NAMS
NATIONAL AGRICULTURAL MONITORING SYSTEM

Climate and Agricultural Update

National Report

Issued March 2007

Copyright

Disclaimer

The National Agricultural Monitoring System (NAMS) is a decision making tool for Government and Industry bodies in evaluating the impact of climate on primary production, and is only one of a series of tools used in assessing such impacts. By accessing the information presented in this document the reader waives and releases the Commonwealth of Australia and other data contributors (see link to partners in the NAMS website) to the full extent permitted by law from all liability for loss or damage arising from the use of, or reliance on, such material, whether or not caused by any negligence on the part of the Commonwealth of Australia, other data contributors or their agents.

In particular and without limit to the generality of the above:

The quality of the data presented in this system cannot be guaranteed. This information should not be used by itself to support decision making; rather it is intended as context only for broader decision making processes

The Australian Government does not guarantee that this file is free from viruses.

Contacts

For further information visit www.nams.gov.au, or for enquiries/feedback relating to this report contact the NAMS helpdesk at NAMS@nams.gov.au.

Contributors

The information in this report was sourced from the following organisations:

ORGANISATION

Bureau of Meteorology	www.bom.gov.au
Bureau of Rural Sciences	www.brs.gov.au
Department of Primary Industries, New South Wales	www.dpi.nsw.gov.au
Snowy Hydro Limited	www.snowyhydro.com.au
Australian Bureau of Agricultural and Resource Economics (ABARE)	www.abare.gov.au
Department of Agriculture and Food, Western Australia	www.agric.wa.gov.au
Goulburn Murray Water	www.g-mwater.com.au
Queensland Department of Primary Industries and Fisheries	www.dpi.qld.gov.au
New South Wales Department of Natural Resources	www.dipnr.nsw.gov.au
Meat and Livestock Australia	www.mla.com.au

