NAMS
NATIONAL AGRICULTURAL MONITORING SYSTEM

Climate and Agricultural Update

National Report

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

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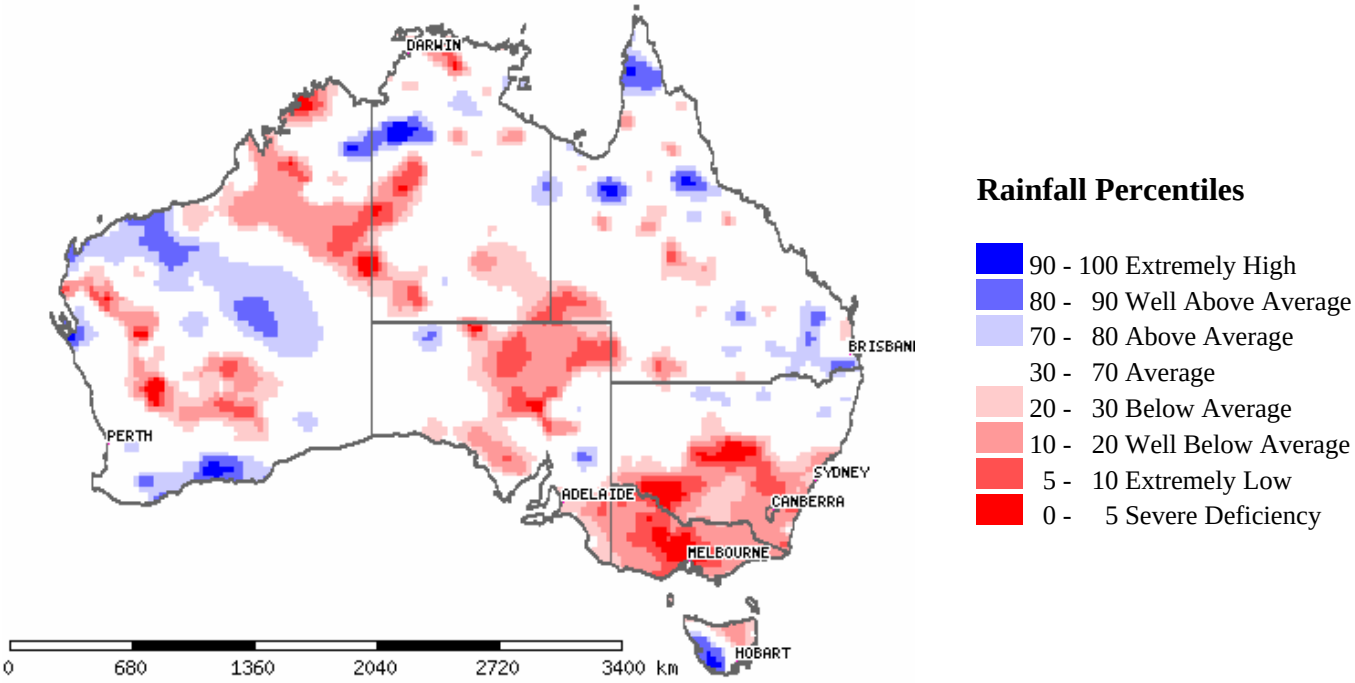
1.0 Rainfall and temperature

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 (October 2007)



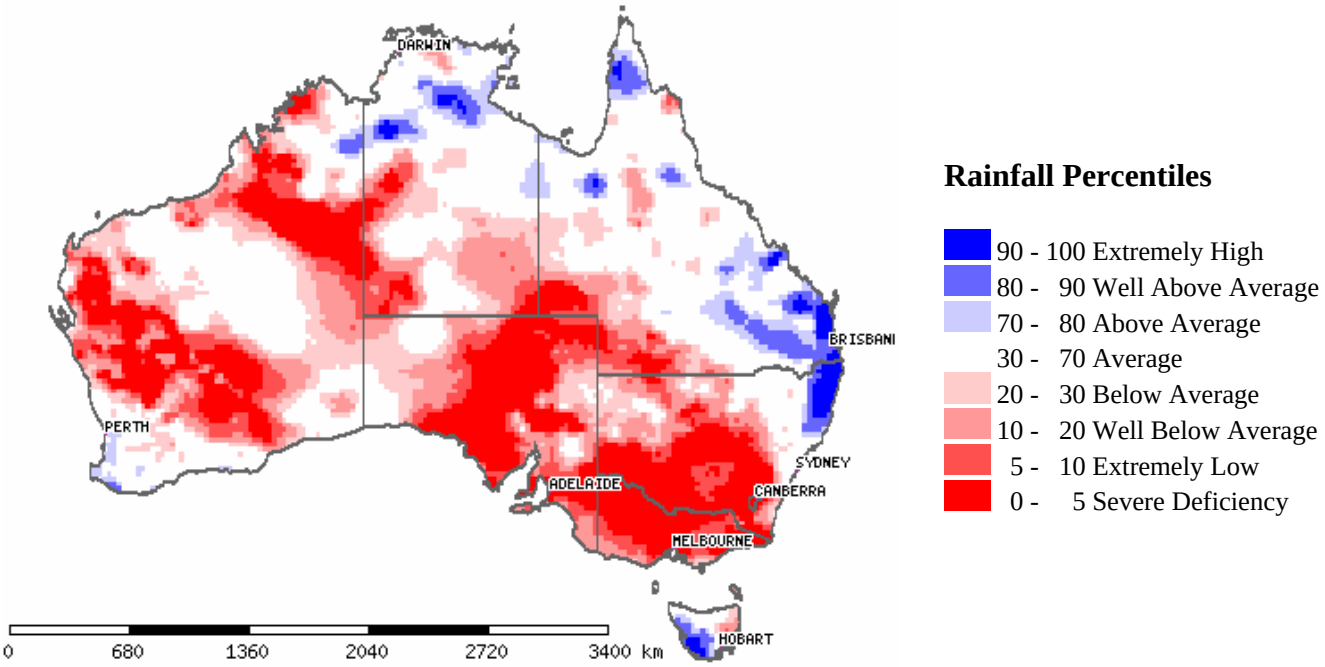
Rainfall percentiles for October 2007

October was generally a dry month over most of Australia. Despite scattered falls in the last week of the month, rainfall was generally below average, with a national mean 36% below average. The most notable dry conditions occurred in Victoria, where October was the 7th driest on record, and the third very dry month in succession. Rainfall was in the lowest percentile in much of central and north-western Victoria. There were also areas of rainfall in the lowest percentile in south-western New South Wales, a strip through the Central Tablelands and Central Western Slopes of NSW, parts of the mid-west of WA, some areas of north-eastern SA (which had no rain for the month).

The only substantial areas of above-average rainfall were the south-west and central parts of WA, western Tasmania, and south-eastern Queensland away from the immediate coastal strip. Above-normal falls were also scattered through tropical Queensland and the NT, as well as in the mid-north of SA and the northern border of New South Wales, mostly associated with localised thunderstorms.

