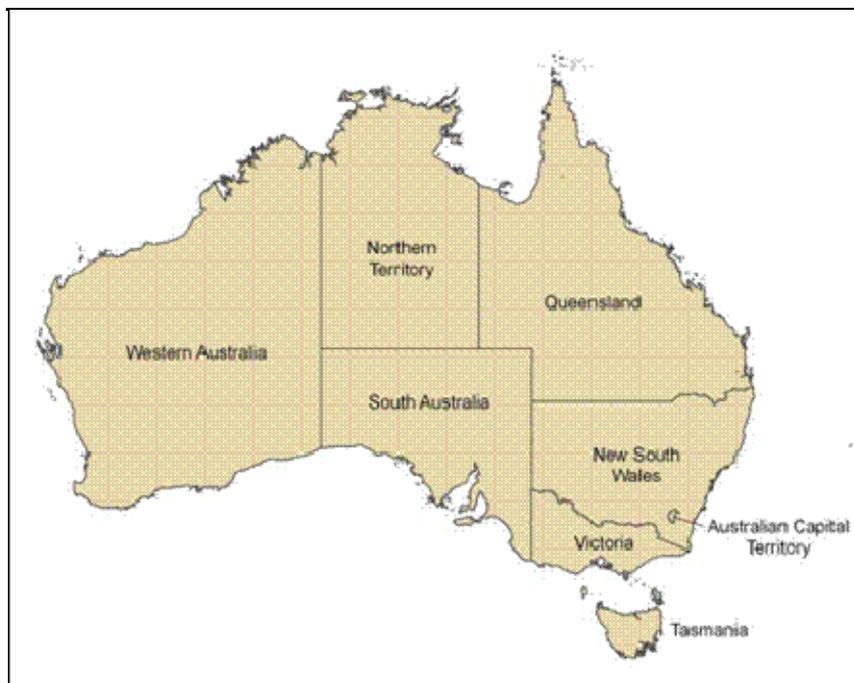




# Climate and Agricultural Update

## National Report

Issued April 2008



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### ORGANISATION

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<p>Meat and Livestock Australia</p> 	<p><a href="http://www.mla.com.au">www.mla.com.au</a></p>

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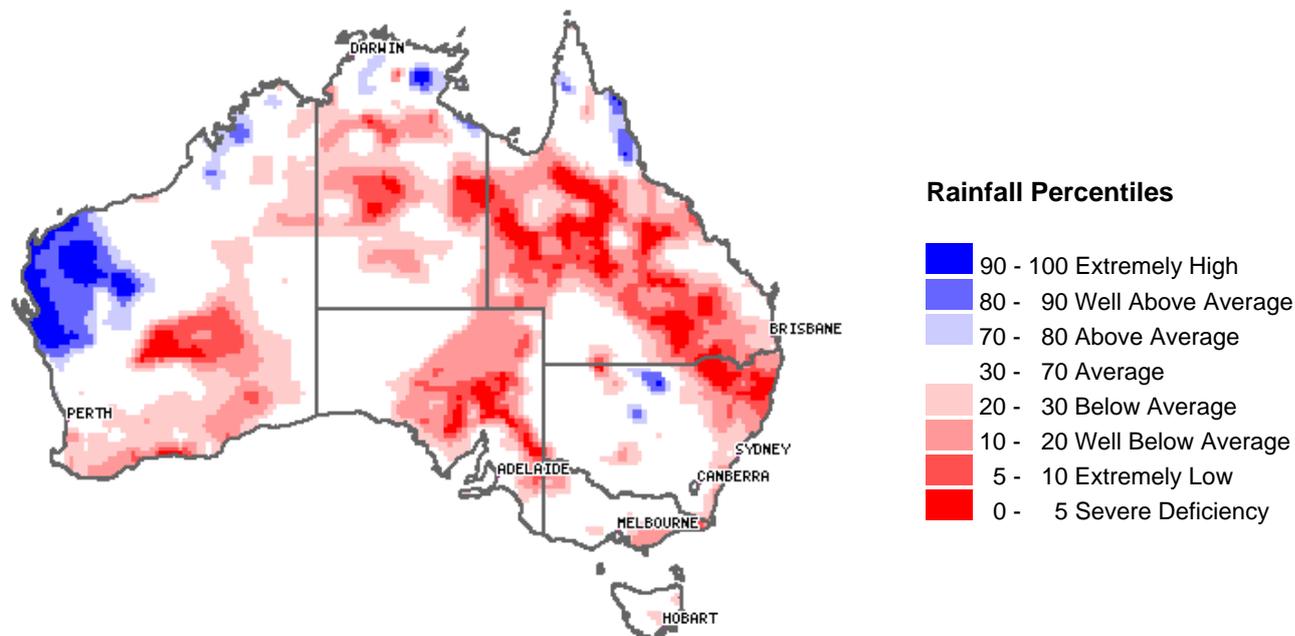
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# 1.0 Rainfall and temperature

## 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 (March 2008)*

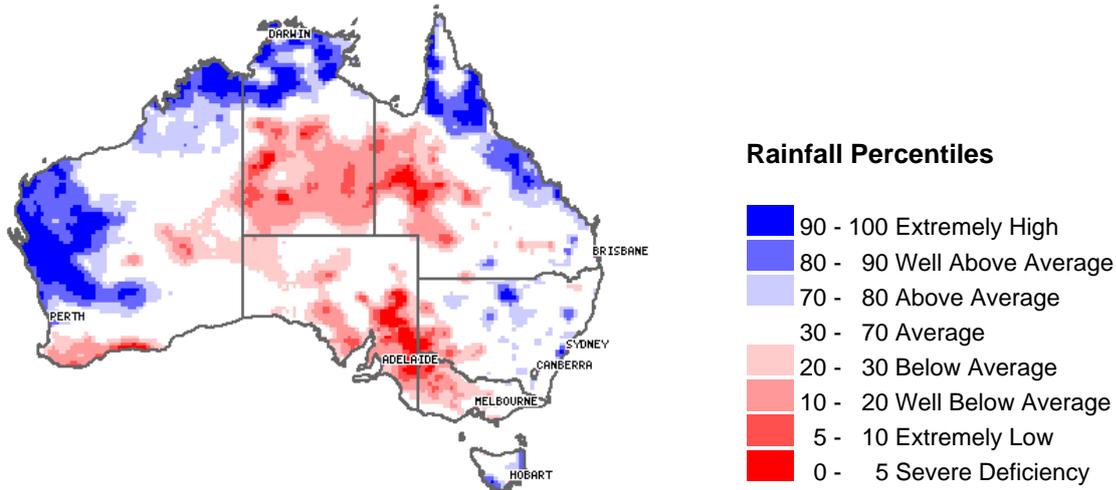


**Rainfall percentiles for March 2008**

March was a generally dry month across Australia, although significant rain events occurred in the south west and the south east at the end of the month after little or no rain in the first three weeks. All state and territory means were below average, ranging from 19 per cent below average in Western Australia (WA) to 83 per cent below average in South Australia (SA), but none ranked in the driest 20 March monthly means of the post-1900 period. The Australian average was 44 per cent below average, ranking 22nd lowest of 109 years.

