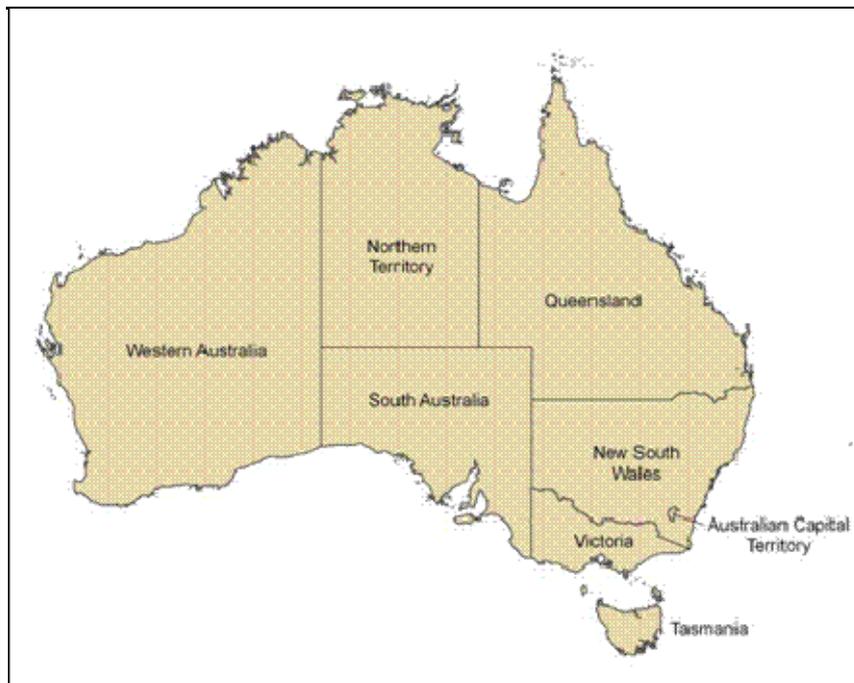




# Climate and Agricultural Update

## National Report

Issued February 2007



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### ORGANISATION

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<p>Bureau of Rural Sciences</p> 	<p><a href="http://www.brs.gov.au">www.brs.gov.au</a></p>
<p>Department of Primary Industries, New South Wales</p> 	<p><a href="http://www.dpi.nsw.gov.au">www.dpi.nsw.gov.au</a></p>
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<p>New South Wales Department of Natural Resources</p> <p>New South Wales Department of Natural Resources</p> 	<p><a href="http://www.dipnr.nsw.gov.au">www.dipnr.nsw.gov.au</a></p>
<p>Meat and Livestock Australia</p> 	<p><a href="http://www.mla.com.au">www.mla.com.au</a></p>

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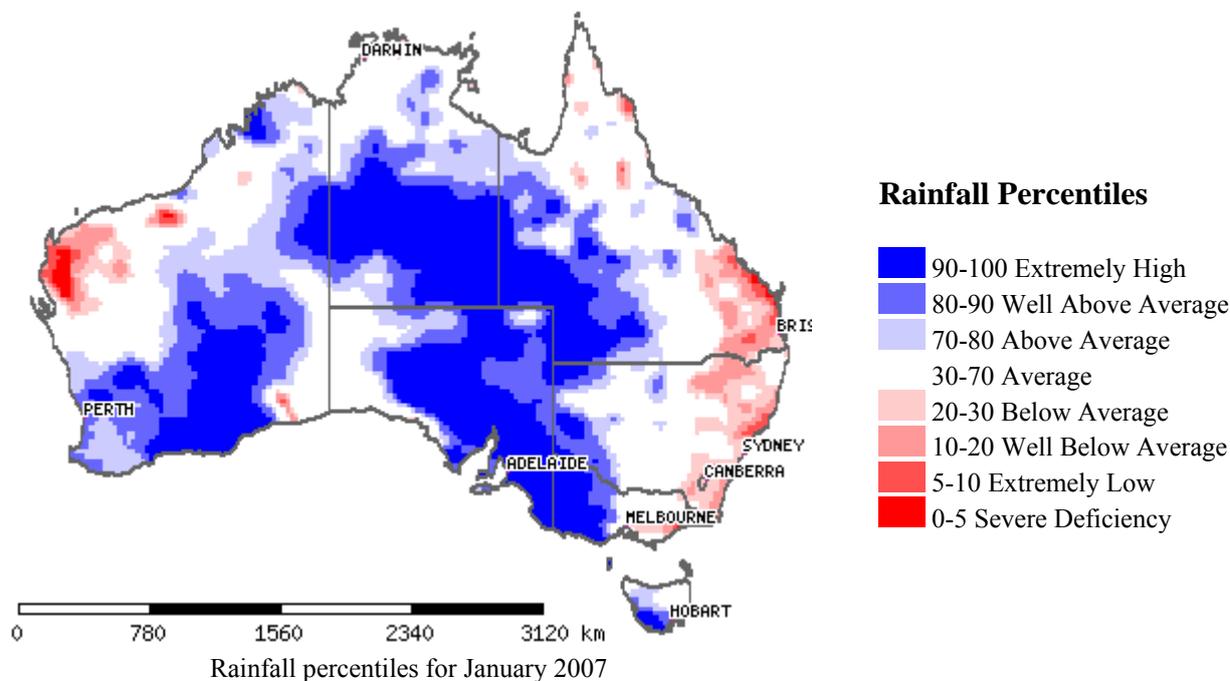
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# 1.0 Rainfall and temperature