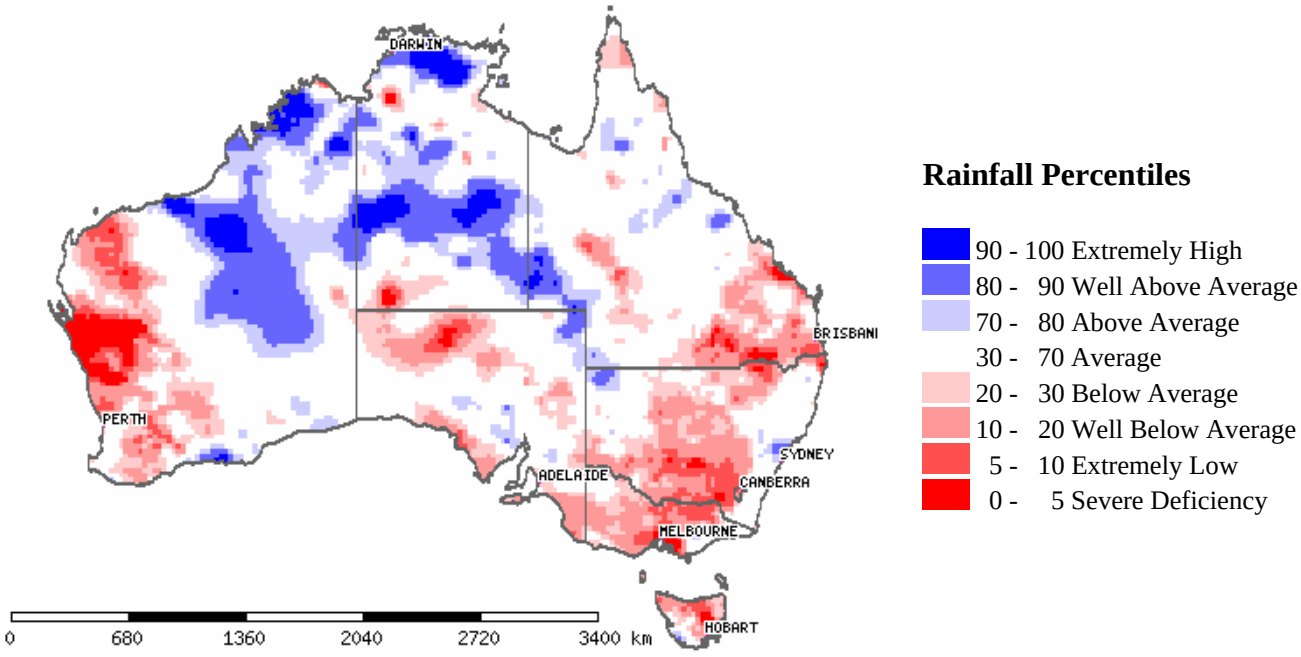
For the agriculturally important Murray-Darling Basin, October 2007 marks the sixth anniversary of lower than average rainfall totals, with the November 2001 – October 2007 period being the equal driest six year period on record along with the 1939-45.

Ongoing or emerging rainfall situations



Rainfall percentiles for the three months August 2007 - October 2007

During the last 3 months (August to October), unseasonal conditions produced above average rainfall across parts of Cape York and the northern half of the Northern Territory. Above average rain was also recorded along the east coast and adjacent ranges from southern Queensland through to north west New South Wales, as well as in western Tasmania. There were also patches with above average rainfall in the south western agricultural region of Western Australia. In contrast, most of the remainder of the country experienced drier than average conditions during the completion of the winter growing season. Almost all of Victoria, most of New South Wales, Western Australia and South Australia experienced well below average to severely deficient rainfall.

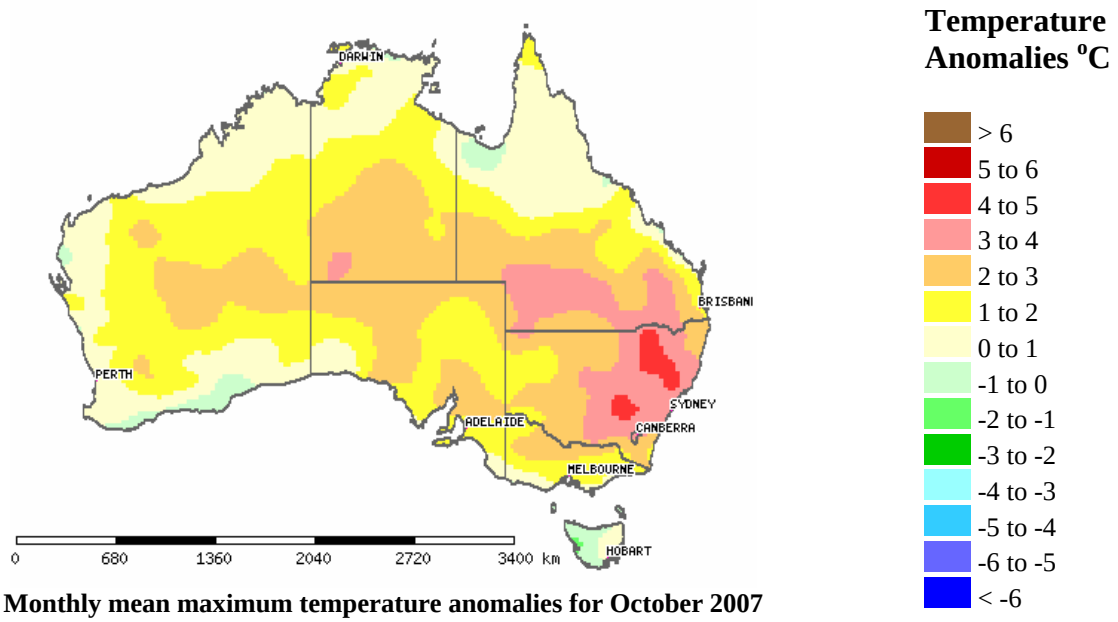


Rainfall percentiles for the 12 months November 2006 - October 2007

For the 12-month period from November 2006 to October 2007, rainfall deficiencies have weakened somewhat compared with the situation at the end of September, as October 2007 had generally higher rainfall totals than October 2006. Rainfall deficits were recorded in the western and south-western parts of Western Australia, in the north and along the coast of South Australia, in most of Tasmania, and in a band from south-east Queensland through inland New South Wales and Victoria. Rainfall deficits extended to central Queensland and to the north of the York Peninsula. In contrast, much of north-western, northern, and central northern Australia recorded above average to extremely high rainfall over the last 12 months.

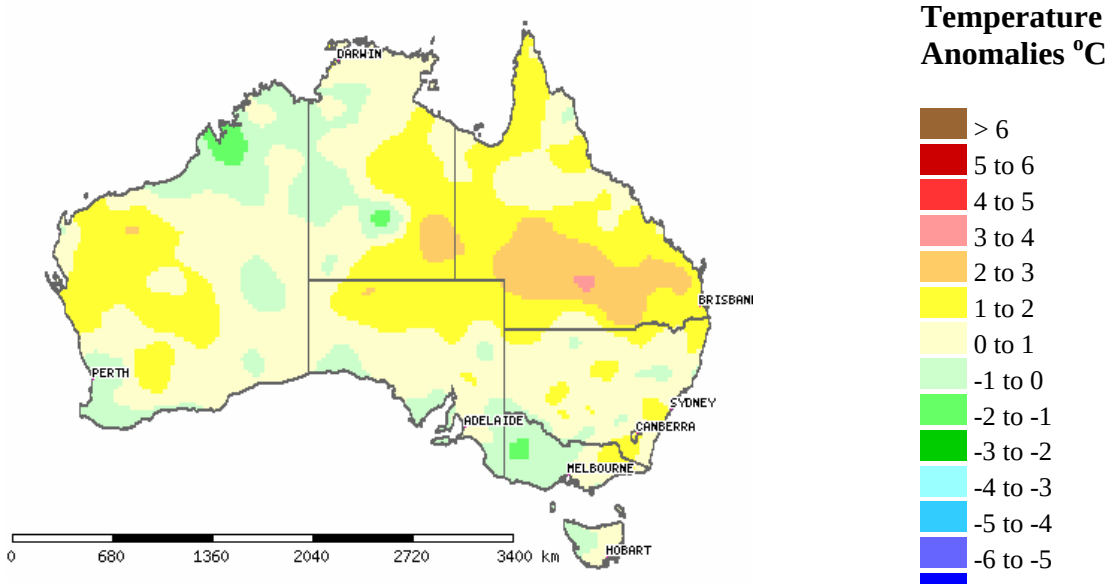
1.2 Maximum and minimum temperature anomalies