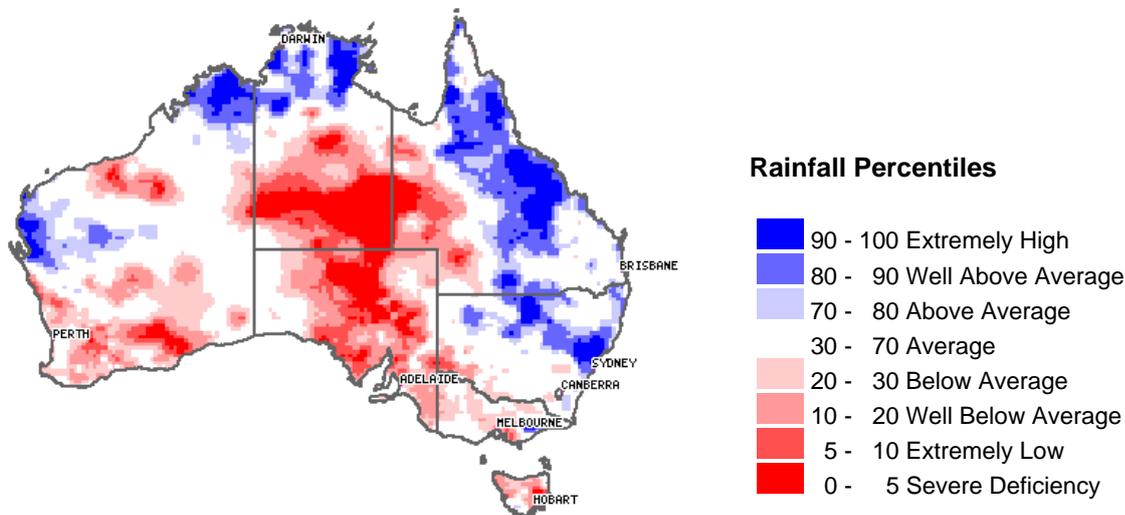
The rainfall over most of the agricultural land was below average to average. Areas with rainfall in the lowest percentile range extended in a band from Mount Isa in north-west Queensland to the north east of New South Wales (NSW), as well as in the central WA and in SA north of Adelaide. While above average rainfall was recorded in the Pilbara and Gascoyne regions of WA, the east coast of northern Queensland north of Cardwell, and parts of the Northern Territory (NT) Top End and Gulf coast. Isolated above average falls occurred in northern inland NSW. The only substantial area in the highest percentile range was the west coast between Shark Bay and Karratha.

## Ongoing or emerging rainfall situations



**Rainfall percentiles for the last three months  
(January – March 2008)**

During the last 3 months, rainfall was below to well below average over most of western Queensland and the NT, as well as in a band from western Victoria into SA, with patches of below average rainfall in the north of SA. Below average rainfall was also recorded in central east of WA and along this state's southern coast. In contrast, above to well above average rainfall was recorded over northern and north-eastern parts of Queensland, north of NT and in some central-north and coastal areas of NSW. Rainfall was also above to well above average in the northern and western parts of WA.

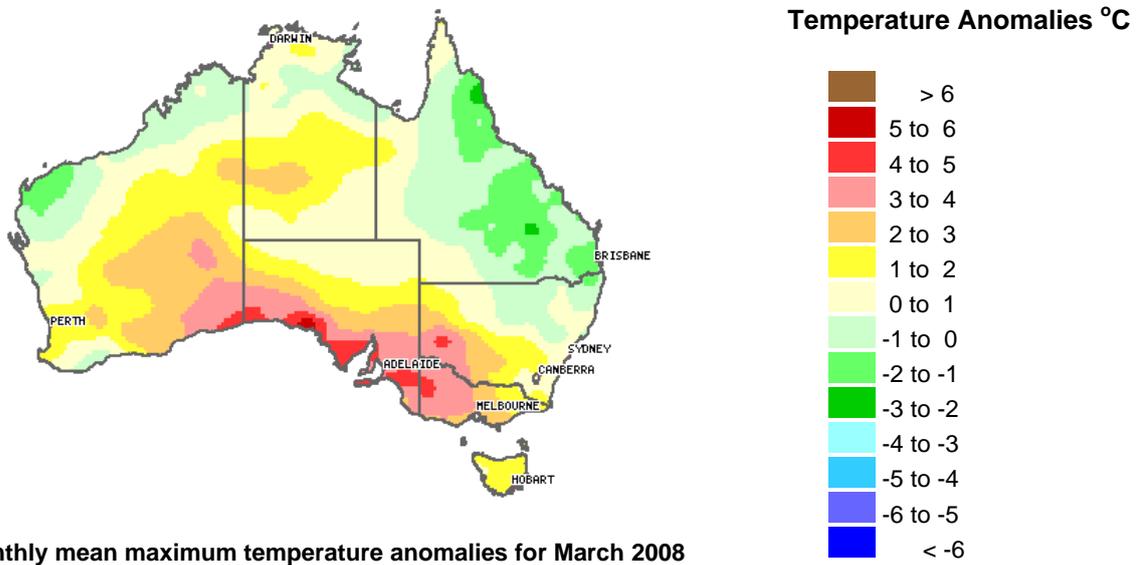


**Rainfall percentiles for the last 12 months  
(April 2007 – March 2008)**

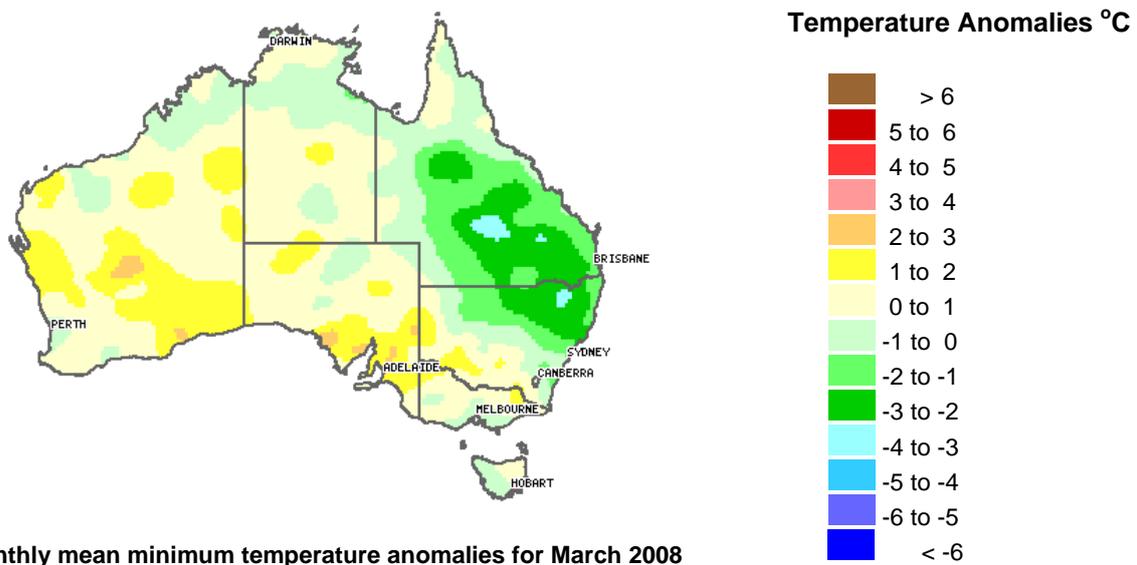
Twelve-month rainfall deficiencies persisted last month over the south-west areas of WA, while they strengthened slightly over the southern half of NT into most of SA and in the west of Queensland. The pattern of below average rainfall in the south-west and central parts of the country, as well as in 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/>

