NAMS
NATIONAL AGRICULTURAL MONITORING SYSTEM

Climate and Agricultural Update

National Report

Issued December 2008

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 http://www.nams.gov.au, or for enquiries/feedback relating to this report contact the NAMS helpdesk at NAMS@nams.gov.au.

Contributors

The information contained in this report is regularly sourced from the following organisations:

ORGANISATION

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

Department of Primary Industries and Resources SA Government of South Australia Primary Industries and Resources SA	http://www.pir.sa.gov.au/
Department of Primary Industries, Victoria, Australia Victoria The Place To Be	http://www.dpi.vic.gov.au/
Murray-Darling Basin Commission MURRAY-DARLING BASIN COMMISSION	http://www.mdbc.gov.au/

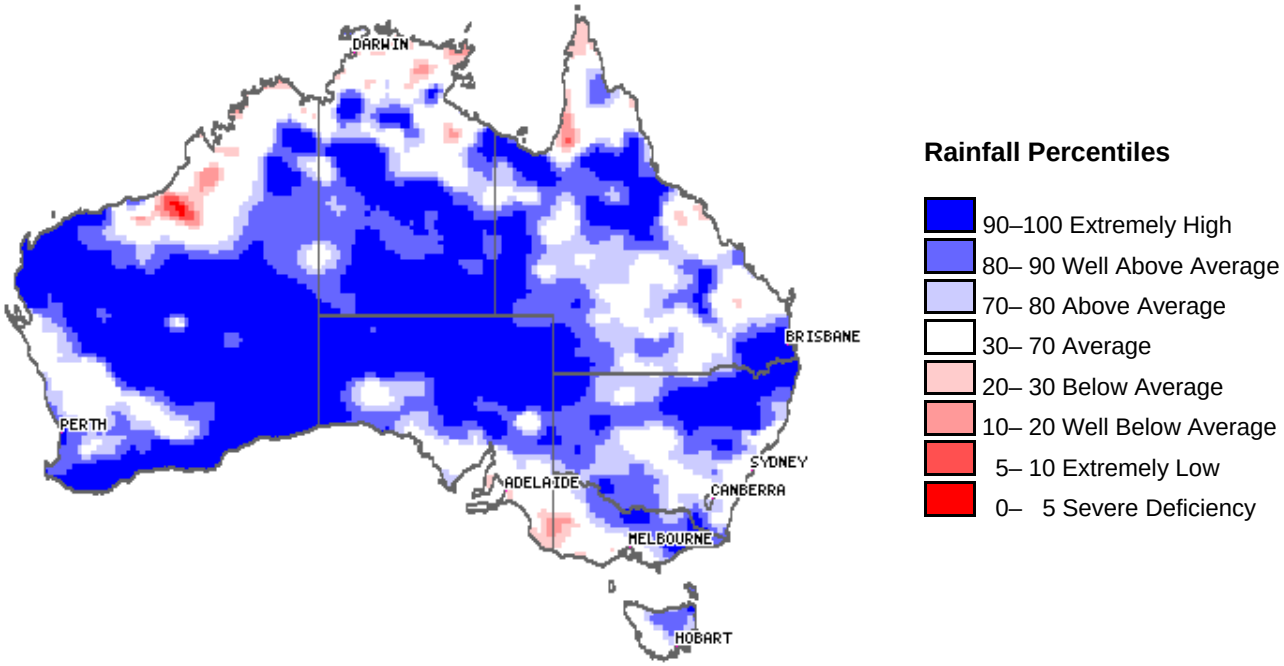
TABLE OF CONTENTS

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 (November 2008)

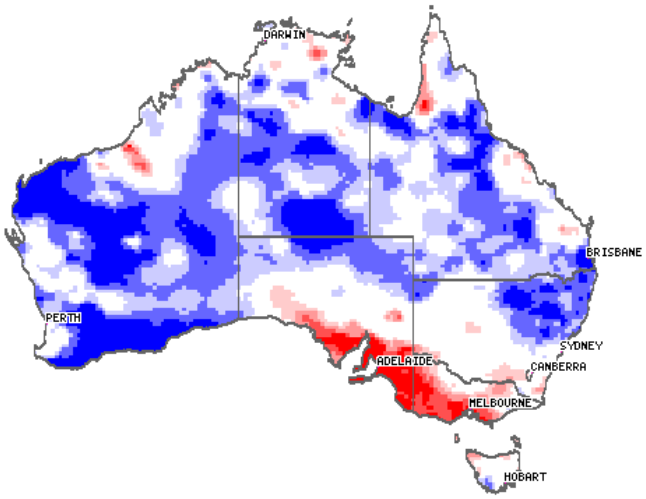


Rainfall percentiles for November 2008

November 2008 was the wettest November in Australia since 2000 with total rainfall 72 per cent above the long-term mean (1961–1990) (eighth highest on record). Rainfall was above average in all states and territories. Western Australia (121 per cent above average) and South Australia (154 per cent above average) had their third-wettest November on record, whilst New South Wales (66 per cent above average) ranked ninth. Only Tasmania (16 per cent above average) was close to the long-term mean.

November rainfall was in the highest tenth percentile in most of Western Australia from the Pilbara southwards (except for the west coast between Carnarvon and Perth and a strip inland), the northern half of South Australia, the southern half of the Northern Territory and adjoining border areas of far western Queensland and north-western New South Wales. Other regions in the highest tenth percentile included south-eastern Queensland, north-eastern New South Wales and east Gippsland in Victoria. The high November rainfall was particularly notable in central Australia with Alice Springs receiving 160 mm. November rainfall over the remainder of the country was below average to average.

Ongoing or emerging rainfall situations

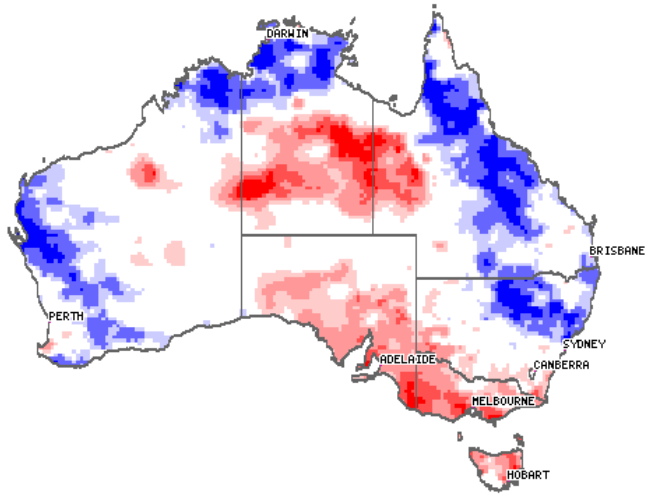


Rainfall Percentiles

- 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
September 2008–November 2008 (Spring)

Rainfall from September to November was average to above average across most of the country. Extremely high rainfall was recorded in areas of southern and central Western Australia, the south of the Northern Territory, across central Queensland and north-east of New South Wales. Rainfall was extremely low in the south of South Australia and most of Victoria. There were some areas with below average rainfall across north and north-west parts of Australia.