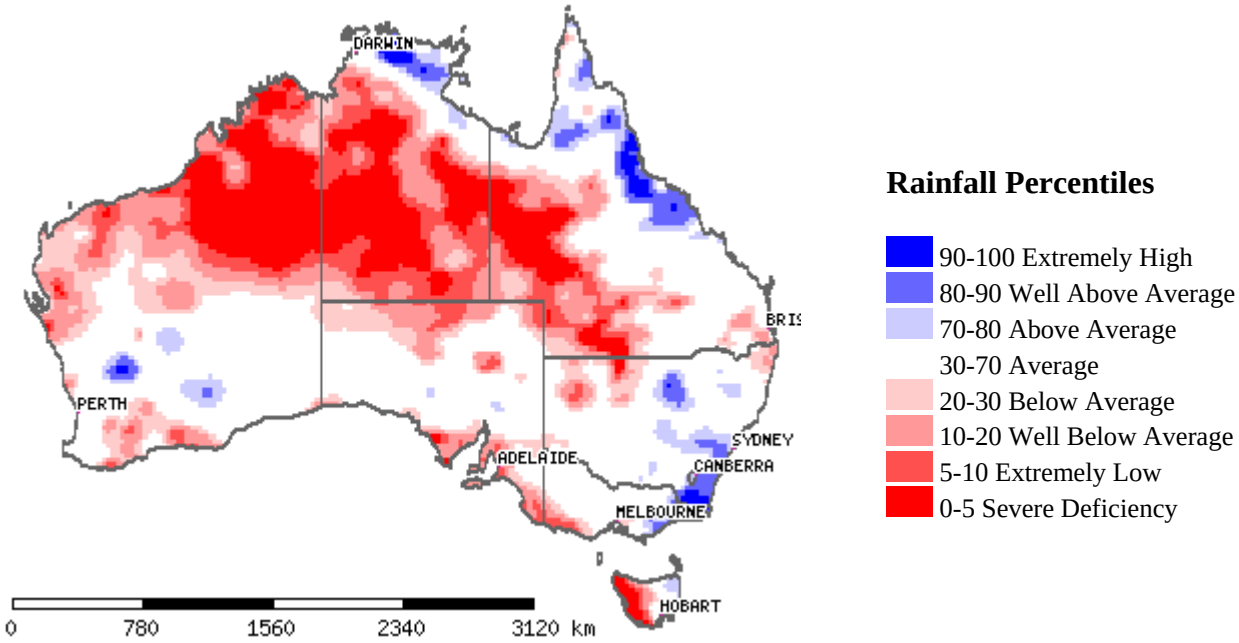
TABLE OF CONTENTS

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/

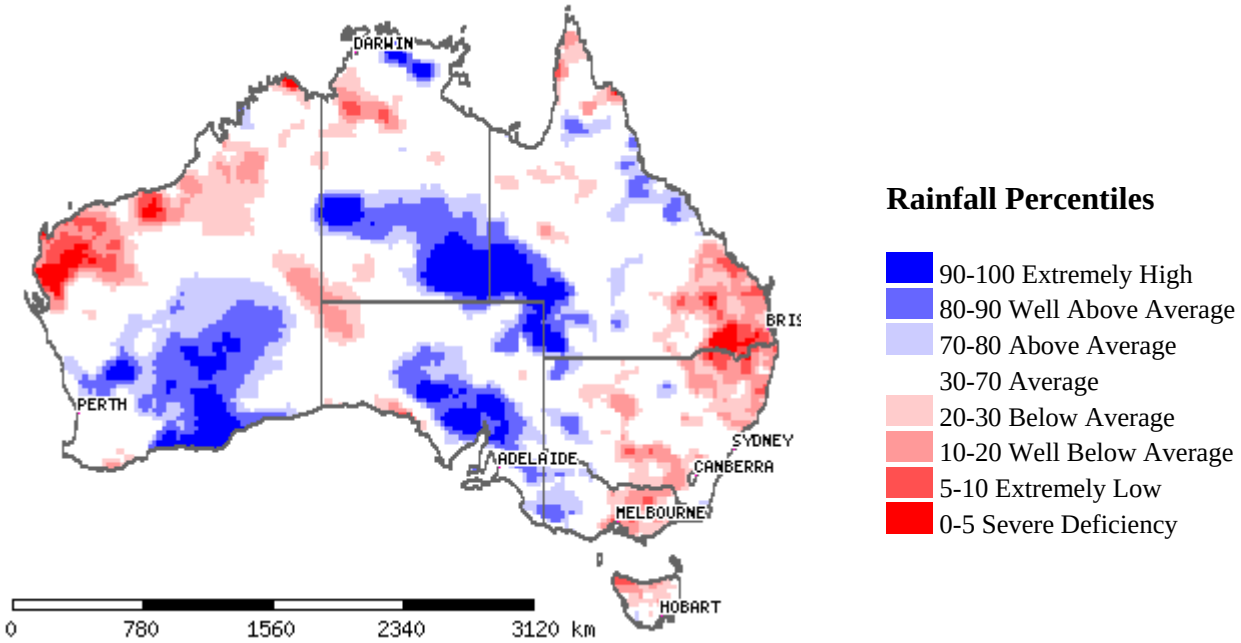
Rainfall over the last month (February 2007)



Rainfall percentiles for February 2007

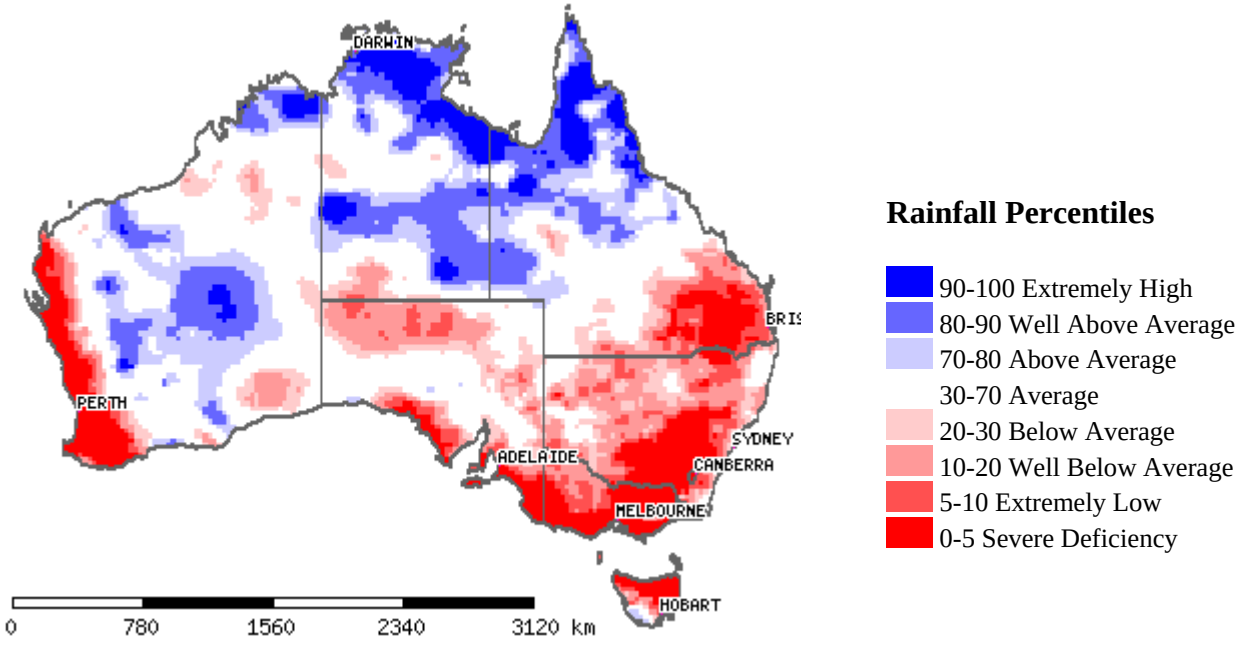
Rainfall in February 2007 was average to above average in many areas near the eastern and northern coasts, particularly on and near the eastern Queensland coast north of Rockhampton, and on the far south coast of New South Wales, where rainfall in many areas was in the highest decile. However, rainfall over most of the remainder of the continent was below normal.

Ongoing or emerging rainfall situations



Rainfall percentiles for the three months
December 2006 - February 2007 (Summer)

Rainfall in the past three months has been average to above average in central and southern parts of the continent – with parts of South Australia, the Northern Territory, Queensland and Western Australia benefiting from one major rainfall event in which they received most of their 2006-07 rainfall. Rainfall has been below average in the south-east of Queensland and north-eastern New South Wales as well as parts of central New South Wales and eastern Victoria.