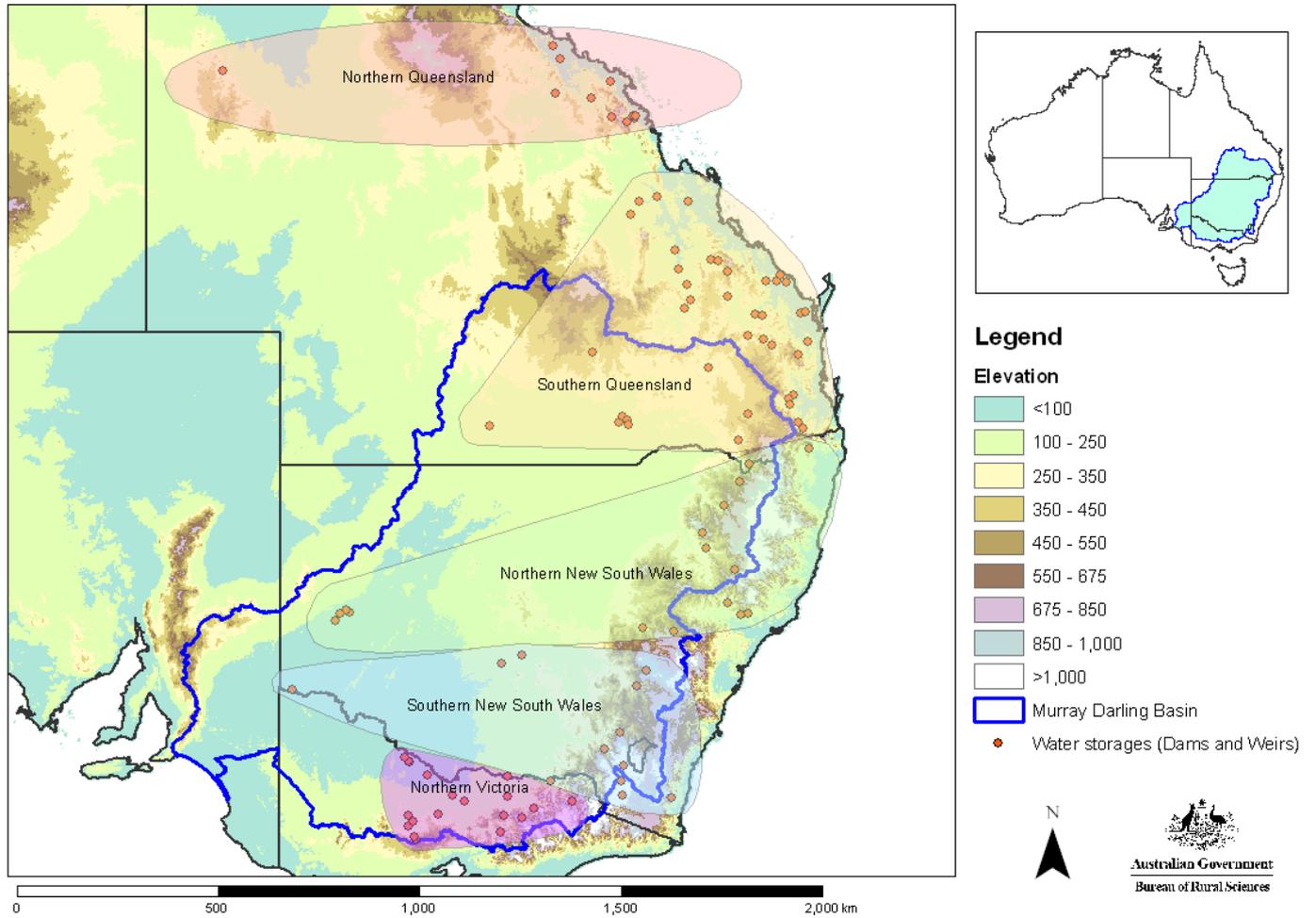


March 2008 was generally a very warm month over southern Australia due to an exceptional prolonged heatwave during the first three weeks of the month. Averaged over Australia, maximum temperatures for the month were 0.79°C above the 1961–90 average. Maxima were 3–5 °C above average over most of southern SA, Victoria west of Melbourne, far south east of WA and south west of NSW. It was 1°C or more above average over the remainder of Victoria, most of Tasmania and SA, the southern and western inland of NSW, and most of interior and south-western WA and central NT. In contrast, monthly mean maxima were below average over most of Queensland except for its far west, in coastal WA north of Carnarvon, and in the northeast of the NT.



Averaged over Australia, minimum temperatures for the month were near the 1961–90 average. Minimum temperature anomalies were weaker than those for maxima. Minima were above average (0–2 °C) in most of WA, the NT, agricultural areas of SA and Victoria (except near Melbourne), as well as in south west of NSW and north-eastern Tasmania. Most other areas had cool nights, particularly in Queensland and northern NSW, with minimum temperature being 1–3 °C below the long-term average.