Rainfall Percentiles

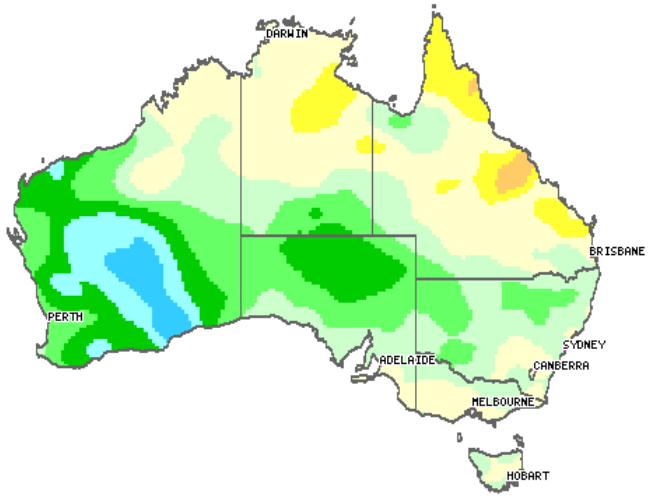
- 90–100 Extremely High
- 80– 90 Well Above Average
- 70– 80 Above Average
- 30– 70 Average
- 20– 30 Below Average
- 10– 20 Well Below Average
- 5– 10 Extremely Low
- 0– 5 Severe Deficiency

Rainfall percentiles for the last 12 months
December 2007–November 2008

Above average rainfall in November has cleared the 12-month rainfall deficiencies over the south of the Northern Territory, the north of South Australia and south-west of Western Australia. However, 12-month rainfall deficiencies are maintained over the remainder of South Australia, central parts of the Northern Territory extending into western Queensland, most of Victoria and Tasmania. These rainfall deficient areas include the agricultural districts.

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 the minimum temperature 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/.

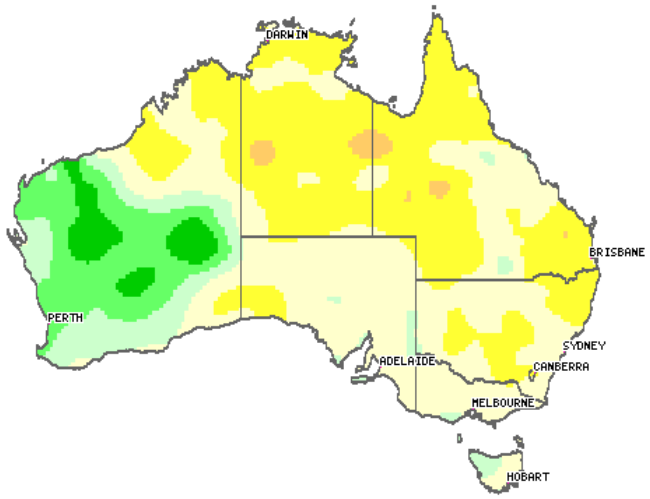


Monthly mean maximum temperature anomalies
November 2008

Temperature Anomalies (°C)

> 6
5 to 6
4 to 5
3 to 4
2 to 3
1 to 2
0 to 1
-1 to 0
-2 to -1
-3 to -2
-4 to -3
-5 to -4
-6 to -5
< -6

Maximum temperature averaged over the continent was 0.69°C below the long-term average for November (seventeenth lowest on record). It was cool across the southern half of the country with Western Australia recording its third coolest November on record. South Australia's daytime temperature anomalies ranged between –3°C in the north and 0°C in the south. Across NSW daytime temperature anomalies varied between –2°C and 0°C. Maximum temperatures were above average throughout the tropics and southern Victoria.



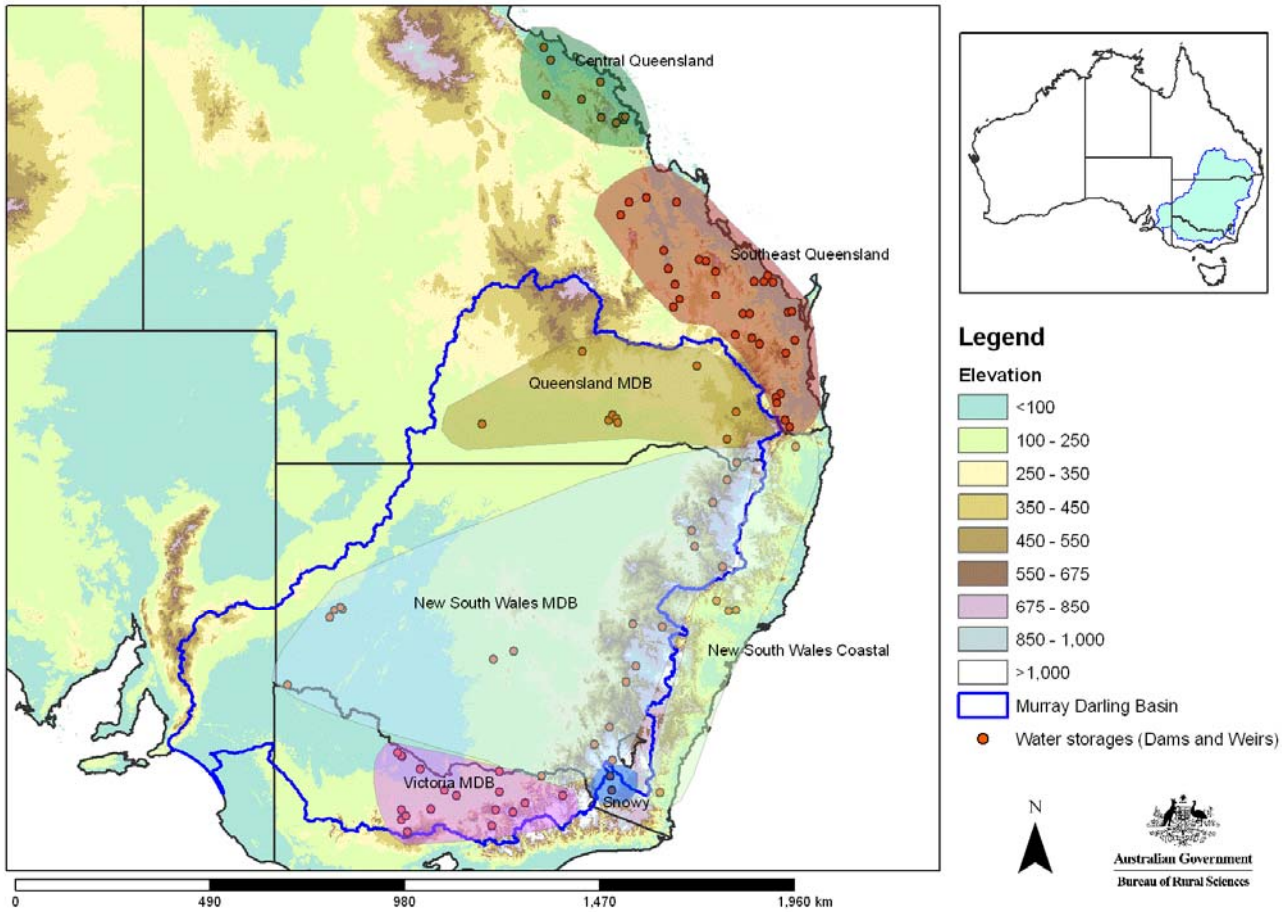
Monthly mean minimum temperature anomalies
November 2008

Temperature Anomalies (°C)

> 6
5 to 6
4 to 5
3 to 4
2 to 3
1 to 2
0 to 1
-1 to 0
-2 to -1
-3 to -2
-4 to -3
-5 to -4
-6 to -5
< -6

Minimum temperatures averaged over Australia were 0.42°C above the long-term average for November (nineteenth highest on record). Minima were generally above average for all states, except Western Australia, with Queensland and the Northern Territory recording their fifth warmest November on record. Nights were 2–3°C below the long-term average in Western Australia south of Port Hedland.