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 October 2007

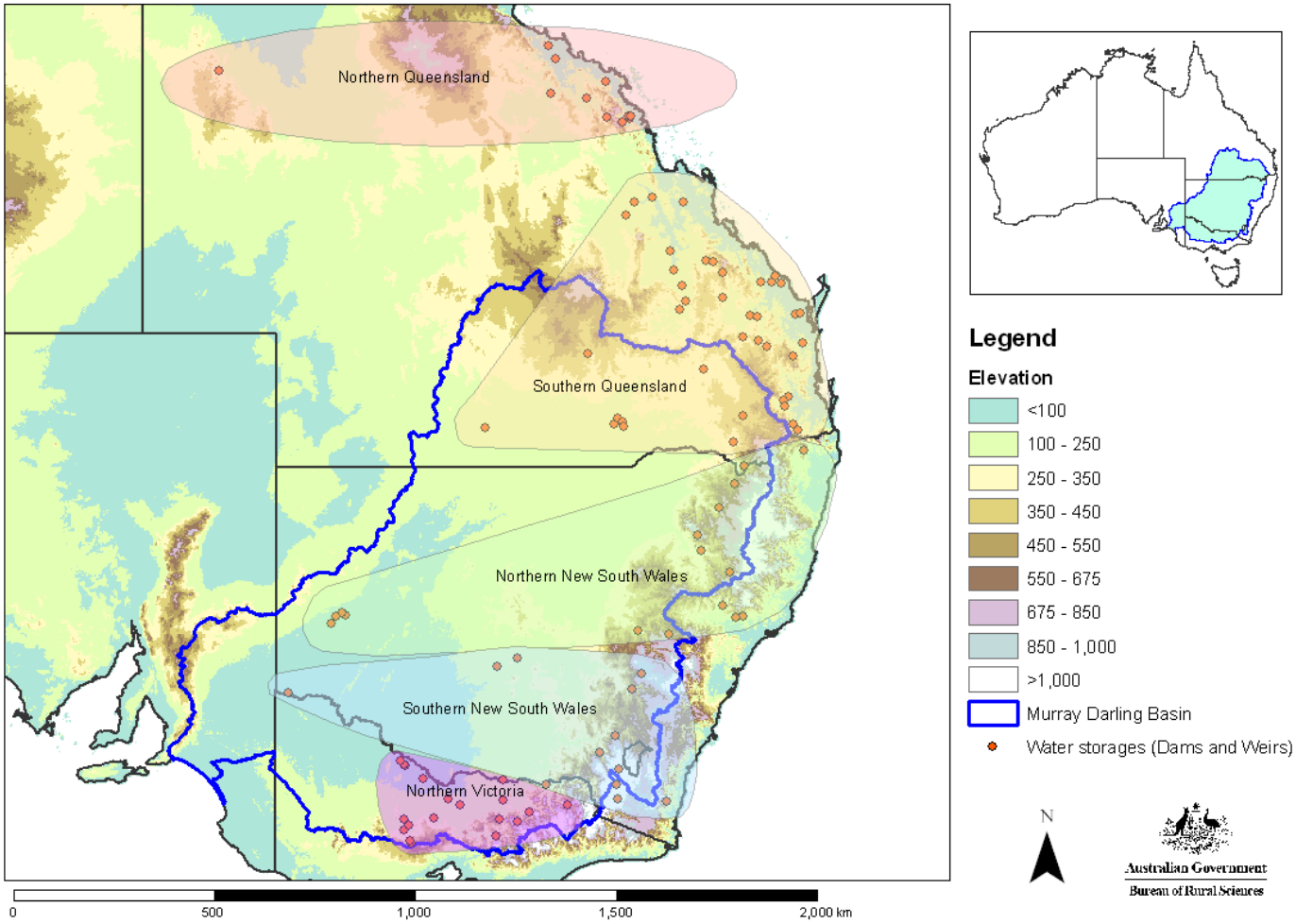
Daytime maximum temperatures were above average over most of the continent. The only areas with below-average values were the south coast of Western Australia, western Tasmania, and a few patches along the tropical coast. New South Wales was especially warm, with mean maximum temperatures between 3 and 5°C above average widespread in the eastern half of the state. The state-wide anomaly (+3°C) was second only to October 2006. Warm conditions were also recorded in southern Queensland with mean maximum temperatures between 3 and 4°C above average; and across most of northern Victoria, parts of South Australia, Western Australia and the Northern Territory with mean maximum temperatures between 2 and 3°C above average recorded.



Monthly mean minimum temperature anomalies for October 2007

Mean minimum temperatures were generally less extreme than those of daily maxima, but were still significant in many parts of the country. Mean minimum temperatures were generally 1 to 2°C above average, in most of extra-tropical Queensland and Northern Territory, north-eastern South Australia, areas around Canberra, in south-western NSW, eastern Victoria and central-western Western Australia. Mean minimum temperatures reached 3 to 4°C above average in southern inland Queensland. In contrast, minima were below average in parts of Tasmania, in western Victoria and southern South Australia, the south-west of Western Australia, and most of the far north of that state.

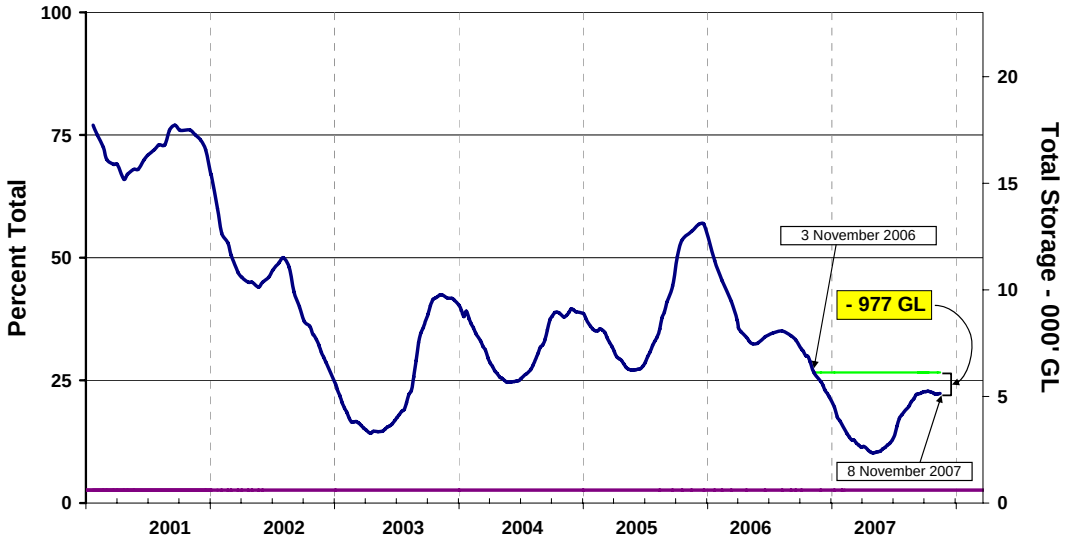
2.0 Water storages and irrigation allocations



Water storages within Queensland, New South Wales and Victoria. The blue line indicates the extent of the Murray-Darling Basin. The shaded areas denote the various reporting regions. Source: Bureau of Rural Sciences.