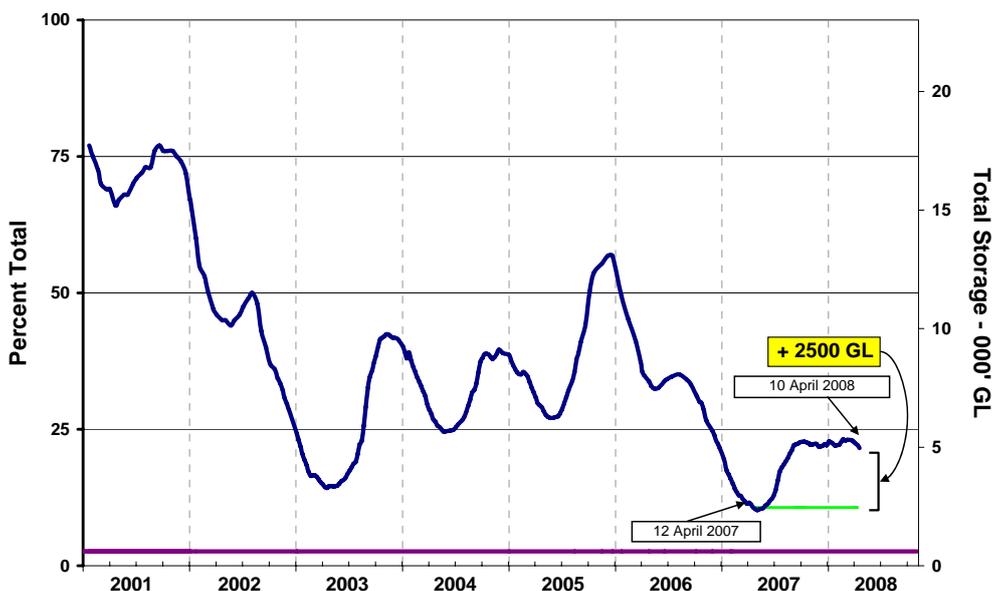
## 2.0 Water storages and announcements



**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 10 April 2008)

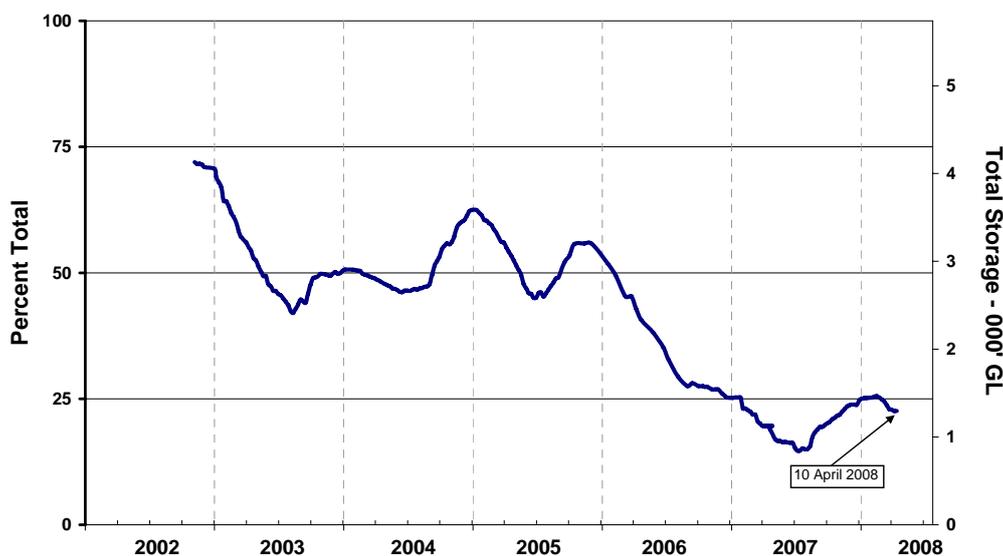
### *Water storage in the MDB (New South Wales, Victoria and Queensland)*



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

Over the past month storage levels within the Murray-Darling Basin (MDB) have decreased, with releases surpassing inflows. At 10 April 2008 storage levels for irrigated agriculture were at 4961 GL (21.6 per cent of a total capacity of 23 020 GL), a decrease of 341 GL (1.5 per cent of total capacity) over the month. Current storage levels are approximately 2500 GL greater than at the same time last year.

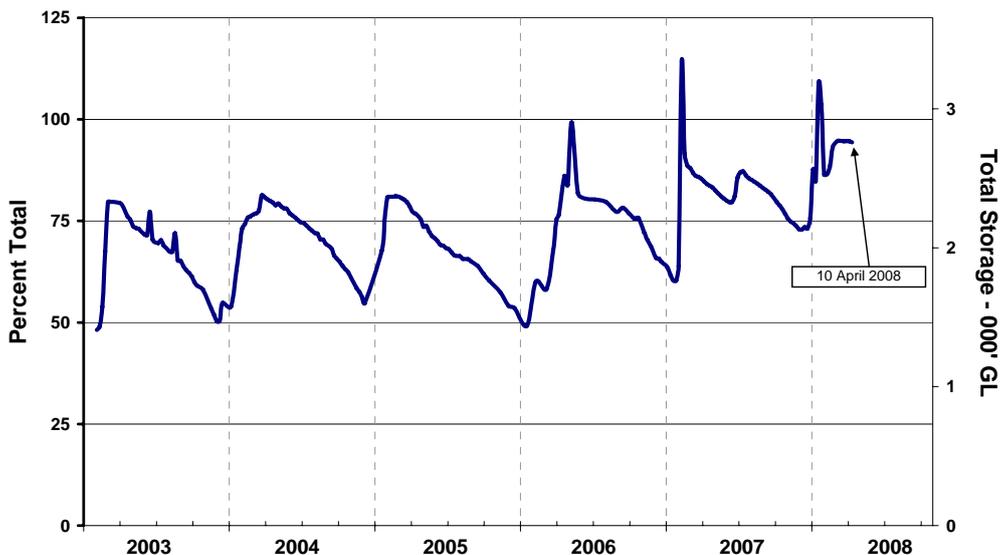
### *Water storage in the Snowy Scheme*



**Water storage levels in the Snowy Scheme from 6 November 2002 to 10 April 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 1295 GL (22.5 per cent of a total capacity of 5744 GL).

## Water storage in Queensland



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

Storage levels in northern Queensland decreased by 11 GL to 3019 GL (94.4 per cent of a total capacity of 3199 GL) over the last month (see figure above). This storage level is approximately 329 GL higher than at the same time last year.



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

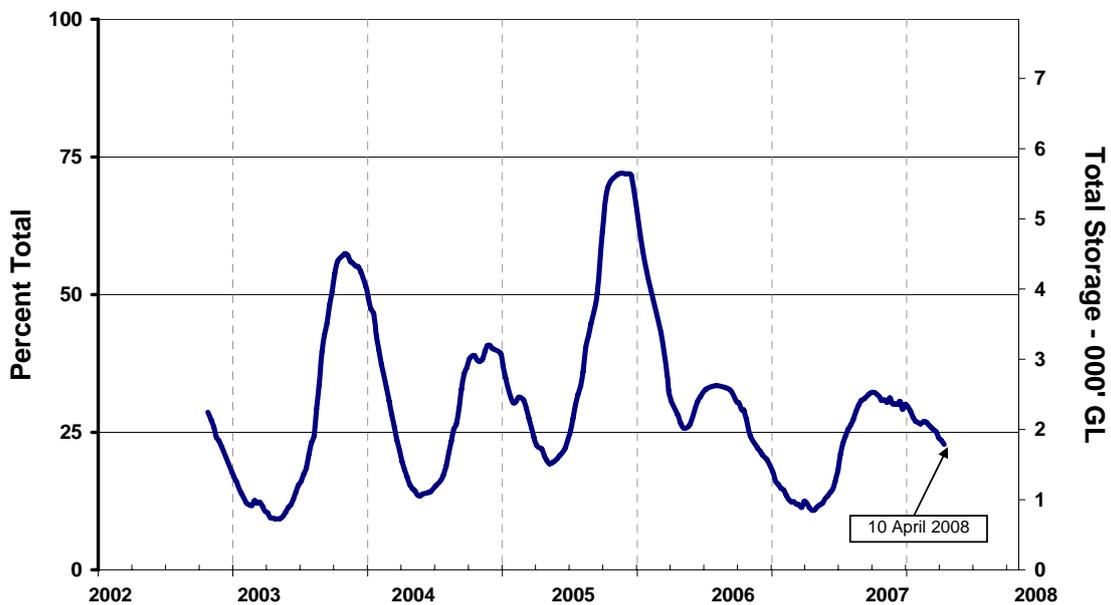
In southern Queensland storage levels decreased by 73 GL to 2808 GL (66.8 per cent of a total capacity of 4203 GL) over the last month (see figure above). This storage level is approximately 1566 GL higher than at the same time last year.

