NAMS
NATIONAL AGRICULTURAL MONITORING SYSTEM

# Climate and Agricultural Update

# National Report

**Issued March 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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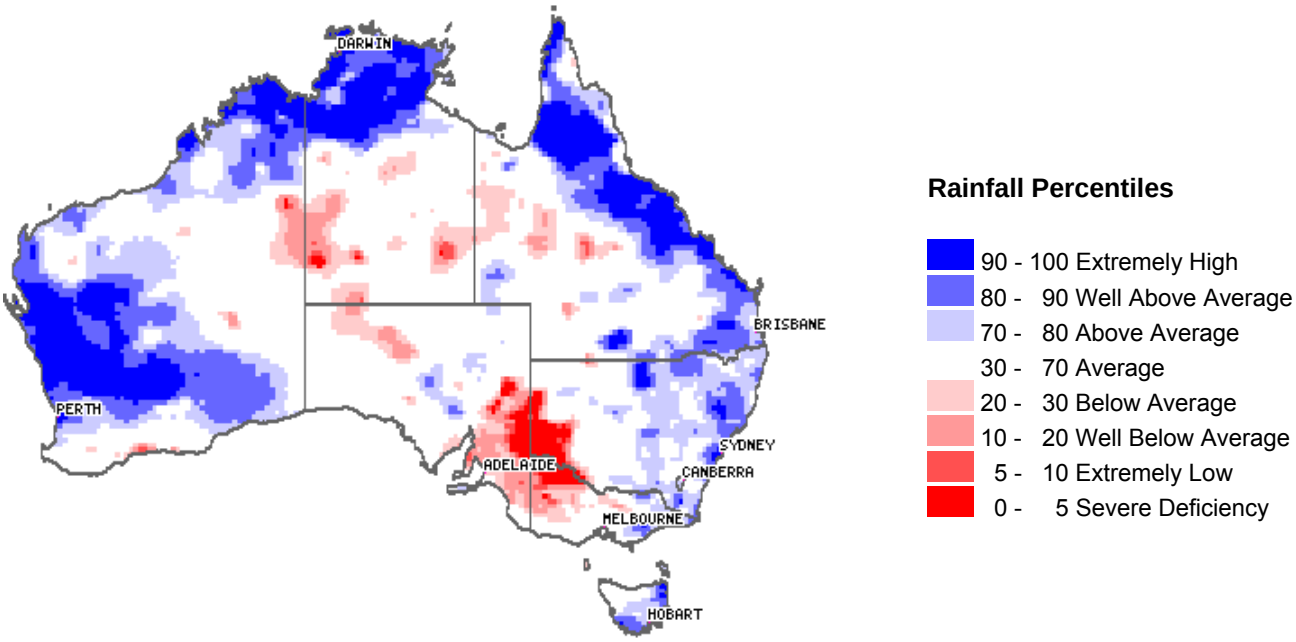
# 1.0 Rainfall and temperature

## 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 (February 2008)*




**Rainfall percentiles for February 2008**

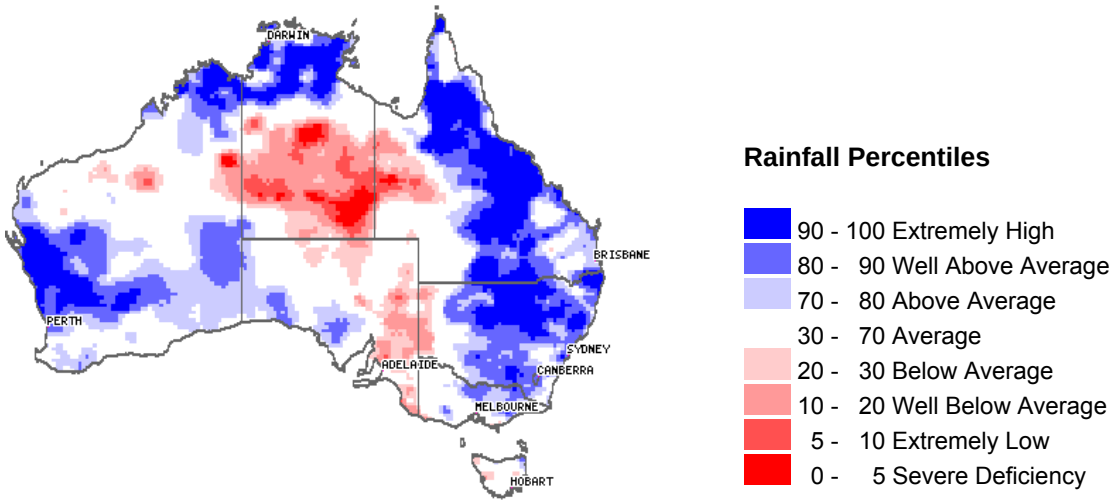
Australian rainfall during February was generally above average in the eastern halves of both New South Wales (NSW) and Queensland, as well as in most of the northern tropics and the southern half of Western Australia (WA). The overall rainfall for the month was 34% above the 1961−90 average (22nd highest on record).

Above average rainfall was experienced in three major areas. The east coast of the country and adjacent inland saw well above average rainfall, though the rains did not travel as far inland as they did in December and January. The western boundary of the wet area ran approximately along Melbourne-Albury-Bourke-Charleville-Hughenden-Normanton line. In contrast to January, Tasmania experienced above average rainfall. The Top End of the Northern Territory (NT) was also wet. Well above average rainfall was also seen in the northern and south-west parts of WA, excluding southern coastal areas. This rainfall was a result of Tropical Cyclone *Nicholas*, which reached the WA coastline north of Carnarvon on 20 February.

The most significant rainfall occurred along the Queensland coast and adjacent inland between Townsville and Hervey Bay. There were a number of major rain events with the most significant being on 15 February when daily falls of up to 625 mm (most of it in five hours) occurred in the Mackay area. Monthly records were set inland from Mackay, as well as on the Atherton Tablelands. Extremely high rainfall also occurred widely in the NT Top End and the northern Kimberley.

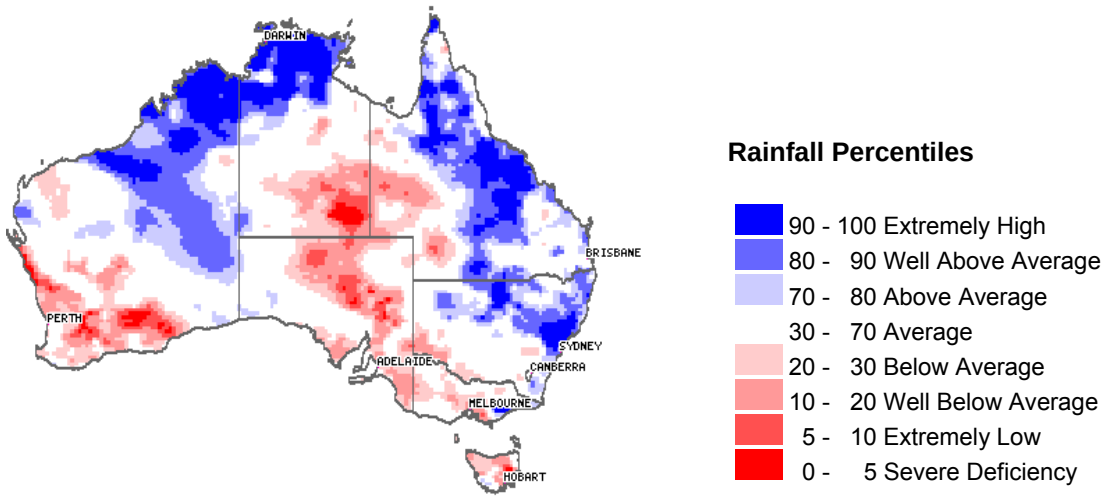
In contrast, it was dry in most of central Australia, extending south to cover most of South Australia (SA), western Victoria and south-western NSW. A region extending from the northern Mallee in Victoria into adjacent areas of NSW and SA, most of which had little or no rain for the month, ranked in the lowest percentile range and the SA state average was 59% below average.