## 1.1 Rainfall

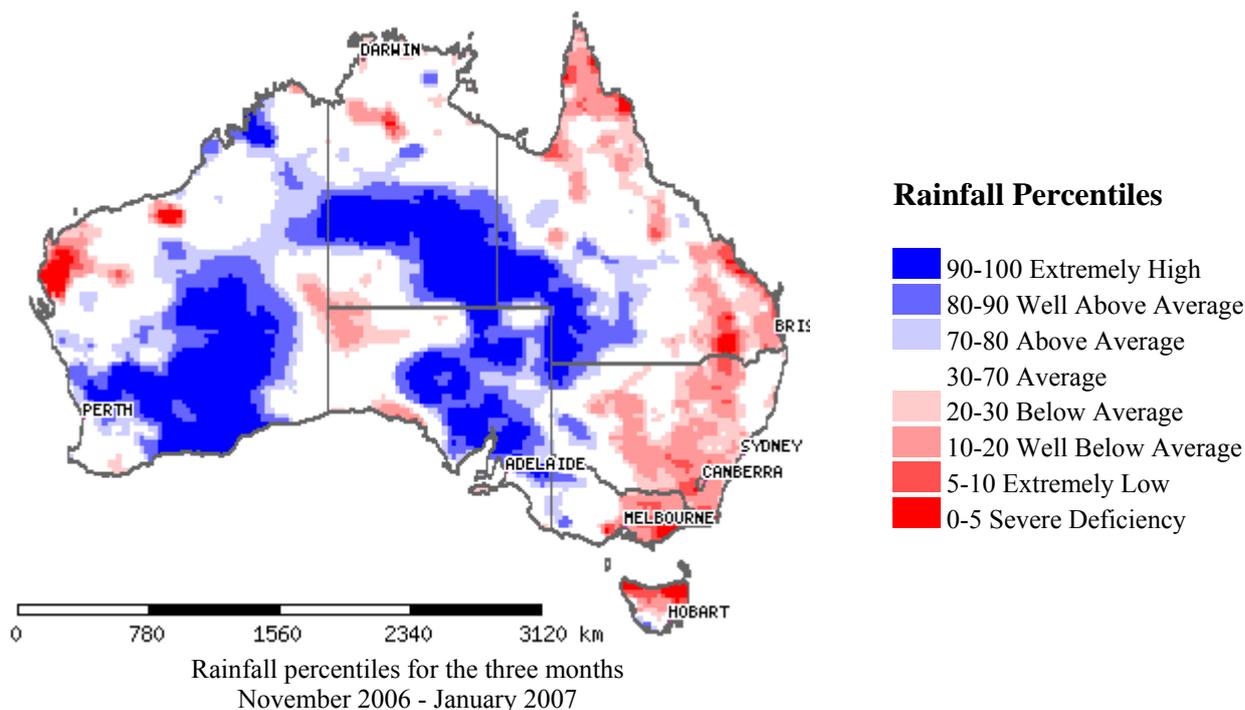
Spatial rainfall analyses are based on historical monthly rainfall data provided by the Bureau of Meteorology. For further information on rainfall data and the interpretation of percentile analyses, go to <http://www.bom.gov.au/climate/austmaps/>