## Water storage in New South Wales



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

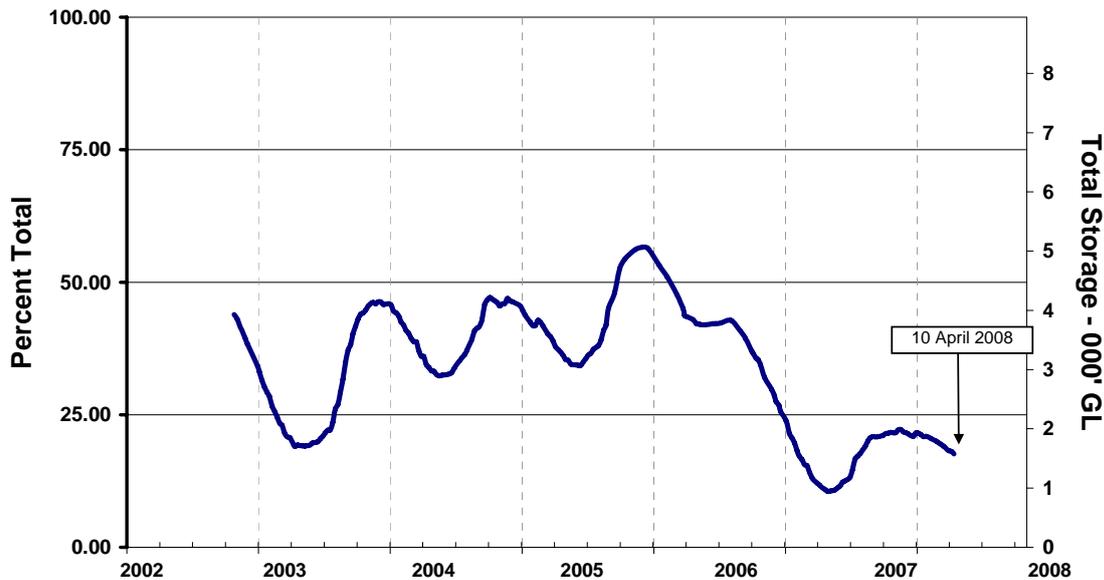
Storage levels in northern NSW increased by 4 GL to 2175 GL (30.6 per cent of a total capacity of 7114 GL) over the last month (see figure above). This storage level is approximately 1310 GL higher than at the same time last year.



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

In southern NSW storage levels decreased by 209 GL to 1783 GL (22.7 per cent of a total capacity of 7844 GL) over the last month (see figure above). This storage level is approximately 899 GL higher than at the same time last year.

## Water storage in Victoria



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

Storage levels in northern Victoria decreased by 127 GL to 1705 GL (17.6 per cent of a total capacity of 8950 GL) over the last month (see figure above). This storage level is approximately 571 GL higher than at the same time last year.

### **Murray-Darling Basin update**

- Rain in the Basin over March was close to the long-term average with some areas around the lower Murray and the Northern Basin significantly below average. The majority of the Basin received between 10 and 50 mm for the month. Wallangra in the northwest slopes of NSW had the greatest fall of 78 mm.
- Average temperatures reached the upper 30s for early March and started to cool towards the mid 20s in later weeks. Daily maximum and minimum temperatures along most of the Murray were above the long-term average with western Victoria and south eastern South Australia experiencing maximum temperatures of up to 4 °C above average.
- The high temperatures and little rain have resulted in March inflows (excluding Darling inflows) of around 60 GL, significantly lower than the long-term average of 188 GL, but higher than last year's inflows for March of around 50 GL. Widespread, sustained heavy rain is needed over the coming months to significantly improve the outlook for next season.
- In light of this 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.
- Murray River flows are currently being wound back due to continuing drought conditions, the onset of cooler weather and the gradual reduction in water demand along the river. This operation will maximise water availability by storing as much water as possible in Hume and Dartmouth Reservoirs and by reducing evaporation and river transmission losses along the river system.
- 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.

## 2.2 Water announcements

### **Announcements for New South Wales (current at 1 April 2008)**

- The NSW Department of Water and Energy announced on 1 April 2008 that there would be no change to current water allocations in the Southern Murray-Darling Basin of New South Wales. Rainfall over the Easter period was patchy and failed to improve water storage levels because the minor inflows generated were lost to evaporation in the last two very hot weeks of March.
- Deputy Director General of the Department, David Harriss said that a substantial autumn break is needed across the Basin in order to improve the water outlook for 2008–09. He also said that the Department has set aside enough water to meet critical human needs in the NSW Southern Murray-Darling Basin in 2008–09, but the outlook for water availability for irrigation remains poor.
- Flows in the Darling River from the Northern NSW and Queensland floods are now receding and the Bureau of Meteorology is predicting only moderate rainfall in Murray-Darling catchments over coming months. The Department will continue implementing the Critical Water Planning Program to meet the needs of critical water dependent industries, such as permanent plantings.
- Licence holders in the Murray and Lower Darling valleys are reminded that whilst the water sharing plan remains suspended, all water remaining in accounts can be carried over into the 2008–09 water year. Should the water sharing plan be reinstated prior to 1 July 2008, the carryover rules provided in the plan will take effect. These rules specify a maximum carryover for general security of 50 per cent of entitlement and no carryover permitted for high security users.
- In the Murrumbidgee Valley, carryover is limited to 15 per cent of licensed entitlement for both general and high security licence holders. Carryover will occur automatically on 1 July 2008 and licences holders are reminded that all applications for trade in the Murray, Murrumbidgee and Lower Darling must be lodged by close of business 30 April 2008.
- Final allocation announcements for the major water systems in NSW for the 2007–08 season are summarised in the table below.

<b>Water system</b>	<b>High Security Licences (%)</b>	<b>General Security Licences (%)</b>
NSW Murray Valley	75 *	0
Murrumbidgee Valley	95 *	13
Lower Darling	100	50
Macquarie Valley	100	5
Hunter Valley	100	100
Lachlan Valley	30	0

\* including re-crediting of water that was suspended in 2006–07

- A water availability outlook for the 2008–09 irrigation season for the Murrumbidgee Valley was provided by the NSW Department of Water and Energy on the 17 March 2008. Estimates of probabilities of improvements can be seen in the table below.

<b>Probabilities</b>	<b>August 1 2008</b>	<b>October 1 2008</b>
95 % high security allocation announced	1 chance in 2	9 chances in 10
25 % general security allocation being announced	Negligible	1 chance in 2

## Announcements for Victoria (current at 1 April 2008)

- An increased allocation for the Goulburn and Broken systems was announced by Goulburn-Murray Water on 1 April 2008 (see below). The seasonal allocations in all other systems remained unchanged.

