NAMS
NATIONAL AGRICULTURAL MONITORING SYSTEM

Climate and Agricultural Update

National Report

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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.dnr.nsw.gov.au
Meat and Livestock Australia	www.mla.com.au

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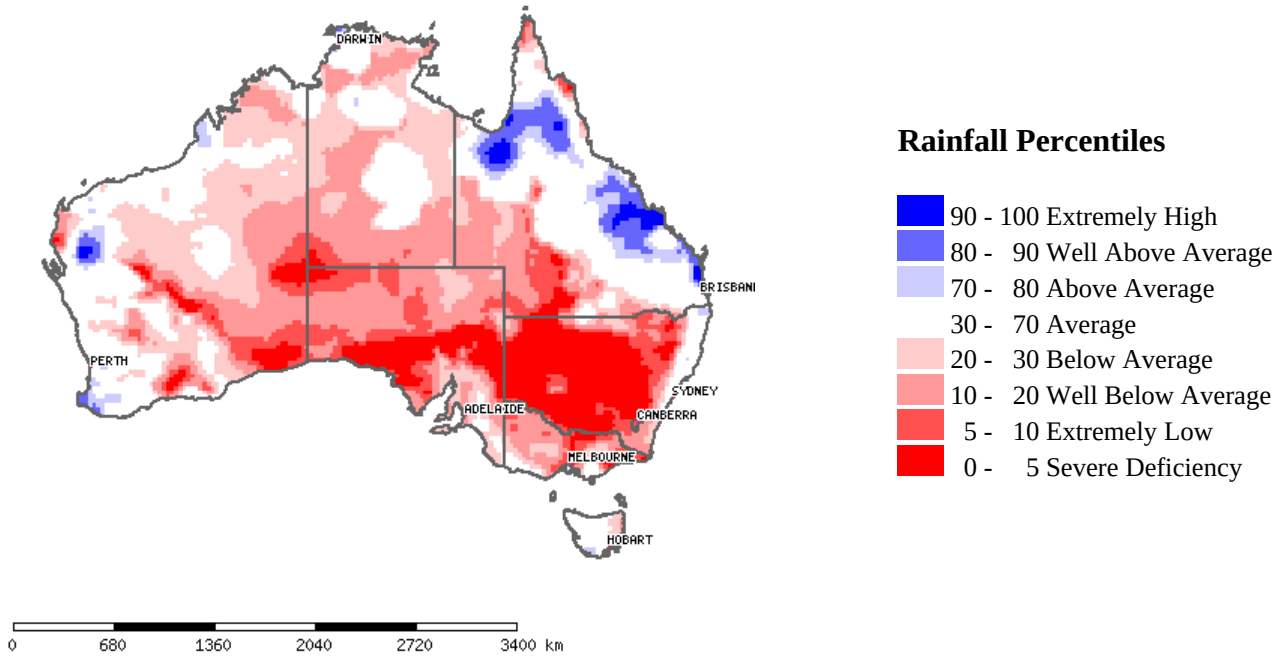
1.0 Rainfall and temperature

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/

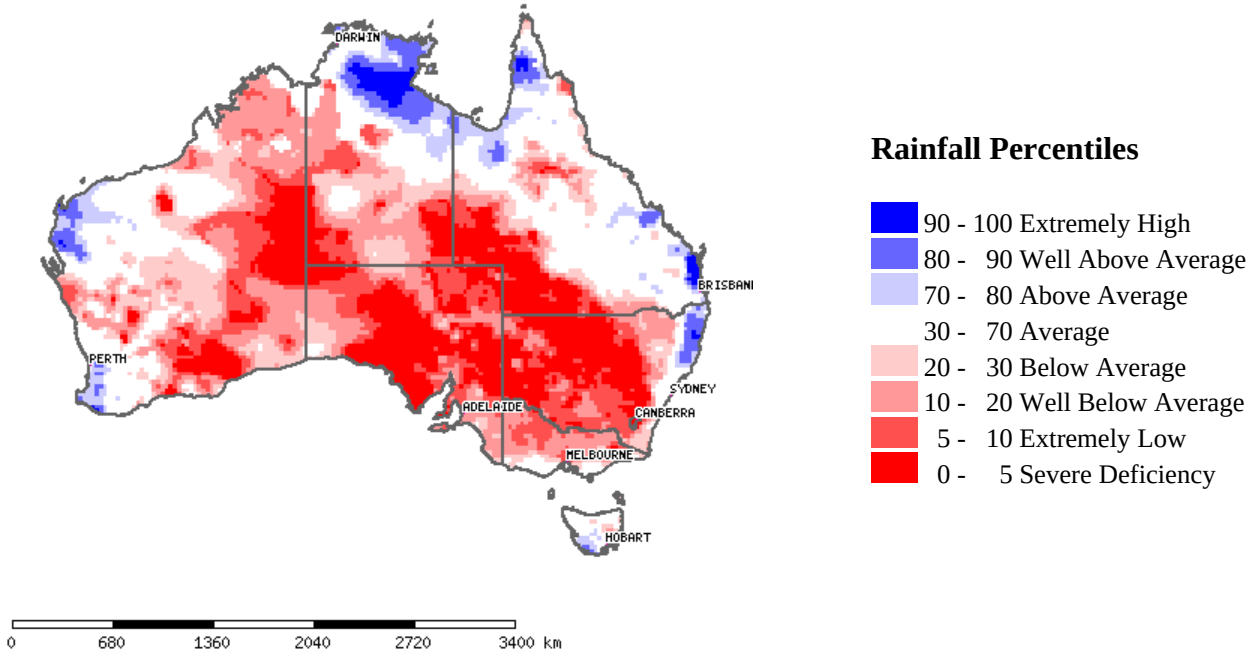
Rainfall over the last month (September 2007)