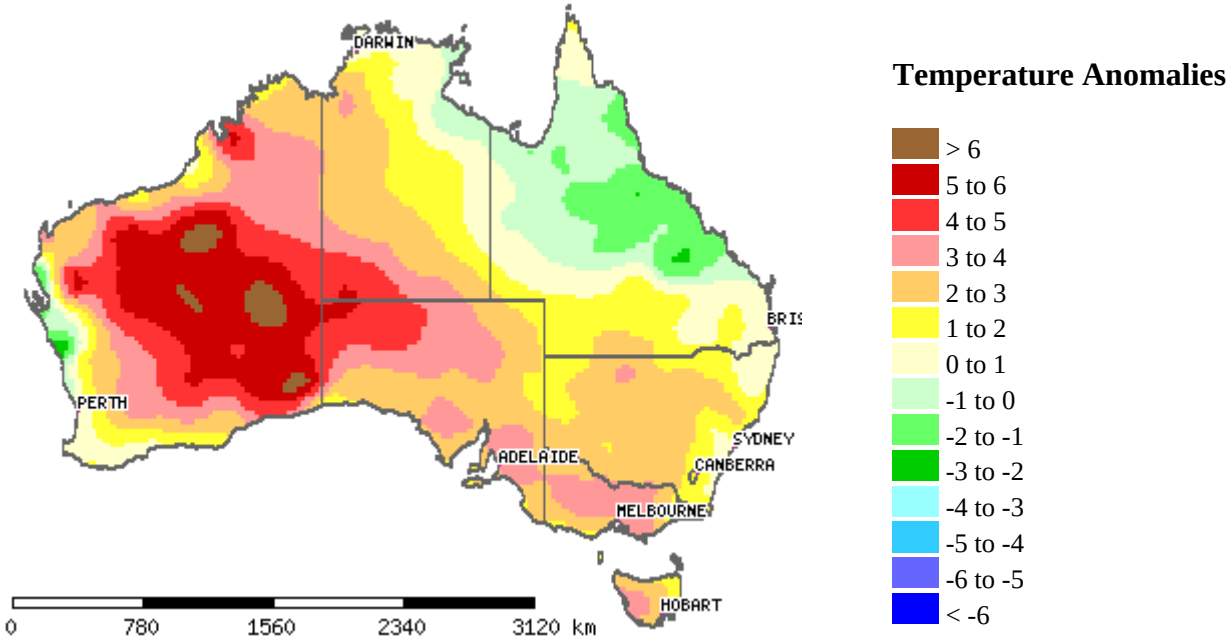


Rainfall percentiles for the 12 months
March 2006 - February 2007

During the first two months of 2007 there has been some contraction in the area of Australia which is experiencing severely rainfall deficiencies. It will take a number of good seasons for large parts of southeast Australia to recover from their driest year on record during 2006, these areas including key catchment areas which feed the Murray and Snowy Rivers, as well as parts of the Western Australian coast, including Perth. In contrast, much of northern Australia and inland Western Australia continue to experience above average to extremely high rainfall conditions at a 12 month time scale.

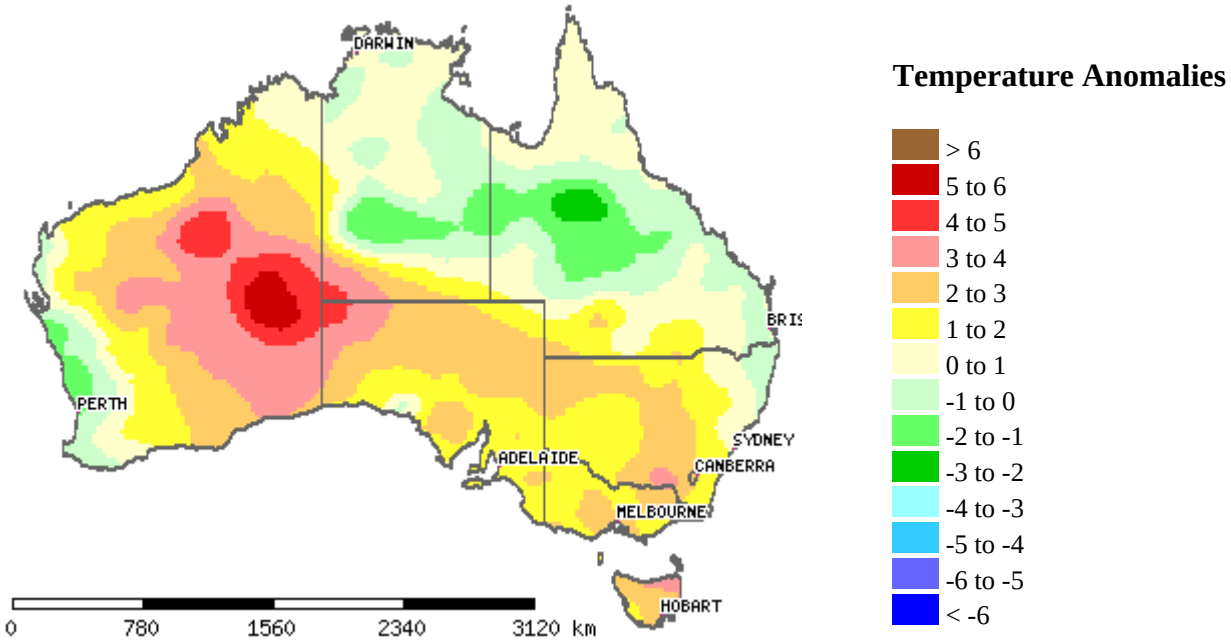
1.2 Maximum and minimum temperature anomalies

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 temperature anomalies for February 2007

Maximum temperatures were well above normal over much of western and southern Australia with many record temperatures being set. Notably, much of the Western Australian interior experienced anomalies above +3°C, in some cases exceeding +6°C. In Tasmania, Victoria and South Australia anomalies were generally in the +2 to +4°C range whilst a large part of New South Wales experienced anomalies between +1 and +3°C. In contrast it was a cooler than normal month across much of northern Queensland, and a section along the coast of Western Australia.