2.1 Water storages (current to 8 November 2007)

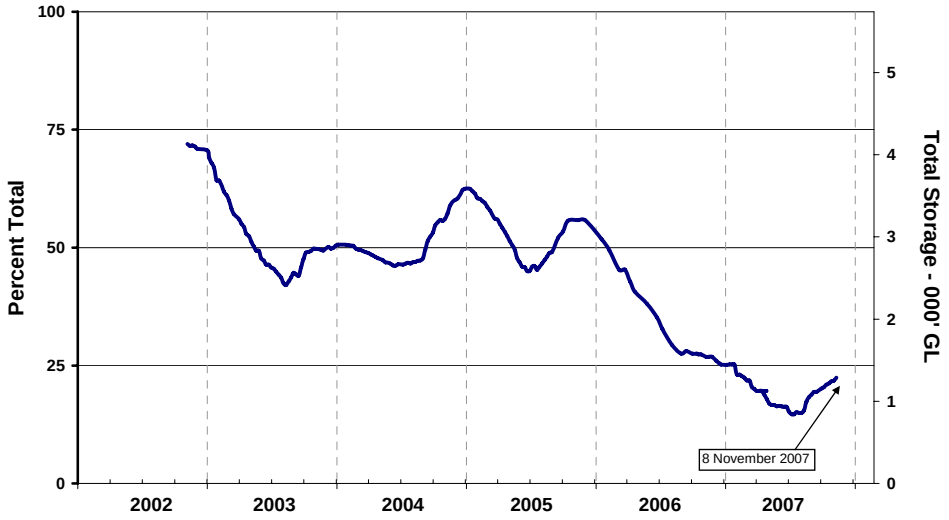
Water storage in the MDB (New South Wales, Victoria and Queensland)



Water storage levels in the Murray-Darling Basin from 1 January 2001 to 8 November 2007. The green line indicates the storage level at the same time last year. Source: Bureau of Rural Sciences.

Over the past 2 months the storage levels within the Murray-Darling Basin have been relatively stable, with releases being virtually matched by inflows. At 8 November 2007 storage levels for irrigated agriculture were at 5,143 GL (23.3 % of a total capacity of 23,020 GL), a decrease of 63 GL (0.3 % of total capacity) over the month. Current storage levels are approximately 977 GL less than at the same time last year.

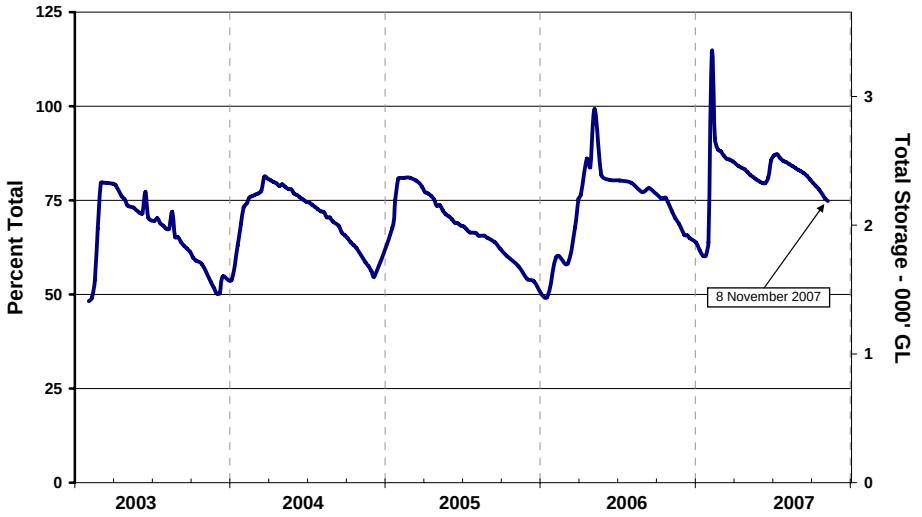
Water storage in the Snowy Scheme



Water storage levels in the Snowy Scheme from 6 November 2002 to 8 November 2007. Source: Bureau of Rural Sciences

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—collectively The Snowy Scheme. Current levels in these storages are 1,288 GL (22.4 % of a total capacity of 5,744 GL).

Water storage in Queensland

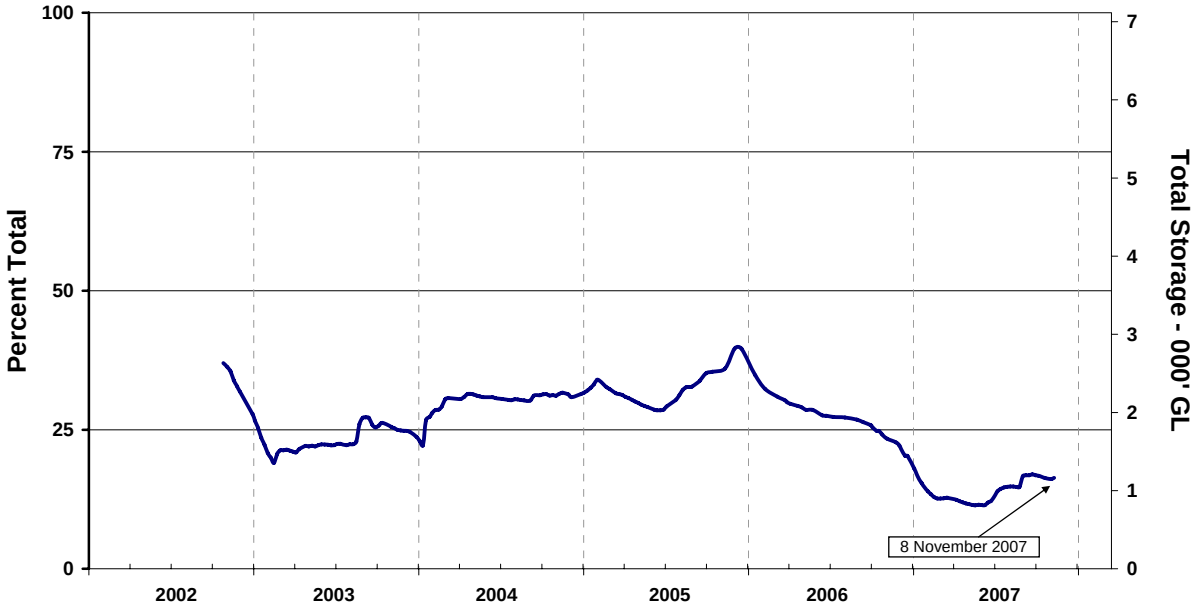


Water storage levels in northern Queensland from 3 February 2003 to 8 November 2007.
Source: Bureau of Rural Sciences

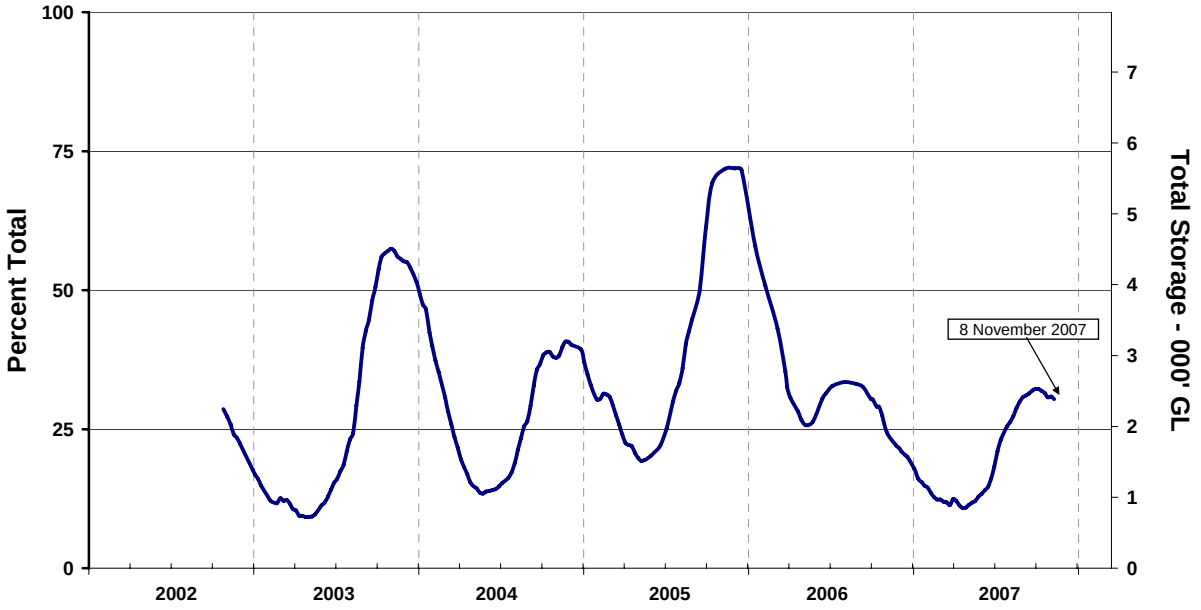
Water storage levels in southern Queensland from 3 February 2003 to 8 November 2007.
Source: Bureau of Rural Sciences

Storage levels in northern Queensland decreased by 124 GL to 2,393 GL (74.8% of a total capacity of 3,199 GL) in October. This storage level is approximately 86 GL lower than at the same time last year. In southern Queensland storage levels decreased by 18 GL to 1,001 GL (23.8% of a total capacity of 4,203 GL) in October. This storage level is approximately 147 GL lower than at the same time last year.