Rainfall percentiles for September 2007

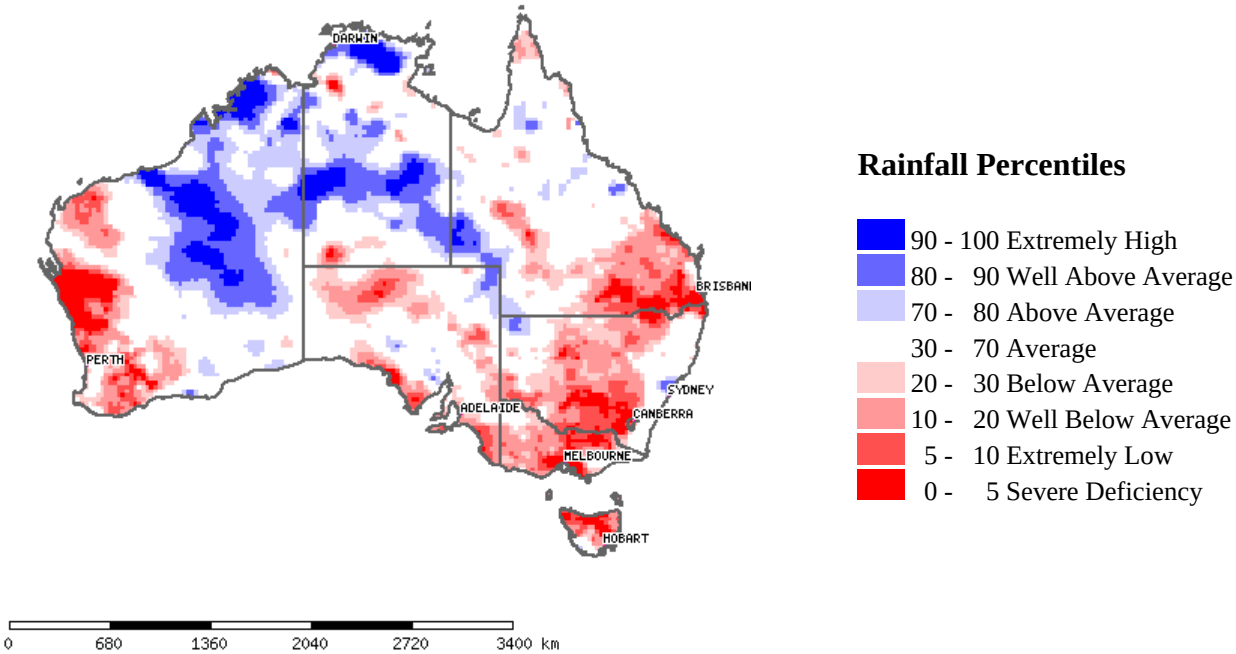
Although September was a dry month over large parts of the continent, extremely high falls were recorded in parts of Queensland and Western Australia - unseasonable falls of greater than 100 mm occurred to the north of Brisbane and also in the area around Rockhampton, and above normal falls were also recorded in the southwest corner of the country and in the Gascoyne region of WA. The most significant area of below-normal rainfall was in NSW, with a large area of severe deficiency in the central northern half of the state. South Australia, and to a lesser extent Victoria, were also covered by areas of below average and well below average rainfall. The Murray Darling Basin (MDB) experienced its driest September on record (74% below normal). Western Australia and the NT also recorded large areas of below average to extremely low rainfall (although it is a seasonally dry time of year over much of these regions).

Ongoing or emerging rainfall situations



Rainfall percentiles for the three months July 2007 - September 2007

During the last 3 months (July to September), unseasonal conditions produced above average to extremely high rainfall across parts of Cape York, the northern half of the Northern Territory and the Kimberley region of Western Australia. Above normal rain also extended south along the east coast and adjacent ranges from southern Queensland through to New South Wales; and in the south-west corner of the country. In contrast, most of the remainder of the country experienced a drier than normal winter. Much of inland New South Wales, Western Australia, South Australia and northern Victoria experienced below average to extremely low rainfall.

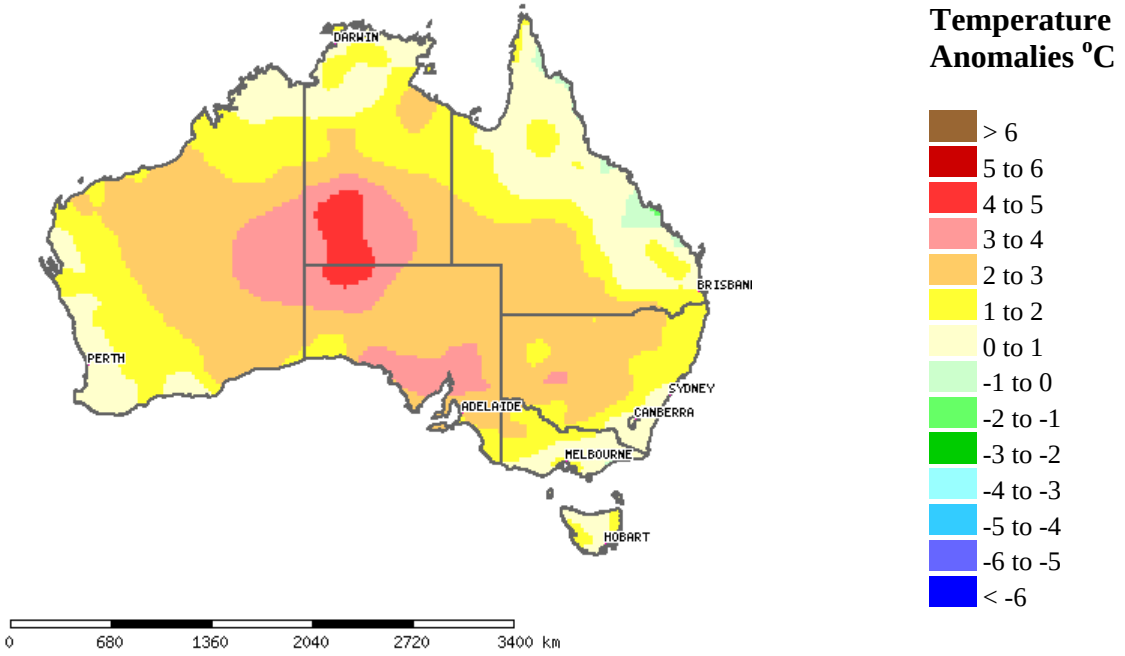


Rainfall percentiles for the 12 months October 2006 - September 2007

For the 12-month period from October 2006 to August 2007, there were regions of rainfall deficit in the southwest and west coasts of Western Australia, along parts of coastal South Australia, in central Australia, in parts of northern Australia, in northern Tasmania, in a band from south-central Victoria to the tablelands and western slopes of New South Wales and in southeast Queensland. In contrast, much of north-western and central Australia have recorded above average to extremely high rainfall conditions over the last 12 months.