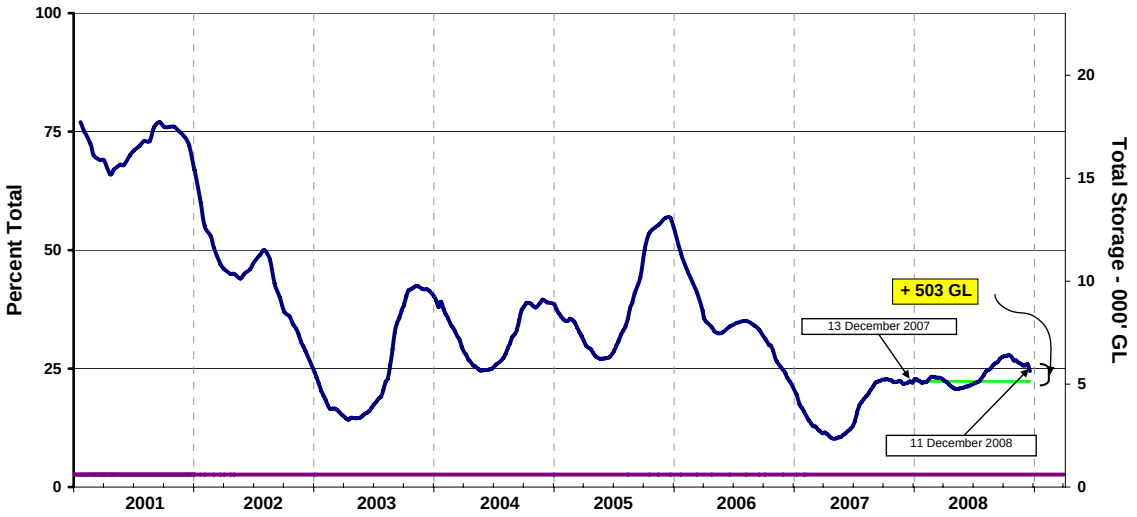
2.0 Water storages and announcements



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

2.1 Water storages (current to 11 December 2008)

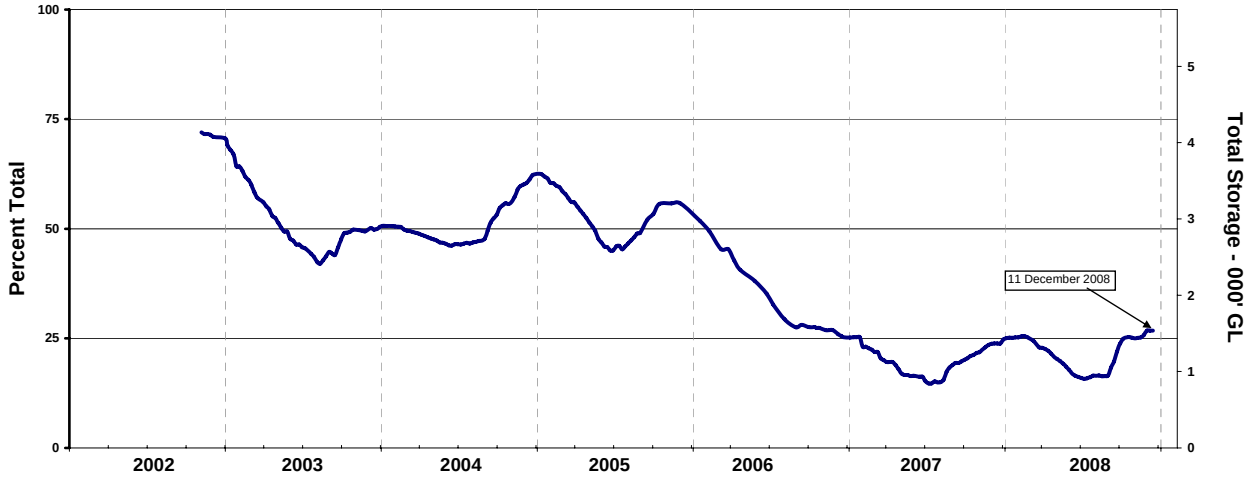
Water storage in the MDB (New South Wales, Victoria and Queensland)



Water storage levels in the Murray-Darling Basin from 1 January 2001 to 11 December 2008. The green line shows the storage level at the same time last year and the purple line shows the dead storage (not calculated).
Source: Bureau of Rural Sciences.

Over the past month storage levels within the Murray-Darling Basin (MDB) have decreased slightly. Storage levels are expected to fall at this time of the year because the peak inflow period is finished and irrigation drawdown has commenced. Storage levels for irrigated agriculture on 11 December 2008 were at 5637 gigalitres (GL) (24.5 per cent of a total capacity of 23 020 GL), a decrease of 35 GL (0.2 per cent of total capacity) over the month. Current storage levels are approximately 503 GL greater than at the same time last year.

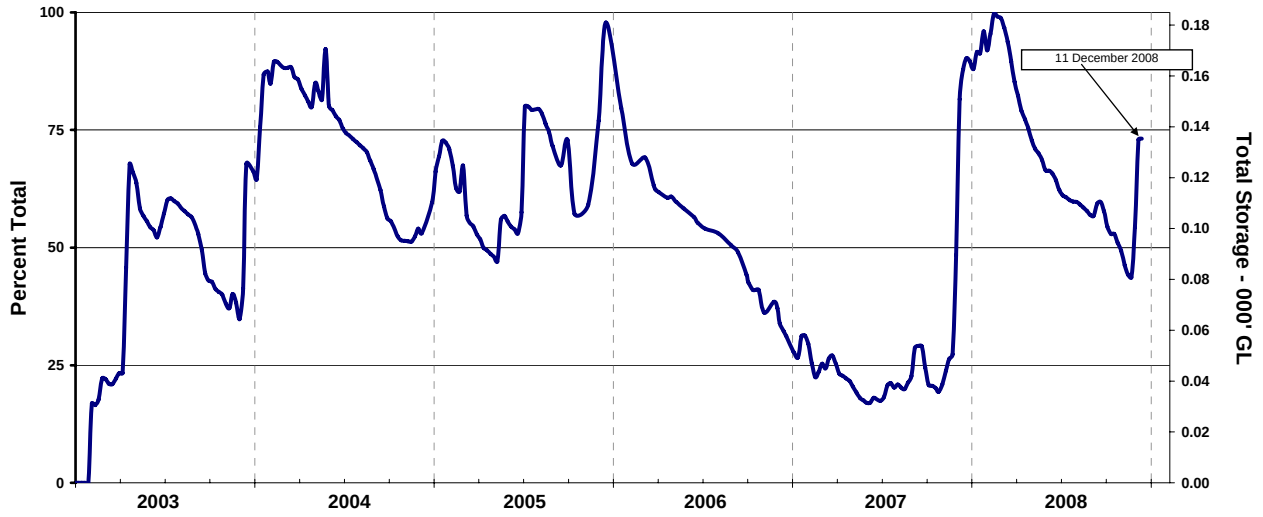
Water storage in the Snowy Scheme



Water storage levels in the Snowy Scheme from 6 November 2002 to 11 December 2008.
Source: Bureau of Rural Sciences.