### *Rainfall over the last month (January 2007)*

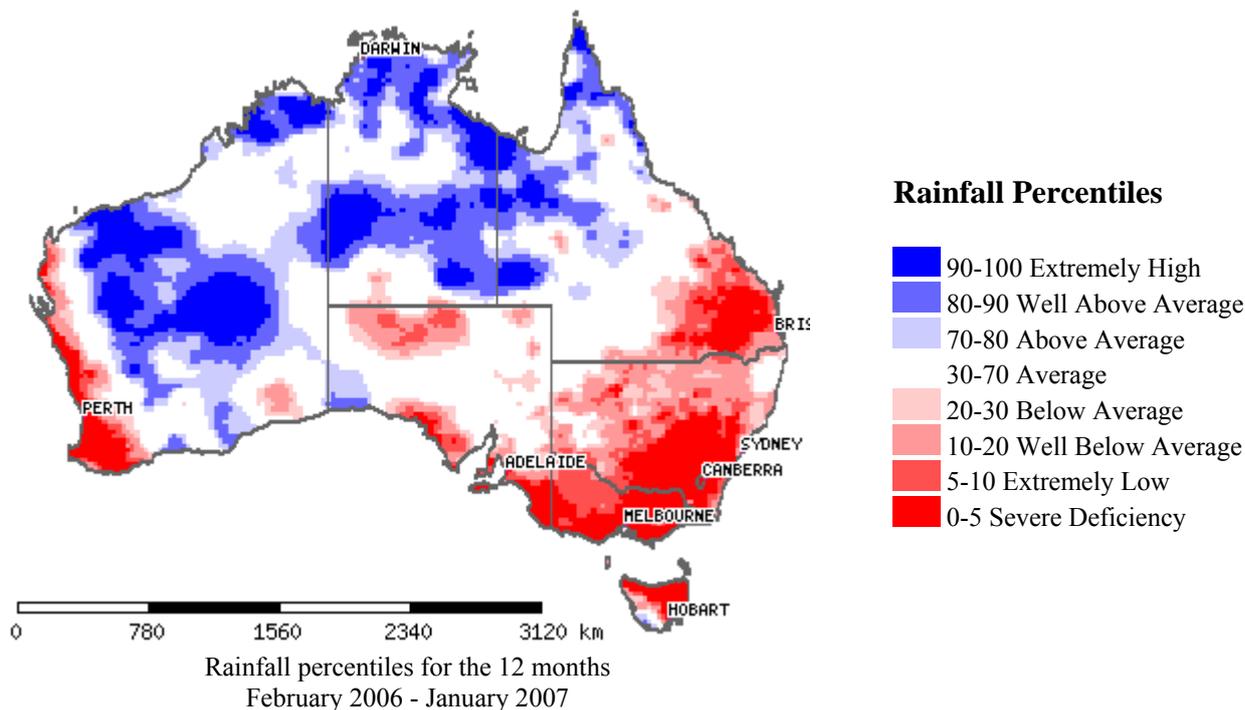


Rainfall in January 2007 was average to very much above average over large parts of the continent – with substantial flooding in some areas of South Australia, central Northern Territory and western Queensland regions; with notable exceptions in eastern Australia (extending from central Queensland to Melbourne).

## Ongoing or emerging rainfall situations



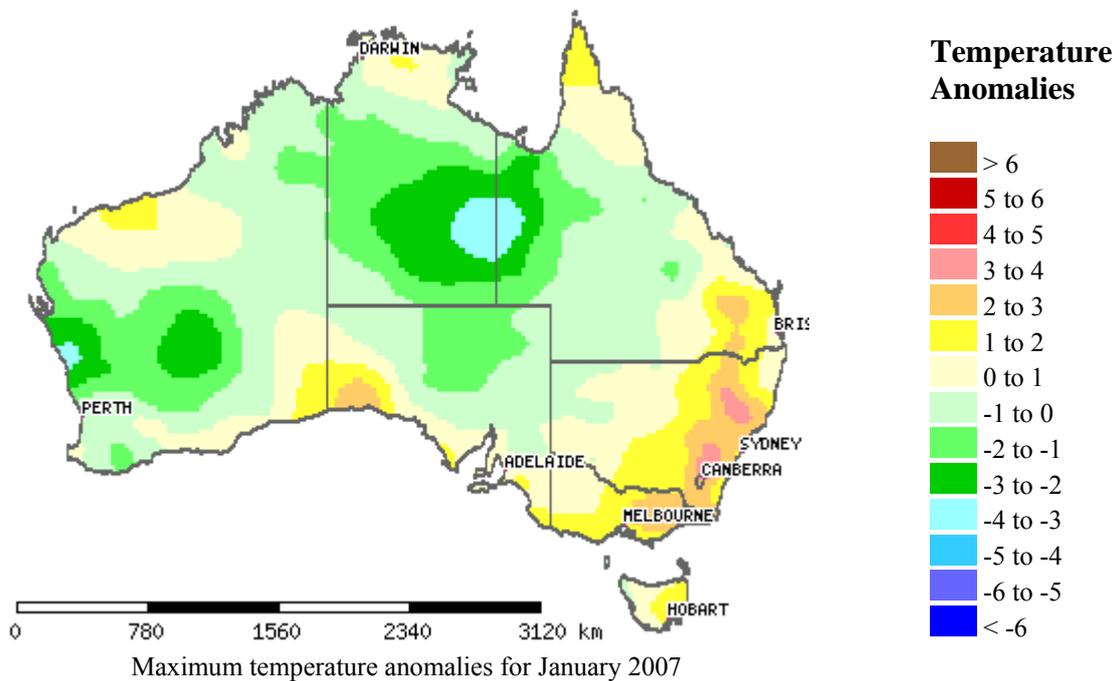
Rainfall in the past three months has been average to above average in central and southern parts of the continent – with areas of South Australia, central Northern Territory and Queensland benefiting after experiencing a period of severe rainfall deficiency toward the end of last year; and below average in the east, north and far west of Australia.