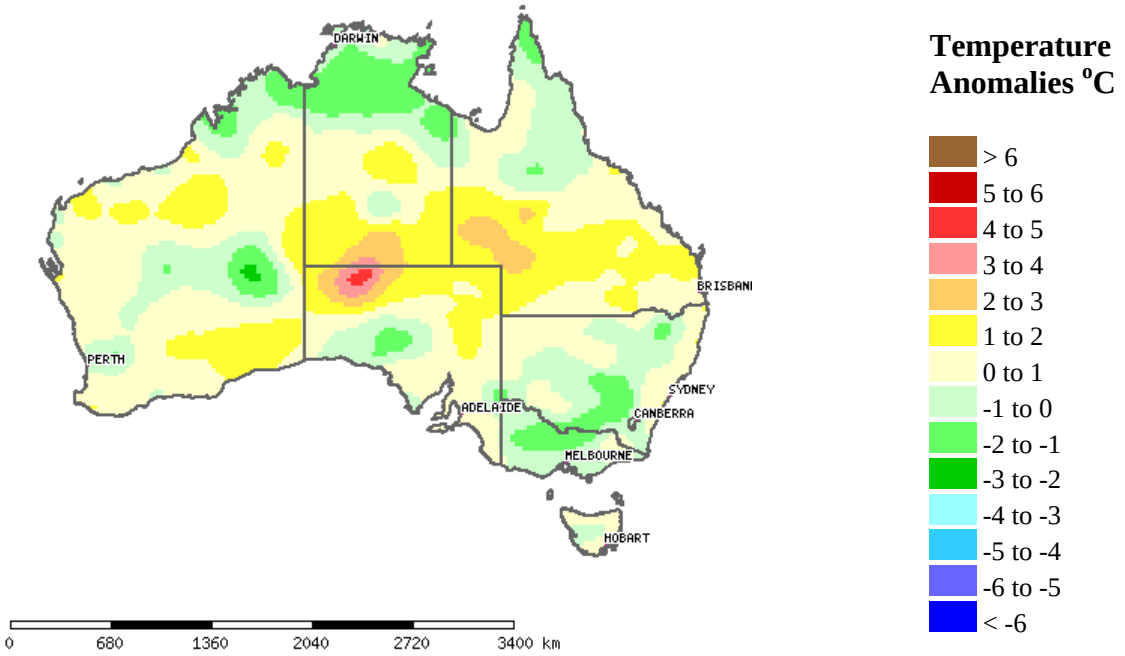
1.2 Maximum and minimum temperature anomalies

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 maxima and minima 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/



Monthly mean maximum temperature anomalies for September 2007

Monthly mean maximum temperatures during September 2007 were generally above average across most of the continent except for some coastal areas in sub-tropical Queensland. Central Australia, portions of South Australia and New South Wales had well above average maximum temperatures. Agricultural areas across inland New South Wales and Western Australia, north-western Victoria, south-west Queensland and South Australia saw monthly mean maximum temperatures ranging from of 1 to 4 °C above normal.



Monthly mean minimum temperature anomalies for September 2007

Monthly mean minimum temperatures during September 2007were below normal across northern Australia, the south-east, the west of South Australia and central Western Australia; and above normal in a band across the centre of the country, and the south-east of Western Australia.

2.0 Water storages and irrigation allocations

2.1 Water storages (current to 4 October 2007)

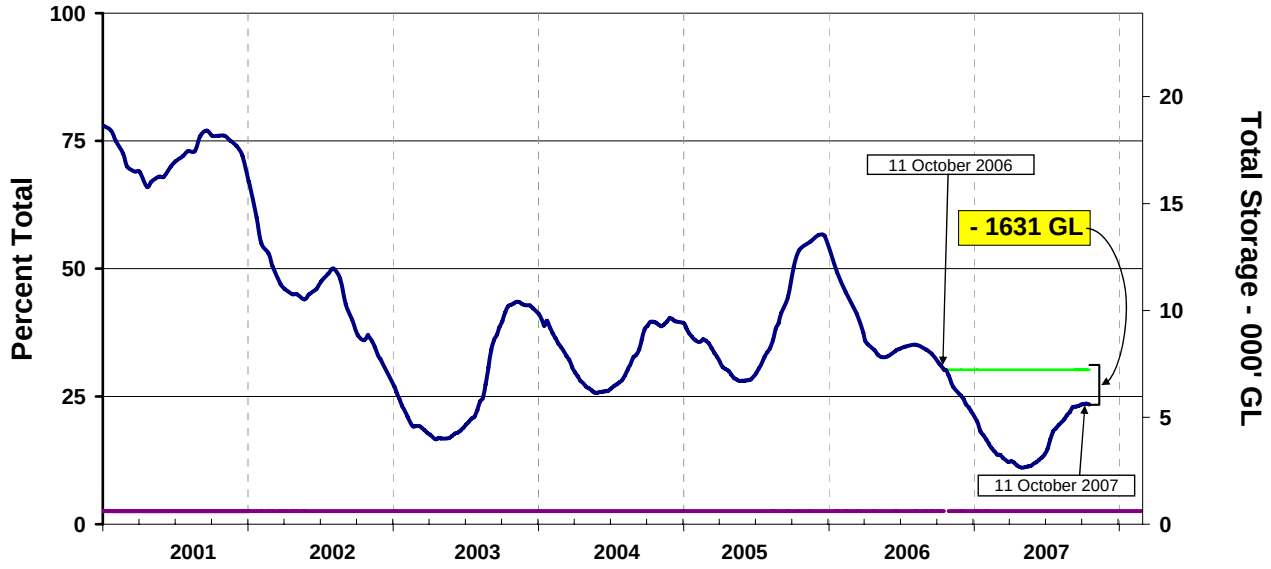
Water storage in the MDB (New South Wales and Victoria)

Over the past 3 months the storage levels within the Murray-Darling Basin have been increasing; however, the rate of increase has slowed significantly during September.

