NAMS
NATIONAL AGRICULTURAL MONITORING SYSTEM

Climate and Agricultural Update

National Report

Issued January 2008

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Contacts

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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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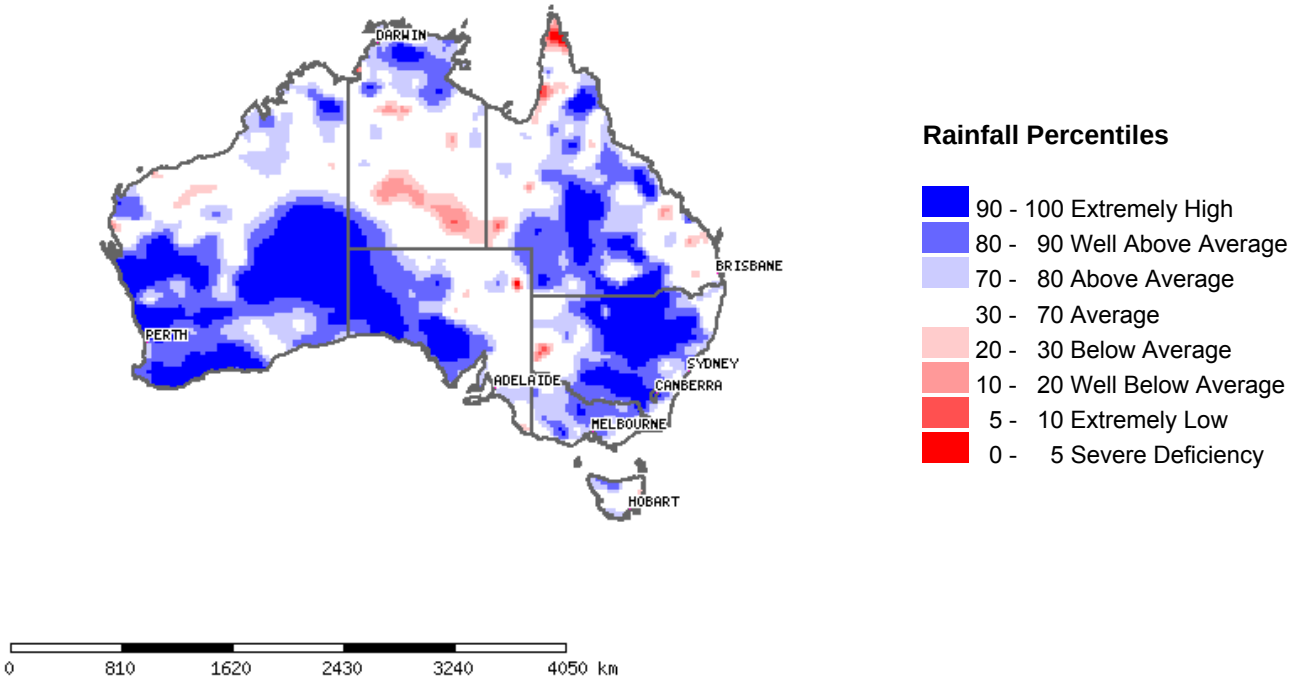
1.0 Rainfall and temperature

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 (December 2007)

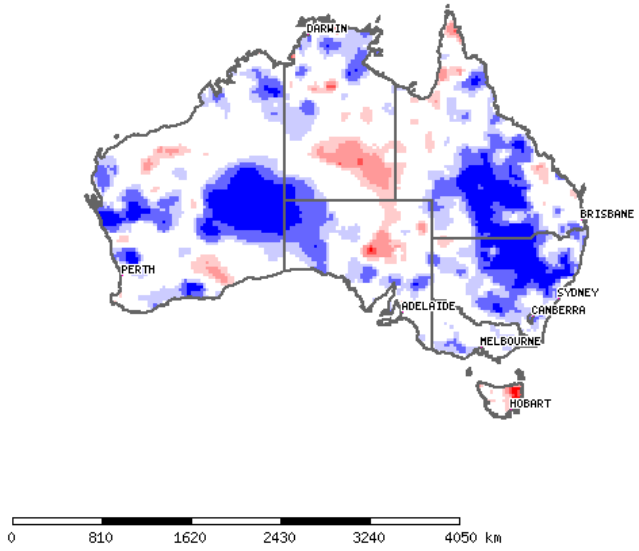


Rainfall percentiles for December 2007

Rainfall was generally average to above average over much of the country, with above-average rainfall in all states and territories. The highest totals were recorded in northern Australia, eastern Western Australia (WA) and in eastern Australia, where the short-term deficiencies were alleviated. Large areas in New South Wales (NSW) and central and southern Queensland (QLD), and in the southern half of WA into South Australia (SA), had extremely high falls. Furthermore, a large area in the northern NSW recorded highest on record falls for the month. Above average falls were also recorded in the northern parts of the Northern Territory (NT) and WA, in Victoria and western Tasmania. As a whole, Australian rainfall was 40% above average for the month with all states and territories being wetter than average. WA and NSW were 84% and 77% wetter than average respectively.

Very few parts of Australia recorded below average rainfall — an area in southern NT, and small areas in the west of NSW and southeast of QLD. Notably, northern Cape York Peninsula was the only area to record very much below average rainfall, with a small area recording lowest on record falls.

Ongoing or emerging rainfall situations



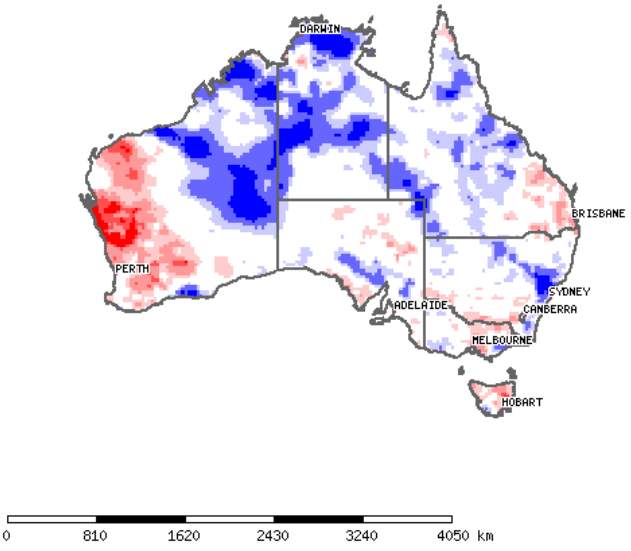
Rainfall Percentiles

90 - 100 Extremely High
80 - 90 Well Above Average
70 - 80 Above Average
30 - 70 Average
20 - 30 Below Average
10 - 20 Well Below Average
5 - 10 Extremely Low
0 - 5 Severe Deficiency

Rainfall percentiles for the last three months of 2007

(October – December)

During the last 3 months of 2007, above average rainfall was recorded in a large band extending from central and southern QLD to central-north and central-east NSW. Above average rain was also recorded in central-east, central-west and northern WA, to the north of Adelaide in SA, in the north of NT and in the south of Victoria. In contrast, below average to extremely low rainfall was recorded in the south of NT, in the central and northern SA, and in the north-east of Tasmania. Some areas with below average rain occurred in the north-west of WA and in far north QLD.