Water storage in New South Wales



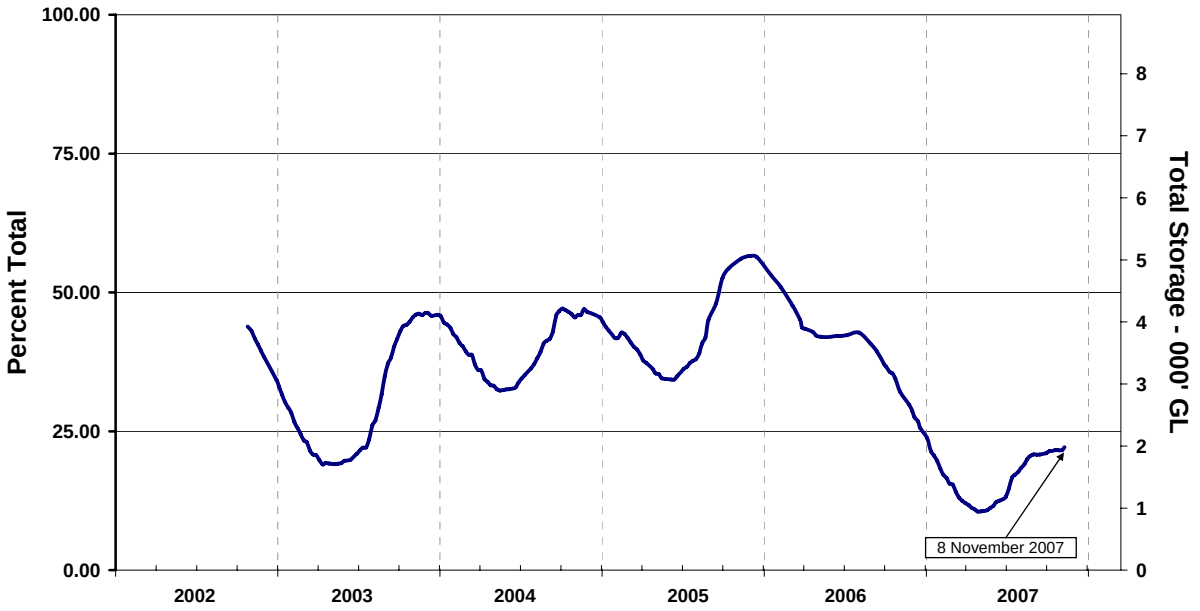
Water storage levels in northern New South Wales from 28 October 2002 to 8 November 2007.
Source: Bureau of Rural Sciences



Water storage levels in southern New South Wales from 28 October 2002 to 8 November 2007.
Source: Bureau of Rural Sciences

Storage levels in northern New South Wales decreased by 12 GL to 1,163 GL (16.4% of a total capacity of 7,114 GL) in October. This storage level is approximately 502 GL lower than at the same time last year. In southern New South Wales storage levels decreased by 115 GL to 2,386 GL (30.4% of a total capacity of 7,844 GL) in October. This storage level is approximately 473 GL lower than at the same time last year.

Water storage in Victoria



Water storage levels in northern Victoria from 28 October 2002 to 8 November 2007.
Source: Bureau of Rural Sciences

Storage levels in Northern Victoria decreased by 57 GL to 1,982 GL (22.1% of a total capacity of 8,950 GL) in October. This storage level is approximately 887 GL lower than at the same time last year.

Murray-Darling Basin update

- During the month of October, rainfall was below average throughout the southern half of the Basin and close to average in the north. The October inflow for the River Murray System was 187 GL which was slightly lower than September (210 GL) and well below the long term average for October of 1 420 GL.
- According to the MDBC storage levels in Dartmouth Reservoir have risen to 17.9% capacity and releases are now 700 ML/day. Releases from Dartmouth Reservoir will be gradually increased over the next two months to meet the rising demand for water along the River Murray System. From mid November higher rates averaging 4 500 ML/day are planned.
- Hume Dam has decreased to 27.5% capacity. Lake Victoria has decreased to 67% of capacity due to releases to South Australia.

2.2 Irrigation announcements

Announcements for New South Wales irrigators in the 2007/08 season (current at 8 November 2007)

- NSW Department of Water and Energy (DWE) announced on 2 November 2007 that despite inflows being well below average for the months of September and October more water would be made available to the Murray and Murrumbidgee Valleys. High security allocations in the Murrumbidgee Valley were increased from 75% to 80%; and a further 10% of suspended account water from 2006 in the Murray Valley was re-credited, bringing total repayments to 45%.
- DWE announced on the 25 October 2007 further restrictions on the domestic use of groundwater and surface water taken from private works in the Murray Valley. Restrictions now apply to landholders and householders on town water supply and users of bores—the bores draw water from a shallow aquifer connected to the river system and essentially draw water from the same resource. Similar restrictions were announced for the Macquarie Valley on the 6 November 2007.

Announcements for Victorian irrigators in the 2007/08 season (current at 1 November 2007)

- An increased allocation and season extension for the Goulburn and Murray systems was announced by Goulburn-Murray Water on the 1 November (see below). The seasonal allocations in all other systems remained unchanged.
- The increase in seasonal allocations in the Goulburn System is due to small inflows in the upper catchment; and the increase in the Murray System is due to continued modest inflows for the whole system. Broken system customers have continuous access to water ordered for irrigation until 30 November 2007, and then rostered access until the end of the season. The seasonal allocation will be reviewed and possibly reduced if Lake Mokoan is closed by blue-green algae. Due to the low flow, customers in the Loddon and Campaspe Systems have rostered access to water to minimise losses.
- The August to October inflows indicate significant resource improvement is now very unlikely for any system this season. The most optimistic 15 February 2008 seasonal allocations are approximately: 45% of high-reliability water shares in the Goulburn system; and 28% of high-reliability water shares in the Murray system.
- The next allocation announcement will be available on Thursday 15 November 2007.

Water system	High-reliability share (%)	Change (%)
Murray	20	+2
Broken	18	0
Goulburn	29	+3
Campaspe	2	0
Loddon	5	0
Bullarook Creek	0	0

Announcements for South Australian irrigators in the 2007/08 season (current at 30 October 2007)

- With no significant rainfall forecast, allocations are set to remain at 16% until June next year for the Murray River. The Minister for the River Murray, Karlene Maywald, said "The last time we did see anything that looked even remotely like this was back in 1913, 1914 and there wasn't anywhere near the development we've got in the Murray Darling Basin in those days, nor the size of communities that we have now dependant on the system."