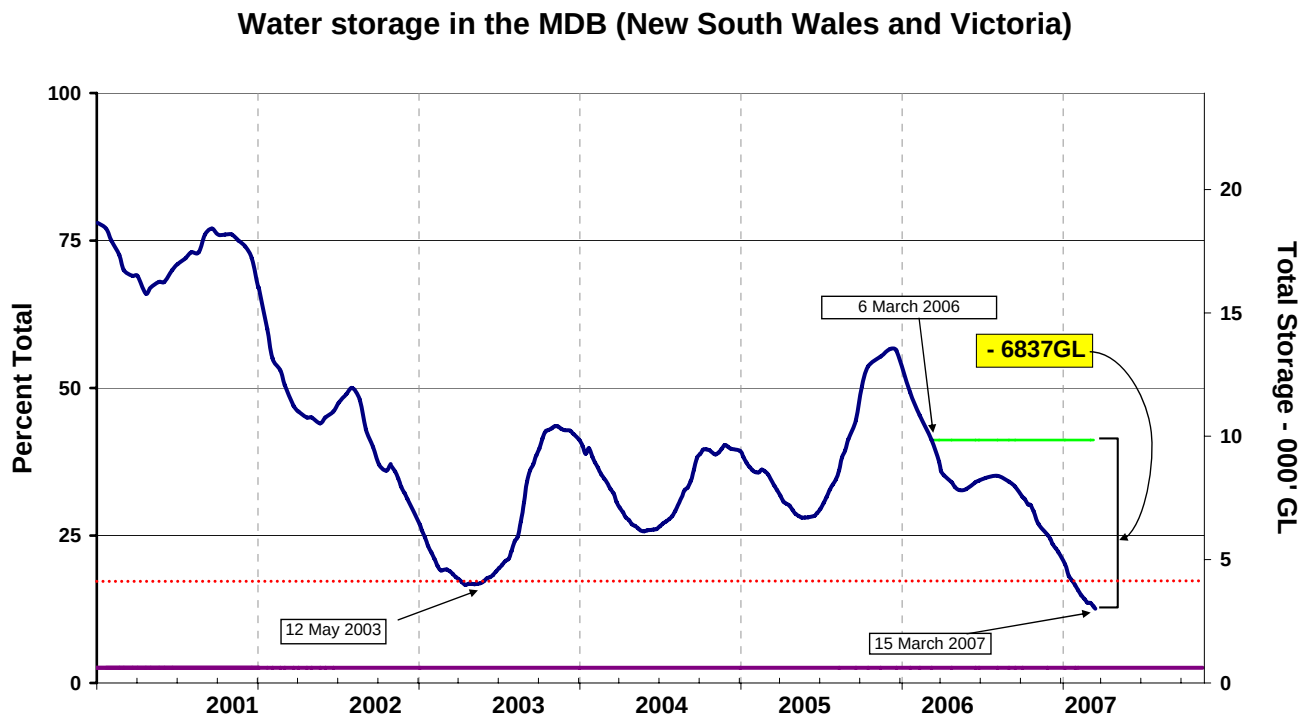


Minimum temperature anomalies for February 2007

Overnight minimum temperatures were above normal in many areas in the south of the continent with records being set in parts of Western Australia and Tasmania. Other notable areas of 2°C or more above normal minimum temperature included northern South Australia, central and north-western New South Wales, and central and north-eastern Victoria. Overnight temperatures were cooler than average across a region extending from north-eastern New South Wales into central Queensland and the Northern Territory; and for a region extending along the coast of southern Western Australia.

2.0 Water storages and irrigation allocations

2.1 Water storages (current to 15 March 2007)



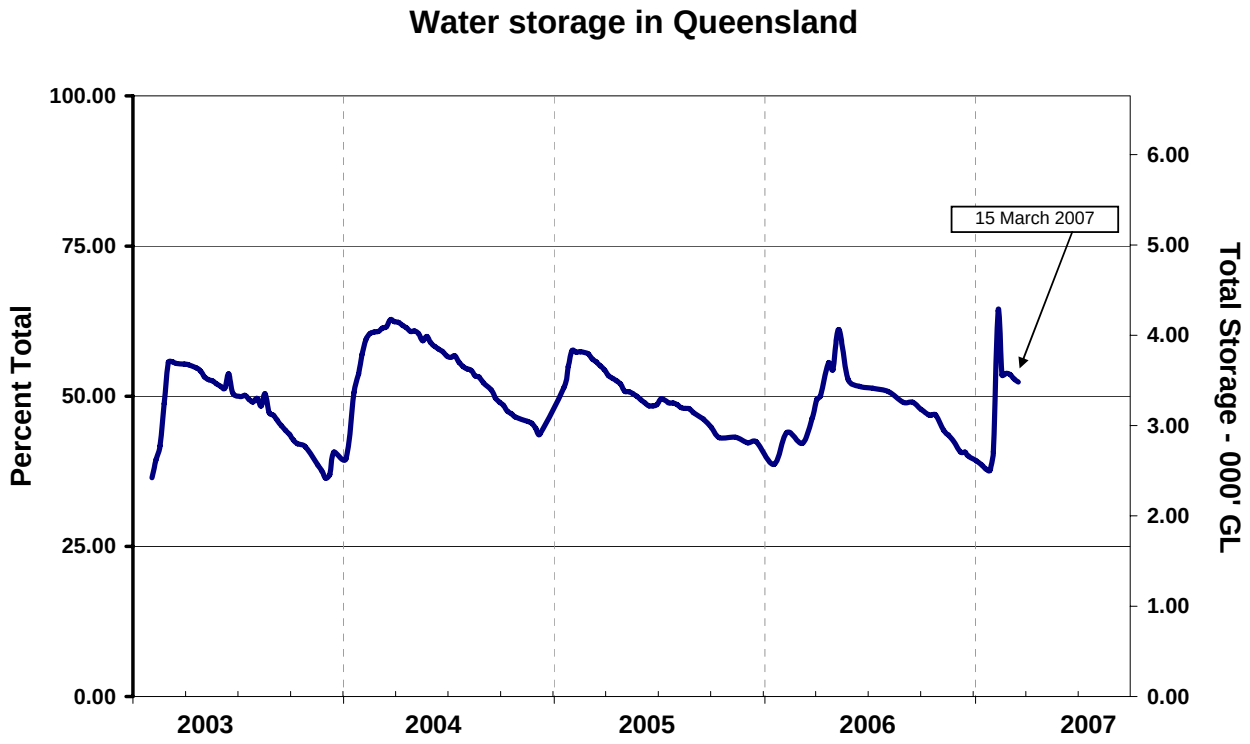
Irrigation water available in the Murray-Darling Basin from 1 January 2001 to 15 March 2007. The red line indicates the lowest level during the 2002/03 drought , the green line indicates the storage level at the same time last year and the purple line indicates the dead storage level for the analysed storages. Source: Bureau of Rural Sciences.