Rainfall Percentiles

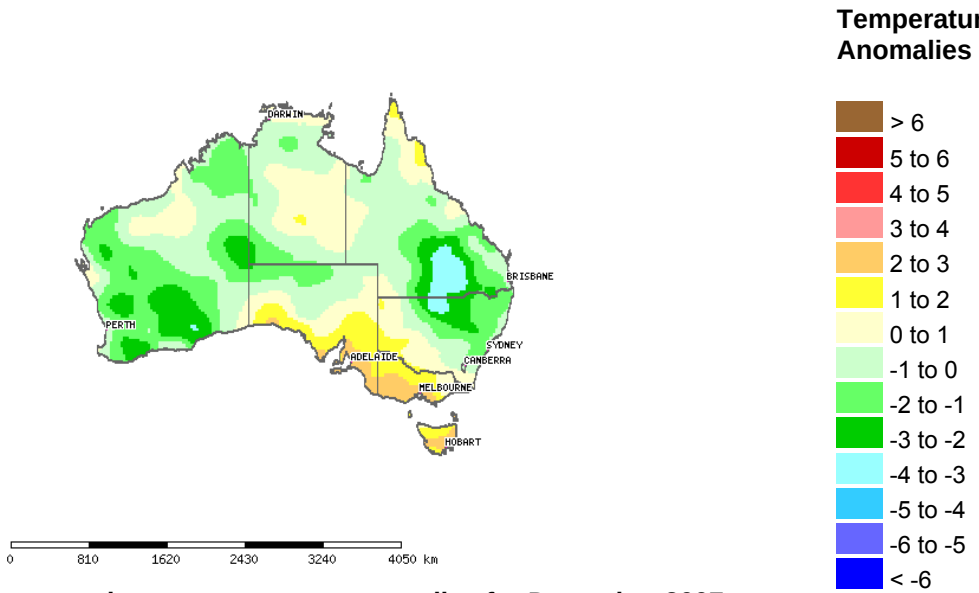
90 - 100 Extremely High
80 - 90 Well Above Average
70 - 80 Above Average
30 - 70 Average
20 - 30 Below Average
10 - 20 Well Below Average
5 - 10 Extremely Low
0 - 5 Severe Deficiency

Rainfall percentiles for 2007 (January – December)

Twelve-month rainfall deficiencies continued to weaken last month, especially in the south-east of the country. Overall, rainfall was average to above average across northern and central Australia and average to below average in the south-west, with mixed outcomes in the south-east. Below average to severely deficient rainfall in the far west and patchy rainfall across southern and eastern Australia means that long-term droughts persist in these areas, including the Murray Darling Basin, most of Victoria and northern Tasmania.

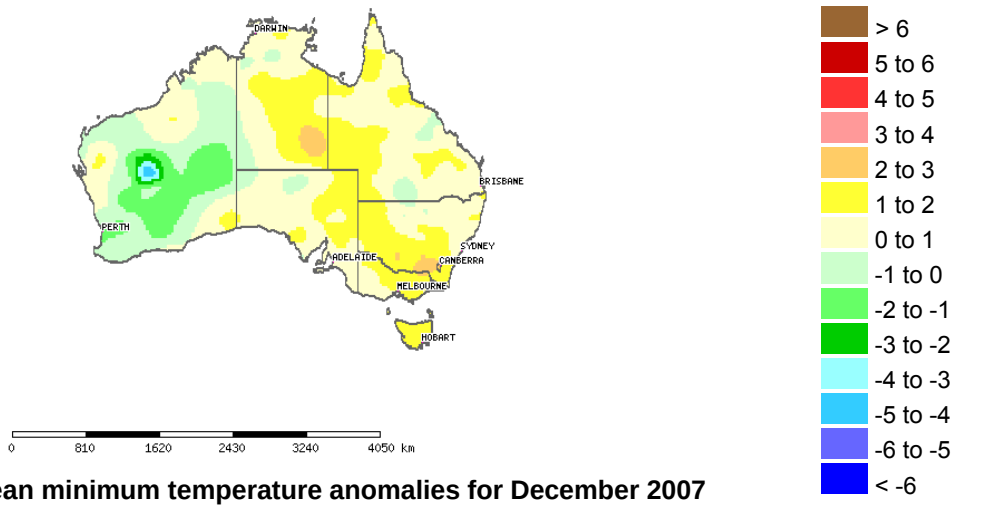
1.2 Maximum and minimum temperature anomalies

