



Australian Government

**Australian Bureau of Agricultural and
Resource Economics – Bureau of Rural Sciences**

Australian climate and agricultural monthly update

July 2010



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Key issues

June 2010 was the fourth-driest June on record for Australia with rainfall 52 per cent below the long-term average. Nevertheless, the majority of Australia's eastern winter cropping regions received average to above average autumn rainfall, allowing most winter crops to be sown at an optimal time into good soil moisture profiles. Inflows to the Murray-Darling Basin have increased since May. Across much of the Basin, water storage levels increased during June. Lambs to market have been in good condition due to the favourable seasonal conditions in recent months. Lamb prices for 2009–10 were well above the 2008–09 price and the five-year average due to the smaller Australian sheep flock and strong demand. A developing La Niña event increases the likelihood of wetter conditions in northern and eastern Queensland over the next three months.

Summary

June 2010 was the fourth-driest June on record for Australia with rainfall 52 per cent below the long-term average. Day-time and night-time temperatures were close to the long-term average for the month.

Despite low rainfall in June, inflows to the Murray-Darling Basin have increased since May. Water storage levels increased during June across much of the Basin, except in Queensland where storage levels declined slightly.

Low rainfall in June is likely to restrict pasture and winter crop growth in some southern agricultural regions. The majority of Australia's eastern winter cropping regions received average to above average autumn rainfall. This rainfall has allowed most winter crops to be sown at an optimal time into good soil moisture profiles, particularly in Queensland, New South Wales and Victoria. In Western Australia, below average autumn rainfall following a very dry summer has resulted in winter crop prospects being less positive at this stage.

In the north of the country, graziers have benefited from the below average June rainfall. Rainfall events during the dry season of northern Australia reduce the quality of standing pasture and do not favour pasture growth.

Graziers in the eastern states delivered heavier conditioned lambs to market during June 2010 compared to the same time in recent years, owing to the improved seasonal conditions in recent months. Increased numbers of lighter conditioned lambs became available as the month progressed, as is the usual trend with the onset of winter and reduced pasture growth rates. In comparison, lamb quality at market in Western Australia has been much lighter as a result of unfavourable seasonal conditions in that state.

Lamb prices for 2009–10 were well above the 2008–09 price and the five-year average. These high prices were influenced by the reduced supply of lambs in Australia, strong demand from the international market, demand from producers restocking flocks, and demand from processors. The particularly strong restocker demand was in response to improved seasonal conditions in south-eastern Australia and strong price outlooks.

ENSO indicators across the equatorial Pacific are consistent with the developing stages of a La Niña event. The majority of climate models suggest an increased likelihood of further ocean cooling beyond La Niña thresholds before the end of the winter. A developing La Niña event increases the likelihood of wetter conditions in northern and eastern Queensland over the next three months.

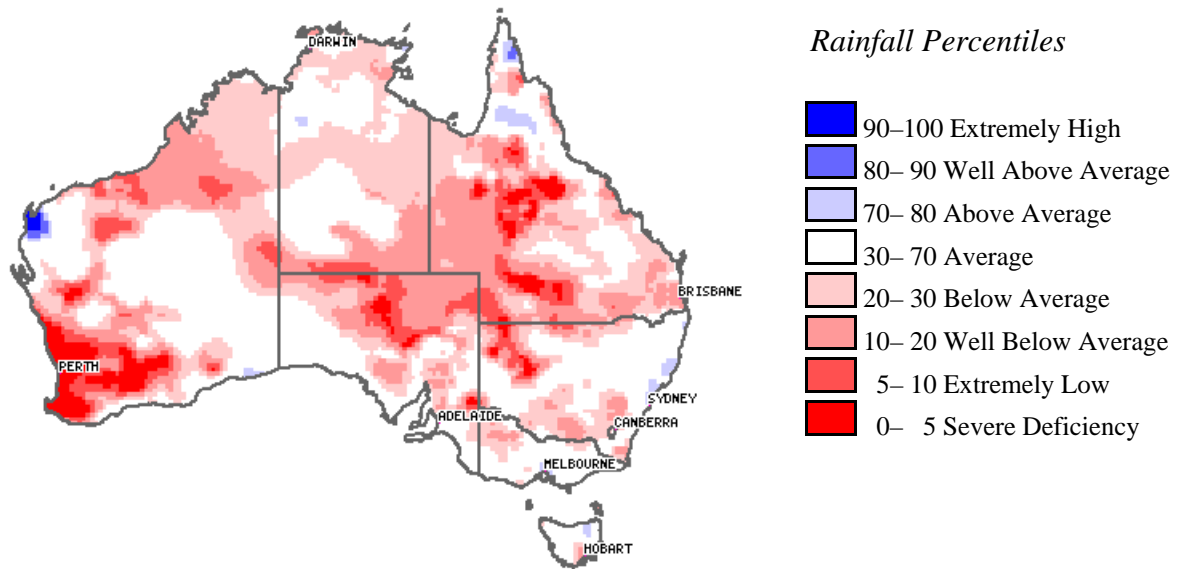
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1.0 Climate