Over the past three months the storage levels within the Murray -Darling Basin have been declining by a rate of between 1000 and 400 GL per month due to irrigation draw down.

March 2007 storage levels for irrigated agriculture were at 3,007 GL (12.6% of total capacity - 23,908 GL), a decrease of 397 GL (1.7% of total capacity) over the month. Allocations and storage levels are at record low positions for this time of the season due to poor rainfall and inflows last year.

Current storage levels are approximately 6,837 GL less than at the same time last year (a decrease of 28.6% 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 1,175 GL (20.5% of total capacity - 5,700 GL).



Current water storage level in Queensland as of 15 March 2007. Source: Bureau of Rural Sciences

March 2007 storage levels in Queensland decreased by 83 GL to 3,647 GL (52% of total capacity - 6,965 GL), this storage level is approximately 710 GL greater than at the same time last year (an increase of 10.2% of total capacity).

2.2 Irrigation allocations for the 2006/07 season

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

- Goulburn-Murray Water announced updated water allocations and season extensions for all water supply systems on 15 March 2007.

- The allocation for the Goulburn system has increased by 2% to 27% of Water Right and Licensed Volume since last month, with the season extended to close on 30 April 2007. This two week extension and increase in allocation has resulted from the cumulative effects of better than forecast loss management and minor inflows in the upper Goulburn catchment.

- The allocation for the Broken system has increased to 74% of Licensed Volume, an increase of 2% since last month resulting from lower than forecast system losses. 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, with season closure dates of the 30 April and 23 April respectively to address the impacts of higher than expected losses. The Campaspe and Loddon systems remain without allocation.

- The end of season date for all gravity irrigation areas will remain at 30 April 2007. The earlier decisions to shorten the irrigation season helped increase allocations when it was most useful to customers. Goulburn-Murray Water advises that there will not be further extensions to the end of season date for irrigation areas and that any additional resources will be used to increase allocations if possible.

- The next allocation announcement is scheduled for Monday 2 April 2007.

Allocation Outlook for New South Wales irrigators in the 2006/07 season (current to 28 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 NSW Department of Natural Resources (DNR) today announced no change to allocations for water users in the Murrumbidgee Valley. High security allocations will remain at 90% and general security at 10%, following the re-crediting of 5% to high security accounts. There has been no significant rainfall in the catchments and inflows remained at minimal levels, but we are hoping for an improvement in conditions in the coming months.

- In the event of the drought continuing at its current intensity, the priority in 2007-08 will be to ensure water supply for urban and domestic and stock purposes. Although the chances of improvements are high, if this worst case eventuates, water may not be able to be supplied at the time when it is required.

For further information on irrigation allocations, go to:

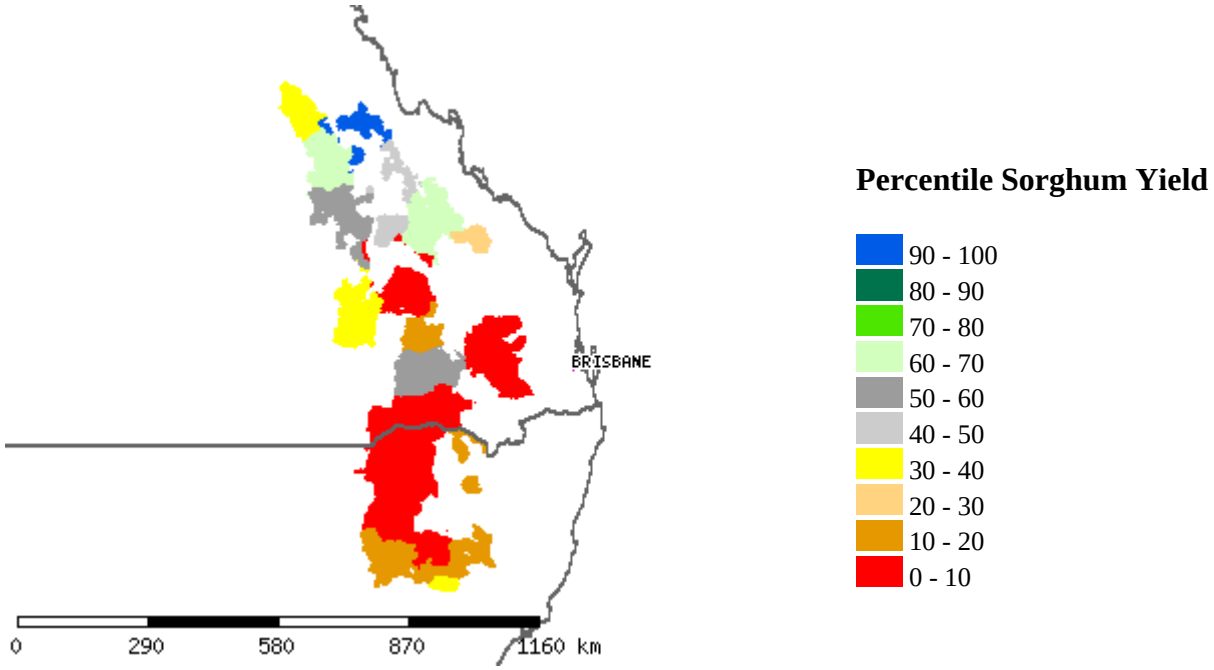
Goulburn-Murray Water
http://www.g-mwater.com.au/news.asp?ContainerID=media_releases

New South Wales Department of Natural Resources
http://www.naturalresources.nsw.gov.au/mediarelnr/mr_toc_currnr.html

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 www.agric.wa.gov.au/.



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.

3.2 Livestock

- The March quarter 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 increase by 10% in 2007-08. This projection reflects increased demand from re-stockers and forecast lower Australian beef production. Both factors are a result of the drought, with 2007-08 production constrained by lower overall cattle numbers, a reduced calf crop and the retaining of stock to build herd numbers. Slaughterings are forecast to decline by 3% (8.6 million), and production to fall by 2 % to 2.1 million tonnes. Higher prices in 2007-08 are forecast to lead to a 3% fall in domestic consumption.

- ABARE has also reported that the Australian saleyard lamb and sheep prices are projected to increase in 2007-08, reflecting reduced supplies and the impact of the drought. ABARE forecasts Australian saleyard lamb prices to increase by around 14% in 2007-08, whilst sheep yard prices are forecast to increase by around 15%. Producers are expected to rebuild sheep flocks in 2007-08 contingent on a widespread break of the drought, and a continuation of favourable returns from wool. This is forecast to result in a decrease in the number of slaughterings of adult sheep in 2007-08. The number of lambs slaughtered in 2007-08 is also expected to decrease, due to lower ewe numbers coming out of the drought. This will be reflected in an increase in the price of lambs at the saleyard.

- MLA reported on March 7, that Australian beef exports during February increased by 6% compared with February 2006 levels, to 79,291 tonnes swt – the highest February volume on record (according to the Department of Agriculture Fisheries and Forestry). Increased shipments for the month were sent to Japan and Korea, while exports to the US were again lower. MLA also reports a 14% decrease in cattle throughput at MLA's NLRS reported saleyards, after some useful rainfall this week. The Eastern Young Cattle Indicator (EYCI) continued its recent climb, reaching 341.5¢ – 10.75¢/kg cwt above last week. This was the result of a tightening of numbers and useful rain in parts of NSW and Victoria, with restockers underpinning the market and increasing competition across most categories, particularly on lightweight and young cattle. Feeder cattle prices continue to rise, with the national feeder steer indicator gaining 7¢ to settle at 180¢/kg lwt on Thursday. Eastern states cattle slaughter levels have been steadily increasing since the beginning of 2007, to the highest weekly total since early December last year. Slaughter levels during February were 41% higher than January, with levels in Queensland almost doubling.

- MLA also reported on March 8, that Australian lamb production during January increased 16% on January 2006 levels, to 35,438 tonnes cwt, (according to the Australian Bureau of Statistics). Australian mutton production also increased during January, by 26% on January 2006 levels, to 29,778 tonnes cwt, (according to figures released by the Australian Bureau of Statistics). The rise in production for the month was primarily due to increased slaughter levels, as worsening drought conditions across the eastern states saw producers increase turnoff rates. MLA also reports that the national re-stocker lamb indicator gained 23¢ (averaging 311¢/kg cwt this week, 8% higher than last week), as producers anticipated a shortage in supply in coming months and as market confidence increased in response to recent rainfall. Mutton continued to recover from pre-Christmas lows, with solid export demand lifting the national indicator by 13¢/kg cwt. Lamb yardings increased during February, with national yardings at MLA's NLRS reported saleyards 16% higher than January and 10% above February in 2006. National sheep slaughter for February was unchanged on January levels; however, both were 13% greater than the same time last year. Saleyard throughput at MLA's NLRS-reported saleyards for February slowed from last month, with an 8% decline nationally – to be similar to year ago levels.