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 December 2007

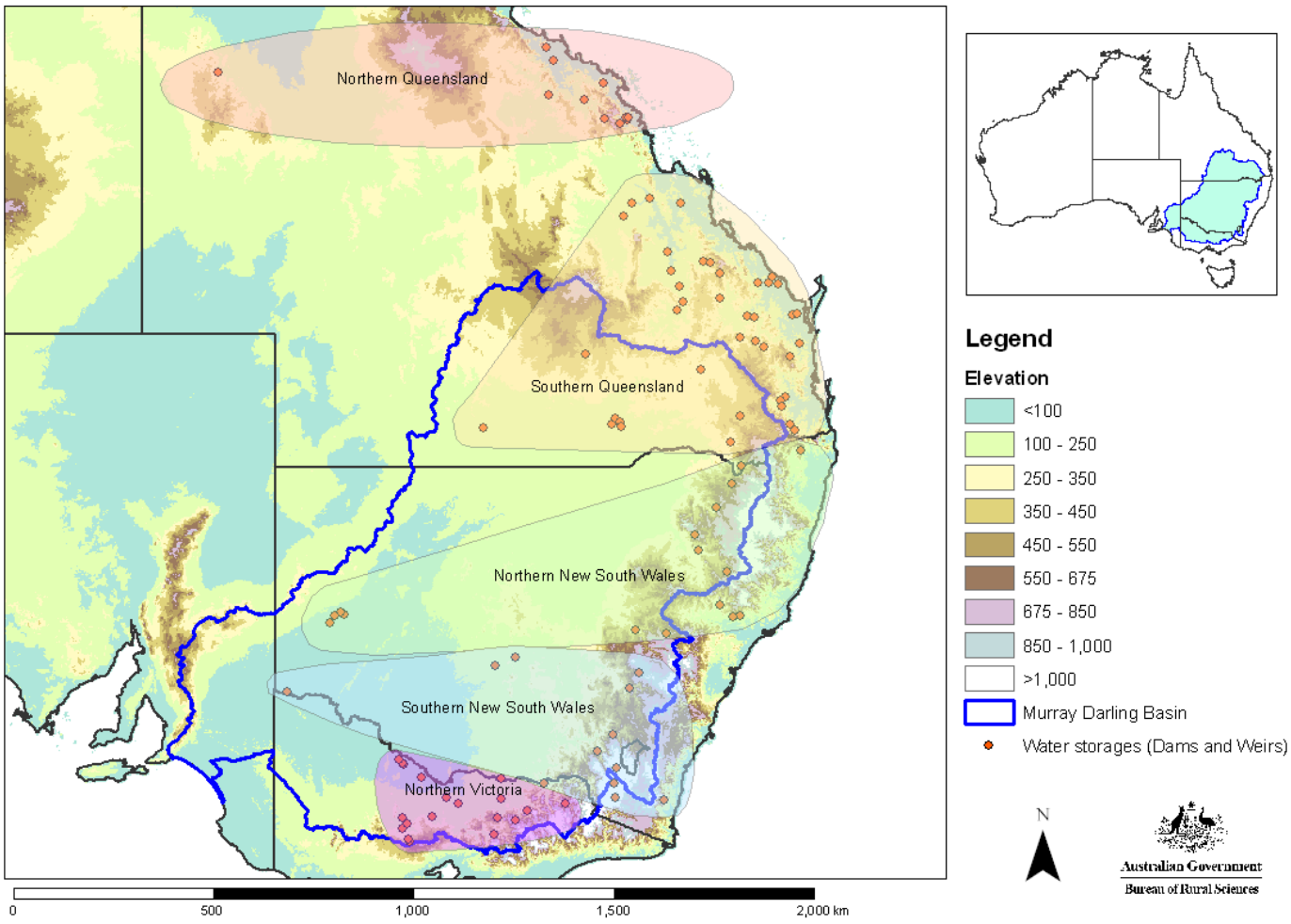
Daytime maximum temperatures were below average throughout much of the continent, except for the southern central and eastern parts which recorded above average daytime temperatures. Anomalies of −2 to −3°C were widespread over southern WA, while southern QLD and northern NSW recorded mean maximum anomalies down to −4°C over a wide area. Much of WA and southern QLD into northern NSW recorded very much below average temperatures (decile 1) and it was the sixth coolest December on record for WA. Southwest Victoria and much of Tasmania recorded very much above average (decile 10) temperatures, making it the third warmest December on record for the Victorian state.



Monthly mean minimum temperature anomalies for December 2007

Anomalies of overnight minimum temperatures showed a somewhat different pattern to those of daily maxima, with weak warm anomalies generally in the central and eastern parts and cool anomalies over much of WA. Anomalies between +1 and +2°C covered much of Tasmania, Victoria, NSW, and the NT, with areas of very much above average minimum temperatures in southern NT, Tasmania, central Victoria and southern NSW. The extreme northern coast of Tasmania recorded highest on record minimum temperatures for the month, making it the fourth warmest December on record for Tasmania. In contrast much of WA was below average with a small area of overnight anomalies below −3°C.

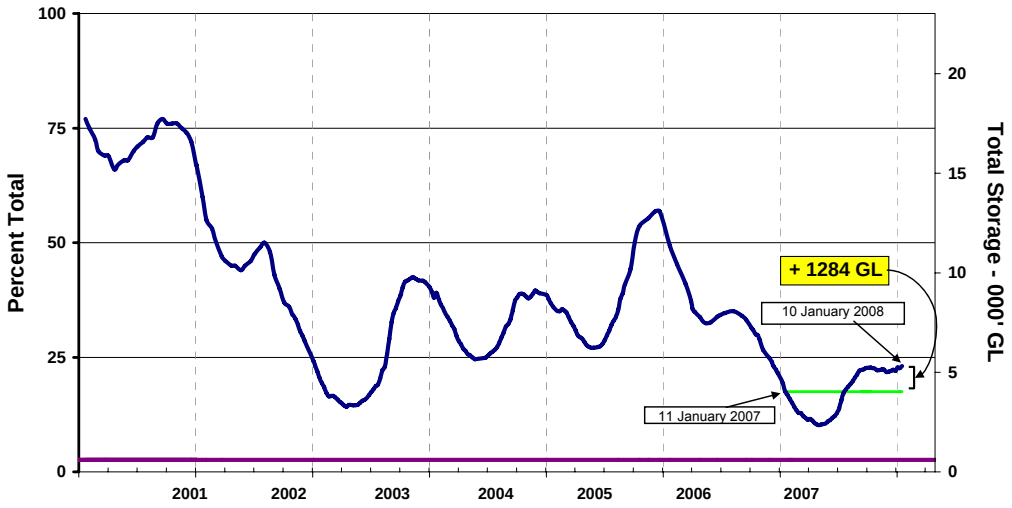
2.0 Water storages and allocations



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 10 January 2008)

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

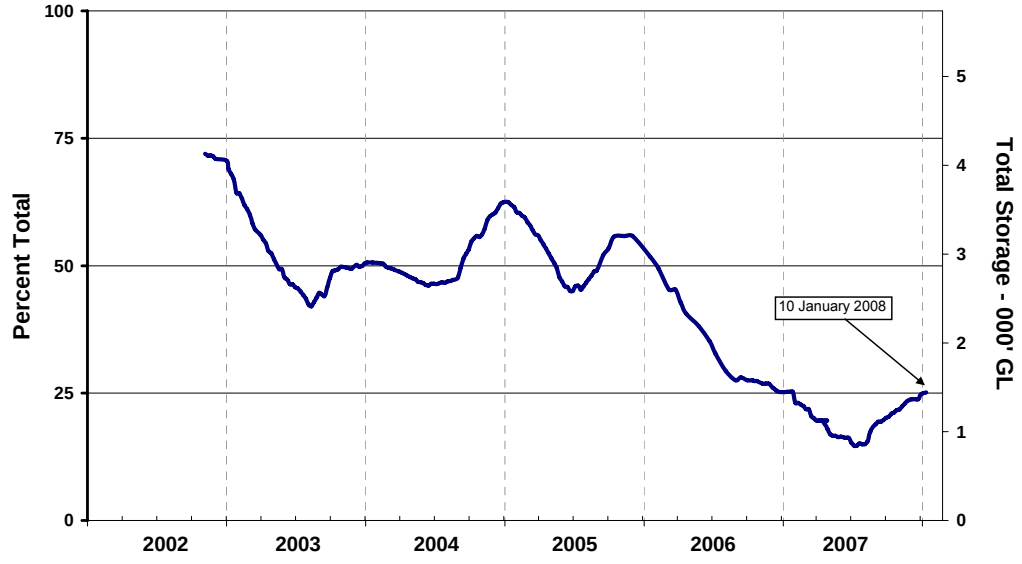


Water storage levels in the Murray-Darling Basin from 1 January 2001 to 10 January 2008.
The green line indicates the storage level at the same time last year.
Source: Bureau of Rural Sciences.

