW SOUTH WALES

The continuing drought and dry conditions have led to early curing of the grass fuels. An early start to the season is expected although recent rain events have eased conditions.

NEW SOUTH WALES/AUSTRALIAN CAPITAL TERRITORY

Heavy rains during June in the northwest of the state have allowed for grass growth in that region. In combination with lower stock levels, a high fuel load is expected. Once this fuel cures in early summer, an above normal fire potential is likely. Above-normal fire potential is also expected in the southern portions of the state and the Australian Capital Territory, associated with long-term drought. Normal fire potential is expected in the remainder of the

state. An early start to the season is possible in the southeast.

TASMANIA

Above normal fire potential is expected in the northeast, Flinders Island, Midlands, Derwent Valley, east coast and the south east (excluding the Tasman and Forestier Peninsulas). The fire season has already commenced in the far northeast. The remainder of the state is expected to have normal fire potential and more usual fire season timing.

VICTORIA

The continuing drought in Victoria is expected to bring above normal fire potential for the upcoming season. Many areas remain in drought, suggesting dry conditions and more forest fuel availability. Spring rainfall has been low to date, and an early start to the season is expected.

WESTERN AUSTRALIA

In southern Western Australia, the lack of rainfall in many areas has increased the availability of scrub fuels for burning, hence the above normal fire potential in these areas

SOUTH AUSTRALIA

Average to below average precipitation in much of the agricultural areas suggests above-normal fire potential for the upcoming season. The season has started early. Below-normal potential is expected in the far north of the state.

VALUE OF THE OUTLOOK

The Seasonal Bushfire Outlook provides information to assist fire authorities in making strategic decisions such as resource planning and prescribed fire management and to reduce the negative impacts of bushfire.

BUSHFIRE POTENTIAL

Bushfire potential depends on many factors. The rainfall in antecedent seasons is of utmost importance. This sets the stage for the future outlook. In regions dominated by grassland, rainfall promotes fuel growth and impacts the curing of the fuel. For forests and woodlands, abundant rainfall reduces the fire risk while an absence of rainfall dries the fuels out and makes them available for consumption by fire.

The climate outlook for the next few months is also important. Of particular interest to Australia are the future tendencies of Pacific sea surface temperature associated with the El Niño-Southern Oscillation, a major driver of Australian climate. Other, less quantifiable factors, such as the distribution and readiness of firefighting resources, are also considered. The participants of the workshop discussed these factors to obtain the consensus outlook presented in this report.

ENSO OUTLOOK, OCTOBER 2007

El Niño - warming of the central and eastern Pacific Ocean, associated with increased probability of drier conditions.

La Niña - cooling of the central and eastern Pacific Ocean, associated with increased probability of wetter conditions.

Most El Niño Southern Oscillation (ENSO) indicators showed an intensifying La Niña during September. Computer models forecast the La Niña to last until early 2008.

This La Niña has been late to develop by historical standards. With a late-developing La Niña, the typical rainfall response is not as likely as in past episodes. Indeed it has been largely absent to date.

The cooler than normal waters seen to the north and northwest of Australia inhibit the formation of northwest cloudbands, which are a major source of winter and spring rain for central and southeastern Australia during La Niña years.

MORE INFORMATION

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Bushfire CRC is a national research centre and part of the Cooperative Research Centre (CRC) program. It was formed in partnership with fire and land management agencies in 2003 to undertake end-user focused research.

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- New South Wales Rural Fire Service
- New South Wales State Forests
- New South Wales Fire Brigades
- Melbourne Water
- Victoria Department of Sustainability and Environment
- Victoria Country Fire Authority
- Parks Victoria
- South Australia Country Fire Service
- South Australia Department of Environment and Heritage
- Tasmania Parks and Wildlife Service
- Tasmania Fire Service
- Western Australia Department of Environment and Conservation
- Western Australia Fire and Emergency Services Authority
- Bushfire CRC