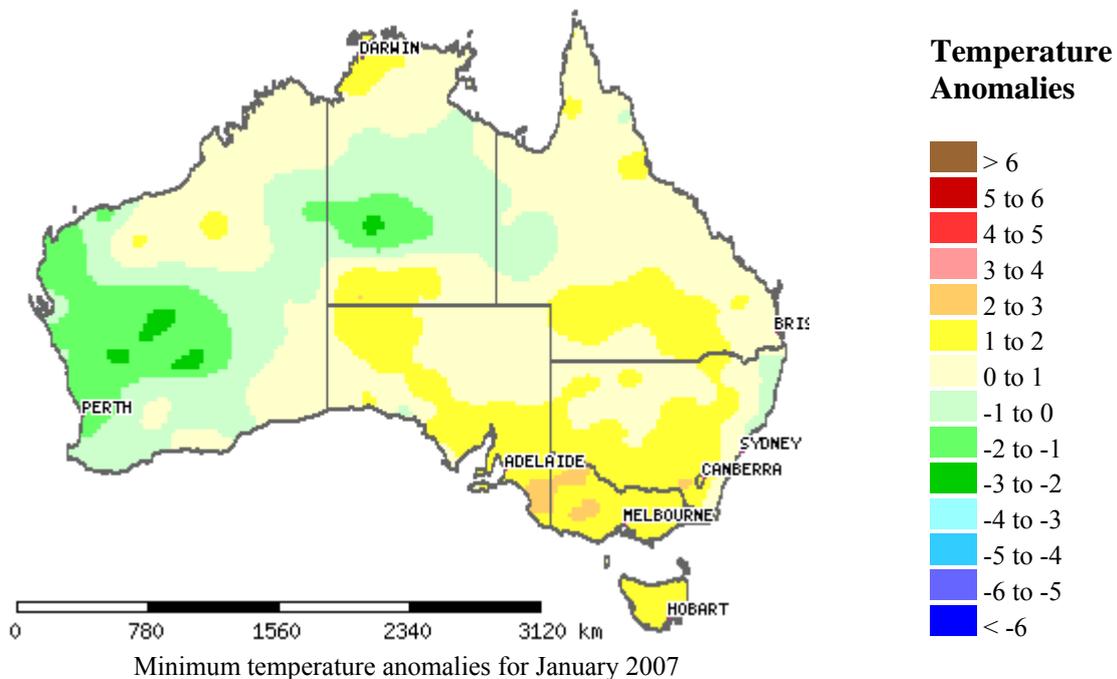
During 2006 parts of southeast Australia experienced their driest year on record, including key catchment areas which feed the Murray Darling Basin, as did parts of the Western Australian coast, including Perth. In contrast, record high falls were observed in parts of the tropics and inland Western Australia. It was the third-driest year on record for both Victoria and Tasmania, while for the broader southeast Australian region, which also takes in southeast South Australia and southern New South Wales, it was the second-driest.

## 1.2 Maximum and minimum temperature anomalies

Spatial temperature analyses are based on historical monthly temperature data provided by the Bureau of Meteorology. These temperature anomaly maps show the departure of the maximum and minimum from the long term average. Temperature anomalies are calculated with respect to the reference period 1961-1990. For further information on temperature anomalies, go to <http://www.bom.gov.au/climate/austmaps/>



Maximum temperatures were well above normal over the New South Wales ranges (extending into southern Queensland) and in eastern and central Victoria. Anomalies were in the +2 to +4°C range over this region, and reached record levels locally around Goulburn. It was also warmer than normal in most of Tasmania, the remainder of Victoria and NSW, the southern parts of South Australia, south-eastern Queensland, Cape York Peninsula and the Top End. In contrast it was a colder than normal month across much of western and central Australia, particularly across most of the Northern Territory and parts of western Queensland and coastal Western Australia (1 – 4°C below average).