Over the past 2 months the storage levels within the Murray-Darling Basin have remained relatively stable, with releases being virtually matched by inflows. At 10 January 2008 storage levels for irrigated agriculture were at 5,312 GL (23.1 % of a total capacity of 23,020 GL), an increase of 178 GL (0.8 % of total capacity) over the month. Current storage levels are approximately 1284 GL greater than at the same time last year.

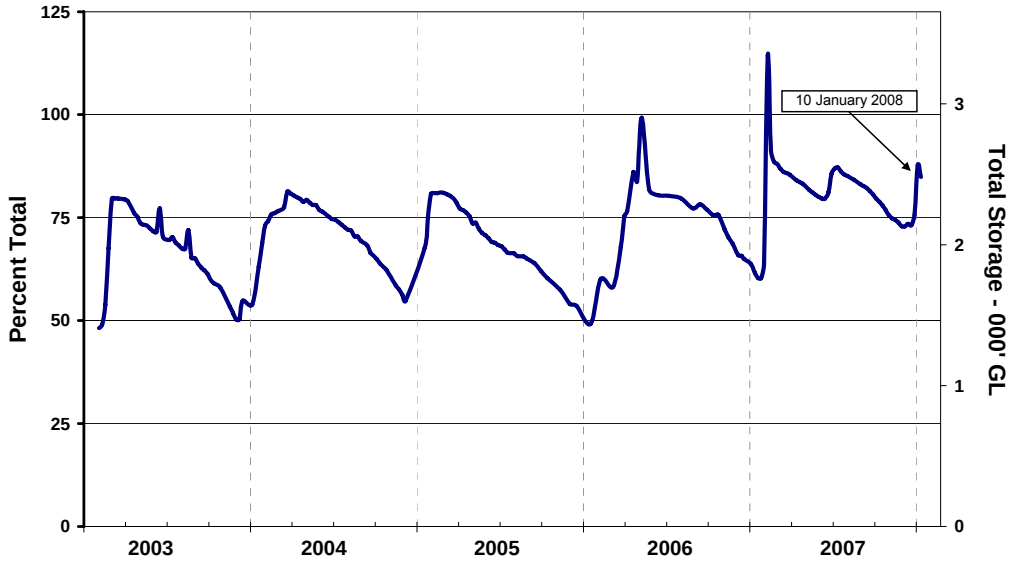
The storage levels above do not include the capacities of Lake Eucumbene, Tantangara Reservoir and Lake Jindabyne which are reserved for hydro-electricity generation and irrigation purposes — collectively The Snowy Scheme. Current levels in these storages are 1,444 GL (25 % of a total capacity of 5,744 GL).

Water storage in the Snowy Scheme



Water storage levels in the Snowy Scheme from 6 November 2002 to 10 January 2008.
Source: Bureau of Rural Sciences

Water storage in Queensland



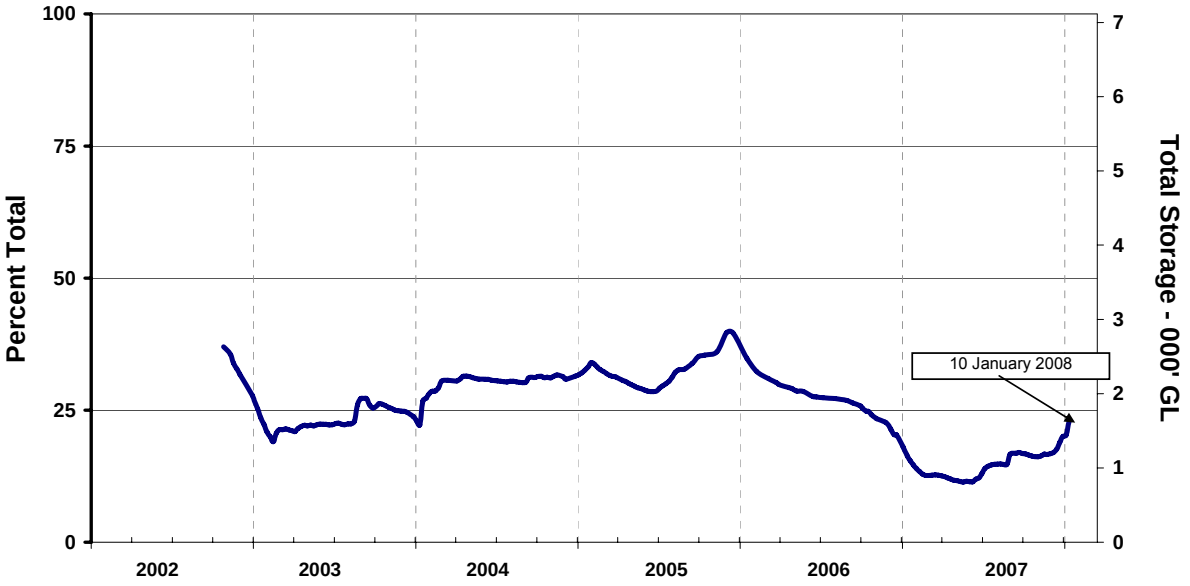
Water storage levels in northern Queensland from 3 February 2003 to 10 January 2008.
Source: Bureau of Rural Sciences

Storage levels in northern QLD increased by 365 GL to 2,716 GL (84.9% of a total capacity of 3,199 GL) over the last month. This storage level is approximately 745 GL higher than at the same time last year.