## *Ongoing or emerging rainfall situations*




**Rainfall percentiles for the last three months (December 2007 – February 2008)**

During the last 3 months, above average rainfall was recorded in most of Queensland, NSW and north-east Victoria, with patches of extremely high rainfall in central and northern Queensland and central north of NSW. In contrast the western parts of these states recorded average to below average rainfall. Above average rainfall was also recorded in most of southern WA, extending in a band from the coast to the eastern border and into the west and south of SA. Above average rainfall also occurred in the far north of WA and the NT. In contrast, below average to extremely low rainfall was recorded in most of NT extending into the west of QLD, while the rainfall was below average in northern and eastern SA. The last three months rainfall in Tasmania was mostly average.

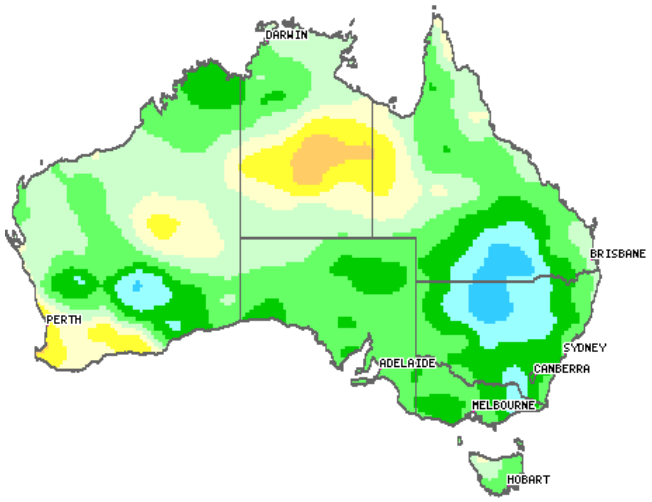


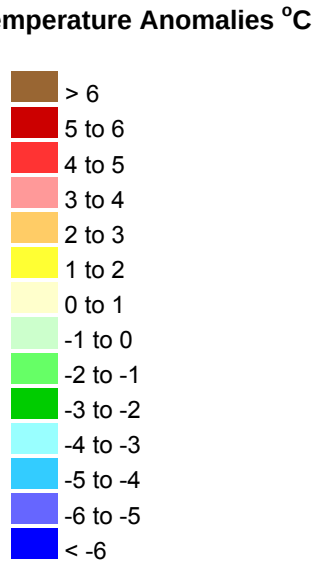

**Rainfall percentiles for the last 12 months (March 2007 – February 2008)**

Twelve-month rainfall deficiencies persisted last month over an extensive area from south and south east NT into most of SA, easing slightly in the west of Queensland and south west of WA. The pattern of below average rainfall in the west, south west and central parts of the country, as well as in SA, Victoria and Tasmania indicates that long-term droughts persist in these areas. The remainder of the country recorded average to above average rainfall.

## 1.2 Maximum and minimum temperature anomalies

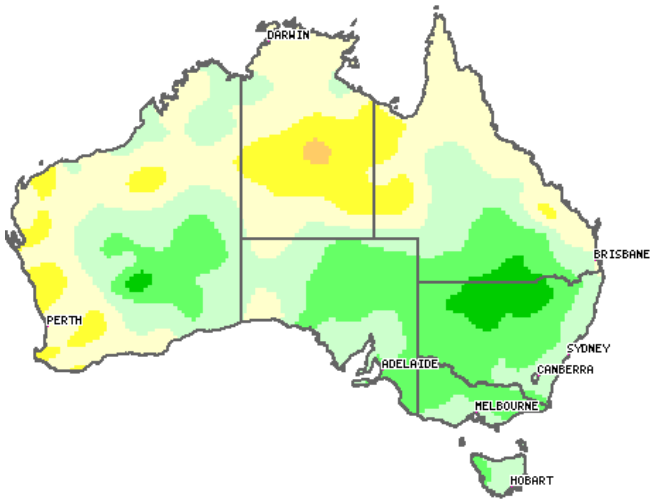
Spatial temperature analyses are based on historical monthly temperature data provided by the Bureau of Meteorology. These temperature anomaly maps show the departure of the maxima and minima from the long term average. Temperature anomalies are calculated with respect to the reference period 1961-1990. For further information on temperature anomalies, go to http://www.bom.gov.au/climate/austmaps/

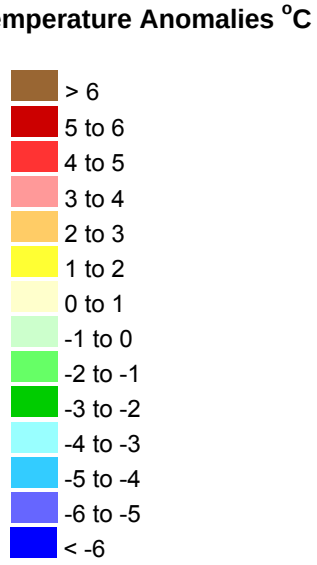



**Monthly mean maximum temperature anomalies for February 2008**

February 2008 was generally a cooler than average month in most of Australia, with overall mean temperature of 1.1°C below the long-term average. Maximum temperatures 1−3°C below average covered most of the country. Maxima anomalies peaked at 4–5°C below average in a region straddling the NSW-Queensland border between Bourke and Charleville, with record cool temperatures set around Cobar and in the wider Sydney region. Similar anomalies occurred around Kalgoorlie, partly as a result of an exceptional cool spell in the aftermath of Tropical Cyclone *Nicholas*. In contrast, maxima were 1–3°C above average in parts of NT and and in south-west WA.