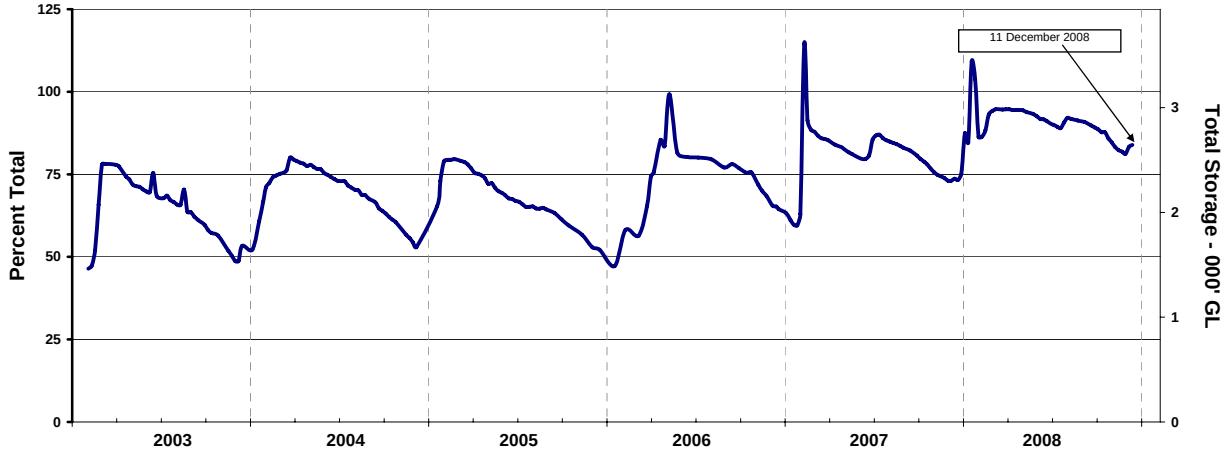
The figure 'Water storage in the MDB' (above top) does not include the capacities of Lake Eucumbene, Tantangara Reservoir and Lake Jindabyne (collectively the Snowy Scheme) which are reserved for hydro-electricity generation and irrigation purposes. Current levels in the Snowy Scheme storages are 1536 GL (26.7 per cent of a total capacity of 5744 GL) (see figure above). This is an increase of 168 GL (2.9 per cent) from last year.

Water storage in Queensland



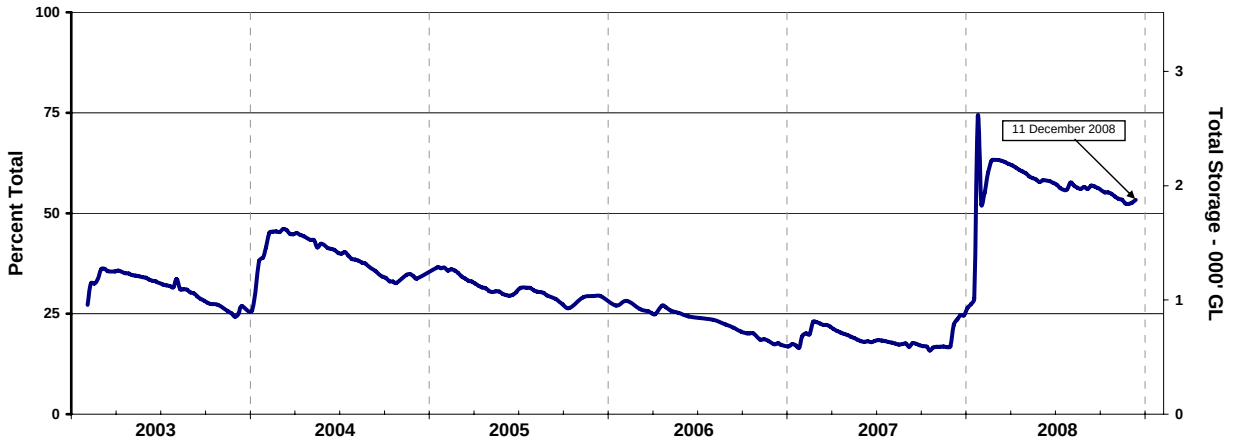
Water storage levels in Queensland MDB from 3 February 2003 to 11 December 2008. Source: Bureau of Rural Sciences.

Storage levels in Queensland MDB increased by 53 GL to 135 GL (73.1 per cent of a total capacity of 185 GL) over the last month (see figure above). This storage level is approximately 27 GL lower than at the same time last year.



Water storage levels in central Queensland from 3 February 2003 to 11 December 2008. Source: Bureau of Rural Sciences.

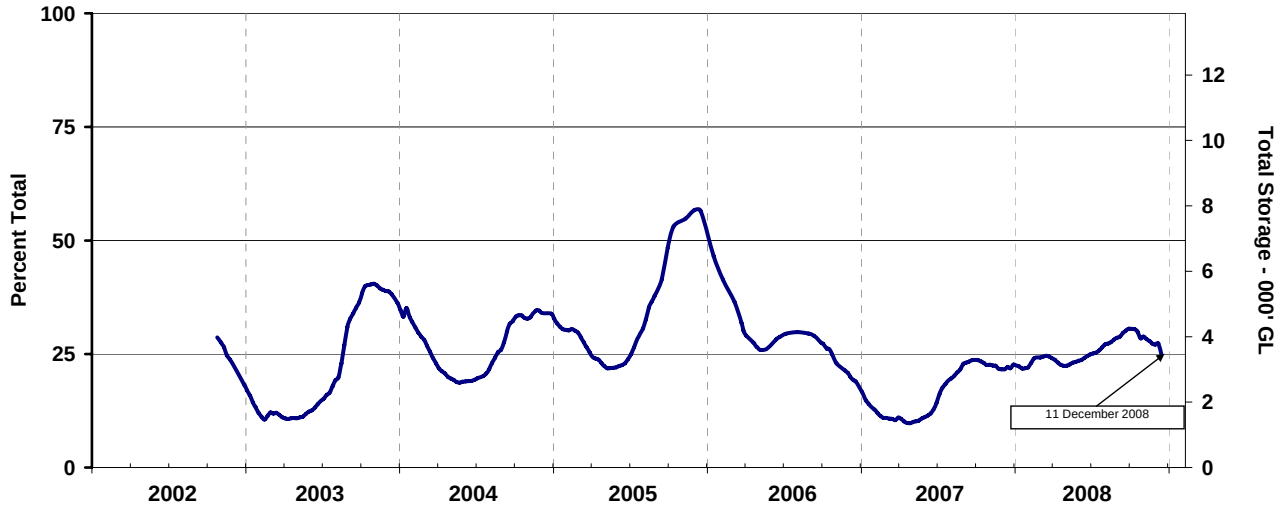
In central Queensland storage levels increased by 50 GL to 2646 GL (83.88 per cent of a total capacity of 3155 GL) over the last month (see figure above). This storage level is approximately 322 GL higher than at the same time last year.



Water storage levels in south-east Queensland from 3 February 2003 to 11 December 2008. Source: Bureau of Rural Sciences.

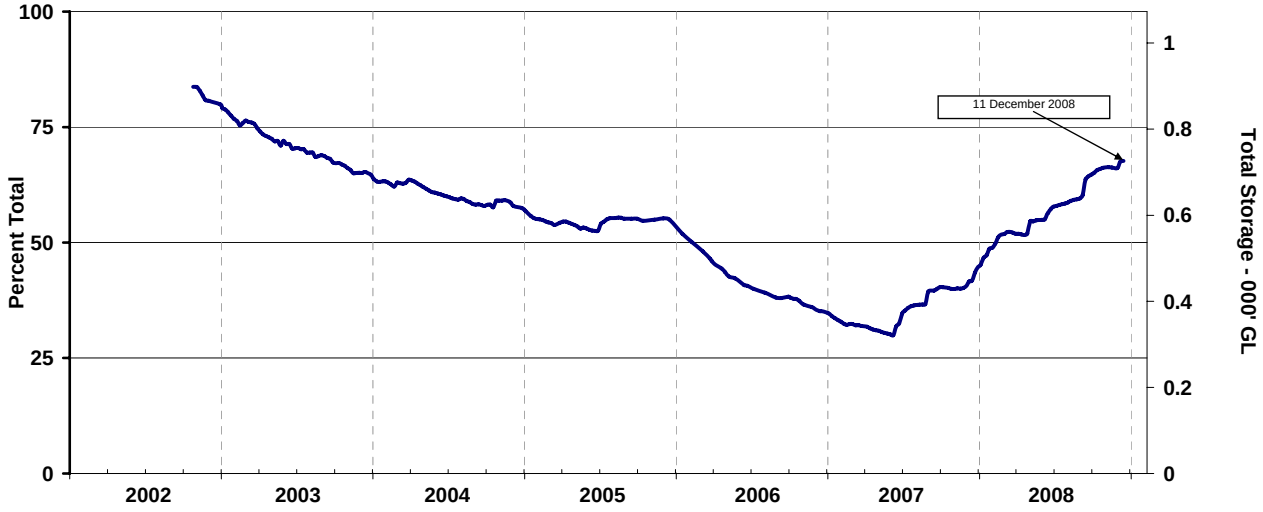
In south-east Queensland storage levels remained at last month's level of 1877 GL (53.36 per cent of a total capacity of 3517 GL) (see figure above). This storage level represents a 1049 GL increase (29.8 per cent) compared to the same time last year.