At 11 October 2007 storage levels for irrigated agriculture were at 5,600 GL (23.42 % of a total capacity of 23,908 GL), an increase of 72 GL (0.3 % of total capacity) over the month.

Current storage levels are approximately 1631 GL less than at the same time last year.

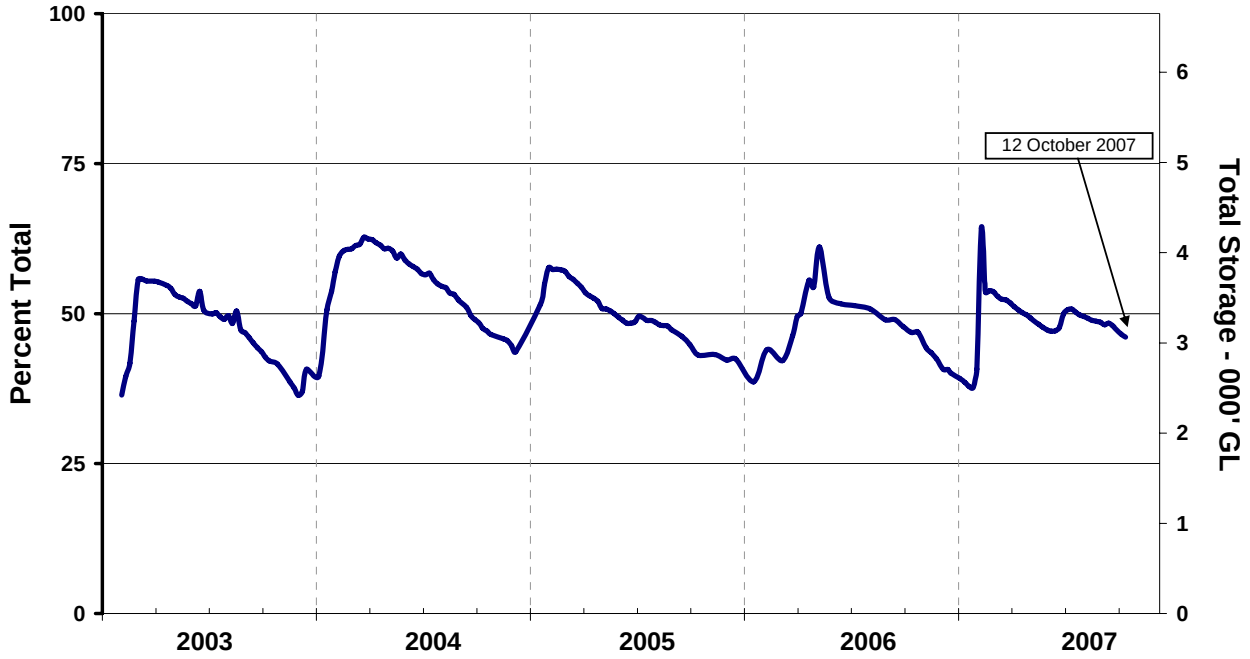
The Murray-Darling Basin storage levels above do not include the capacities of Lake Eucumbene, Tantangara Reservoir and Lake Jindabyne which are reserved for hydro-electricity generation and irrigation purposes. Current levels in these storages are 1,218 GL (21.2 % of a total capacity of 5,744 GL).



Irrigation water available in the Murray-Darling Basin from 1 January 2001 to 4 October 2007. The green line indicates the storage level at the same time last year. Source: Bureau of Rural Sciences.

Water storage in Queensland

Storage levels in Queensland decreased by 160 GL to 3,209 GL (46.1% of a total capacity of 6,965 GL) in September. This storage level is approximately 50 GL lower than at the same time last year.



Current water storage level in Queensland as of 4 October 2007. Source: Bureau of Rural Sciences

Murray-Darling Basin update

- September rainfall has been very much below average across much of the southern basin. As a result inflow to the River Murray System slowed to 210 GL when compared to the 360 GL for August. This compares to the long-term average for September of 1610 GL. Monthly inflows have now been below average for the last 24 months.
- In August there were some good falls of rain in the far northeast of the Basin and this has resulted in some small inflows to the Darling River. This flow is travelling very slowly downstream, but is unlikely to result in significant inflows to Menindee Lakes.
- According to the MDBC storage levels in Dartmouth Reservoir have risen to 17% capacity and Hume Dam has risen to 29% capacity but is forecast to drop as consumptive demand increases over summer. Lake Victoria is currently 78% full and has begun gradually falling as it is drawn upon to supplement South Australian flow requirements.
- The Murray-Darling Basin Commission (MDBC) reported in their weekly report on 5 October that “low rainfall and high temperatures have resulted in inflows and storage levels well below the levels for the corresponding time last year.” In addition they reported that “Current water availability is the lowest for the Murray system based on modelling for the past 116 years” and that “unless there is heavy rain over the next few months there will be serious consequences for human users and for the environment.”
- The flow to South Australia for September was 50.3 GL.

2.2 Irrigation allocations

Allocation announcement for New South Wales irrigators in the 2007/08 season (current at 15 October 2007)

- Licence holders within the Murray Lower Darling Water Sharing Plan area were re-credited with a further 10 per cent of the water suspended in 2006/07. Water will be re-credited to accounts immediately and be available for use. This improvement is the result of the combined effect of small rainfall events and some snow melt. Currently there is enough water in the Murray Valley system to provide another period of contingency water to support high security permanent plantings and to meet the critical needs of all Murray Valley towns, high security intensive livestock, and forest industries for the remainder of the water year. Inflows are receding to the record low flows seen last year and no reserves have been set aside for 2008/09.