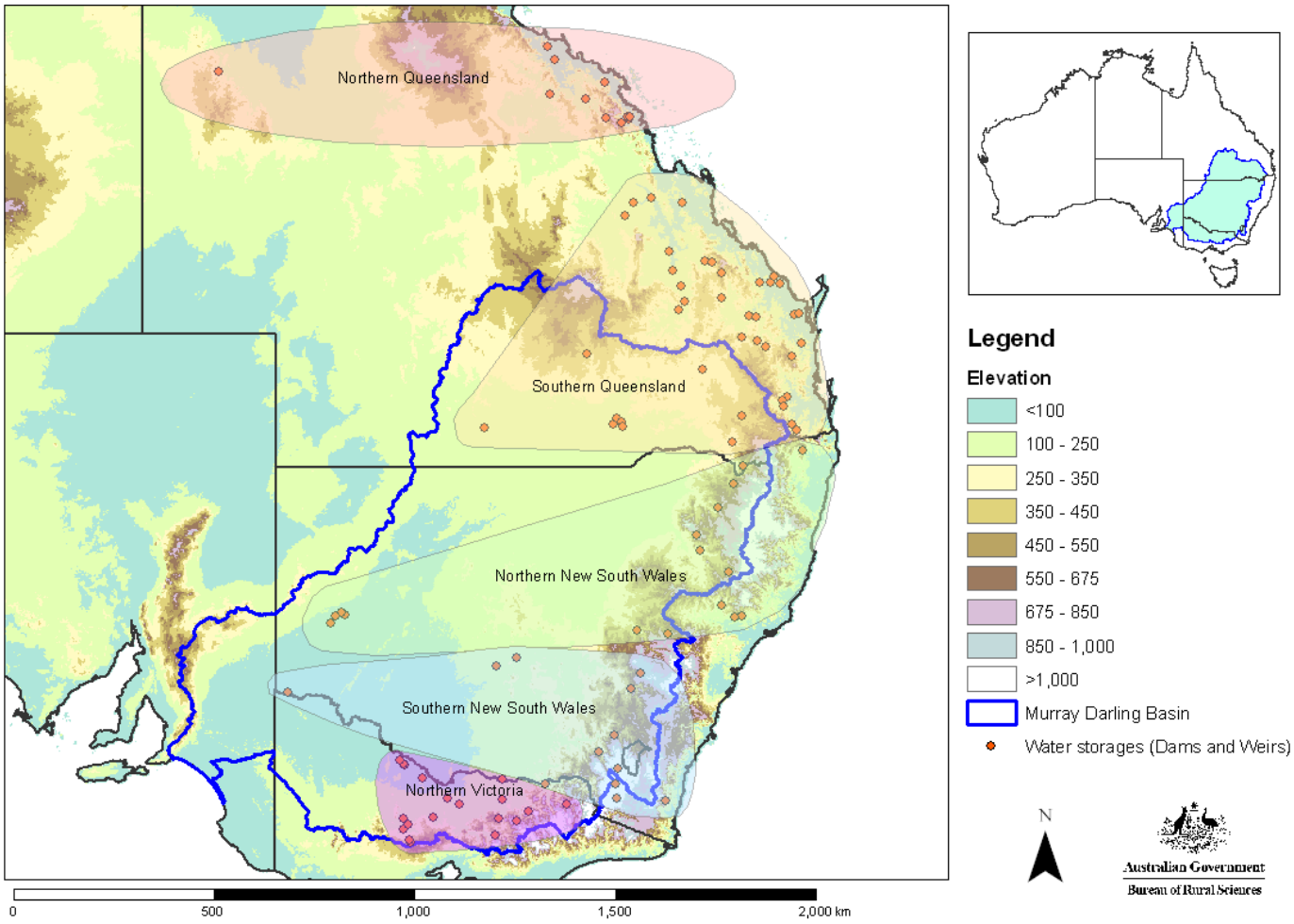



**Monthly mean minimum temperature anomalies for February 2008**

Minimum temperatures were generally slightly above average through the tropics, as well as on the subtropical coast of Queensland and the western coast of WA. Elsewhere they were mostly below average. Overnight minima were 1−2°C above average in much of the central and southern NT. In contrast, the minimum temperatures were 1−2°C below average in most of inland NSW, southern inland QLD and northern and eastern Victoria, reaching near-record levels of 2−3°C below normal around Nyngan.

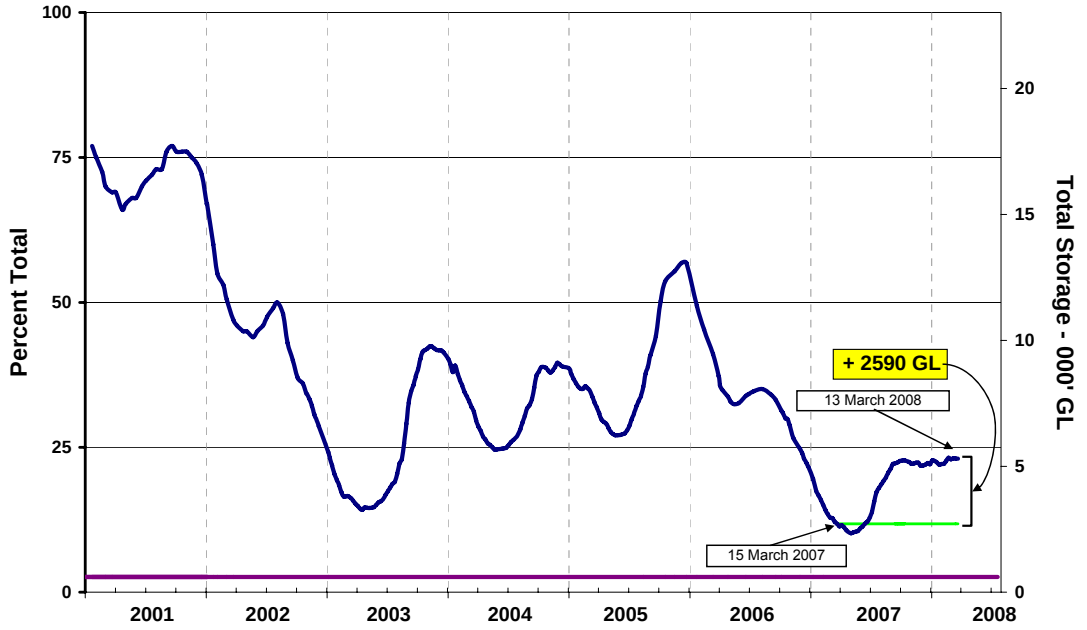
# 2.0 Water storages and announcements




**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 13 March 2008)

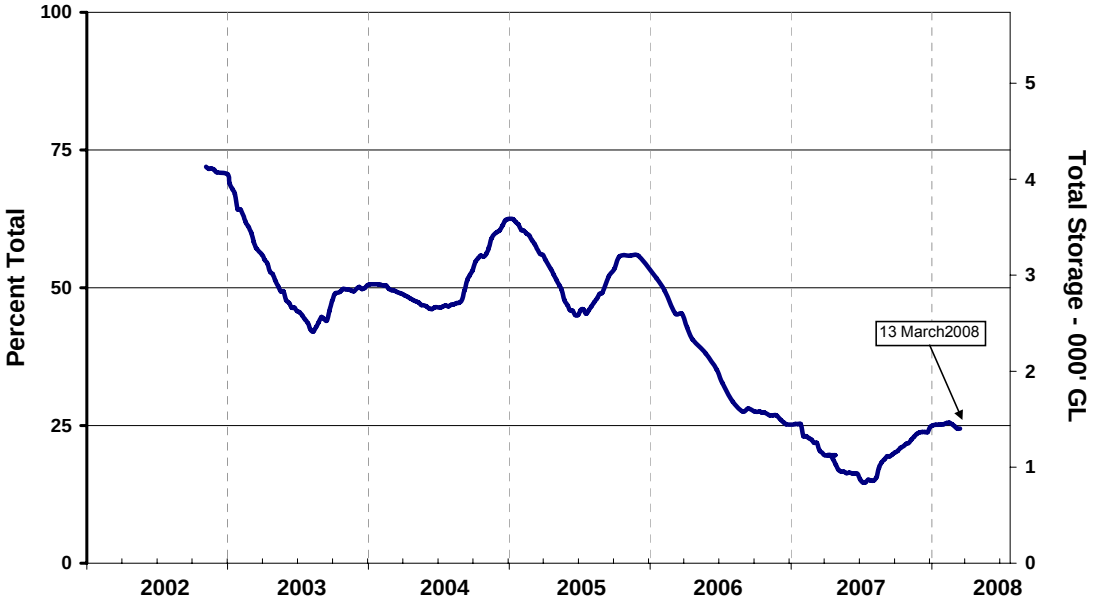
### *Water storage in the MDB (New South Wales, Victoria and Queensland)*