Water system	High-reliability share (%)	Change (%)
Murray	43	0
Broken	71	+1
Goulburn	57	+2
Campaspe	18	0
Loddon	5	0
Bullarook Creek	0	0

- The inflows to water systems have been severely limited by the dry conditions affecting northern Victoria. Savings created by efficient system operations and isolated showers allowed small increases in allocations of high-reliability water shares in the Goulburn and the Broken systems. Operating efficiencies and very low inflows were not enough to improve the allocations in the other water systems.
- This is the final allocation announcement for the 2007–08 season. The water resources improvements that are received from now until the end of June 2008 will be used for system operations and allocations during the 2008–09 season.
- On 15 February 2008 Goulburn-Murray Water released an outlook for seasonal allocations in the 2008–09 season. The upcoming season is likely to commence with very low reserves in all storages as water allocated in the 2007–08 season has been 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 overcome 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.
- Goulburn-Murray Water will issue an updated outlook for the 2008–09 season on 15 May 2008.
- 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
<i>wet</i>	100	100*	90	100	100*
<i>average</i>	17	0	31	22	100
<i>dry</i>	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
<i>wet</i>	100	100*	100*	100*	100*
<i>average</i>	63	100*	82	100	100*
<i>dry</i>	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 25 March 2008)**

- Minister for the River Murray Karlene Maywald announced on 25 March 2008 that SA River Murray water irrigation allocations will remain unchanged at 32 per cent in SA.
- The latest assessment of water resources by the Murray-Darling Basin Commission, to the end of February, shows a 20 gigalitre improvement in the total amount of water allocated to South Australia for 2007–08. This small increase will be used to pay off South Australia's imbalance to the other Murray-Darling Basin states and to secure critical human needs and carry-over for 2008–09. Therefore no extra water is available to increase irrigation allocations and licensed water users.
- In total, SA has now been allocated 1070 gigalitres of water from the River Murray System, with 350 gigalitres allocated to critical urban needs and irrigation and 720 gigalitres allocated for dilution, reserves and losses.
- Flows into SA have been increased from 3500 megalitres per day (ML/day) to 3800 ML/day to maintain weir pool levels during the recent period of hot weather. While salinity levels above Lock 1 remain low, salinity below Lock 1 continues to increase because of low flows into SA. Salinity at Murray Bridge averaged 980 EC last week, compared to 390 EC for the same period last year. Salinity in Lake Alexandrina is 3870 EC, compared with 1390 EC last year, although there are sections where levels are much higher.
- Minister Maywald announced on the 25 March 2008 that there is a 50–50 chance of an opening allocation for 2008–09 of up to 5 per cent. According to the Murray-Darling Basin Commission, this probability depends on rainfall and inflows into the system before 1 July 2008. Possible scenarios for flows to South Australia in 2008–09 will be outlined in an update to be provided in mid-May.

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

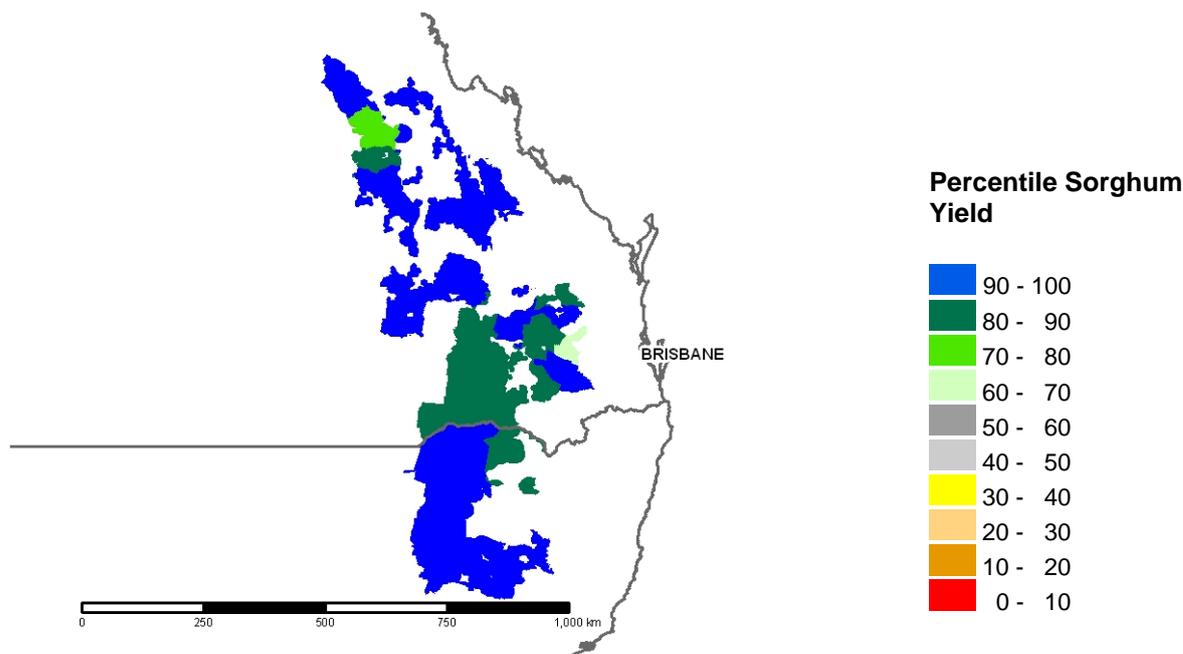
<http://www.sawater.com.au/SAWater/WhatsNew/NewsRoom/>

## 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](http://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

- Australia's sorghum crop may top 3 million tonnes, the best ever national summer crop output for 50 years. Yields have broken records this summer, particularly in Queensland, where dryland crops are yielding as much as 13 tonnes per hectare. Sorghum was also a successful crop in NSW with overall seasonal production around 796 000 tonnes from 179 000 ha. Harvest has commenced on maize in the Riverina, with very good yields reported. Rice and cotton harvest are due to start in coming weeks.

#### Winter Crops

- Much of NSW's winter cropping belt is already anxiously looking for rain to ensure a good season this year. Winter crops are predicted to be high across NSW with about 5.4 million ha expected to be sown (up 6 per cent from last year). However, the cropping outlook is dependent on a good general autumn break. After a relatively dry March across much of Australia, seasonal prospects for the coming months have been given a substantial boost with wetter than average conditions forecast across much of eastern Australia between April and June.
- WA grain producers are eagerly awaiting the start of the 2008 cropping season with preparations underway for seeding. Reasonable rainfall events during February and March in north-eastern agricultural areas have helped build soil moisture. There is renewed confidence of an improved growing season ahead to capitalise on attractive grain prices. Grain producers are viewing the 2009 cropping season optimistically, where an average or better production year might align with historically strong grain prices.