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

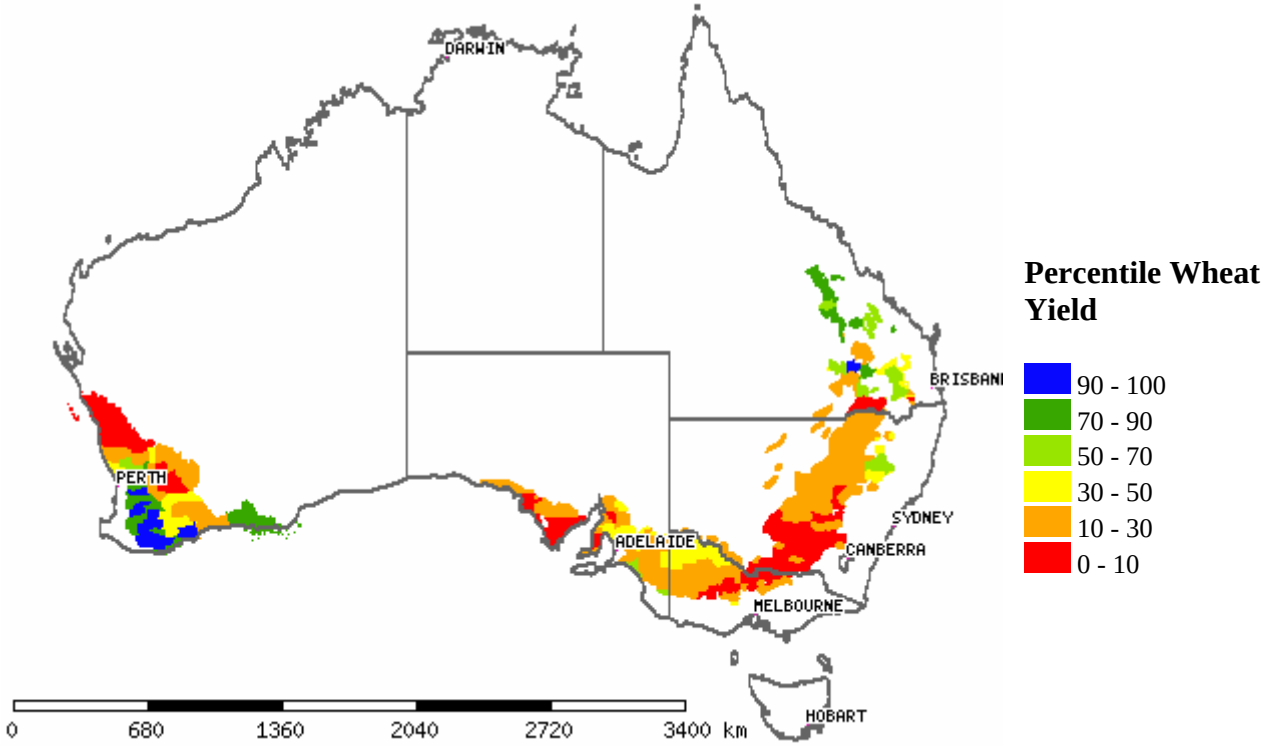
New South Wales Department of Natural Resources
http://www.naturalresources.nsw.gov.au/

SA water
http://www.sawater.com.au/SAWater/WhatsNew/NewsRoom/

3.0 Crop and livestock production

3.1 Crops

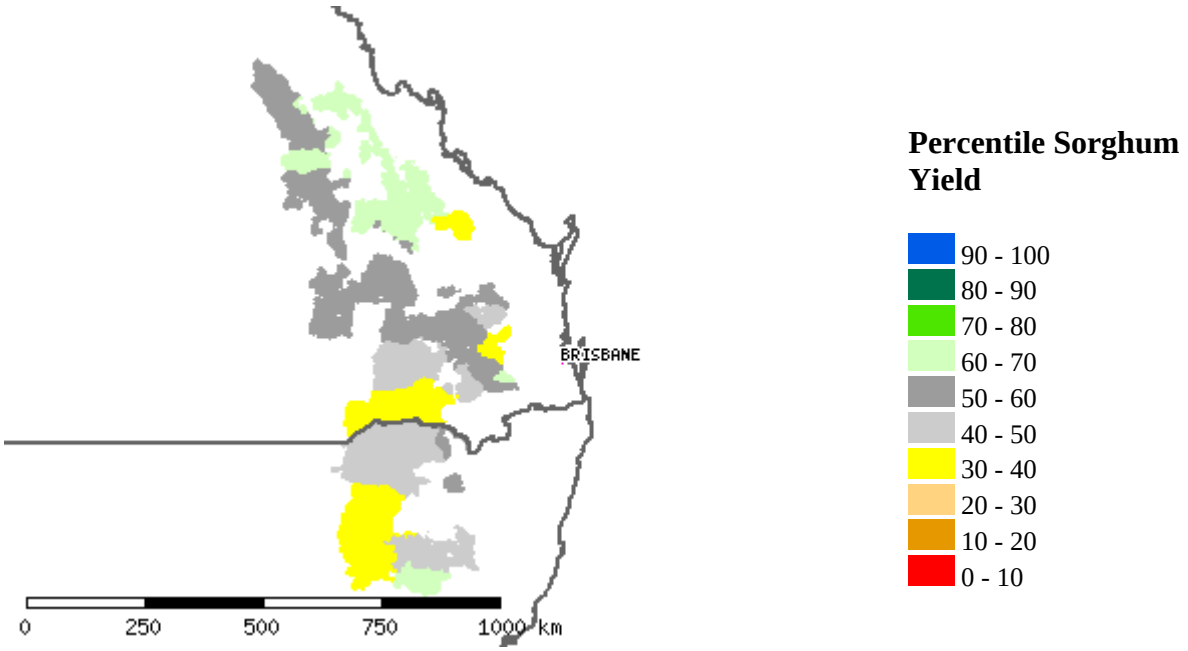
Predicted wheat yields are provided by the Western Australian Department of Agriculture and Food. The following figure shows wheat yield forecasts as percentiles of a 100-year historic data set. For further information on predicted wheat yields, go to www.agric.wa.gov.au/.



Predicted shire wheat yields for the 2007 cropping season ranked relative to all years (1906-2006) based on rainfall to date (31 October 2007) and assuming average rainfall for the remainder of the season

- Current predictions for shire level wheat yields for the 2007 growing season are generally extremely low to well below average for the majority of the wheat belt reflecting the variable start to the 2007 winter cropping season and the lack of within growing-season rainfall. Certain areas of the southern Australia, particularly south-eastern Western Australia and the far northern extent of the wheat belt in Queensland, and a small region in northern New South Wales are predicted to have average to above average yields.

Predicted sorghum yields are provided by the Queensland Government 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.dpi.qld.gov.au/fieldcrops.



Predicted shire sorghum yields for the 2007 cropping season ranked relative to all years (1907-2006) based on rainfall to date (31 October 2007)

- Current predictions for shire level sorghum yields for the 2007/08 growing season are generally below average to above average reflecting the variable conditions at the start of the summer cropping season.
- The New South Wales Department of Primary industries has reported that wheat yield prospects for all crops have continued to deteriorate with virtually no effective rainfall recorded during September and October. Winter crop production is forecast at 2.82 million tonnes, down almost 40% from mid-September estimates of 4.67 million tonnes. The continuing drought conditions have seen many crops with reasonable dry matter and little prospect of filling grain cut for hay or silage. Low dry matter crops with little or no yield prospects have either been grazed or left for harvest due to high grain prices and looming seed shortages for 2008 plantings. In many areas the total grain harvest will be retained on farm. Rain now would benefit only late maturing slopes and tablelands' crops. Prospects for summer crops continue to decline with no significant spring rainfall across the state and little irrigation water available. It is estimated that only 60% of the irrigated cotton crop is currently sown. Planting of the early sunflower crop is almost complete. About 23% of the sorghum crop has been planted. Rainfall is needed to assist crop establishment and enable further plantings to proceed.
- The Victorian Department of Primary Industries reports that winter crops range from very good to un-harvestable with significant variability between regions an also within farms. Overall harvest will be well below average. Rainfall, soil type and time of sowing are the standout factors determining grain yield in Victoria this season.
- The Department of Primary Industries of South Australia reports that harvesting has been underway since mid October on Eyre Peninsula and in the Upper North, with barley, peas and a limited amount of wheat the first to be harvested. Early reports indicate that cereal yields are better than expected; however, grain quality has been variable with wheat generally of better quality in terms of grain size and test weight than barley. Rainfall late in the month brought harvesting to a halt and farmers are now looking for a sustained period of fine weather to allow harvesting to continue without further interruption and to finish crop ripening for immature crops. Widespread frosts in the first half of October affected significant areas of crops in the South East. While recent rainfall will delay harvest and may affect grain quality in ripe/near ripe crops, it should be beneficial to later maturing crops. Total crop area is estimated to be 4.01 million hectares with crop production estimated to be 4.89 million tonnes.
- The Department of Agriculture and Food Western Australia reports that below average rainfall in the north, central and eastern wheat belt regions saw predicted wheat yield fall further over the past month. The outlook for wheat yields continues to be low across most wheat belt shires with the exception of the southern parts of the State. A 10 to 15 mm rainfall event in the north in the third week of September has marginally improved yield potential. In contrast, most of the southern part of the State received reasonable September rain and consequently the forecast of average-to-good yield expectations have continued.
- The Australian Bureau of Agriculture and Resource Economics have taken 3.4 million tonnes off its forecast for wheat, now predicting a total harvest of just 12.1 million tonnes. The combined output of wheat, barley and canola is now 42 per cent below the five year average.