**Water storage levels in the Murray-Darling Basin from 1 January 2001 to 13 March 2008.**
**The green line indicates the storage level at the same time last year.**
**Source: Bureau of Rural Sciences.**

Over the past 6 months the storage levels within the Murray-Darling Basin have remained relatively stable, with releases being virtually matched by inflows. At 13 March 2008 storage levels for irrigated agriculture were at 5,301 GL (23 % of a total capacity of 23,020 GL), a decrease of 36 GL (0.2 % of total capacity) over the month. Current storage levels are approximately 2,590 GL greater than at the same time last year.

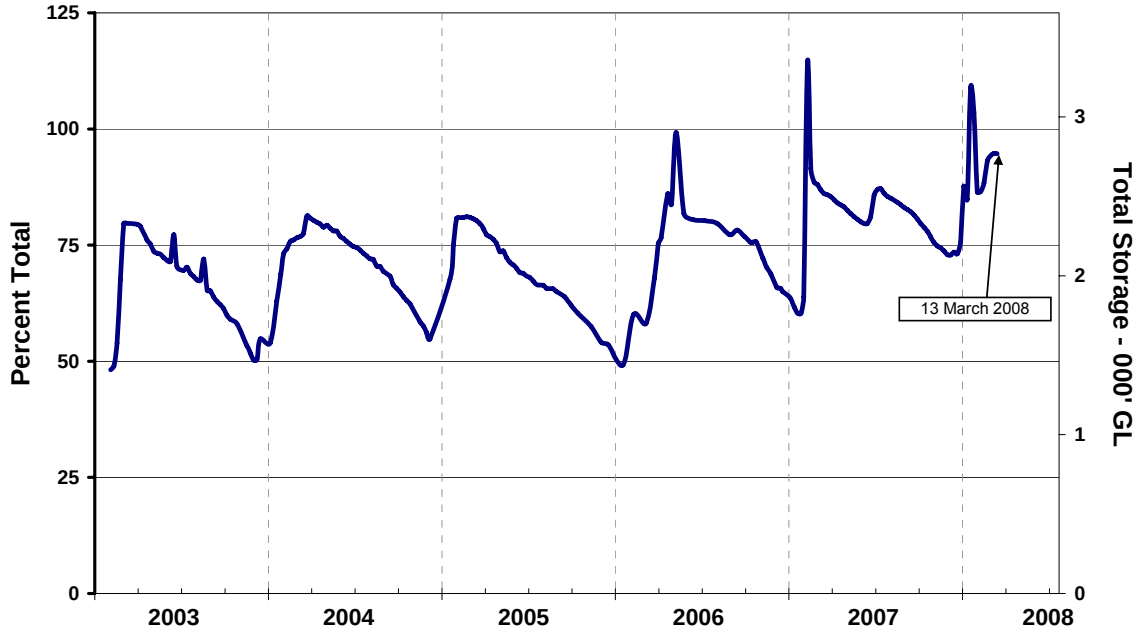
### *Water storage in the Snowy Scheme*




**Water storage levels in the Snowy Scheme from 6 November 2002 to 13 March 2008.**
**Source: Bureau of Rural Sciences**

The figure 'Water storage in the MDB' figure (above top) does 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 The Snowy Scheme storages (directly above) are 1,405 GL (24.5 % of a total capacity of 5,744 GL).

## *Water storage in Queensland*




**Water storage levels in northern Queensland from 3 February 2003 to 13 March 2008.**
**Source: Bureau of Rural Sciences**

Storage levels in northern QUEENSLANDincreased by 202 GL to 3,030 GL (94.7% of a total capacity of 3,199 GL) over the last month (see figure above). This storage level is approximately 276 GL higher than at the same time last year.

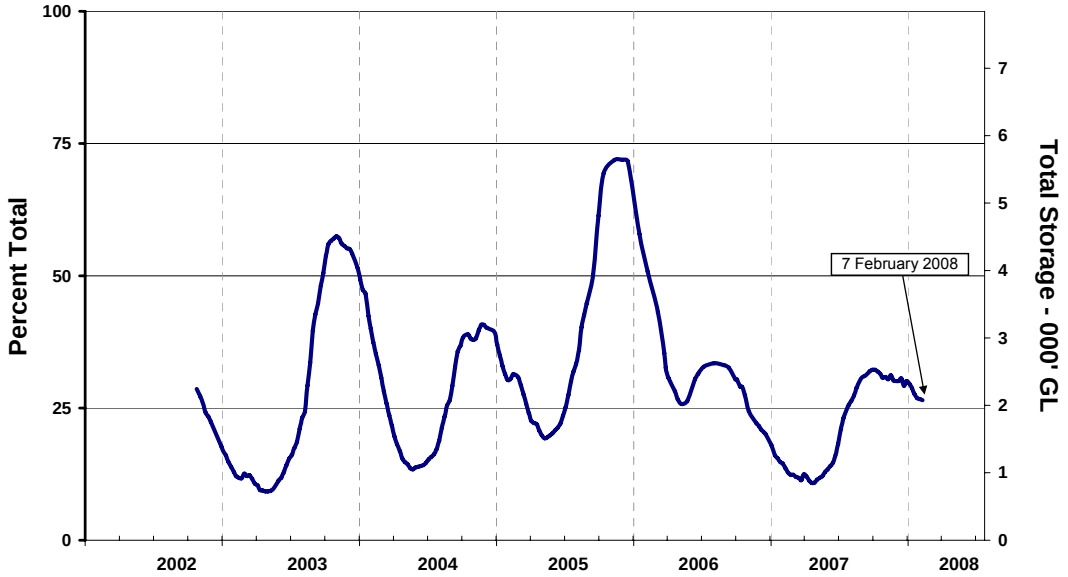

**Water storage levels in southern Queensland from 3 February 2003 to 13 March 2008.**
**Source: Bureau of Rural Sciences**

In southern QUEENSLANDstorage levels increased by 178 GL to 2,881 GL (68.5% of a total capacity of 4,203 GL) over the last month (see figure above). This storage level is approximately 1,593 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 13 March 2008.**
**Source: Bureau of Rural Sciences**