Water storage levels in southern Queensland from 3 February 2003 to 10 January 2008.
Source: Bureau of Rural Sciences

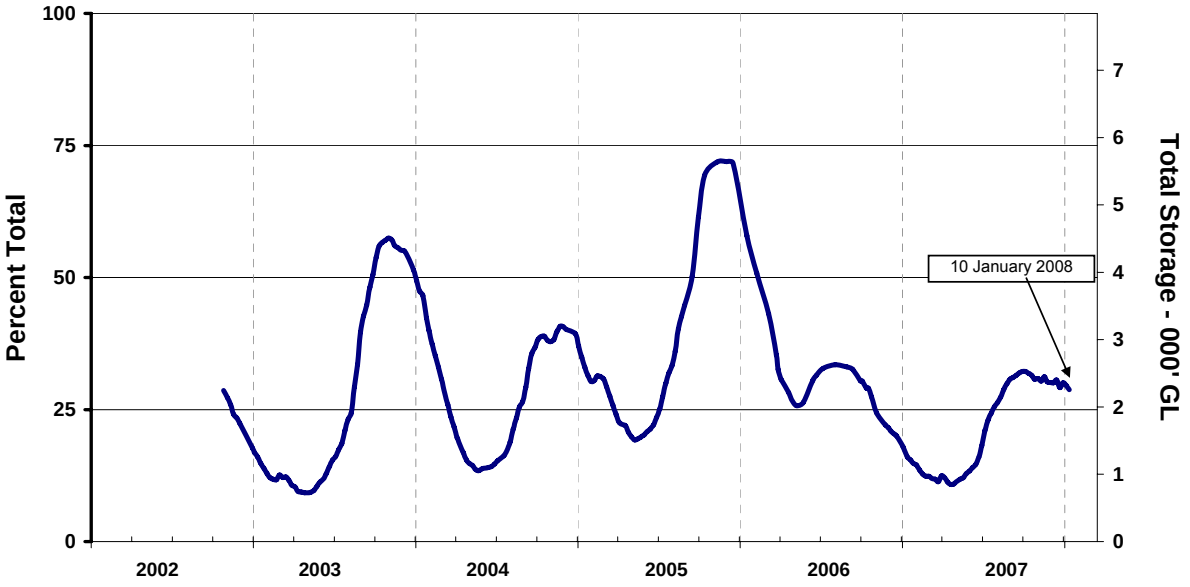
In southern QLD storage levels increased by 160 GL to 1,509 GL (35.9% of a total capacity of 4,203 GL) over the last month. This storage level is approximately 487 GL higher than at the same time last year.

Water storage in New South Wales



Water storage levels in northern New South Wales from 28 October 2002 to 10 January 2008.
Source: Bureau of Rural Sciences

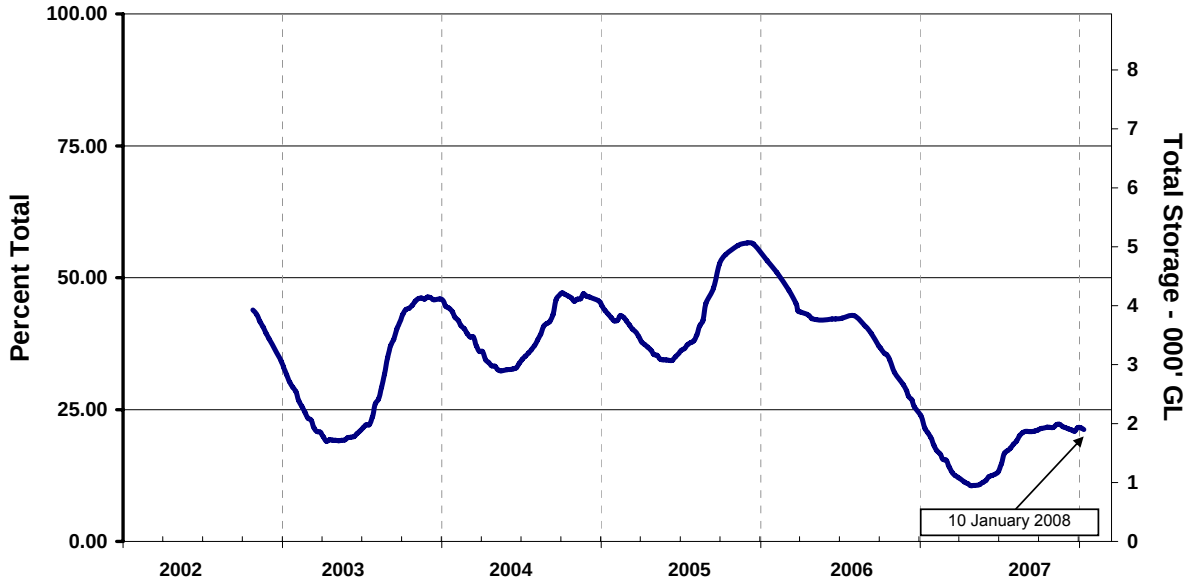
Storage levels in northern NSW increased by 383 GL to 1,635 GL (23% of a total capacity of 7,114 GL) over the last month. This storage level is approximately 472 GL higher than at the same time last year.



Water storage levels in southern New South Wales from 28 October 2002 to 10 January 2008.
Source: Bureau of Rural Sciences

In southern NSW storage levels decreased by 144 GL to 2,256 GL (28.8% of a total capacity of 7,844 GL) over the last month. This storage level is approximately 998 GL lower than at the same time last year.

Water storage in Victoria



Water storage levels in northern Victoria from 28 October 2002 to 10 January 2008.
Source: Bureau of Rural Sciences

Storage levels in northern Victoria decreased by 11 GL to 1,900 GL (21.2% of a total capacity of 8,950 GL) over the last month. This storage level is approximately 22 GL lower than at the same time last year.

Murray-Darling Basin update

- There was significant rainfall across the Murray-Darling Basin prior to Christmas. In central NSW there was rainfall in excess of 100 mm which caused significant increases in flow in the Darling River. The NSW Department of Water and Energy has estimated that about 300 GL of this water will reach the Menindee Lakes and in response they will release water into the lower reaches of the Darling River in early January.
- The rain in the southern part of the basin was sufficient to produce the highest daily inflow to the River Murray System since July 2007. Despite only increasing overall storage volume by 30 GL, the continuing inflow from tributaries, the rain on the river and the low evaporative loss have increased overall water availability by approximately 150 GL since mid December. The increase has led to the recent allocation increase to Victorian Murray Water users and the provision of additional water to the Wakool River System west of Deniliquin (see Water Announcements below).

2.2 Water announcements

Announcements for New South Wales (current at 15 January 2008)

- The NSW Minister for Emergency Services and Water Utilities announced an increase in water allocations and releases in regional NSW on 3 January 2008, due to heavy pre-Christmas rain. Irrigators in the Barwon – Darling River can now access up to 10% of water in their accounts. Reasonable inflows passing the length of the Barwon – Darling River to the Menindee Lakes will allow an allocation of 100% of entitlement for high security users in the Lower Darling River for 2007-08.
- The NSW Department of Water and Energy announced on the 15 January that in the Murrumbidgee Valley inflows have been well above those in 2006 and are close to the long-term average. As a result, General Security allocations have been increased by 6% to 9% for this water year. High Security allocations remain at 90%. In addition, water has been diverted into some wetlands in the lower reaches of the river for maintenance of threatened species. In the Murray Valley, inflows have been sufficient to allow for a further 10% of water suspended in 2006 to be re-paid to accounts, bringing the total repaid to 65%.
- On 4 January temporary water restrictions for basic landholder rights on the Barwon – Darling River (upstream of Lake Wetherell), and general security licences on the Macquarie – Cudgeong were revoked. On 4 January a temporary water restriction order for generally security users on the Lachlan River, limiting users to 40% of entitlement, was invoked.