3.2 Livestock

Beef cattle

- Australian Bureau of Agricultural Resource Economics reports that cattle yardings increased during September and remained high throughout the first three weeks of October, as a result of dry conditions and the limited feed available. National yardings of yearling steers and cows in September increased by 12 % compared with last year, and by over 40 % compared with 2005. Compared to early October 2006 there have been more prime quality cattle yarded, suggesting that farmers are moving early to reduce numbers before stock begin to lose condition.
- Meat and Livestock Australia (MLA) reported on the 31October 2007 that the useful rain received across various parts of the eastern states resulted in cattle supply at MLA's NLRS reported saleyards to fall 25%. Most states had reduced supply with NSW and Victoria reduced by 24% and 29% respectively. Queensland on the other hand displayed only marginal changes to be back only 5%. The cow market experienced the largest reductions to supply with 37% less yarded. Vealer steers decreased by 25% and yearlings decreased by 18%; however, the heifer portion increased by 17%.

Sheep and lambs

- MLA reported on the 2 November 2007 that, the good rain across the eastern states tightened yardings and forced increased competition, as buyers lifted prices to fill orders. Despite quality being mixed, national lamb indicators made substantial gains of between 37 and 57¢/kg carcass weight from last week. The national re-stocker indicator finished at $43/head, up $7.10/head, light lambs averaged 258¢/kg carcass weight, while trade and heavy lambs stood at 296¢/kg carcass weight and 275¢/kg carcass weight, respectively.
- At MLA's NLRS reported saleyards, national lamb yardings were 7% below last week and 41% lower than the same time last year. The largest fall to numbers was registered in SA, which dropped 15%, while Victorian yardings were down 9%, and NSW tightened 3% from last week.
- Lamb quality remained mixed, with a definite weakening in Bendigo, as more dry skinned and seed infected new season lambs were penned. Ballarat, however, reported one of its best offerings of trade and heavy weight lambs for this season. South Australian quality was generally good in the south of the state, yet further north at the South Australian Livestock Exchange, only an average quality yarding was offered. New South Wales yarded fair to good quality, except in the central regions, as increased numbers were unfinished and had dry seedy skins.
- Rain also reduced sheep yardings 16% from last week, and 32% on the same time last year. The biggest reduction was in New South Wales, which fell 43%, while Victoria eased 32% on last week. Mutton demand was very solid, with the national mutton indicator finishing at 117¢/kg carcass weight, which was 20¢/kg carcass weight more than last week, and 56¢/kg carcass weight greater than last year.

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

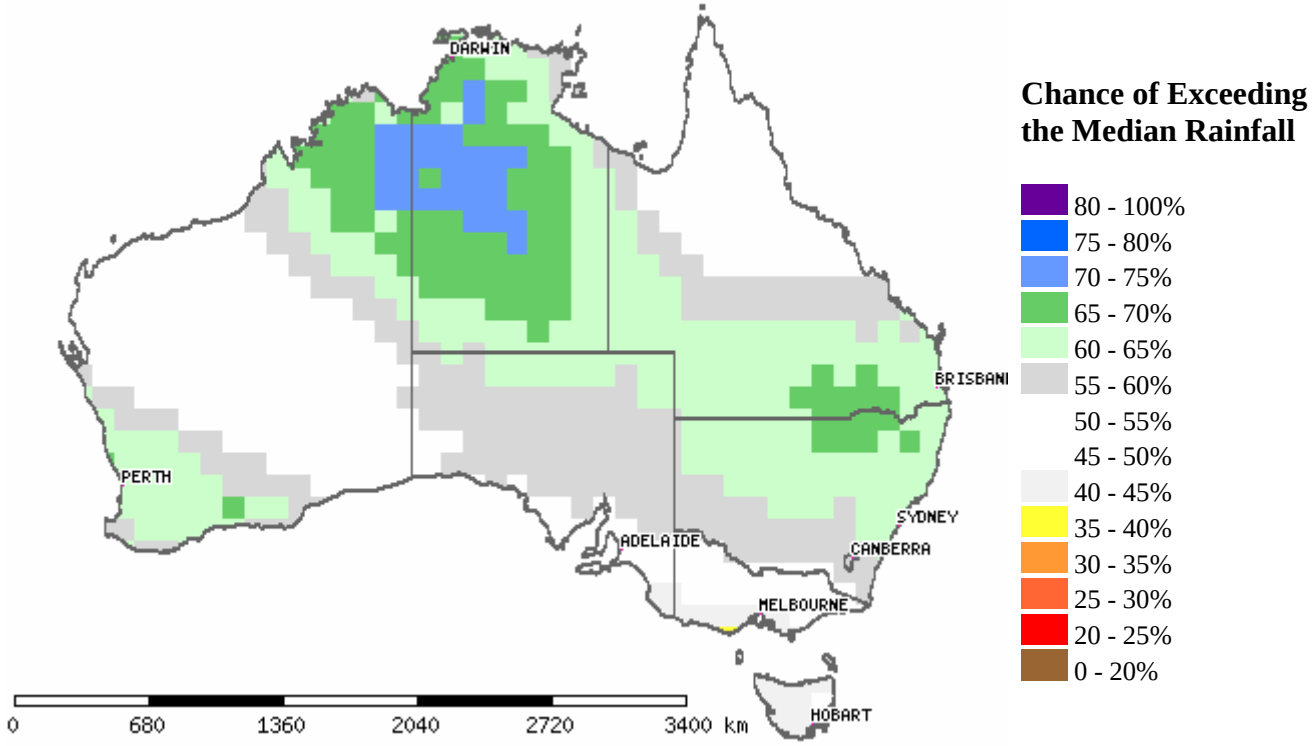
Queensland Department of Primary Industries and Fisheries
http://www.dpi.qld.gov.au/fieldcrops/

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 November 2007 and January 2007

The national outlook for total rainfall over the late spring to mid-summer period (November to January), shows a moderate to strong shift in the odds favouring above average falls from northern Western Australia, the Northern Territory to southern Queensland and northern New South Wales. A wetter season is also favoured in south-west Western Australia, although it is generally a dry time of year in this part of the country.