Water storage in New South Wales



Water storage levels in northern New South Wales MDB from 28 October 2002 to 11 December 2008. Source: Bureau of Rural Sciences.

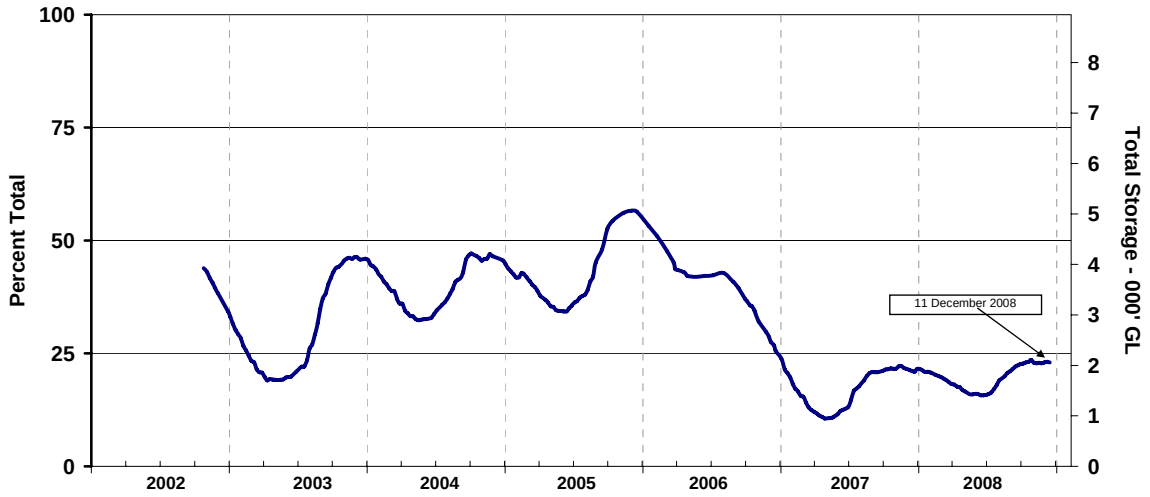
Storage levels in the New South Wales MDB decreased by 386 GL to 3483 GL (25.08 per cent of a total capacity of 13 884 GL) over the last month (see figure above). This storage level is approximately 405 GL higher than at the same time last year.



Water storage levels in coastal New South Wales from 28 October 2002 to 11 December 2008. Source: Bureau of Rural Sciences.

In coastal New South Wales storage levels increased by 15 GL to 726 GL (67.7 per cent of a total capacity of 1073 GL) over the last month (see figure above). This storage level is approximately 278 GL higher than at the same time last year.

Water storage in Victoria



Water storage levels in Victoria MDB from 28 October 2002 to 11 November 2008. Source: Bureau of Rural Sciences.

Storage levels in Victoria MDB increased by 9 GL to 2058 GL (23 per cent of a total capacity of 8950 GL) over the last month (see figure above). This storage level is approximately 169 GL higher than at the same time last year.

For further information on water storages, go to:

Snowy Scheme
http://www.snowyhydro.com.au/lakeLevels.asp?pageID=360&parentID=6

Queensland
http://www.sunwater.com.au/pdf/water/CurrentStorageSummary.pdf

New South Wales
http://www.statewater.com.au/indexes/index.asp

Northern Victoria
http://www.g-mwater.com.au/water-resources/storage-levels/

Murray-Darling Basin update

- Murray system inflows (excluding inflows to Menindee Lakes and releases from the Snowy Scheme) for November 2008 were about 140 GL (net of inter-valley transfers), around 18 per cent of the long-term November average of 780 GL. For the months June to November 2008, Murray system inflows were 1450 GL, which is only 20 per cent of the long-term average of 7200 GL. The 2008–09 water year is currently tracking as the seventh driest in 117 years of records in terms of Murray system inflows.
- At 30 November 2008, total Murray-Darling Basin Commission (MDBC) active storage (excluding Menindee Lakes) was 1853 GL (25 per cent). This is 213 GL higher than at this time last year but well below the end of November long-term average of 6380 GL. A further 230 GL is stored in Menindee Lakes which remains under New South Wales' control. New South Wales continues to release water from Menindee Lakes into the Murray system to support allocations to NSW irrigators and to help deliver New South Wales' agreed supply to South Australia.
- Small inflows saw storage in Dartmouth Reservoir increase by 11 GL during November to 880 GL (23 per cent of capacity). The release from Dartmouth Reservoir has been reduced to 340 ML per day. Storage in Hume Reservoir decreased by 143 GL to 842 GL (28 per cent of capacity). The release from Hume Dam was increased to 7800 ML per day
- The Bureau of Meteorology's rainfall outlook over the MDB areas for January to March 2009 indicates neutral conditions for rainfall across most of the MDB and a moderate shift to above average rainfall in the north-eastern part of the Basin. Above average maximum temperatures are forecast over the Basin but minimum temperatures are likely to be average. This climate outlook, combined with the fact that only 20 per cent of Murray system inflows normally occur in summer and autumn, indicate that the chances of a significant improvement in Murray system inflows during the coming months are low. Historical records also indicate that it is rare to have a significant improvement in Murray system inflows after a dry winter and spring.

For further information on the Murray-Darling Basin, go to:

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

2.2 Water announcements

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

- On 5 December 2008 the NSW Department of Water and Energy announced an increase in water availability for general security licence holders in the Macquarie Valley to 5 per cent.
- On 15 December 2008 the NSW Department of Water and Energy announced an increase in water availability for general security licence holders in the Murray Valley (to 4 per cent), Murrumbidgee Valley (to 14 per cent) and Lower Darling (to 50 per cent).
- Allocation announcements at 15 December 2008 for the major water systems in New South Wales for the 2008–09 water year are summarised in the table below. Per cent change in allocation over the previous month is indicated in the table.

Water system	High Security Licences (%)	Change (%)	General Security Licences (%)	Change (%)
NSW Murray Valley	95	0	4	+2
Murrumbidgee Valley	95	0	14	+3
Lower Darling	100	0	50	+20
Macquarie Valley	100	0	5	+4
Hunter Valley	100	0	100	0
Lachlan Valley	30	0	0	0
Border Rivers	100	0	0	0
Peel Valley	100	0	80	0

- Inflows to water storages in the Macquarie catchment during November have been sufficient to secure the second water allocation for this water year to general security licence holders of 4 per cent. Irrigators will be able to add this water to their remaining carryover from last year and to plan for the summer irrigation season with more certainty. The water allocation for town water supply, high security and stock and domestic use will continue at 100 per cent.
- Two water allocations for general security licence holders in the Lower Darling during December 2008 mean they can now access 50 per cent of their licensed water entitlement, an increase of 20 per cent. Water will continue to be released to the Lower Darling River from Lake Pamamaroo at a rate of 2900 ML per day until January 2009.
- Murray Valley allocations have increased to 4 per cent of licensed water entitlement, due to minor improvements in water availability in the first two weeks of December.
- The water allocation for Murrumbidgee Valley general security licence holders has increased to 14 per cent: 12 per cent will be delivered before the end of February 2009 and the remaining 2 per cent will be delivered after February 2009. The increased allocations in the Murray and Murrumbidgee Valleys are the result of rainfall from summer storms across the upper Murray and Murrumbidgee catchments.
- The NSW Department of Water and Energy will monitor water resources over the Christmas–New Year period and make further allocation announcements if necessary. All water users are reminded to be conservative with their water usage.
- Water allocations for the high security licence holders remained unchanged.