1.1 Rainfall

Rainfall over the last month (June 2010)

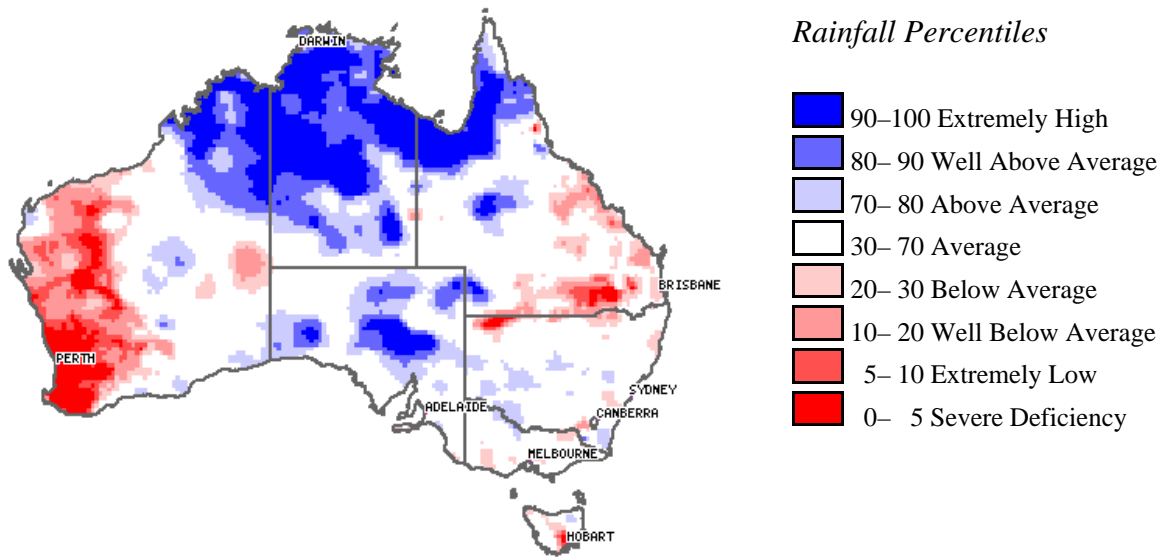


Rainfall percentiles (June 2010)

June 2010 was the fourth-driest June on record for Australia with rainfall 52 per cent below the long-term average. Low rainfall in June is likely to reduce pasture and winter crop growth in some southern agricultural regions.

Rainfall across the Murray-Darling Basin was below average to average during June 2010. A slight increase in water storage levels was recorded across the Basin during the month, except in Queensland where storage levels declined slightly.

Ongoing and emerging rainfall situations (April to June 2010)



Rainfall percentiles (April to June 2010)

Above average rainfall or higher was recorded from April to June 2010 across northern and central parts of Australia.

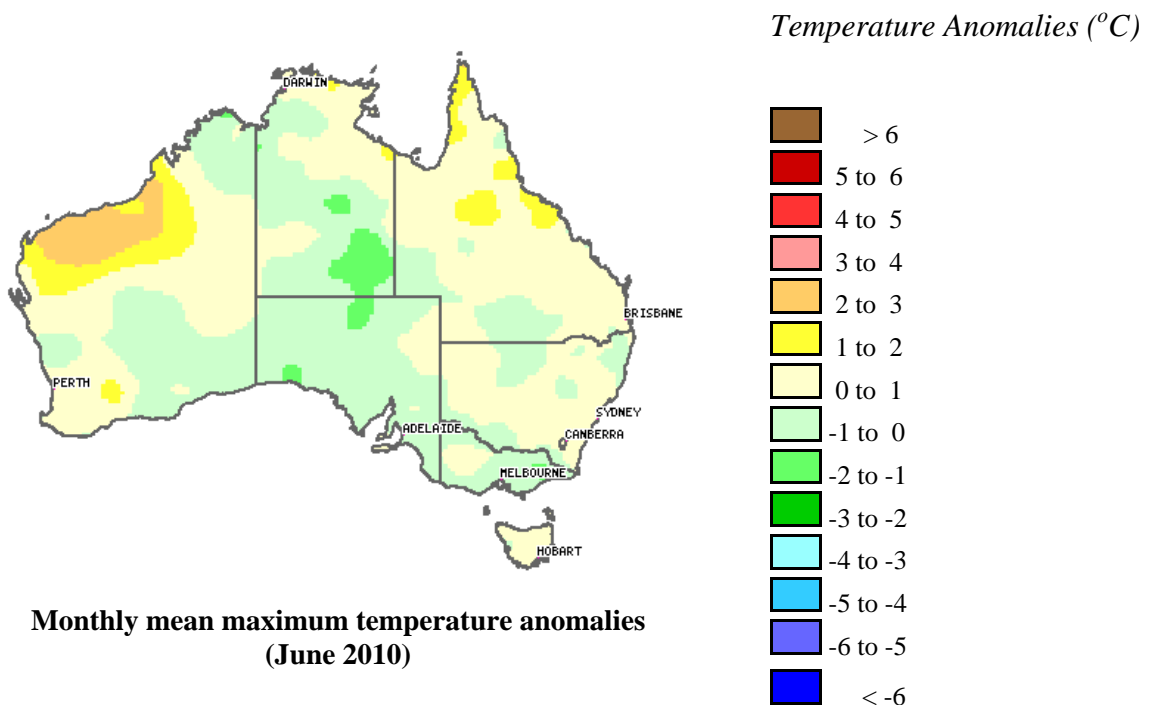
Below average rainfall in June strengthened rainfall deficiencies in the west of Western Australia and new deficiencies are emerging in southern Queensland.