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/

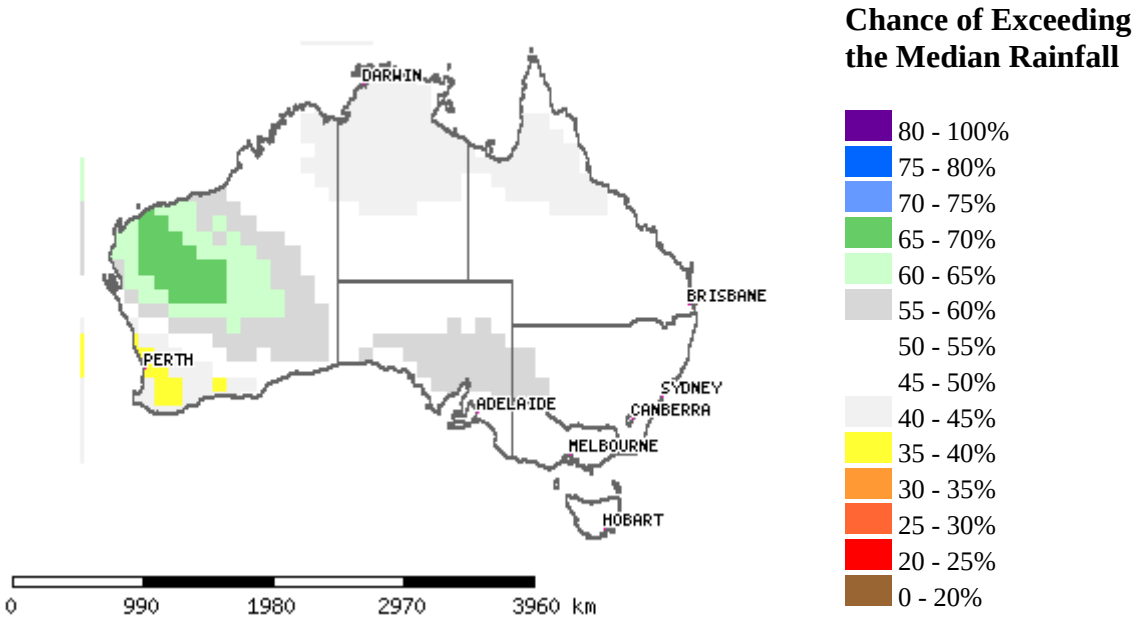
New South Wales Department of Primary Industries
http://www.agric.nsw.gov.au/reader/nsw-grains-report-sept-2005

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



March 2007 - May 2007 (Autumn)

The chance of exceeding median rainfall between 01 March 2007 and 31 May 2007

The national outlook for total rainfall during the period March 2007 to May 2007 generally shows no strong trends towards wetter or drier conditions. In WA however, a drier than average autumn is more likely in the southwest, whereas above average falls are indicated further north in a zone stretching from the Pilbara to the interior.

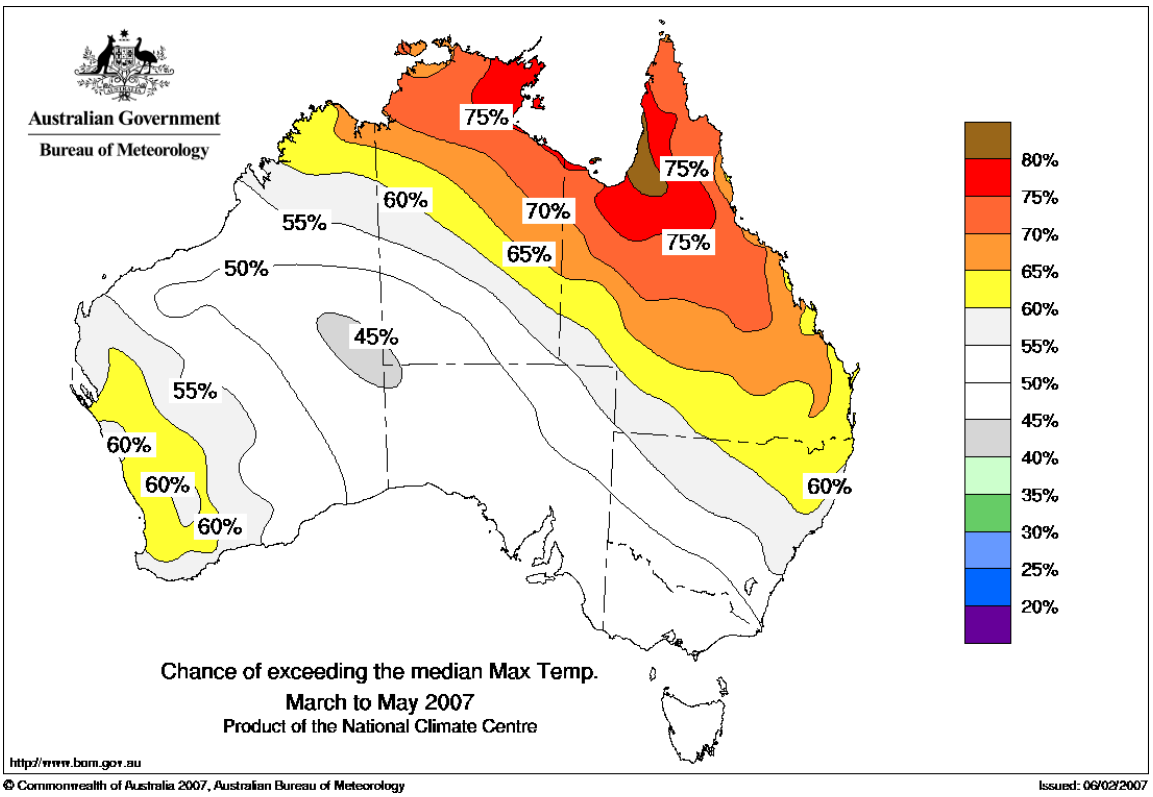
4.2 El Nino & Southern Oscillation Index

- The Bureau of Meteorology reports that the eastern equatorial Pacific Ocean has continued to cool rapidly following the demise of the 2006/07 El Niño event. While current conditions remain neutral, the rapid cooling in the Pacific has increased the likelihood of, though it is not guaranteed, a switch to La Niña conditions over the coming months. The Trade Winds have mostly been close to or somewhat stronger than normal since December, the SOI has been neutral for three of the past four months and is now close to zero and cloudiness has shifted to the western Pacific. There would now appear to be little chance of a return to El Niño conditions in 2007, with a continuation of neutral, or a switch to La Niña conditions, the more likely scenarios.