- DEW announced on 2 October that high security licence holders within the Murrumbidgee Regulated Water Sharing Plan area were advised of an increase in the available water determination (AWD) to 75%. The AWD for stock and domestic licence holders has also increased from 50% to 100% of entitlement, and town water supplies have been increased to 70%. These improvements are due in part to additional water from the Snowy Mountains Scheme, and in part to inflows into Burrinjuck Dam which have receded more slowly than anticipated.
- In the Murrumbidgee Valley there is sufficient water available to provide town water supply for the whole of 2007/08 and towns have been advised that they may ease water restrictions from Level 4 to level 3a, which allows some outside watering in the warmer months. There is no water reserved for next year and there remains a need to conservative with all water use.
- Stream flows across the Hunter River Valley have improved over the last month, as a result of significant rain in August. Enough water is available to meet town water supply, power generation and domestic and stock requirements for the whole of 2007/2008 and 2008/2009. Allocations for general security users have increased from 10% to 18%, and for high security users from 80% to 84%.
- Groundwater trading near Hay in the Central West has been restricted to ensure sufficient water remains available for both users and the environment. The decision to enforce trade restrictions came after routine monitoring showed a drop in water levels in parts of the system.

Allocation announcement for Victorian irrigators in the 2007/08 season (current at 15 October 2007)

- An increased allocation and season extension for the Goulburn system was announced by Goulburn-Murray Water on the 15 October. Increased seasonal allocations were also announced for the Murray, Broken and Campaspe systems. The seasonal allocations in all other systems remained unchanged.
- The seasonal allocation in the Goulburn system is 26% of high-reliability water shares, an increase of 3%. Continued modest inflows in the Murray system allowed the seasonal allocation to increase by 2% to be 18% of high-reliability water shares. The seasonal allocation for the Broken system has increased by 3% to 18% of high-reliability water shares. The Loddon system seasonal allocation of 5% of high-reliability water shares is unchanged. Campaspe system customers have a seasonal allocation of 2% of high-reliability water shares, an increase of 1%. Volumes held in the Bullarook Creek system storages remain insufficient to satisfy qualified rights for the rest of the season. Providing access to all qualified rights for customers is the immediate priority ahead of a bridging seasonal allocation.
- The winter and spring inflow trends indicate significant resource improvement is now very unlikely for any system this season. The most optimistic 15 February 2007 seasonal allocations are approximately: 43% of high-reliability water shares in the Goulburn system; and 27% of high-reliability water shares in the Murray system.
- The next allocation announcement will be available on Thursday 1 November 2007.

For further information on water storage levels and irrigation allocations, go to:

Murray-Darling Basin Commission
http://www.mdbc.gov.au/

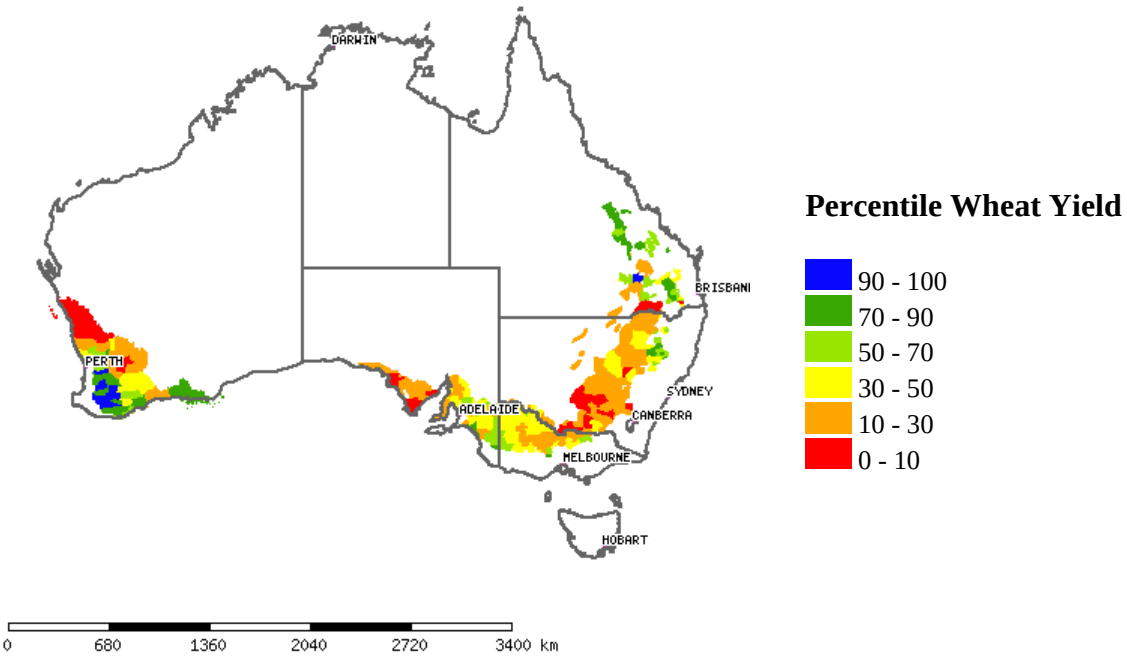
Goulburn-Murray Water
http://www.g-mwater.com.au/news.asp?ContainerID=media_releases

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

3.0 Crop and livestock production

3.1 Crops

Predicted wheat yields are provided by the Western Australian Department of Agriculture and Food. The following figure shows wheat yield forecasts as percentiles of a 100-year historic data set. For further information on predicted wheat yields, go to www.agric.wa.gov.au/.