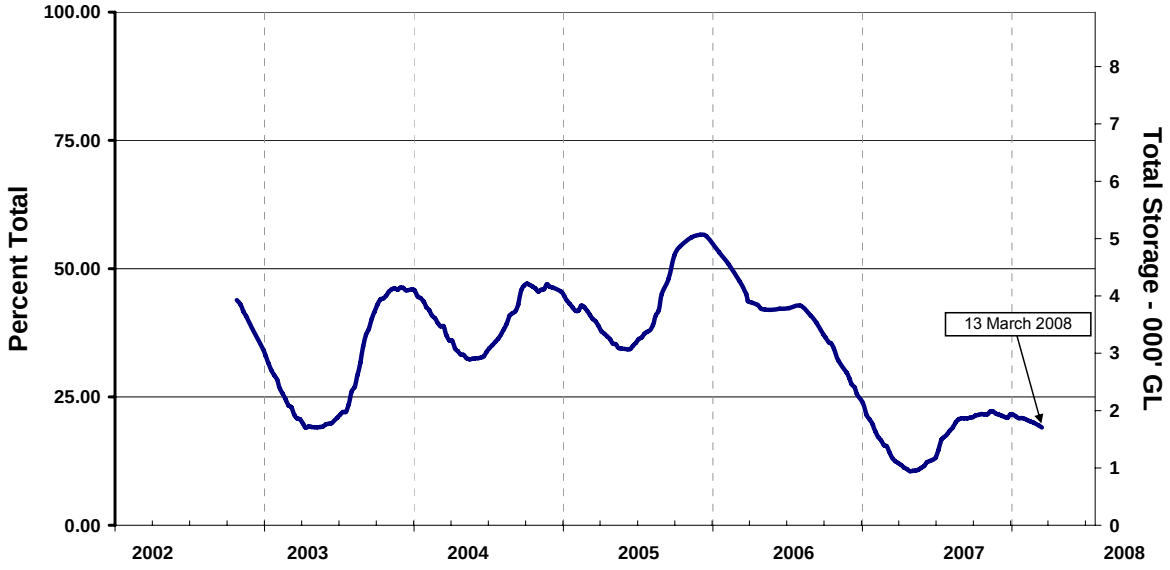
Storage levels in northern NSW increased by 210 GL to 2,171 GL (30.5% of a total capacity of 7,114 GL) over the last month (see figure above). This storage level is approximately 1,260 GL higher than at the same time last year.




**Water storage levels in southern New South Wales from 28 October 2002 to 13 March 2008.**
**Source: Bureau of Rural Sciences**

In southern NSW storage levels decreased by 118 GL to 1,992 GL (25.4% of a total capacity of 7,844 GL) over the last month (see figure above). This storage level is approximately 1,065 GL higher than at the same time last year.

## *Water storage in Victoria*




**Water storage levels in northern Victoria from 28 October 2002 to 13 March 2008.**
**Source: Bureau of Rural Sciences**

Storage levels in northern Victoria decreased by 106 GL to 1,705 GL (19.1% of a total capacity of 8,950 GL) over the last month (see figure above). This storage level is approximately 222 GL higher than at the same time last year.

## *Murray-Darling Basin update*

- The La Niña weather pattern has delivered above average rainfall across much of the Murray-Darling Basin, providing welcome relief for many graziers and dryland farmers and causing flooding in southern Queensland and the Border rivers. However, across much of the Murray-Darling Basin, the water available for irrigators and the environment remains at record low levels. Despite good summer rainfall, inflows in the central and southern parts of the Basin remain low and headwater storage levels remain well below average.
- The Murray-Darling Basin Commission (MDBC) is managing the Murray System to conserve as much water as possible in major storages and maximise water availability to the states in 2008–09.
- While critical urban, stock and domestic requirements for 2008–09 are reasonably assured, opening water allocations for Murray water users in 2008–09 are again expected to be very low or zero – but with some carryover water available. Allocation improvements during the season will be highly dependent on rainfall and inflows over winter–spring 2008.
- Whilst above average rainfall has been observed in eastern NSW and Queensland during February, parts of the Basin in the southwest received their lowest rainfall on record. Most areas experienced temperatures in the mid-high 30's over February. Maximum daytime temperatures along the length of the Murray River during February were 1–4 °C below the long-term average.
- Murray System Inflows (excluding inflow to Menindee Lakes) totalled around 100 GL over February compared with the long-term average of 170 GL. Inflow to Menindee Lakes for February was about 200 GL. Widespread heavy rain is needed over the coming months to significantly improve the outlook for next season.
- The storage level of Dartmouth Reservoir has remained steady for the last 3 months, and is currently 681 GL (17.4 % of capacity). Dartmouth Reservoir is the preferred site for storing water that will be carried over into next season as it has lower evaporative losses and less chance of spilling than either Hume Reservoir or Lake Victoria. Hume Reservoir continues to supply the bulk of downstream requirements along the mid-Murray and is currently holding 371 GL (12 % capacity).

## 2.2 Water announcements

### *Announcements for New South Wales (current at 3 March 2008)*

- On 3 March 2008, NSW Department of Water and Energy Deputy Director General, David Harriss, announced a 25 % allocation for high security licence holders in the NSW Murray Valley. Improved water availability in the Murray and Darling Rivers has allowed for this increase to licence holders. Taken together with re-crediting of water that was suspended in 2006–07, most NSW high security users now have access to approximately 75 % of their entitlement.
- As at 3 March 2008 allocations in the Lower Darling remain unchanged, with high security users having 100 % of entitlement and general securities having 50 %. In the Murrumbidgee Valley high security users will have access to 90 % of entitlement and an additional 5 % re-credited from 2006 and a general security allocation of 13 %.
- Current water availability for the 2008–09 irrigation season remains low in both the Murray and Murrumbidgee Valleys and contingency planning will continue. The main priority of NSW Department of Water and Energy is to continue to ensure that the Murray and Murrumbidgee river systems are being managed to reduce losses and conserve as much water as possible for next year.
- On 19 February 2008 the Department of Water and Energy announced a three per cent increase in water allocation for environmental water and General Security licence holders in the Macquarie Valley. Recent rainfall has delivered more inflows into Burrendong Dam, boosting the storage level to 21 % and making this allocation increase possible.
- On February 4 the Department announced the first allocation for 2007–08 for Macquarie Valley General Security licensees of 2 %. These licensees can now access a total of five per cent of their licensed water entitlement. While it is late in the season this additional water will help local irrigators and water users plan for the year's production with a greater degree of certainty. The allocation for town water supply, stock and domestic use, and High Security licensees remains at 100 per cent.
- Another 4,800 megalitres have been credited to the Macquarie Valley environmental water account for Burrendong Dam, which is good news for the environment and downstream landholders. In addition more water is now available to General Security licences purchased under the RiverBank project, administered by the Department of Environment and Climate Change.