Announcements for Victoria (current at 15 December 2008)

- Goulburn-Murray Water (G-MW) announced the updated season allocations on 15 December 2008 (see below).

Water system	High-reliability share (%)	Change (%)
Murray	28	+7
Broken	0	0
Goulburn	23	+5
Campaspe	0	0
Loddon	0	0
Bullarook Creek	0	0

- On 15 December 2008 G-MW announced an increase in seasonal allocations for the Murray and Goulburn systems. The Murray system now has an allocation of 28 per cent of high-reliability water shares (HRWS). The Goulburn system has an allocation of 23 per cent of HRWS. The allocations for all other water systems in northern Victoria remain at zero.
- The increases in seasonal allocations in the Murray and Goulburn systems are largely due to the savings made in the system operations and to the continued modest inflows generated by rainfall during November. Inflows to the Broken, Campaspe, Loddon and Bullarook systems were negligible and allocations remain at zero.
- Modest inflows into the storages of the Broken system have allowed G-MW to ease constraints on the delivery of carryover. If further resource improvements do not occur, strict rosters will be introduced to maintain supplies throughout the season.
- The priority for the Campaspe and Loddon systems is the supply of essential needs through the 2008–09 season. Carryover will be available wherever possible, but delivery cannot be guaranteed because of the limited resources.
- The G-MW announced that due to the limited response to recent rainfall, allocation prospects for the Murray and Goulburn systems are likely to remain below 30 per cent HRWS until the middle of February 2009. The Broken, Campaspe, Loddon and Bullarook systems are unlikely to receive any allocation
- Goulburn-Murray Water will announce an update of seasonal allocations for all water systems on 2 January 2009.

Announcements for South Australia (current at 15 December 2008)

- Murray River irrigation allocations will remain at 15 percent as the current drought continues in the Murray-Darling Basin. According to the Minister for the Murray River, Karlene Maywald, only 140 GL flowed into the system during November, well below the long-term November average of 771 GL. It is expected that an allocation update will be provided to irrigators as soon as inflow data is available following last week's good rains throughout the catchment.

- Licensed Murray River irrigators will be able to carry-over unused water from 2008–09 for use in the 2009–10 water year. While the final details of the 2009–10 carry-over scheme are yet to be finalised, it is likely to be similar to the 2008–09 scheme. Further details about the 2009–10 carry-over scheme will be announced in the Minister's next Murray River allocation update later in the month.

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 Water and Energy
http://www.naturalresources.nsw.gov.au/

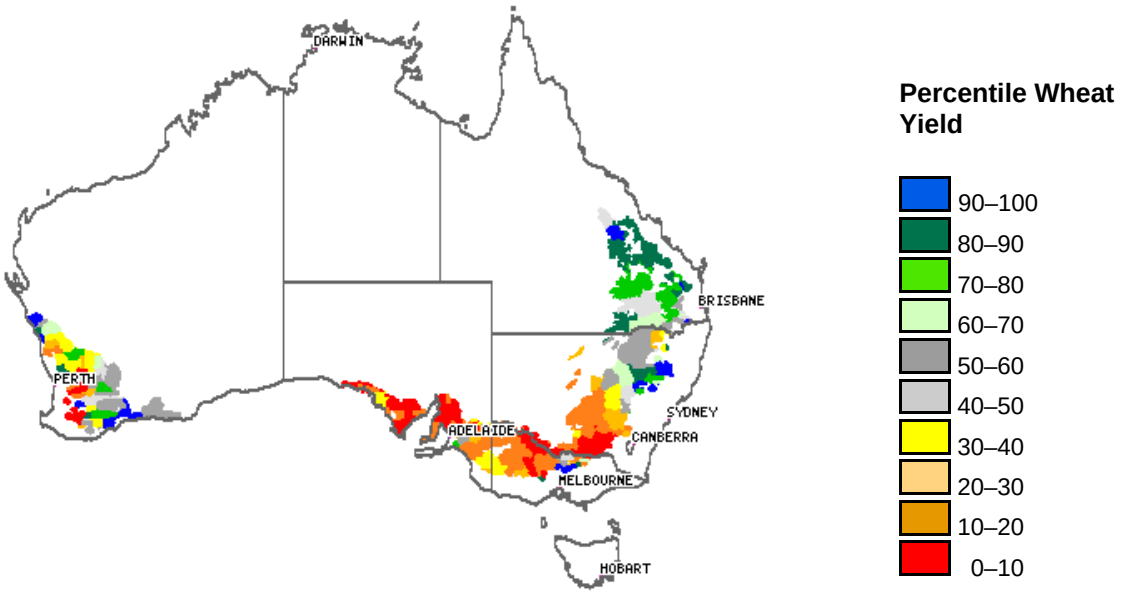
South Australian Department of Water, Land and Biodiversity Conservation
http://www.dwlbc.sa.gov.au/media.html

3.0 Crop and livestock production

3.1 Crops

Winter Crops

Predicted median wheat yields are provided by the Queensland Department of Primary Industries and Fisheries. The following figure shows shire wheat yield forecasts across Australia as percentiles of a 105 year historic data set (1901 to 2005).



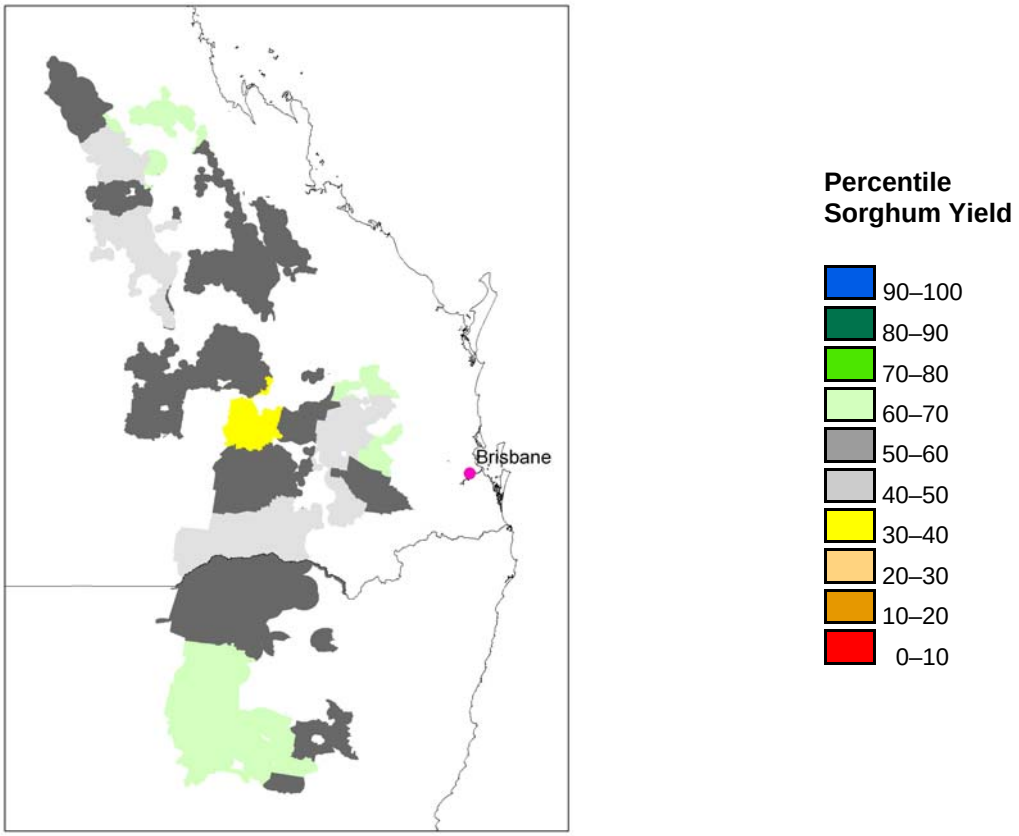
Predicted shire wheat yields for the 2008 cropping season at 1 December 2008 ranked relative to all years (1901–2005).