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

- Current predictions for shire level wheat yields for the 2007 growing season are generally well below average to average reflecting the variable start to the 2007 winter cropping season and the lack of within growing season rainfall. The northern and eastern parts of the Western Australian wheat belt, the west of South Australia, parts of central and eastern Victoria, the majority of New South Wales and parts of southern Queensland are all indicating forecasts of well below average yields. Certain areas of the southern Australia, particularly south-east Western Australia and the far northern extent of the wheatbelt in Queensland are predicted to have average to above average yields.
- Below average rainfall during September across the whole of the national wheatbelt has continued to reduce prospects for a record wheat crop this year.
- The NSW Department of Primary industries has reported that due to one of the driest Augusts and the first three weeks of September being very dry, prospects for winter crops in NSW have turned unfavourably. Winter crop area for harvest is estimated at around 3.12 M ha from the 5.08 M ha sown. At this early stage summer crop prospects are poor with little water available for irrigation. Best prospects are in the north east where some soil moisture profiles are close to full. Some early sunflower and maize have been planted. Current planting estimates (excluding rice) are 228,795 ha. With the majority of the cropping area drought declared 50-100 mm of rain is needed to maintain yield potential of surviving winter crops, boost summer crop prospects and alleviate severe water shortages. Conditions are extremely poor across most regions, except for areas of the north east that recorded 50-100 mm of rain in the third week of August.
- The Victorian Department of Primary Industries reports that many crops have been stressed by the recent warm, dry conditions. The effects have been variable, depending on crop development, stored soil water and soil type. As a result of this, some crops have now been cut for hay. In some areas average rainfall is required to deliver below average to average yields.

- The Department of Primary Industries of South Australia (PIRSA) reports that the ongoing warm, dry conditions across much of Eyre Peninsula, the Upper North and the Northern Mallee saw crops in these districts continue to lose significant yield potential. In remaining districts where there was light to moderate rainfall, crop yield potential

declined marginally. Most cereal crops have finished flowering and commenced grain fill, with the earliest now close to harvest. Total crop area is estimated to be 4.01 million hectares with crop production currently estimated to be 4.85 million tonnes. Further rainfall and mild temperatures are needed during October to maintain crop yield potential at current levels.

- The Department of Agriculture and Food Western Australia reports that in the Northern Agricultural region crop expectations declined during August due to the lack of rain and high temperatures. Conditions in the north-eastern wheat belt are poor; however, there remains potential in the central and southern regions. In general, crops in western and south-western areas still require rainfall for grain fill. Crops in northern and eastern areas are suffering considerable stress and have insufficient soil moisture to complete development—an early finish will lead to extremely low crop yields.
- The Chicago Board of Trade wheat futures hit a record US 835.5 cents a bushel in early September and on 3 September AWB increased its estimated pool returns for 2007-08 by $14 a tonne. This brought the 2007-08 estimated pool returns for Australian Premium White to $314/tonne, and the main grade of durum to $390/tonne.
- According to the Australian Bureau of Statistics, national stock of grain held by major bulk handlers continues to decline, falling by nearly 20% to 5 million tonnes by the end of July.

3.2 Livestock

Beef cattle

- Meat & Livestock Australia (MLA) reported that, with seasonal conditions across many regions during August still reasonable, particularly in the north—cattle turnoff and beef production tightened during August. Australian beef production for the month fell 6% on the same time last year, to 183,000 tonnes cwt (Australian Bureau of Statistics).
- Despite the decline in August, Australian beef production during the first eight months of 2007 was up 2% on last year, at 1.4 million tonnes cwt. Contributing to the increase was a 4% jump in national slaughter (at 5.4 million head), while average carcase weights (at 267kg/head) were back 2%.
- Adult cattle slaughter during August decreased 3% on the same time last year, to 667,000 head, driven by a 6% fall in Queensland and 2% decline in Victoria. NSW slaughter for the month fell 2% to 141,000 head.
- MLA also stated that for NSW the number of cattle yarded rose substantially at the beginning of September due to the lack of rain and feed on hand. This trend continued as the month progressed as seasonal conditions deteriorated further as temperatures increased and limited rain was recorded. Compared with August, total yardings increased 17%—numbers were also 15% above September 2006.
- The Overall, quality of NSW beef remained relatively mixed. Better quality was witnessed in the well finished, supplementary fed and off-crop lines yarded. At the start of the month, prices remained firm to cheaper, with re-stockers active in the northern regions. Prices, however, registered a downward trend as the month progressed. With the lack of feed and high grain prices, greater numbers of young cattle were forced onto the market. Young cattle, dominated the month's yardings, at 58.5%, while grown cattle made up the remainder 41.5%.
- The benchmark Eastern Young Cattle Indicator (EYCI) at the completion of Thursday the 4th sales was 286.25¢/kg cwt, which was down 5.75¢/kg cwt on last week and 11% lower than the same time last year. This was also the lowest point for the EYCI since January 2007.
- Nationally, indicators have all been on the decline for young cattle categories for the past three months, not just the eastern states. The national vealer and trade yearling steer indicators lost 17%, while feeder steers dropped 15% since July. During the same period, the EYCI has fallen 15%.
- The main factors influencing prices include the deteriorating seasonal conditions, the record global and domestic grain prices which have hampered feeder activity and the high A$ which has squeezed processor margins—leading to weakening competition.

Sheep and lambs

- MLA reports that in NSW September began with producers holding back consignments, despite the continuing dry conditions, in anticipation of further rain and a positive crop outlook; however, numbers yarded began to increase due to the lack of feed and prevailing dry conditions. In the final week of September, lamb numbers remained fairly steady and sheep numbers declined, but throughput remained above August 2007 and September 2006.
- Eastern states' lamb slaughter for September totalled just over 1.4 million head, to be 13% greater than the same time last year. The dry start to spring and a lack of follow up rain for cropping enterprises were factors behind producers offloading lambs. This flush of young lambs plus the remaining old lambs has filled processors' supply chains. In NSW and SA, lamb slaughter for September was up 13% and 14% on the same time last year, respectively, while

Victorian slaughter lifted 10%. Queensland has seen a large flush of numbers coming from northern feedlots, with slaughter numbers nearly double this time last year.