- Indications are that cropping will expand in WA this year if conditions in late April and May are conducive. However, expansion may be limited by a decline in grain prices, a possible return to dry conditions in the south of the State, and by increased input costs.
- In SA, paddock activities were minimal given the very hot, dry conditions for much of March. Some cultivation has taken place, especially in areas where useful rainfall was received. Limited dry sowing commenced in the Upper North with more farmers likely to start in early-mid April. Soil moisture levels were generally low and significant rainfall is needed to get the season underway.
- After two successive years of well below average winter grain harvests and record grain prices, farmers across southern Australia are poised to plant record acreage to grain providing the autumn rains arrive. According to ABARE, wheat prices are forecast to remain around \$350–\$400 per tonne over the next five years, held up by strong demand for grains for bio-fuels and low world stocks.

## 3.2 Livestock

### *Beef cattle*

- Australian beef and veal exports have recorded their lowest first quarter total since 2004. The high Australian dollar, weaker demand from Japan, Korea and the US, along with interruptions to domestic beef production all combined to constrain shipments. Exports for the first three months of 2008 were back 16 per cent on the previous year at 190 058 tonnes swt, with shipments for March down 14 per cent to 79 538 tonnes swt.
- Exports to Japan for the first quarter of 2008 were back 15 per cent compared with last year to 81 072 tonnes swt. Exports to Korea for March slipped 12 per cent year-on-year, at 12 273 tonnes swt, with exports for the first three months of 2008 back 26 per cent, at 31 182 tonnes swt. Beef and veal exports to the US for the first quarter of 2008 fell to only 46 169 tonnes swt, 33 per cent below the same period last year and the lowest since 1997. Contributing to the fall in shipments for the three month period was the wet weather across Queensland and annual plant closures, which impacted production volumes.
- The March slaughter was lower compared with February. Total cattle killed fell 13 per cent to 510 528 head, while calf slaughter increased 18 per cent to 35 872 head, with the Easter holiday contributing to the lower slaughter numbers as processing plants close for at least two days.
- Queensland was the only state to record an increase in the number of cattle killed. The number was up 1 per cent to 261 608 head compared with February. The increase in numbers may have been caused by the late start to the year by some processors due to transport difficulties that followed the rain, forcing cattle into the market in March instead of earlier in the year. Calf slaughter for March declined 28 per cent compared with February's levels.
- NSW cattle slaughter figures in March fell 23 per cent to 135 343 head compared with February. This was due to the large reductions leading into Easter. Compared with the cattle slaughtered in March 2007, numbers fell 22 per cent. Calf slaughter for March fell 20 per cent to 11 142 head compared with February.
- Victoria's cattle slaughter for March reduced 28 per cent to 92 779 head compared with February. Again, the lowest slaughter numbers were recorded in the week leading up to Easter, figures falling 8 per cent on the previous week. In comparison to March 2007, cattle slaughter for March 2008 was down 30 per cent.
- In SA, March slaughter was the lowest recorded for the year-to-date. Volumes fell 31 per cent compared with February and 20 per cent compared with January to 20 798 head. Cattle slaughter was down 41 per cent year-on-year.
- The Eastern Young Cattle Indicator (EYCI) continued to decline into March to reach a low of 312.5 cent per kilogram of carcass weight (¢/kg cwt) by the mid-month. The fall in the EYCI occurred despite yardings declining mid-month, as reduced buyer interest and offer prices saw sellers hold on to stock. Despite the improvement in the EYCI over the past three months, there is still a number of factors that have the potential to impact prices in the near future, such as rain events in coming months, the fluctuation of the Australian dollar and rising grain prices.

## **Sheep and lambs**

- Australian lamb exports during March were down 16 per cent on the same time last year, at 11 887 tonnes sheep weight (swt). Tighter domestic lamb supplies, the strong Australian dollar and lower shipments to the US, Middle East, and the EU all contributed to the decline in lamb shipments for the month.
- The National Livestock Reporting Service (NLRS) lamb slaughter data indicates a steady decline in slaughter numbers at the start of autumn. The eastern states lamb slaughter for the first quarter of 2008 was 5 per cent lower than the same time last year. Lower kills usually occur each year during the Easter month because of the Easter long weekend. Lamb slaughter was also affected as a result of the reduced kills by export processors due to the lack of overseas demand and high Australian dollar.
- Victoria recorded the greatest reduction in lamb slaughter numbers over the first quarter of 2008, which is 7 per cent below the same time last year. NSW and SA recorded falls of 2 per cent and 3 per cent, respectively. Queensland's slaughter numbers climbed 19 per cent above last year's first quarter total.
- The first quarter of 2008 has seen a considerable reduction in eastern states sheep slaughter, the figure 22 per cent below the same time last year. Following the favourable rains over a wide area early in the year and after repeated years of drought, producers are attempting to hold onto remaining breeding stock.
- For the first quarter of this year, Queensland and NSW sheep slaughter was 31 per cent and 27 per cent, respectively, below the same time last year. Slaughter in Victoria was 21 per cent lower year-on-year, while kills in SA only declined 7 per cent compared with the first quarter of 2007.

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

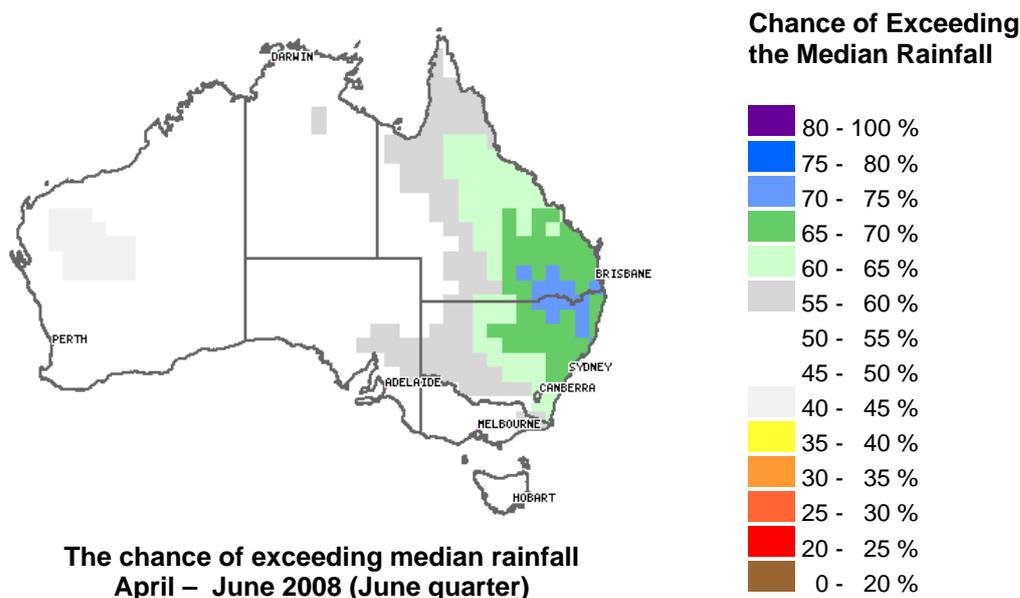
### 4.1 El Niño & Southern Oscillation Index

On 2 April 2008 the Bureau of Meteorology reported that the La Niña event in the Pacific basin continues to weaken, with the surface of the equatorial Pacific warming by about 0.1 to 0.2 °C. While western Pacific surface temperatures remain typical for a La Niña event, eastern Pacific temperatures have now been out of the La Niña range for the last five weeks. Below the surface, the cold water in the eastern Pacific has continued to warm and decrease in volume. The Southern Oscillation Index (SOI) remains positive at +12.