- The ABARE December forecast for 2008–09 winter crop production in Australia is 31 million tonnes (Mt), well down on mid-year estimates. Australian wheat production is forecast to remain at its October level of around 20 Mt, significantly more than the 13 Mt harvested in 2007–08. Barley production is estimated at 6.4 Mt, 0.1 per cent up from the October forecast. Canola production is estimated at 1.3 Mt, unchanged since October. http://www.abareconomics.com/corporate/media/2008_releases/9dec_08.html
- Queensland: Wheat harvest in Queensland has been interrupted by rainfall events. The quantity and quality of grain is better than anticipated. Total wheat production is expected to be 2.02 Mt, up from the 1.5 Mt predicted in November. http://www.abareconomics.com/publications_html/cr/cr_08/cr08_Dec.pdf
- New South Wales: Winter crop production is forecast to be 9.05 Mt, slightly higher than October estimates. Harvest commenced up to three weeks early in many districts and the early harvested crop is reported to be of good quality. About 40 per cent of the wheat harvest was completed prior to the late-November rainfall in the northern and western areas that delayed harvest and downgraded grain quality. http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0008/260198/NSW-grains-report-december-2008.pdf
- Victoria: Harvest is underway in most areas with patchy rain causing interruptions. Grain yields are highly variable with the North Central region expecting 0–2.5 tonnes per hectare (average less than one tonne per hectare). Most barley being harvested is making feed grain. The quantity of hay and silage has been reduced and may lead to shortages in the autumn–winter period (Department of Primary Industries Victoria, Dry Season Conditions Report, 4 December 2008: http://www.dpi.vic.gov.au/dpi/nrenfa.nsf/LinkView/7F6D7A59B8E48904CA2575150015BAD82B72296A5108C4FFCA25734F0009F96F/$file/_DSC%20%2384%20Dec%204%20-%202008.pdf)
- South Australia: Approximately 60 per cent of the state harvest is complete. Yields range from below average in northern areas to near average further south. Cereals have performed better than canola and pulse crops. Total crop area is estimated to be 4 million hectares with crop production estimated at 4.74 million tonnes (Primary Industries and Resources SA, Crop and Pasture Report, November 2008: http://www.pir.sa.gov.au/__data/assets/pdf_file/0019/91009/nov08cpr.pdf)

- Western Australia: All districts have been affected by wetter than average conditions. Early grain harvest has been completed in the north. Above average November rainfall and hail have caused delays to harvest, crop losses and downgrading of grain quality (Department of Agriculture and Food Western Australia, Seasonal Update, December 2008: http://www.agric.wa.gov.au/content/LWE/CLI/SeasonalUpdateDec08.pdf)

Summer Crops

Predicted sorghum yields for the coming season are provided by the Queensland Department of Primary Industries and Fisheries. The following figure shows shire sorghum yield forecasts across Australia as percentiles of a 105 year modelled historic data set (1901 to 2005).



Predicted sorghum yields for the 2008 cropping season at 1 December 2008 ranked relative to all years (1901–2005).

- Total summer crop production is forecast to be around 3.2 Mt in 2008–09, 8 per cent higher than last year. The total area planted to summer crops in 2008–09 is forecast to remain similar to last year. The area planted to grain sorghum is forecast to decline by 15 per cent from the area sown last year, reflecting a fall in the area of fallow land available and a significant decline in feed grain prices. Average to above average rainfall in October and November in key growing regions combined with the favourable seasonal outlook has improved yield prospects for grain sorghum production, forecast to reach 2.1 Mt in 2008-09. http://www.abareconomics.com/publications_html/cr/cr_08/cr08_Dec.pdf

- Modelled sorghum yield at 1 December 2008 for Australia is 2.51 tonne per hectare (t/ha), slightly above the long-term median of 2.33 t/ha. This represents an increase of 0.07 t/ha on the September prediction. Predicted sorghum yields are slightly above the long-term average in both northern New South Wales (3.02 t/ha) and Queensland (2.38 t/ha). These predictions are based on “consistently positive” Southern Oscillation Index (SOI) phase at the end of November. (Queensland Department of Primary Industries and Fisheries: http://www.dpi.qld.gov.au/documents/PlantIndustries_FieldCropsAndPasture/Sorghum-Report-November-08.pdf).

3.2 Livestock

Beef cattle

- Australian beef and veal exports during November declined by 3 per cent on a year-on-year basis. Positive impacts from a falling Australian dollar were offset by uncertainties relating to the global credit crisis. (Meat and Livestock Australia, Market News: http://www.mla.com.au/TopicHierarchy/News/MarketNews/2008/Beef+exports+slide+during+November.htm).
- Cattle numbers in saleyards during November were 19 per cent lower than the five-year average and 10 per cent lower than November 2007. A factor contributing to lower yardings in November 2008 was the improved seasonal conditions in the north allowing cattle to reach desired weights earlier than normal and as a result greater cattle numbers were sent to market in October 2008. October yardings were 15 per cent higher than the five-year average and 23 per cent higher than November 2008 yardings (Meat and Livestock Australia, Market News: http://www.mla.com.au/TopicHierarchy/News/MarketNews/2008/October+supply+reduces+November+yardings.htm).
- Despite reduced cattle numbers in saleyards during November, cattle and calf slaughter numbers for November 2008 increased. Cattle slaughter for November 2008 decreased by 3 per cent with respect to the five-year average (Meat and Livestock Australia, Market News: http://www.mla.com.au/TopicHierarchy/News/MarketNews/2008/October+supply+reduces+November+yardings.htm).

Sheep and lambs

- Australian lamb exports during November fell by 17 per cent on a year-on-year basis. Australian lamb supplies continue to be tight and prices are high for this time of year following recent widespread rains (Meat and Livestock Australia, Market News: http://www.mla.com.au/TopicHierarchy/News/MarketNews/2008/Lamb+exports+lower+in+November.htm).
- Spring lamb slaughter declined 6 per cent in 2008 compared to 2007. Producers are rebuilding their flocks and lambs are being bought to feed to greater weights. This was made possible by more favourable spring conditions in 2008 than has occurred in previous years. (Meat and Livestock Australia, Market News: http://www.mla.com.au/TopicHierarchy/News/MarketNews/2008/Spring+lamb+slaughter+falls.htm).
- Spring sheep slaughter increased by 2 per cent in 2008 compared to 2007. (Meat and Livestock Australia, Market News: http://www.mla.com.au/TopicHierarchy/News/MarketNews/2008/Spring+lamb+slaughter+falls.htm).