- The Bureau of Meteorology notes that, whilst a rapid cooling of the Pacific at the end of the El Niño would normally be associated with a return to more normal, or in some cases above normal rainfall patterns, it is unlikely such rain will be enough to make up for the long-term rainfall deficiencies experienced through eastern and southern Australia. This particularly applies to water supplies, which in some cases will require several years of average or above average rainfalls to recover to a satisfactory level.

- The Bureau of Meteorology reports that the chance of a La Niña developing in 2007 is thought to be higher than the long-term average (which is about one in five or 20%) because (a) they have a tendency to follow an El Niño; (b) the El Niño has decayed somewhat earlier than normal thereby giving time for a La Niña to begin developing during the critical March to June period; and (c) a large pool of cold sub-surface water has developed in the central to eastern tropical Pacific Ocean. La Niña events are generally associated with wetter than normal conditions across much of the eastern half of the country from about autumn.
  CURRENT STATUS as at 7th March 2007
  Next update expected by 28th March 2007

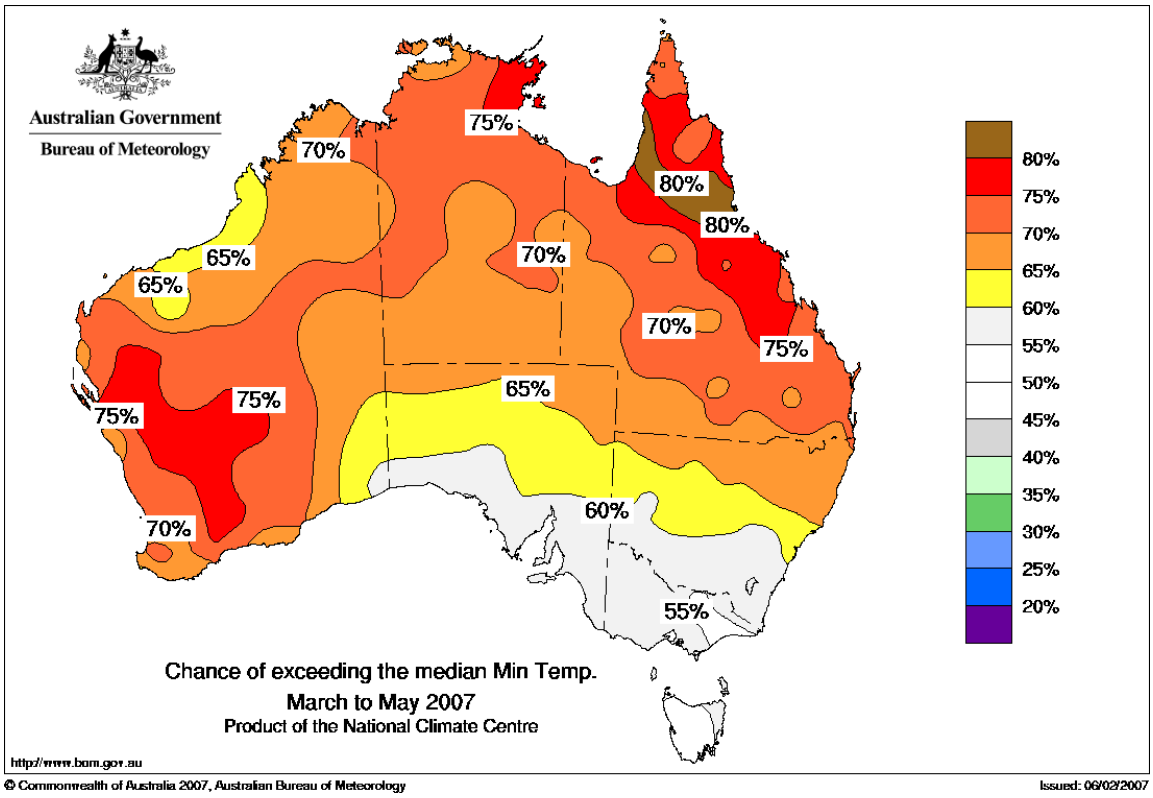
4.3 Temperature Outlook



The chance of exceeding median maximum daytime temperatures between
01 March 2007 and 31 May 2007

The temperature outlook for autumn (March to May) shows a moderate to strong shift in the odds towards above normal temperatures across a broad region of northeast and northern Australia. A warmer than average autumn is also favoured in southwest WA. 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 March to May, the chances are mainly between 60 and 75% for higher than normal maximum temperatures northeast of a line from Derby in northwest WA to Tamworth (NSW). Within this region, the chances peak above 80% in the southwest of Cape York Peninsula (see map). There also 60-65% chances for a higher than average seasonal mean in the southwest of WA.



The chance of exceeding median minimum daytime temperatures between
01 March 2007 and 31 May 2007

The chances of seasonal minimum temperatures being higher than the median are between 60 and 75% over most of the country. Exceptions to this pattern are in southeastern Australia and southern SA where the outlook probabilities are in the neutral 50 to 60% range.

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