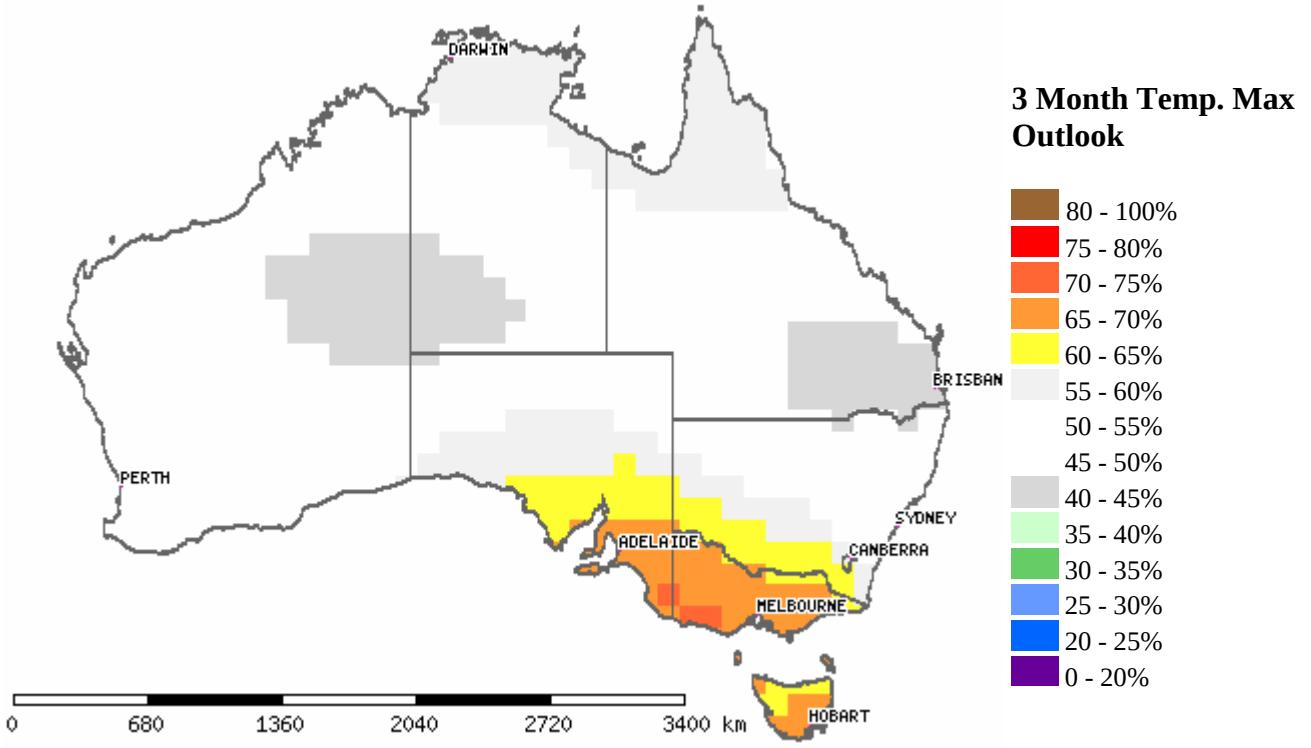
4.2 El Niño & Southern Oscillation Index

In its latest update on 24 October the Bureau of Meteorology reported that a La Niña event is well established in the Pacific. The main characteristics are colder than average temperatures along the Equator both on and below the surface, stronger than average Trade Winds and reduced cloudiness in the equatorial Pacific. The Southern Oscillation Index (SOI) is the only ENSO indicator that is yet to show a typical La Niña signal—it remains neutral at about +1 for the past 30 days. Computer models forecast the La Niña to last until at least early 2008.

However, 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 such a late-developing La Niña, the associated Australian rainfall response may differ from past episodes.

Moreover, Australia's climate over recent months has been influenced by the unusually cool ocean temperatures to the north, and particularly north-west, of the continent. A marked cooling trend began in June when, historically, these waters would have been expected to warm as the La Niña evolved in the Pacific. These cooler than normal waters inhibit the formation of north-west cloud bands, which are a major source of winter and spring rain for central and south-eastern Australia during La Niña years. During October there has been a slight warming of the ocean to the north and northwest of the continent.

4.3 Temperature Outlook

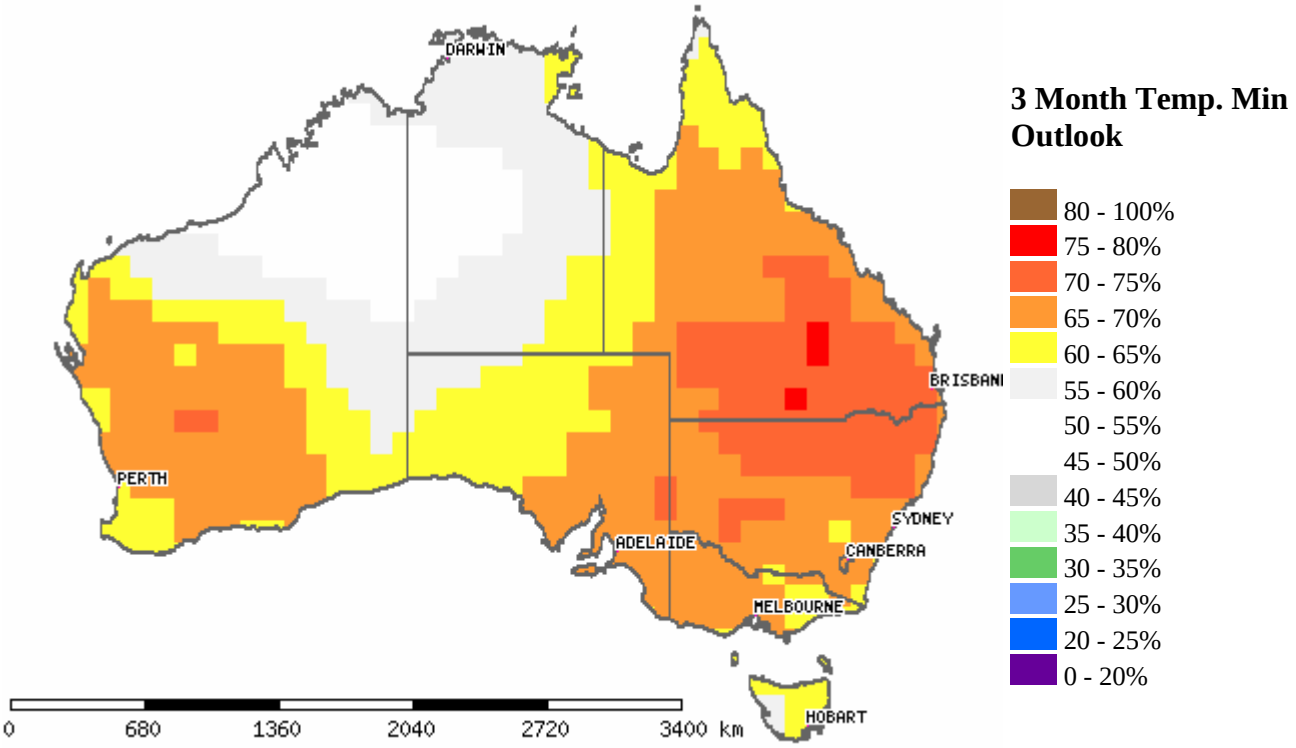


The chance of exceeding median maximum temperatures between November 2007 and January 2007

The national outlook for maximum temperatures averaged over the late spring to mid-summer period (November to January) shows a moderate to strong shift in the odds favouring warmer than average conditions in south-eastern Australia, including Tasmania

The pattern of seasonal temperature odds across Australia is mostly a result of continuing higher than average temperatures over parts of the tropical and sub-tropical Indian Ocean.

Averaged over the November to January period, the chances are between 60 and 70% for above-normal maximum temperatures over Tasmania, Victoria, southern New South Wales and the southern half of South Australia (see map). In a few small patches in western Victoria and southeast South Australia the chances approach 75%.



The chance of exceeding median minimum temperatures between November 2007 and January 2007

Minimum temperatures for the November to January period are likely to be warmer than normal across much of the country. The chances of increased overnight warmth (averaged over the coming three months) over Queensland, New South Wales, Victoria, Tasmania, most of South Australia and the southern half of Western Australia are mainly between 60 and 70%. A substantial part of southern Queensland and northern New South Wales has values in the 70 to 75% range.

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