The Trade Winds remain stronger than average across the western equatorial Pacific, but are weaker in the east. Cloudiness near the date-line has been very much below average in recent months. All the dynamic computer models predict La Niña conditions in the central Pacific to decay to neutral over the next couple of months, although the recent observations from the eastern Pacific show a faster decline in La Niña conditions. The models do not suggest El Niño conditions will return during 2008.

### 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](http://www.bom.gov.au/climate/ahead/rain_ahead.shtml).

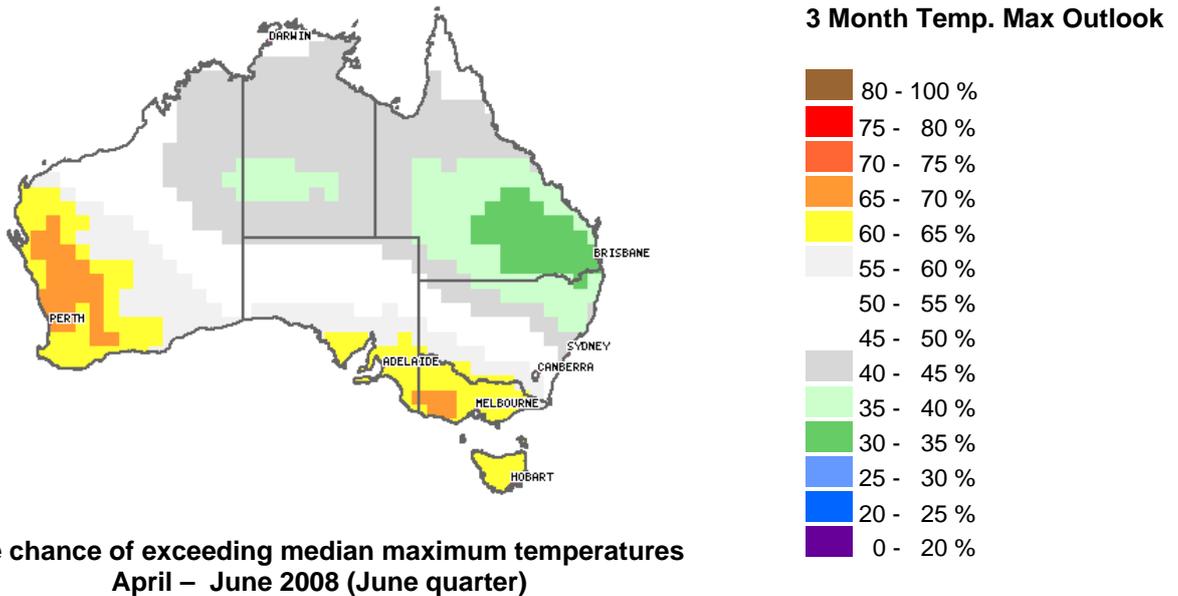


The national outlook for total rainfall over the June quarter (April to June), shows a moderate to strong shift in chances, favouring a wetter than average season over the eastern halves of Queensland and NSW.

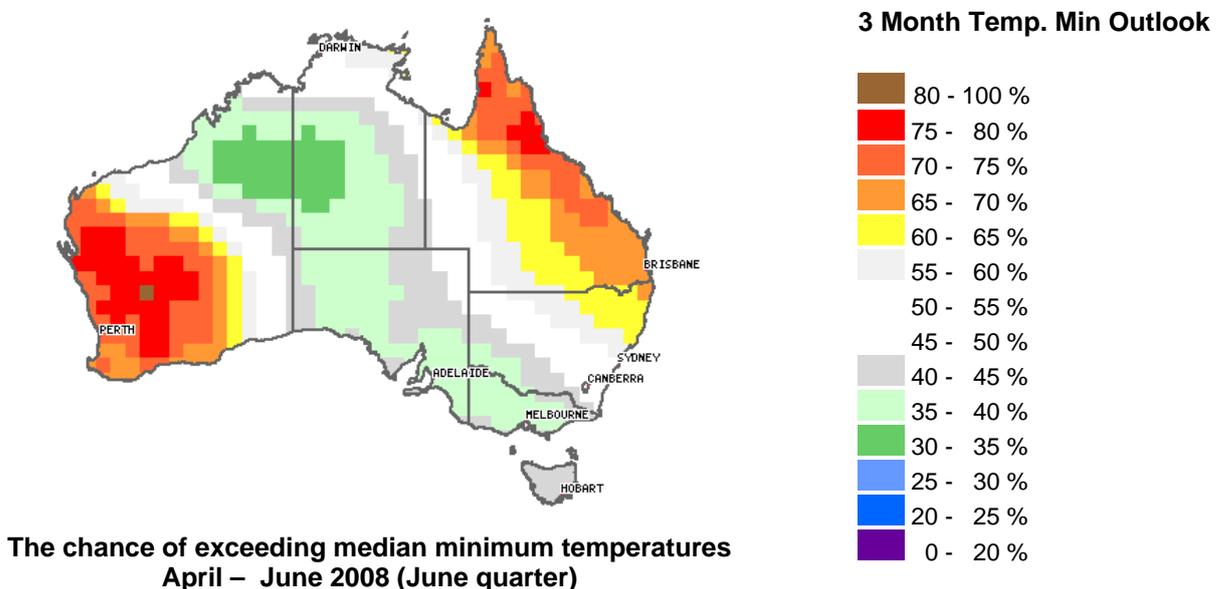
The chances of exceeding the median rainfall over April to June are between 60 and 70 per cent over most of the eastern halves of Queensland and NSW, approaching 75 per cent in a region straddling the border.

The pattern of seasonal rainfall odds across Australia is a result of continuing higher than average temperatures in the southeastern Indian Ocean, and cooler than average waters across the equatorial Pacific in association with La Niña.

## 4.3 Temperature Outlook



The national outlook for average June quarter (April to June) maximum temperatures shows a mixed pattern of odds: warmer days are favoured in the far west and far south east, while cooler days are predicted from central Queensland to northern NSW and in part of central Australia. The pattern of seasonal maximum temperature chances 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). Averaged over April to June, the chances are between 60 and 70 per cent for above-normal maximum temperatures in western WA, Tasmania, Victoria and southern SA.



The minimum temperature outlook for the June quarter is also a mixed pattern, with moderate to strong shifts in the chances favouring warmer nights in western WA and north-eastern Australia. While cooler nights are favoured in a band from north-western Australia to Victoria. History shows the oceans' effect on minimum temperatures in the April to June period 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/>