Announcements for Victoria (current at 2 January 2008)

- An increased allocation for the Goulburn, Murray, Broken and Campaspe systems was announced by Goulburn-Murray Water on the 2 January 2008 (see below). The seasonal allocations in all other systems remained unchanged.
- The increase in seasonal allocations was largely due to widespread rainfall in Northern Victoria in the week prior to Christmas. The intensity and depth of rainfall produced greater than expected inflows to many of the water systems and storages.
- Using recorded inflows as a guide to the most likely summer inflows, the final 2007/08 seasonal allocations are approximately: 45-58% of high-reliability water shares in the Goulburn system; and 33-39% of high-reliability water shares in the Murray system. Goulburn Murray Water reports that the seasonal allocations will not fall below current levels; however, allocations may increase due to lower than predicted evaporation rates and efficiency improvements in river and channel operations.
- Carry over of unused allocations has been introduced as a permanent measure to manage water resources. Irrigators are encouraged to implement such management practices due to the likelihood of zero allocations at the start of the next season.
- The next allocation announcement will be available on Monday, 15 January 2008.

Water system	High-reliability share (%)	Change (%)
Murray	33	+5
Broken	48	+19
Goulburn	45	+6
Campaspe	10	+5
Loddon	5	0
Bullarook Creek	0	0

Announcements for South Australia (current at 5 December 2007)

- Premier Mike Rann and Minister for the River Murray Karlene Maywald announced on 5 December that South Australian River Murray water allocations will be lifted to 32% for 2007/08. The lift in allocations has been made possible by higher than expected inflows into the Murray-Darling Basin and its storages, along with lower than expected losses and increased releases from the Snowy Hydro Scheme.

- Water allocations were lifted to 22% from 1 December. This further 10% increase is the largest so far in 2007/08 but still well short of the 60 % irrigators received in 2006/07. Mr Rann, who visited irrigators in the Riverland with Minister Maywald, says the revised allocation is effective from 14 December.
- Carry-over water will be available for the 2007/08 water year, allowing water to be carried forward into the 2008/09 year.

For further information on water announcements, go to:

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

Goulburn-Murray Water
http://www.g-mwater.com.au/news/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

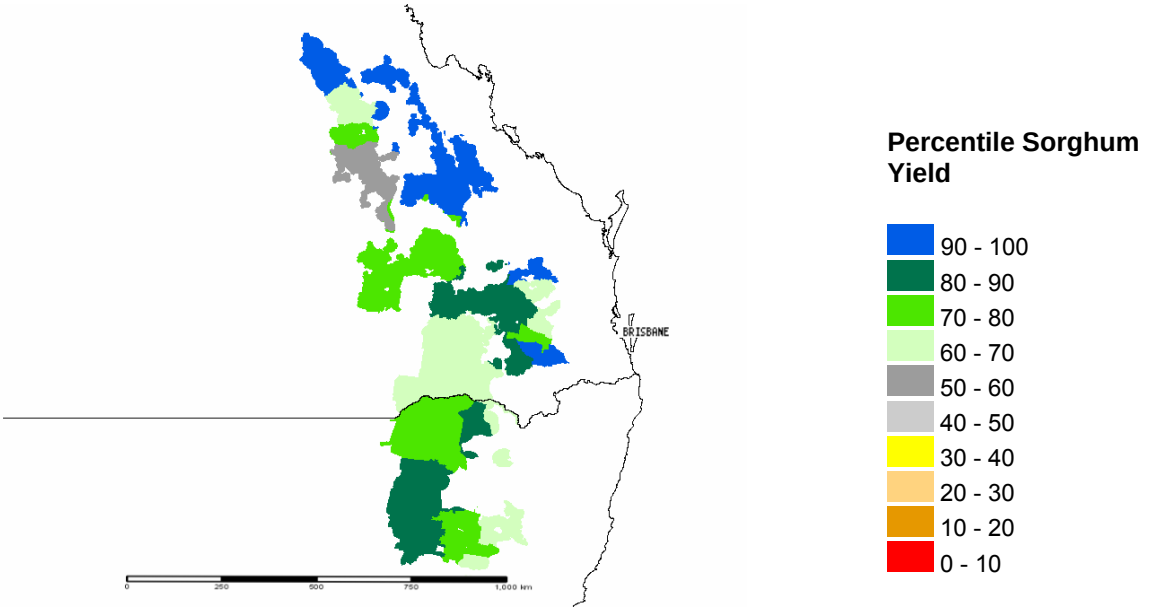
3.1 Crops

Winter Crops

- In its quarterly report released on 10 January 2008, the Australian Bureau of Agriculture and Resource Economics has added 0.6 million tonnes to its forecast for wheat in the last month, now predicting a total harvest of 12.7 million tonnes which is still well below average. Barley production is estimated to be higher than the 2006/07 crop but is still expected to be around 36% below the five year average at 5.5 million tonnes. Canola is estimated at 931 000 tonnes and despite an increase from 2006/07 figures, this is still well below average.
- In NSW, winter crop production for 2007/08 is forecast at 2.44 million tonnes, dropping from November estimates of 2.99 million tonnes. Substantial winter cropping areas were cut for hay as producers realised that crops were unlikely to produce harvestable amounts of grain. Wheat production for NSW in 2007/08 is estimated to be 1.75 million tonnes, compared to the 2.1 million tonnes harvested in 2006/07. The canola harvest for 2007/08 is estimated at 40 000 tonnes, which is well below average. Mixed outcomes for crops in central and northern NSW resulted from variable rainfall during the growing season. Areas west of the Newell highway in southern NSW generally had low rainfall, resulting in poor yields in many parts and in addition yields throughout southern NSW are expected to be well below average.
- WA is expected to produce a total winter crop of almost 9 million tonnes, up 1 million tonnes from last month's prediction—this is a 19% increase from the previous 2006/07 season. Wheat estimates are up from last month to 5.8 million tonnes, while barley remains at close to two million tonnes. Canola crops are estimated at 475 000 tonnes, a 30% increase from the previous season. Production was below average in the northern region but despite this, was of a high quality. In the southern and central regions, seasonal conditions were more favourable and crop yields are expected to be average to above average.