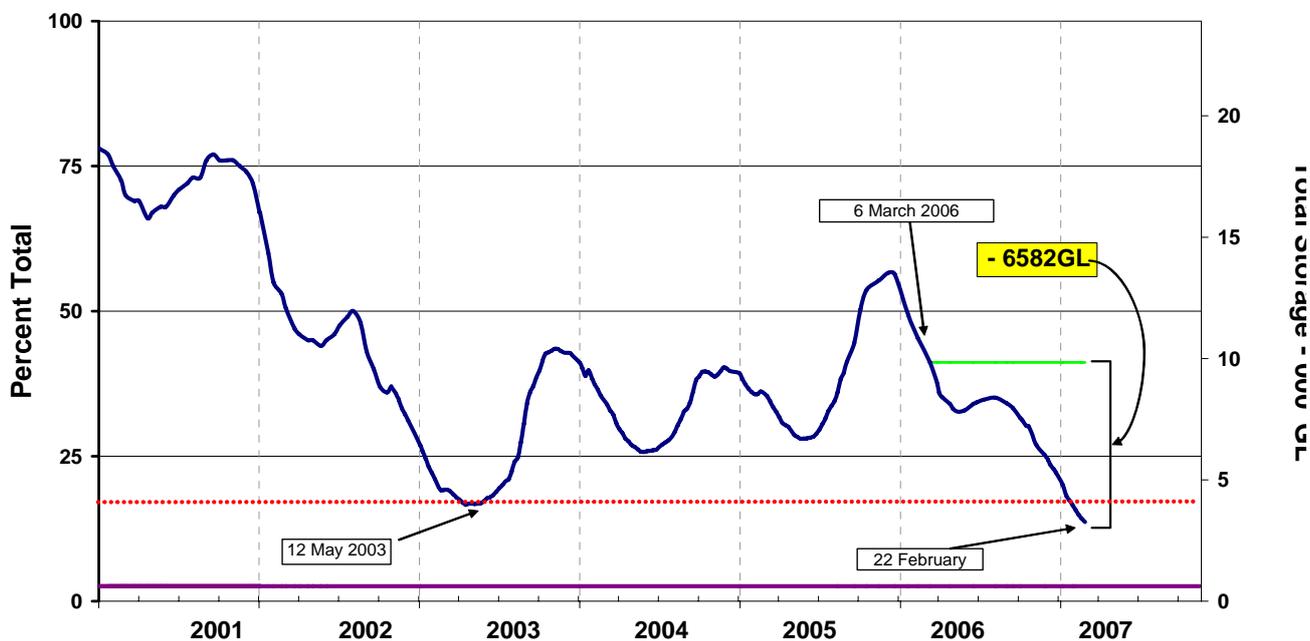


Overnight minima temperatures were above normal over most of the eastern two-thirds of the country, but anomalies were generally less than +2°C. The largest anomalies were over south-western Victoria and far south-eastern South Australia, reaching +2 to +3°C. In contrast, most of Western Australia and the western Northern Territory were rather cool. Anomalies were in the -1 to -2°C range over a large part of central Australia bounded by Perth, Wiluna and Onslow, with a few records being set locally inland from Carnarvon.

## 2.0 Water storages and irrigation allocations

### 2.1 Water storages (current to 22 February 2007)

#### Water storage in the MDB (New South Wales and Victoria)



Irrigation water available in the Murray-Darling Basin from 1 January 2001 to 22 February 2007. The red line indicates the lowest level during the 2002/03 drought, the green line indicates the storage level at the same time last year and the purple line indicates the dead storage level (2.6% of total capacity or 617 GL) for the analysed storages. Source: Bureau of Rural Sciences.

February 2007 storage levels for irrigated agriculture were at 3,262 GL (13.6% of total capacity - 23,908 GL), a decrease of 704 GL (2.9% of total capacity) over the month. Reductions in allocations and savings made by the use of distribution systems contributed to this being a smaller decline than over the previous month.

Current storage levels are approximately 6,582 GL less than at the same time last year (a decrease of 27.5% of total capacity).

The Murray -Darling Basin storage levels above do not include the capacities of Lake Eucumbene, Tantangara Reservoir and Lake Jindabyne which are reserved for hydro-electricity generation and irrigation purposes. Current storage levels are 1,288 GL (22.4% of total capacity - 5,700 GL).

## Water storage in Queensland



Current water storage level in Queensland as of 22 February 2007. Source: Bureau of Rural Sciences

February 2007 storage levels in Queensland decreased by 1,127 GL to 3,748 GL (54% of total capacity - 6,965 GL), this storage level is approximately 813 GL greater than at the same time last year (an increase of 11.7% of total capacity). However it should be noted that the majority of this increase is associated with one storage (Burdekin Falls Dam).

## 2.2 Irrigation allocations for the 2006/07 season

### Allocation Outlook for Victorian irrigators in the 2006/07 season (current to 15 February 2007)

- Goulburn-Murray Water announced on 15 February 2007 an updated of water allocations for all supply systems following a review of water availability.
- The allocation for the Goulburn system has increased by 1% to be 25% of Water Right and Licensed Volume. The allocation increase has resulted from the cumulative effects of improved loss management and minor inflows since the previous increase in mid-December 2006.
- The Broken system allocation is 72% of Licensed Volume, an increase of 1% which resulted from lower than expected losses across the system. This allocation will be reviewed, and reduced, if Lake Mokoan is closed by an outbreak of blue-green algae.
- Allocations for the Murray, Campaspe and Loddon systems remain unchanged from the previous month. The Murray system allocation remains at 95% of Water Right and Licensed Volume and both the Campaspe and Loddon systems remain without allocation. Storage volumes in the Campaspe and Loddon systems have continued to fall since the last allocation announcement and Goulburn-Murray Water is preparing emergency drought operation measures to meet domestic and stock requirements in these systems until inflows increase significantly.
- The next allocation announcement is scheduled for Thursday 1 March 2007.

## **Allocation Outlook for New South Wales irrigators in the 2006/07 season (current to 15 February 2007)**

- The allocation for NSW general security water users in the Murray and Lower Darling valleys for the 2006-2007 season remains at 0%.
- The current dry conditions and record low inflows remain throughout the Valley. Inflows to the River Murray system for January 2007 were at an historic record low for any month when total inflow was just 30 GL compared to previous recorded minimum of 53 GL in January 1983.
- The allocation for NSW Murrumbidgee Valley water users remains unchanged with high security allocations remaining at 85% and general security at 10 %. There has been a slight improvement in water availability but not to the extent that an increase, to re-credit water that had previously been suspended in accounts of water users, can be considered.