- According to the MLA, numbers of young lambs during September in WA accounted for 59% of total lamb yardings. Lower young lamb numbers were yarded at Katanning where they comprised just under half of the total lamb yarding. Further north, at Midland, greater numbers of young numbers were forwarded onto the market due to the supply area experiencing drier conditions. Young lambs at Midland accounted for 67% of the total lamb yardings during September; with the majority in the trade weight range purchased by processors.
- Young lambs numbers in WA in September were not as high as the same time last year. In September 2007 young lamb yardings were 43% lower than the same month last year, while old lamb numbers for September 2007 were 19% higher. This illustrates that WA's flush of young lambs could be later compared with last year's drier season, after some good rains were recorded across western parts of WA during September.

Wool

- The ABC reports that Australian Wool Innovation (AWI) forecast has fallen 27 million kilograms to 434 million, because of a lack of rain and poor pasture growth.
- The Australian Wool Production Forecasting Committee is tipping wool production for the 2007-08 season at 395 million kilograms greasy, 7 per cent down on last year. The number of sheep and lambs to be shorn is expected to be down 8 per cent because of higher slaughter numbers and lower lambing rates. The ABC reports that the decline is largely being blamed on a lack of rainfall during August and September in the major sheep growing areas of eastern Australia.
- Several years of drought across sheep and lamb producing areas of Australia has seen flock numbers decline, with the Australia flock currently at its lowest level since 1925. The Australian sheep flock is expected to enter a rebuilding phase from 2007-08, underpinned by strong returns from lamb production and some recovery in fine wool demand and prices.

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.dpi.nsw.gov.au/aboutus/news/newsletters/grains-report-nsw

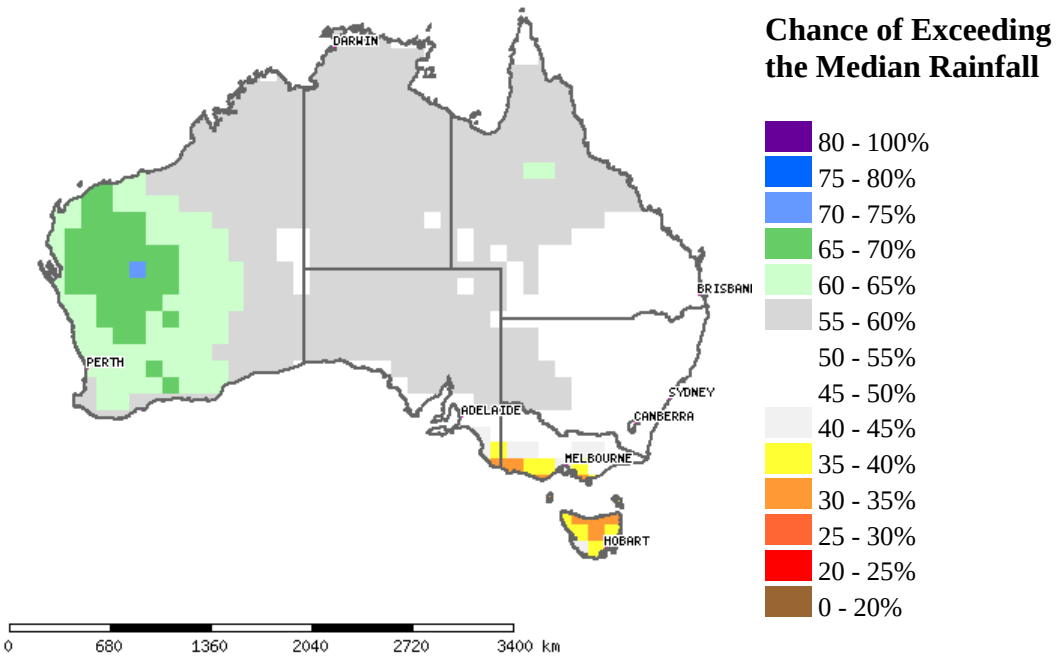
Queensland Department of Primary Industries and Fisheries
http://www.dpi.qld.gov.au/fieldcrops/

Department of Primary Industries and Resources
http://www.pir.sa.gov.au/dhtml/ss/section.php?sectID=566&tempID=15

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



The chance of exceeding median rainfall between 01 October 2007 and 31 December 2007

The national outlook for total rainfall for the December quarter (October to December) shows contrasting odds between the west and south-east of the country. Higher seasonal falls are indicated in western WA while a drier than average season is more probable in the far southeast of the country. It should be noted though, that the December quarter is a seasonally dry time of year in northwest WA, with heavy rain being uncommon.

4.2 El Nino & Southern Oscillation Index

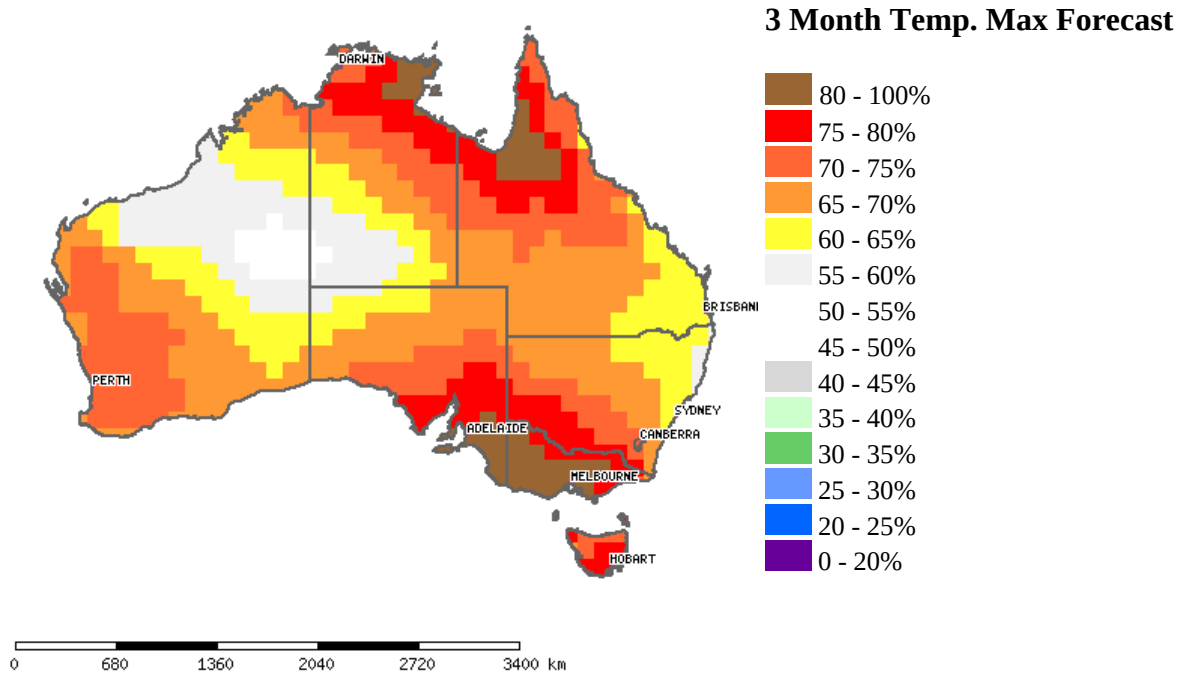
On 3 October the Bureau of Meteorology reported that La Niña had developed in the Pacific. With the exception of the Southern Oscillation Index (SOI), all ENSO indicators showed an intensifying La Niña during September. Computer models forecast the La Niña to last until early 2008, making it almost certain that 2007 will be considered a La Niña year.