### *Announcements for Victoria (current at 03 March 2008)*

- An increased allocation for the Goulburn, Murray, Broken and Campaspe systems was announced by Goulburn-Murray Water on 3 March 2008 (see below). The seasonal allocations in all other systems remained unchanged.

| Water system | High-reliability share (%) | Change (%) |
|---|---|---|
| Murray | 43% | +1% |
| Broken | 70% | +2% |
| Goulburn | 54% | +1% |
| Campaspe | 18% | +2% |
| Loddon | 5% | 0% |
| Bullarook Creek | 0% | 0% |

- Continuing dry conditions means there has been little inflow to water systems since the most recent allocation announcement on 15 February 2008. The improvements on the 03 March were provided by efficient delivery system operations and the current low demand for water.
- Goulburn-Murray Water will announce the final 2007–08 seasonal allocations on Tuesday 1 April 2008. For customers in the Murray, Broken, Goulburn, Campaspe, Loddon and Bullarook Creek regulated systems, water which is unused from this season's allocations carries over to next season.
- The next allocation announcement will be available on Monday, 17 March 2008.

- On 15 February 2008 Goulburn-Murray Water released an outlook for seasonal allocations in the 2008–09 season. The 2008–09 season is likely to commence with very low reserves in all storages as water allocated this season is delivered or held as carryover by customers. Storage inflows after March this year will be reserved for use during 2008–09, but significant winter and spring inflows are the key elements to overcoming a potential water shortage. Next season's irrigation allocations will rely almost entirely on the inflows between July and November.
- Average inflow conditions will not provide enough water to allocate water for irrigation on 1 July 2008. All systems will begin the 2008–09 season with zero seasonal allocations. By 15 August 2008, average inflows are expected to allow non-zero allocations in the Murray, Goulburn, Campaspe and Loddon systems.
- A summary of 2008–09 season allocations can be seen in the tables below. The terms in these tables are defined as: *wet* (inflow volumes that are higher in 1 year out of every 10 years), *average* (inflow volumes that are higher in 5 years out of every 10 years) and *dry* (inflow volumes that are higher in 9 years out of every 10 years)

**Outlook for 15 August 2008 Seasonal Allocations (% of high-reliability water share)**

| Inflow Conditions | Murray | Broken | Goulburn | Campaspe | Loddon |
|---|---|---|---|---|---|
| *wet* | 100% | 100%* | 90% | 100% | 100%* |
| *average* | 17% | 0% | 31% | 22% | 100% |
| *dry* | 0% | 0% | 0% | 0% | 0% |

* Low-reliability water shares allocated

**Outlook for 15 October 2008 Seasonal Allocations (% of high-reliability water share)**

| Inflow Conditions | Murray | Broken | Goulburn | Campaspe | Loddon |
|---|---|---|---|---|---|
| *wet* | 100% | 100%* | 100%* | 100%* | 100%* |
| *average* | 63% | 100%* | 82% | 100% | 100%* |
| *dry* | 0% | 0% | 20% | 0% | 0% |

* Low-reliability water shares allocated

**Outlook for 15 February 2009 Seasonal Allocations (% of high-reliability water share)**

| Inflow Conditions | Murray | Broken | Goulburn | Campaspe | Loddon |
|---|---|---|---|---|---|
| *wet* | 100%* | 100%* | 100%* | 100%* | 100%* |
| *average* | 100% | 100%* | 100%* | 100%* | 100%* |
| *dry* | 45% | 0% | 45% | 0% | 64% |

* Low-reliability water shares allocated

## *Announcements for South Australia (current at 20 February 2008)*

- Minister for the River Murray Karlene Maywald announced on 20 February that SA River Murray water irrigation allocations will remain unchanged at 32 % in SA.
- Despite widespread rain and flooding in some parts of Australia, the inflows to the Murray-Darling Basin shared system in January and early February 2008 have only marginally increased and SA is still experiencing a very dry period that is impacting on our water supplies.
- In total, SA has now been allocated 1052 gigalitres of water from the River Murray System, with 350 gigalitres allocated to critical urban needs and irrigation and 702 gigalitres allocated for dilution, reserves and losses.

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/

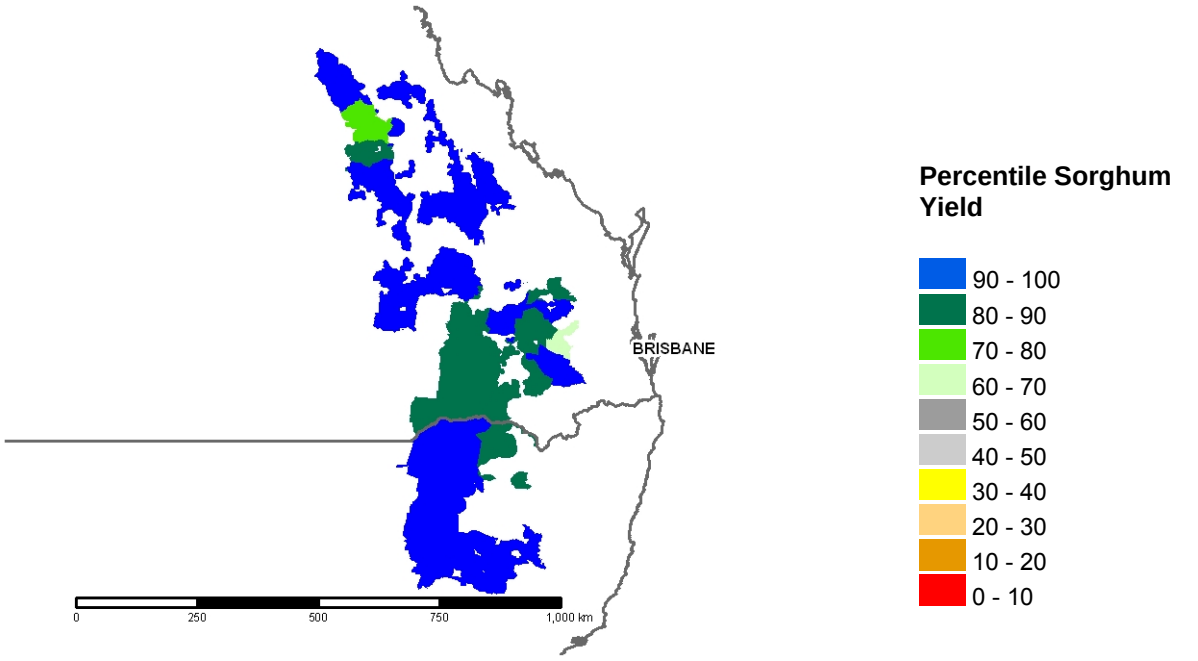
SA water
http://www.sawater.com.au/SAWater/WhatsNew/NewsRoom/

# 3.0 Crop and livestock production

## 3.1 Crops

### *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 2007–08 cropping season ranked relative to all years (1908-2007) based on rainfall to date (March 2008)**

### *Summer Crops*

- Current predictions for shire level sorghum yields for the 2007–08 growing season are expected to be above average reflecting favourable rainfall experienced in January and February. Total grain sorghum production is forecast to be a record 2.45 million tonnes, nearly 80 % greater than the year before.
- Above average rain has fallen across most of NSW throughout January and February, particularly in the northern and central regions, leading to increased summer crop potential. Summer crop sowings are estimated at 1.05 million ha compared to last season where approximately 276,763 ha were harvested. A lack of irrigation water at planting time has severely constrained the area planted to cotton and rice; more rainfall will be required for irrigation allocations to increase to adequate levels for irrigators.
- In NSW sorghum sowings are estimated at 250,000 ha, an increase on last month's forecast of 176,400 ha. Sunflower plantings are predicted at 21,000 ha, which is greater than last year, where approximately 10,515 ha were harvested. Sunflower plantings are currently approximately 21,000 ha and exceed the previous years harvest area by 77 %.
- NSW has had its smallest rice planting (only 2,000 ha) since the 1920s, down 89 % on the previous year. The recent rain along with above average temperatures have provided excellent conditions for growth, with rice crops expected to yield 9 tonnes to the hectare, which is above average. Despite above average yields, a lack of irrigation water in southern NSW at the time of planting resulted in reduced planting, and overall, production volume will be small. Good rainfall and further inflows (resulting in increases in allocations) must occur so that growth may be sustained. Cotton lint and cotton seed production are also forecast to fall by 58 %, primarily because the area sown to cotton is estimated to have declined significantly to 63,000 hectares, the lowest area sown to cotton since 1982–83.