For further information on irrigation allocations, go to:

Goulburn-Murray Water

[http://www.g-mwater.com.au/news.asp?ContainerID=media\\_releases](http://www.g-mwater.com.au/news.asp?ContainerID=media_releases)

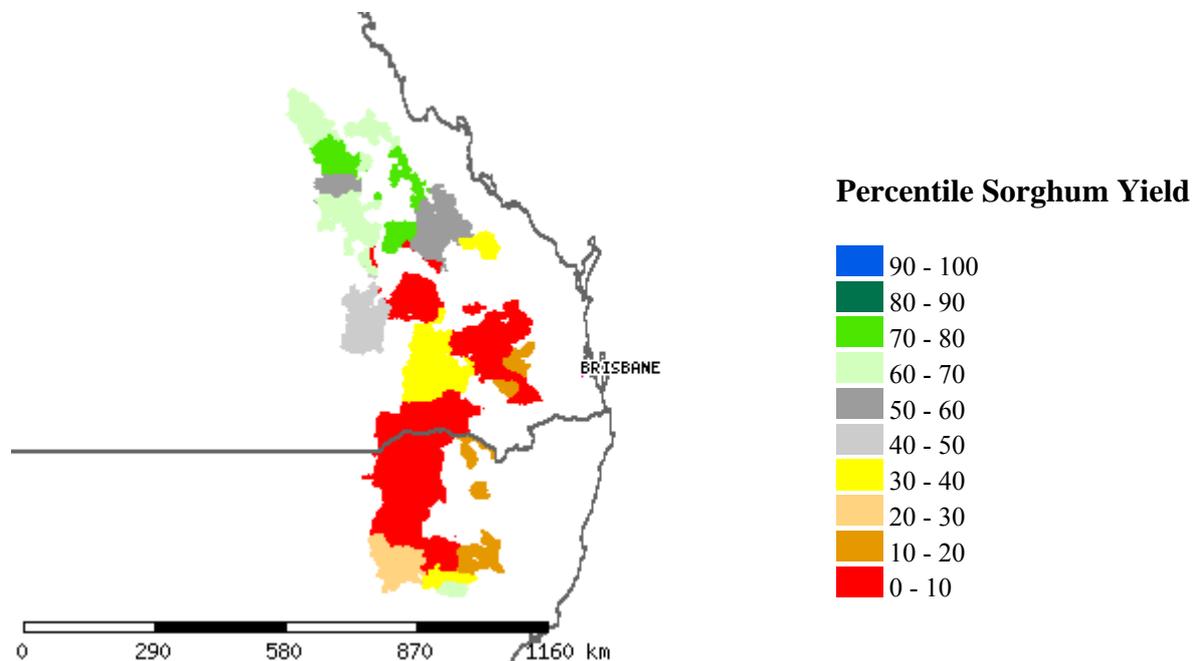
New South Wales Department of Natural Resources

[http://www.naturalresources.nsw.gov.au/mediarelnr/mr\\_toc\\_currnr.html](http://www.naturalresources.nsw.gov.au/mediarelnr/mr_toc_currnr.html)

## 3.0 Crop and livestock production

### 3.1 Crops

Predicted sorghum yields are provided by the Queensland Department of Primary Industries and Fisheries. The following figure shows sorghum yield forecasts as percentiles of a 100-year historic data set. For further information on predicted sorghum yields, go to <http://www2.dpi.qld.gov.au/fieldcrops/14206.html>.



Predicted shire sorghum yields for the 2007 cropping season ranked relative to all years (1906-2006)

Current predictions for shire level sorghum yields for the 2006/2007 growing season are generally below average to extremely low in New South Wales and the southern sorghum growing region of Queensland, and low average to high average in the northern sorghum growing region of Queensland. A small area of high average yield is predicted for the far south of the New South Wales sorghum growing area.

## 3.2 Livestock

- The December edition of Australian Commodities, released by the Australian Bureau of Agricultural and Resource Economics (ABARE), reported that the weighted average saleyard indicator price of beef cattle is forecast to fall 13% in 2006-07, to 280¢/kg cwt. This projection is based on low pasture availability and high feed prices, which are expected to result in a 7% increase in cattle slaughter (to 9 million head) and a 4% increase in beef production.
- The December quarter Australian Commodities, reported that the Australian saleyard lamb and sheep prices are forecast to fall in 2006-07, reflecting the impact of the drought. ABARE forecasts Australian saleyard lamb and mutton prices to fall 15% (to average 290¢/kg dressed weight) and 42% (to average 100¢/kg dressed weight) respectively in 2006-07, if seasonal conditions in the southern producing regions remain poor over coming months. Under this scenario there would be downward pressure on saleyard prices as a result of increased supply and weak re-stocker demand. In addition, ABARE has forecast lamb production to fall 3% to around 370,000 tonnes in 2006-07. This anticipated fall comes as a result of more lambs being sold for slaughter up to December as the adverse seasonal conditions forced producers to offload stock at lighter weights in response to a lack of pasture and high feed costs. In 2006-07, lamb slaughter is forecast to increase by around 2%, to 19 million head, although this situation could be reversed in the latter part of the financial year if seasonal conditions improve. Due to the reduced availability of quality stock as a result of the drought, ABARE has forecast live sheep exports to fall by over 3% in 2006-07, to 4.1 million head.
- MLA reported on February 9, that lamb numbers have increased by 13% following hot and dry conditions at its NLRS reported saleyards. Quality has been generally mixed, resulting in the national lamb indicators falling. The national restocker and light lamb indicator lost 8¢ and 16¢/kg cwt from last week respectively. Trade and heavy lambs lost 22¢ and 3¢/kg cwt, respectively. Mutton however gained 2¢/kg cwt from last week. During most of January demand had generally been softer with minimal restocker and feedlot activity due to the adverse seasonal conditions. It was also reported that a number of lambs were not finished as producers were forced to sell. This resulted in January saleyard prices being below than the same time last year.
- MLA reported on February 9, that national throughput in it's NLRS reported saleyards rose 2%, with numbers similar to last fortnight levels. Both the national trade and feeder steer indicators were cheaper, at 170¢ and 167¢/kg lwt respectively. Grown steer demand eased with the Japan ox indicator falling 2¢/kg lwt while the US cow indicator slipped 5¢ due to the mixed quality on offer. Feeder cattle prices have made a recovery from December levels and followed a steadily increasing trend from January through to February. Both direct from paddock consignments and saleyard lots have received increased rates. Feeder demand has been solid, although buyers are purchasing within tight price limits. There has also been additional demand from restockers after recent rainfall in some areas that has bolstered competition. During the end of January large numbers left feedlots when northern export abattoirs resumed, which, along with some operators having a break in buying, prompted increased demand for suitable stock to re-fill pens.