Summer Crops

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 December 2007)

- Current predictions for shire level sorghum yields for the 2007/08 growing season are generally above average reflecting the above average rainfall conditions during December.

- NSW summer crop forecasts from ABARE for grain sorghum production in 2007/08 are at 755 000 tonnes, a 61% increase from 2006/07 tonnage. Cotton seed and cotton lint are forecast to fall by 68% from the 2006-07 season to 100 000 tonnes and 71 000 tonnes respectively in 2007/08.

3.2 Livestock

Beef cattle

- Due to the improved outlooks for pasture and summer crops, there was increased competition for young cattle by re-stockers in the saleyards during December in eastern states. The first sale week of 2008 in NSW saw numbers down more than 50% compared to the previous year, with grown cattle in short supply in most areas. The trend is national, with 64% of national yardings being young cattle, and as was the case last year, cows accounted for almost half of the grown cattle at saleyards. There has been mixed quality at the saleyards; however, there is improving numbers of finished cattle due to the better outlooks for the season as a result of the good rain in December. As rainfall and mild temperatures have recently been favourable, particularly during Christmas and the New Year, producers have been able to delay selling in the eastern states.
- Anthrax has spread further into the Upper Hunter of NSW—this spread of disease has cost a small number of graziers thousands of dollars in cattle losses and has prevented stock moving to the saleyards.
- Beef cattle numbers in WA saleyards in the first sales of 2008 have been up on the last sales in December 2007, as feed prices remain high, seasonal conditions are poor and producers are attempting to offload stock. Many lot-feeders have decided not to feed cattle after receiving poor contract prices, and with grain costs at all-time highs, prices need to be close to $4/kg (dressed) for producers to avoid making significant losses this year. Grain-fed beef is tipped to be in short supply in WA throughout autumn and winter, with estimates for the number of cattle on feed to be halved this year. Prime condition slaughter cattle remained in relatively limited supply irrespective of the market location with short supplies of heavy and trade weight steers and heifers available. Vealer supplies remain solid coming into the new year, but agents have indicated that this will drop away as we enter February.

Sheep and lambs

- Due to favourable conditions throughout the majority of lamb producing areas over the last month, the national average carcase weights surged to a record high with some overweight and over-conditioned lines presented in eastern states. Widespread rain for eastern states in December made it foreseeable for producers to grow out lambs, which is reflected in the saleyards where yarding numbers were lower for the first sales of January compared to the pre-Christmas sales in December of 2007. The sheep supply market has tightened as producers plan to consolidate flocks and take advantage of the better pastures resulting from December rainfall. Compared to the opening week of sales in 2007, lamb supply was 7% lower and sheep yardings were 13% lower than the first sales of 2008 in NSW.
- During the first two weeks of December in WA re-stocker lamb numbers were 59% below the same time in December 2006 with 79% of light lambs returning to the paddock. Sheep offerings were reduced also, with 16% less offerings than the same time in 2006. Producers are making the decision to run only dry ewes in 2008, as they attempt to maintain their flock numbers. Conditions in the south-west of WA have varied greatly across the state during the Christmas period. Areas north of Perth have stocking levels at historic lows. Water levels in dams continue to be a problem for many producers in eastern areas of WA and carting has commenced with any surplus stock now being offloaded.

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

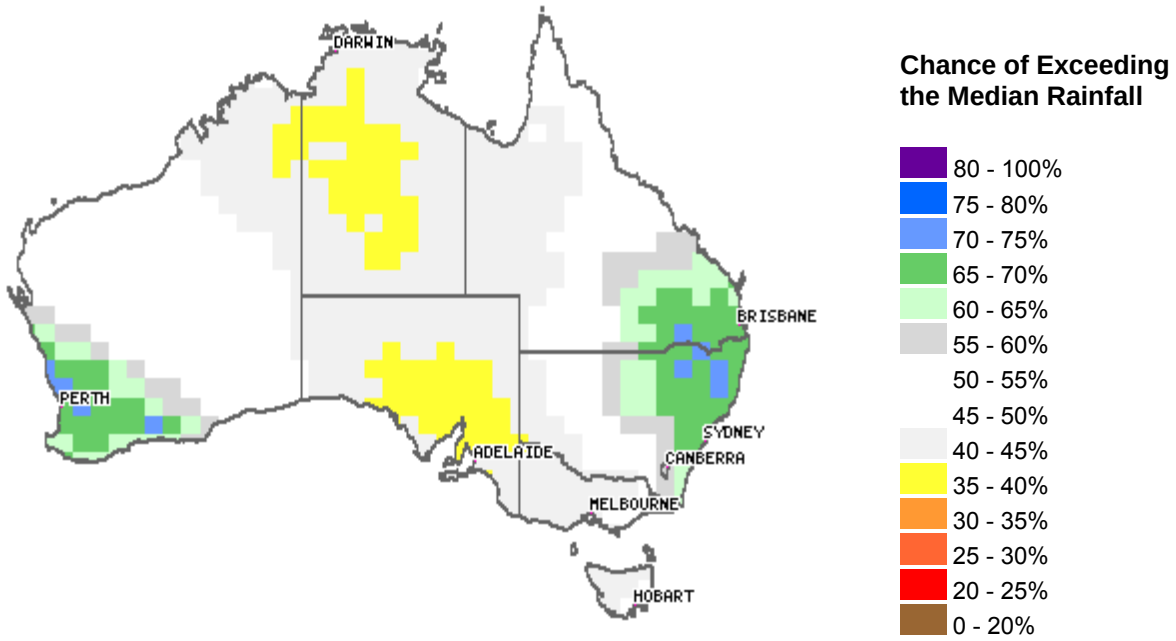
4.1 El Niño & Southern Oscillation Index

In its latest update on 2 January 2008 the Bureau of Meteorology reported that a La Niña event is firmly established in the Pacific, strengthening over the past month and contributing to the enhanced eastern Australian rainfall since November. One of the main features of the event is that cooler than average Sea Surface Temperatures (SSTs) now extend further west along the equator than at any time since 2000, while warmer than average SSTs surround northern Australia. Trade Winds remain enhanced and cloudiness continues to be suppressed along much of the central equatorial Pacific—both indicators of the now mature event. While sub-surface temperatures remain cooler than normal in the east, some warming has occurred in the western regions. The December 2007 Southern Oscillation Index (SOI) of 14.4 is the highest monthly SOI value since April 2006, and the monthly rainfall totals were above-average in all states and territories. Although some computer models suggest that the event is nearing its peak, most continue to indicate the persistence of cool Pacific Ocean temperatures, consistent with a La Niña, until at least autumn 2008.

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.