- Overall, the total summer crop production in NSW is forecast to increase by 26 % to 1.35 million tonnes in 2007–08. Further rainfall is still required for March to continue good moisture levels to complete summer crops and prepare for winter crops.
- In Queensland sorghum sowings are estimated at 545,000 ha, a 55 % increase on last year's harvest area. Sunflower plantings are currently approximately at 13,000 ha, which triples the area of the previous year's harvest. Cotton plantings are currently approximately at 22,800 ha (most of which is under irrigation).
- Queensland has experienced favourable conditions recently, with a majority of the state receiving above average rainfall. This increase in rainfall, particularly in the central and southern regions has lifted production estimates for both sorghum and cotton. Despite flooding around Emerald and central Queensland causing some damage to grain sorghum crop, the increased yield potential in southern Queensland grain sorghum growing regions will easily outweigh these losses.
- The heavy rainfall across central Queensland has brought about a significant increase in water storages, bringing about a positive outlook for cotton in 2008–09.

### *Winter Crops*

- A steady improvement in seasonal conditions across the country combined with record grain prices are expected to lead to an expanded winter cropping programme in 2008–09. However follow-up rainfall will certainly be required throughout autumn.
- Overall most SA districts experienced very little rainfall throughout February. In the Northern Murray Mallee, sowing intentions will be influenced by the positive grains prices. However, decisions to increase sowing areas will certainly be influenced by autumn rain. In the Lower South East the major increase will be in wheat as a relatively low risk crop, including feed wheat to supply the dairy/feed lot industry. An increase in canola and beans is also expected.
- The increasing cost and supply difficulties for fertilisers and herbicides are still proving to be a problem for farmers as they prepare for the coming season.
- In Queensland soil moisture levels have improved due to the recent heavy rainfall. The increased odds for autumn rainfall exceeding the median in the north, will contribute a good winter crop for 2008–09.

## 3.2 Livestock

### *Beef cattle*

- Australian saleyard cattle prices are forecast to rise in the coming year, due to tighter supplies as producers commence herd rebuilding. According to ABARE, the Australian cattle herd is expected to grow 1.4 % in 2008–09, to 28.6 million head, and to 29.6 million head by 2011–12. Underpinning this growth will be a 2.3 % decline in slaughter, with production back 2 %, at 2.1 million tonnes cwt.
- MLA's NLRS weekly slaughter figures indicate that nationally beef production during February was again constrained by reduced turnoff and wet conditions throughout Queensland. The wet summer has lifted demand from re-stockers for calves, cows and young cattle. However, the quality of cattle at market has been poorer as time has passed in February, largely due to supply areas in south remaining dry (eastern states). Re-stockers were still quite active, purchasing suitable cattle at cheaper prices due to the reduced competition from lot-feeders and processors. Looking ahead, production should start to increase during March. However, the extent of the increase will depend on seasonal conditions and the level of competition from re-stockers and feeders for suitable younger cattle.
- Queensland cattle slaughter continues to be impacted by the very wet conditions across the state. The wet weather has been the major contributor to the reduction in kill numbers during 2008. Heavy rain across Queensland, particularly in central and northern areas has significantly impacted supplies; with rain damaged roads causing numerous logistical issues for producers and transporters. In some instances, cattle deliveries to processors have not been able to be made, or forced to take a longer, more expensive, route. Central areas of the state have also been reported to be affected by 3-day-sickness. The majority of cattle that are being killed are grass-fed and have been noted to be in very good quality. However, the grain-fed cattle are in tight supply, as grain prices remain high and cattle on feed numbers low. Processors are anticipating larger numbers to become available once the weather dries up.

## *Sheep and lambs*

- According to ABARE, while the emphasis for producers to rebuild flocks through to 2012–13 will have a significant impact on sheep turnoff, lamb production will continue to surge to record levels, underpinned by favourable returns to producers. After an estimated 2 % dip in production for 2007–08 (404,000 tonnes cwt), Australian lamb production is forecast to reach a near-record 412,000 tonnes cwt in 2008–09. On the assumption of a return to normal seasonal conditions and continuing attractive returns, lamb production is forecast to continue to grow through to 2012–13, reaching a forecast 440,000 tonnes cwt. Sheep turnoff and mutton production will largely be shaped by the rebuilding of the flock, with slaughter in 2008–09 forecasted to decline 17 %, to 8.5 million head. Slaughter is expected to increase slowly towards 10 million head by 2012–13, still 25 % below 2006–07.
- Nationally, markets saw lower supplies during February. Eastern states re-stocker lamb numbers for February were 9 % lower than the same time last year, with NSW reporting 44 % lower. Improved seasonal conditions across NSW has allowed producers to hold onto and finish lambs on pastures to heavy weights, large numbers of these heavy lambs have entered the sale yards. The poorer conditions in Victoria have resulted in re-stocker numbers being 10 % above the same time last year. Nationally, heavy lamb yardings were 38 % greater than the five-year average, with NSW the main contributor to this trend (representing 59 % of the total national yardings). This large number of heavy lambs has left exporters with extra export product, which is proving difficult to shift, making trading difficult for processors and they are reportedly reducing the number of heavy lambs they process.
- For SA, the worsening season has resulted in state wide near-exhausted feed reserves, and quality in the sale yards has been dramatically affected. There has been minimal rainfall in SA, resulting in re-stocker numbers for February being 69 % higher than the same time last year. For Victorian producers, if no good break occurs sooner rather than later, producers may have to unload lambs they would normally hold until they are ready or prices improve.
- For WA heading into autumn, dry feed stocks, including stubble and pastures are in very limited availability, with supplementary feeding well under way. Insufficient water supplies have become a major problem for most producers, forcing many to offload surplus stock. Sheep and lamb yardings at both the major saleyards in WA have been larger than would usually be expected at this time of year. A combination of seasonal conditions and high grain prices has seen many stock turned off in store condition. The forecast for the continuation of high grain prices, coupled with reduced incomes from sheep and lambs, has influenced many producers to increase their focus on grain, at the expense of rebuilding their sheep flock. Ewe mutton quality and weights have decreased considerably over the past month – indicative of the dwindling feed and water supplies.