For further information go to:

Australian Bureau of Statistics  
<http://www.abs.gov.au>

ABARE Australian Crop report and ABARE Australian Commodities forecast and issues  
<http://abareonlineshop.com/>

Meat and Livestock Australia  
<http://www.mla.com.au/>

Department of Agriculture Western Australia  
<http://www.agric.wa.gov.au/>

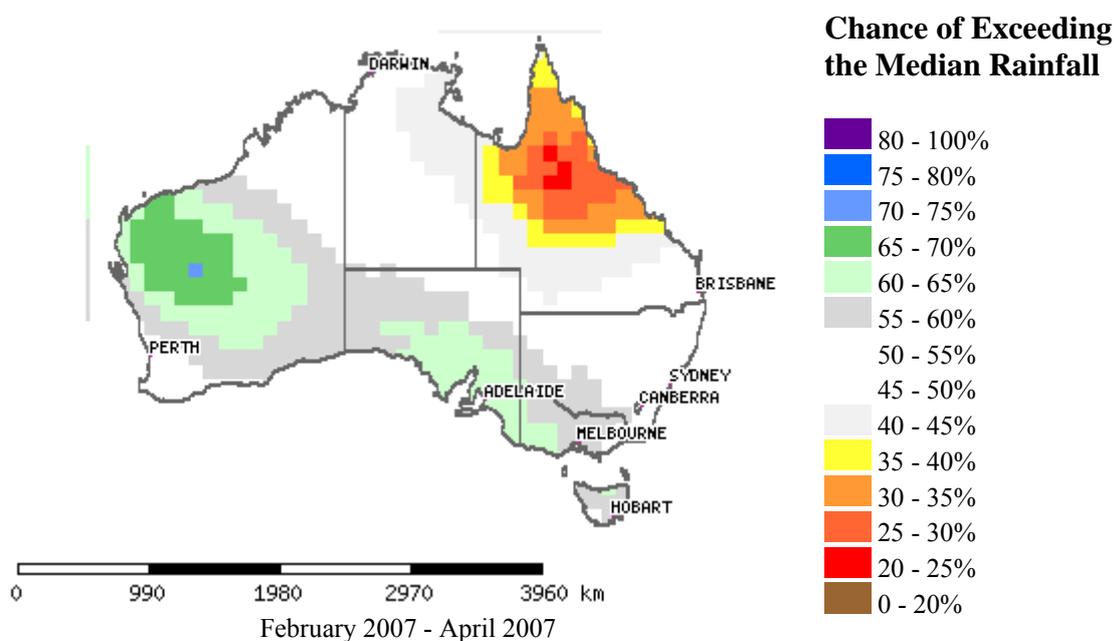
New South Wales Department of Primary Industries  
<http://www.agric.nsw.gov.au/reader/nsw-grains-report-sept-2005>

Queensland Department of Primary Industries and Fisheries  
<http://www.dpi.qld.gov.au/fieldcrops/>

## 4.0 Climate Outlook

### 4.1 Rainfall Outlook

The Bureau of Meteorology provides seasonal outlooks that are statements about the probability of wetter or drier than average weather over a three-month period. The outlooks are based on the statistics of chance (the odds) taken from Australian rainfall/temperatures and sea surface temperature records for the tropical Pacific and Indian Oceans. They are not, however, categorical predictions about future rainfall, and they do not indicate the expected rainfall amount for the three-month outlook period. For further information on this rainfall outlook, go to [http://www.bom.gov.au/climate/ahead/rain\\_ahead.shtml](http://www.bom.gov.au/climate/ahead/rain_ahead.shtml)