For further information on crops and livestock, go to:

Australian Bureau of Statistics
http://www.abs.gov.au/
Australian Bureau of Agricultural and Resource Economics
http://abareconomics.com/
Meat and Livestock Australia
http://www.mla.com.au/
Department of Agriculture and Food Western Australia
http://www.agric.wa.gov.au/
New South Wales Department of Primary Industries
http://www.dpi.nsw.gov.au/aboutus/news/
Primary Industries and Resources South Australia
http://www.pir.sa.gov.au/grains/cpr/
Queensland Department of Primary Industries and Fisheries
http://www.dpi.qld.gov.au/fieldcrops/
The Land Farmonline
http://theland.farmonline.com.au/

4.0 Climate Outlook

4.1 El Niño Southern Oscillation (ENSO)

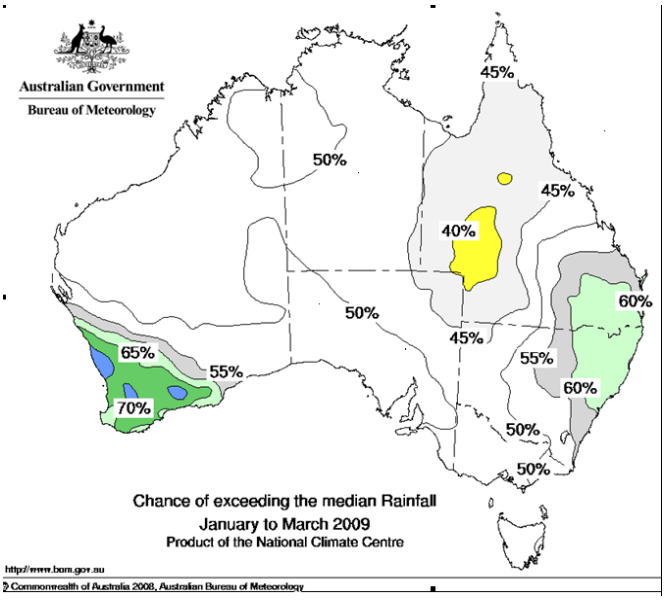
On 10 December 2008 the Bureau of Meteorology announced that although the tropical Pacific remains neutral with respect to ENSO there is an indication of developing La Niña characteristics. Sea surface temperatures are close to the long-term average across most of the equatorial Pacific, although some parts of the central Pacific have recently developed weak cool anomalies. Sub-surface cool anomalies also persist in the central and eastern equatorial Pacific. Trade winds across the western part of the tropical Pacific have been stronger than average for several months as reflected in the continuation of a strongly positive Southern Oscillation Index (SOI). The approximate 30-day SOI value on 8 December was +15. Cloudiness near the date-line has been below average during the past few months. These trends indicate that the development of a La Niña during the southern summer cannot be ruled out. The Indian Ocean Dipole is now neutral and is expected to remain neutral through the rest of the southern hemisphere summer.

The majority of dynamic computer models predict neutral conditions with a cooler than normal Pacific to continue through the southern hemisphere summer. However, some models favour a return to La Niña conditions.

For further information on the Bureau of Meteorology interpretation of the El Niño–Southern Oscillation go to, http://www.bom.gov.au/climate/enso/

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, temperature and sea surface temperature records for the tropical Pacific and Indian Oceans. They are not categorical predictions about future rainfall and they do not indicate the expected rainfall amount for the three-month outlook period.



The chance of exceeding median rainfall January–March 2009.

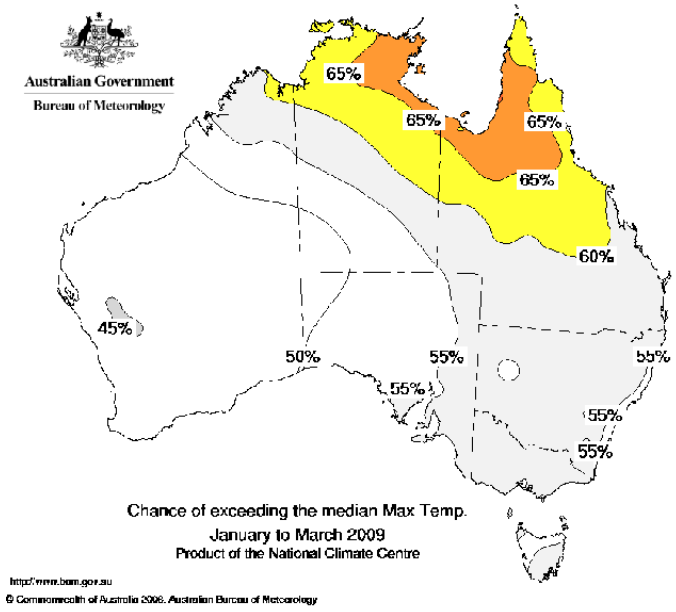
Chance of Exceeding the Median Rainfall (%)

- 80–100
- 75–80
- 70–75
- 65–70
- 60–65
- 55–60
- 50–55
- 45–50
- 40–45
- 35–40
- 30–35
- 25–30
- 20–25
- 0–20

Across much of Australia, above average rainfall and below average rainfall are equally likely from January to March 2009. The likelihood of exceeding median rainfall is higher for south-west Western Australia (60–75 per cent), north-east NSW and south-east Queensland (60–65 per cent). The chance of exceeding the median rainfall in central and south-western Queensland is lower (35–40 per cent).

The pattern of seasonal rainfall odds across Australia is mainly a result of continued warmth in the central Indian Ocean. Outlook confidence is related to how consistently the Pacific and Indian Oceans affect Australian rainfall. During the March quarter, history shows the effect to be moderately consistent through eastern parts of New South Wales and Queensland, large parts of the Northern Territory and over much of southern and western Western Australia. Elsewhere the effect is only weakly or very weakly consistent.

4.3 Temperature Outlook

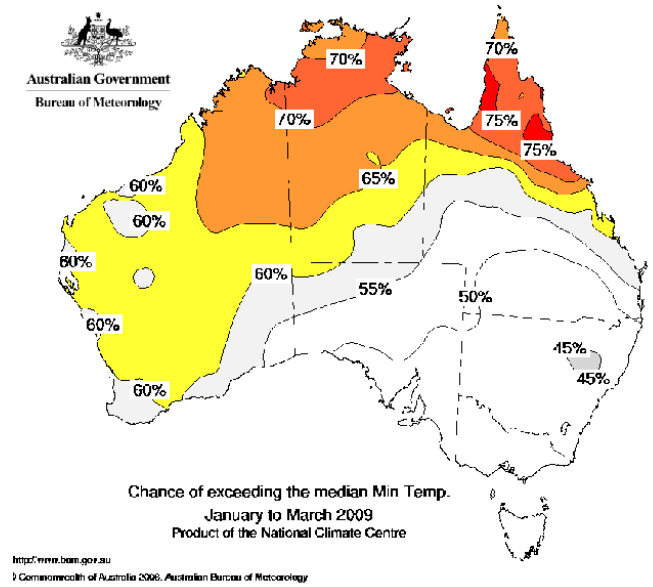


3 Month Temp. Max Outlook (%)

80–100
75–80
70–75
65–70
60–65
55–60
50–55
45–50
40–45
35–40
30–35
25–30
20–25
0–20

The chance of exceeding median maximum temperatures January–March 2009.

Above average maximum temperatures are favoured across northern Australia during the March quarter from the Kimberley, across most of the Northern Territory and into the eastern states and South Australia. Most of Western Australia has an equal chance of above or below average maximum temperatures during this period.



3 Month Temp. Min Outlook (%)

80–100
75–80
70–75
65–70
60–65
55–60
50–55
45–50
40–45
35–40
30–35
25–30
20–25
0–20

The chance of exceeding median minimum temperatures January–March 2009.

Minimum temperatures are likely to be higher than average during the March quarter across Western Australia, the Northern Territory, northern South Australia, and northern Queensland. The rest of the country has an even chance of above or below average minimum temperatures during this timeframe.

History shows the oceans' effect on minimum temperatures during the March quarter to be moderately consistent over most of Queensland, the Northern Territory and northern Western Australia. Elsewhere the effect shows weak to very weak consistency.

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