4.2 Rainfall Outlook

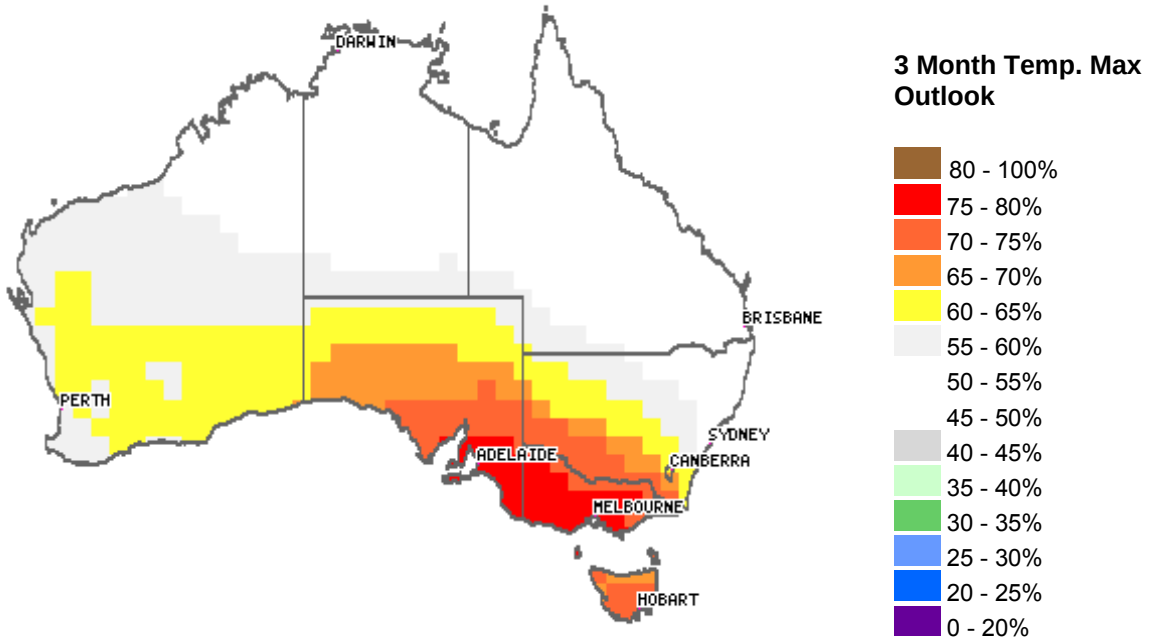
The Bureau of Meteorology provides seasonal outlooks that are statements about the probability of wetter or drier than average weather over a three-month period. The outlooks are based on the statistics of chance (the odds) taken from Australian rainfall/temperatures and sea surface temperature records 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 January 2008 and March 2008

The national outlook for total March quarter rainfall (January to March), shows mixed odds for exceeding the seasonal median. There are moderate to strong shifts favouring above average totals in parts of eastern and south-western Australia, while a drier season is favoured in some areas through the middle of the continent. The pattern of seasonal rainfall odds across Australia is a result of cooling across the equatorial Pacific in association with La Niña, and continuing higher than average temperatures in the central to south-eastern Indian Ocean.

4.3 Temperature Outlook

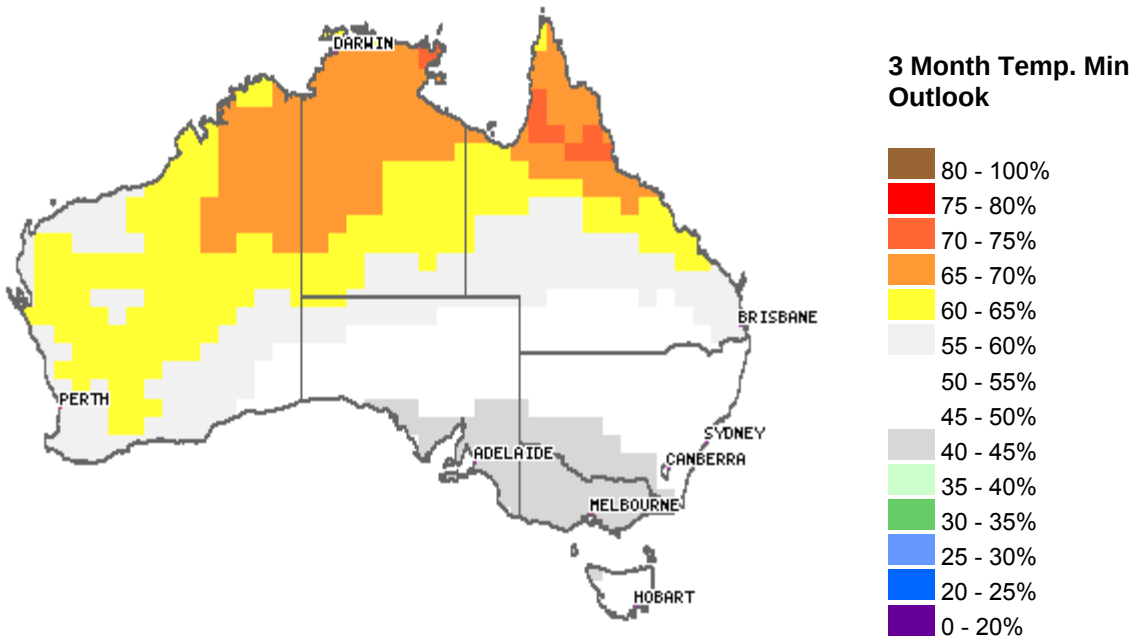


The chance of exceeding median maximum temperatures between January 2008 and March 2008

The national outlook for maximum temperatures averaged over the March quarter (January to March) shows a moderate to strong shift in the odds favouring higher than average temperatures over much of southern Australia.

The pattern of seasonal maximum temperature odds across southern Australia is a result of the La Niña pattern of cooler than average temperatures along the equatorial Pacific. In northeast Australia, effects from the Indian and Pacific Oceans cancel each other—below-normal temperatures are promoted by the La Niña pattern, while above-normal temperatures are promoted by continuing higher than average temperatures in the central to south-eastern Indian Ocean.

Averaged over January to March, the chances are above 60% for above-average maximum temperatures over southern WA, most of SA, TAS, VIC, and the south-west half of NSW (see map). Over much of VIC and southeast SA the chances are in the 75 to 80% range.



The chance of exceeding median minimum temperatures between January 2008 and March 2008

Minimum temperatures for the March quarter are favoured to be warmer than average across much of northern and WA (see map). The chances of increased overnight warmth (averaged over the coming three months) are mainly between 60 and 70% in these areas. Across the rest of the country, the chances of the seasonal mean minimum being above the long-term average are between 40 and 60%.

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