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

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

'Dry Seasonal Conditions in Rural Victoria', Report 75 (6 March 2008)
Victorian Department of Primary Industries
http://www.dpi.vic.gov.au

SA Department of Primary Industries and Resources
http://www.pir.sa.gov.au/grains/cpr

# 4.0 Climate Outlook

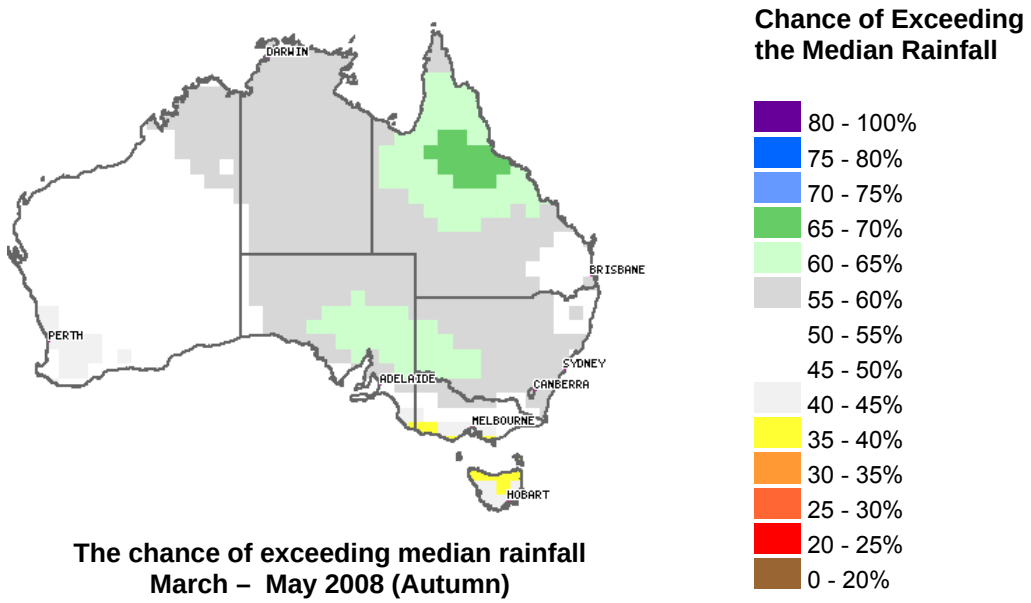
## 4.1 El Niño & Southern Oscillation Index

On 5 March the Bureau of Meteorology reported that the La Niña event in the Pacific basin is mature, and continues to influence the climate of eastern Australia. While the far eastern Pacific Ocean has warmed, cooler than average sea surface temperatures (SSTs) continue to extend across the western to central equatorial Pacific. When combined with enhanced Trade Winds, suppressed cloudiness in the central Pacific and a strongly positive (+21) Southern Oscillation Index (SOI), it is clear that the atmosphere and ocean are firmly reinforcing each other, sustaining the La Niña event. The SOI reached a record value for February of +21.3, the highest for any month since +22.4 in November 2000.

Warmer than average water in the western Pacific sub-surface has only slightly propagated towards east. Central Pacific SSTs have not been impacted yet; in fact they've continued to cool. However, a gradual weakening of the cool anomalies in the central Pacific would be consistent with the latest outlooks from computer models. These show Pacific temperatures gradually warming over the next few seasons, although remaining below La Niña thresholds until at least the end of the southern autumn. In addition, this is the time of year when abatement of La Niña conditions would typically be expected. However, the ocean sub-surface cool anomalies about the near-equatorial central and eastern Pacific are yet to show signs of significant weakening.

## 4.2 Rainfall Outlook

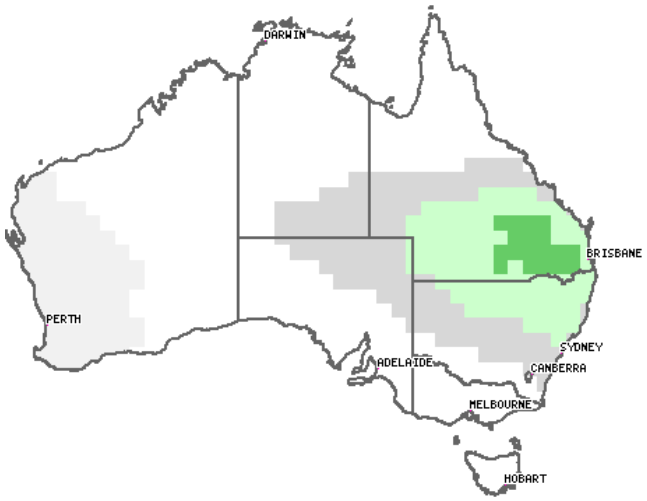
The Bureau of Meteorology provides seasonal outlooks that are statements about the probability of wetter or drier than average weather over a three-month period. The outlooks are based on the statistics of chance (the odds) taken from Australian rainfall/temperatures and sea surface temperature records for the tropical Pacific and Indian Oceans. They are not 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 March – May 2008 (Autumn)**

The national outlook for autumn rainfall (March to May) shows a mixed pattern of chances for exceeding the median. A wetter than average season is favoured in northern Queensland and in parts of NSW and SA, while below-average falls are more likely in parts of Victoria and Tasmania The pattern of seasonal rainfall odds across Australia is a result of cooler than average waters 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

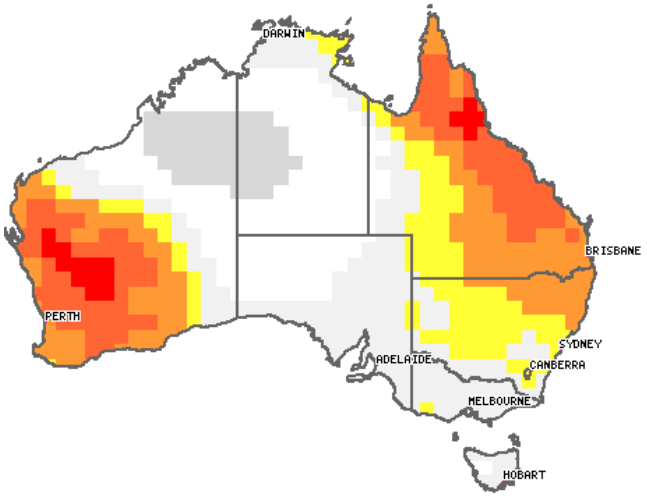



**3 Month Temp. Max Outlook**

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 March – May 2008 (Autumn)**

The national outlook for average autumn maximum temperatures (March to May) shows a moderate shift in the odds favouring cooler than average conditions in southern Queensland and northern NSW. The pattern of seasonal maximum temperature odds across Australia is a result of the combined effects from above average temperatures in the central to southeast Indian Ocean, and the cooler than average temperatures in the equatorial Pacific (La Niña).




**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 March 2008 – May 2008 (Autumn)**

In contrast, minimum temperatures averaged over autumn are favoured to be warmer than average across most of Queensland, NSW and the southern half of WA. The chances of increased overnight warmth (averaged over the coming three months) are mainly between 60 and 75% in these areas. Across the rest of the country, the chances of the seasonal mean minimum being above the long-term average are typically between 45 and 60%, except in an area in the western NT into northern WA where the chances approach 40%.

History shows the oceans' effect on minimum temperatures during autumn to be moderately consistent over large parts of the country

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