Most critically, the near-equatorial Pacific Ocean has continued to cool both on and below the surface, the Trade Winds remain stronger than normal across the western to central Pacific, and cloudiness in the equatorial Pacific is reduced. Together, these indicators suggest the atmosphere and ocean are reinforcing each other - a critical component in sustaining La Niña conditions for any period of time.

This La Niña has been late to develop by historical standards. In the past, most significant La Niña events were established by winter's end, with widespread above-average rain falling over Australia's eastern half. With a late-developing La Niña, this typical rainfall response is not as likely as in past episodes. Indeed it has been largely absent to date.

Moreover, Australia's climate may continue, at least in the short term, to be influenced by the unusual state of the oceans to the north, and particularly northwest, of the continent. These have been cooling since June when, historically, they would have been expected to warm as the La Niña evolved in the Pacific. These cooler than normal waters inhibit the formation of northwest cloud bands, which are a major source of winter and spring rain for central and south-eastern Australia during La Niña years.

4.3 Temperature Outlook

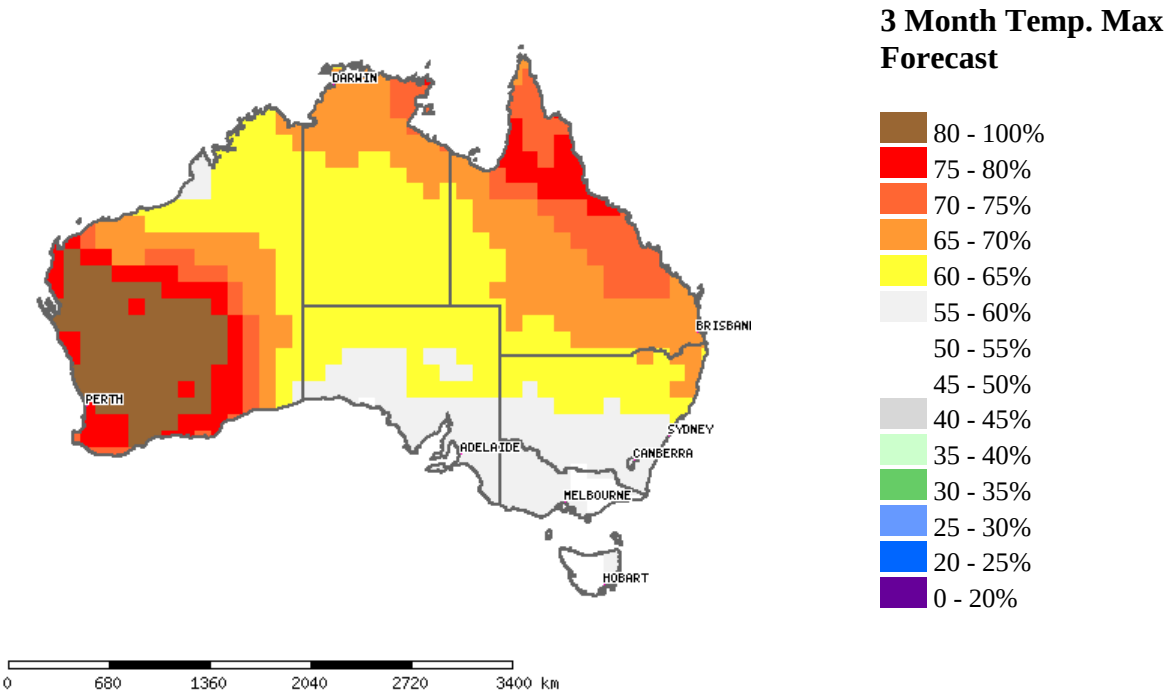


The chance of exceeding median maximum temperatures between October 2007 and December 2007

The national outlook for temperatures averaged over the December quarter (October to December) shows a moderate to strong shift in the odds favouring higher than average maximum and minimum temperatures in most areas.

The pattern of seasonal temperature odds across Australia is a result of continuing higher than average temperatures over parts of the south tropical Pacific Ocean, and also in parts of the tropical and sub-tropical Indian Ocean. A stronger signal is coming from the Indian Ocean.

Averaged over the December quarter, the chances are between 60 and 80% for above-normal maximum temperatures over much of the country, with the exception of a band from northwest to central Australia (see map). In parts of the southeast and far north the chances exceed 80%.



The chance of exceeding median minimum temperatures between October 2007 and December 2007

Minimum temperatures for the December quarter are favoured to be warmer than normal across WA, the NT, Queensland and the north of both SA and NSW (see map). The chances of increased overnight warmth (averaged over the coming three months) in these areas are mainly between 60 and 80%, with values well over 80% in southern WA. The chances are between 45 and 60% for above-normal minimum temperatures for the remainder of the country.

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