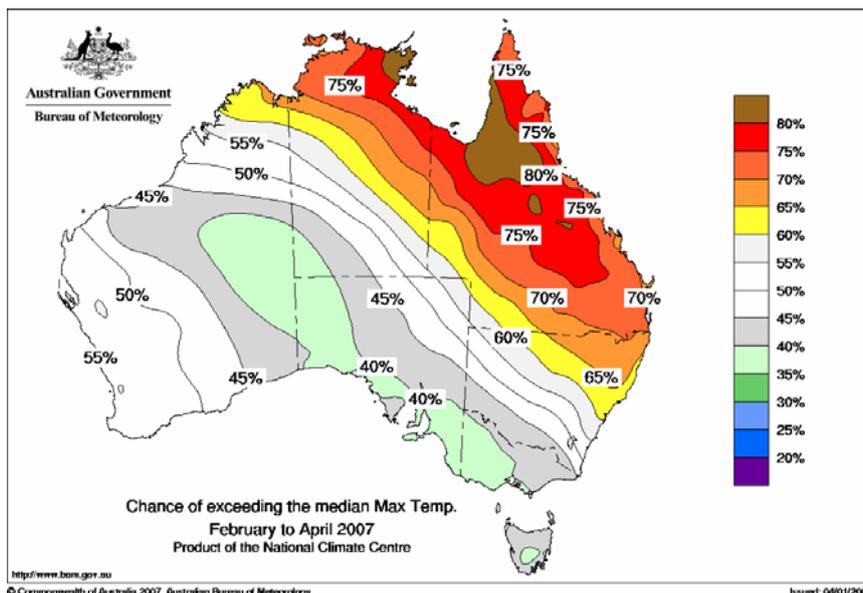
The chance of exceeding median rainfall between  
01 February 2007 and 30 April 2007

The national outlook for total rainfall during the period February 2007 to April 2007 shows a mixed probability pattern. Below average rainfall totals are indicated for northern Queensland contrasting with an increased chance of above normal rainfall in a band from northwest Western Australia to western Victoria.

### 4.2 El Nino & Southern Oscillation Index

- The Bureau of Meteorology reports that there has been a sustained cooling of waters in the equatorial Pacific since early December, with current Sea Surface Temperature anomalies now close to El Nino threshold values. This indicates that the El Nino event is weakening and a switch towards average or above average rain conditions are likely across eastern Australia, sometime in late summer or autumn, although this is not guaranteed.
- A result of the weakening El Nino has been a southward extension of tropical moisture bringing heavy rain to the Northern Territory, South Australia and western parts of Queensland, New South Wales and Victoria. This change is consistent with previously observed patterns associated with the end of an El Nino cycle.

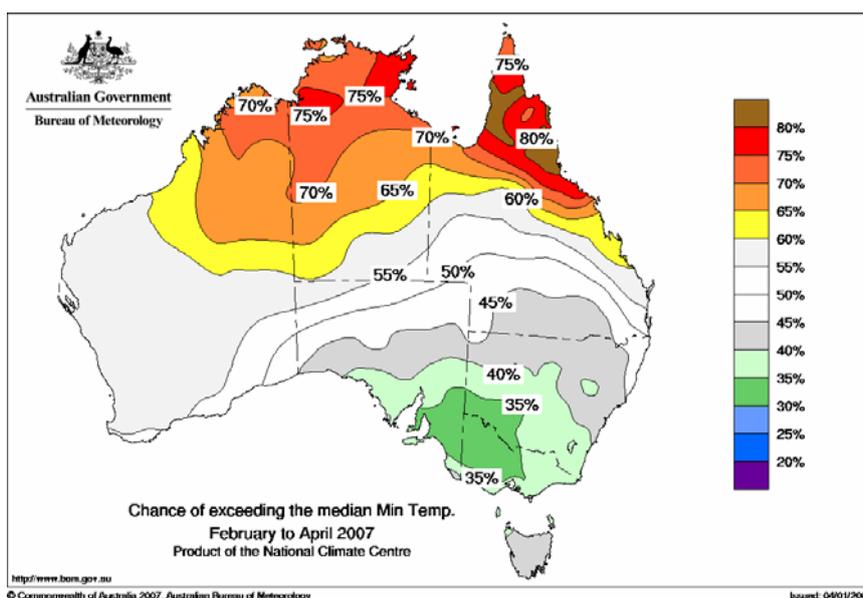
### 4.3 Temperature Outlook



The chance of exceeding median maximum daytime temperatures between 01 February 2007 and 30 April 2007

The temperature outlook for the period February 2007 to April 2007 shows contrasting probabilities across the country with warmer than average conditions favoured across much of northern and eastern Australia. A cooler than normal three-month period is more likely for parts of western and southern Australia. The pattern of seasonal temperature odds across Australia is due to higher than average temperatures in both the Pacific (dominating effect) and Indian Oceans.

Averaged over the next three months there is a chance of mainly between 60 to 80% for higher than normal maximum temperatures, northeast of a line from Derby (northwest Western Australia) to Sydney. Within this region, the chances peak above 80% in eastern Arnhem Land (Northern Territory) and in an area surrounding the east coast of the Gulf of Carpentaria (north Queensland). In contrast there is a 60 to 65% probability (i.e. 35 to 40% probability of higher than average) for a cooler than normal February 2007 to April 2007 period in a band stretching from the interior of Western Australia, across western and southern South Australia, to central Victoria. Similar probabilities are associated with a few patches across Tasmania.



The chance of exceeding median minimum daytime temperatures between 01 February 2007 and 30 April 2007

The chances of seasonal minimum temperatures being higher than the median are between 60 and 80% over most of the northern tropics, indicating a moderate to strong shift in the odds towards warmer than normal conditions. In contrast, cooler than average nights (i.e. a 30 to 40% chance for warmer than normal) are favoured in the southeast of the mainland.

For further information on the Bureau of Meteorology seasonal outlooks, go to <http://www.bom.gov.au/climate/ahead/>