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/>.

1.2 Temperature

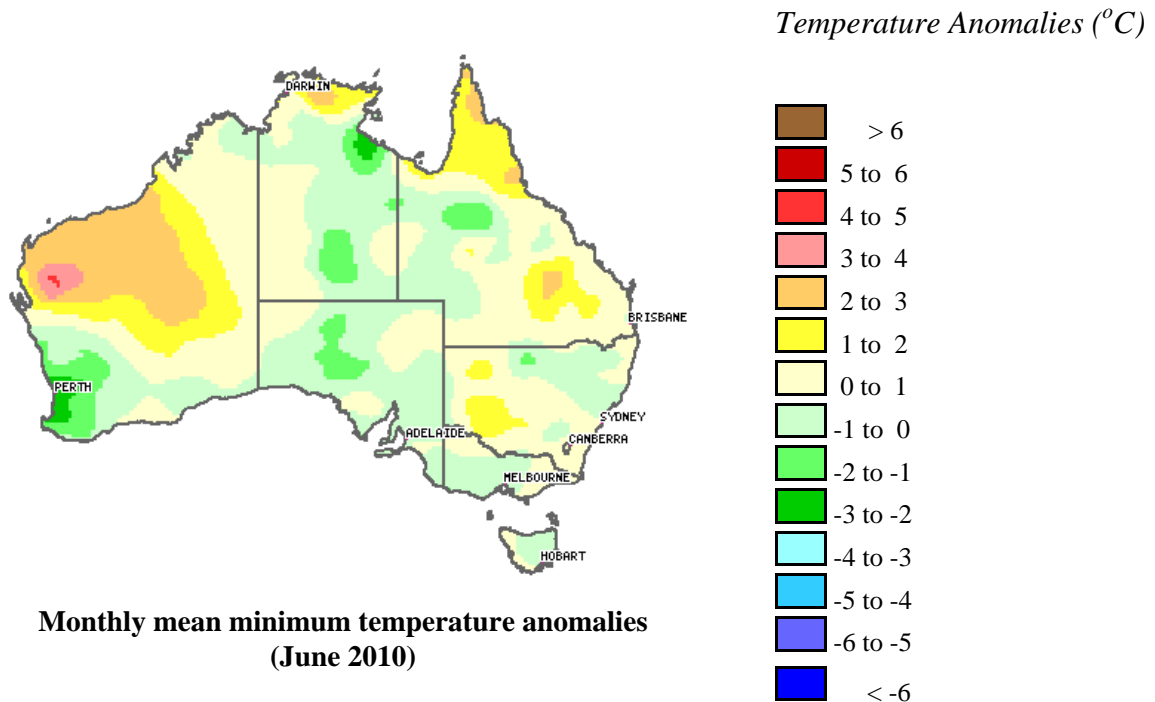
Mean maximum temperature

The mean maximum temperature for Australia during June 2010 was close to the long-term average. Maxima were above average in most of Western Australia, New South Wales, Queensland and Tasmania. Below average maxima were recorded across much of the Northern Territory, South Australia, and Victoria. Notable anomalies included maxima of 1 to 4°C above average across the north-west of Western Australia and 1 to 2°C below average in the southern parts of the Northern Territory and South Australia. Near-average daytime temperatures across southern agricultural regions will be favourable for pasture growth rates and crops.



Mean minimum temperature

The mean minimum temperature for Australia during June was close to the long-term average. Minima were above average for most of Western Australia, Queensland and New South Wales whereas the other states and territories recorded mostly below average minima during June 2010. Notable anomalies included minima of 3 to 4°C above average in the west of Western Australia. Anomalies of 1 to 2°C below average were recorded in rangeland areas of northern Australia, which could have caused pasture deterioration.



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 with respect to the reference period 1961 to 1990. For further information on temperature anomalies go to <http://www.bom.gov.au/climate/austmaps/>.

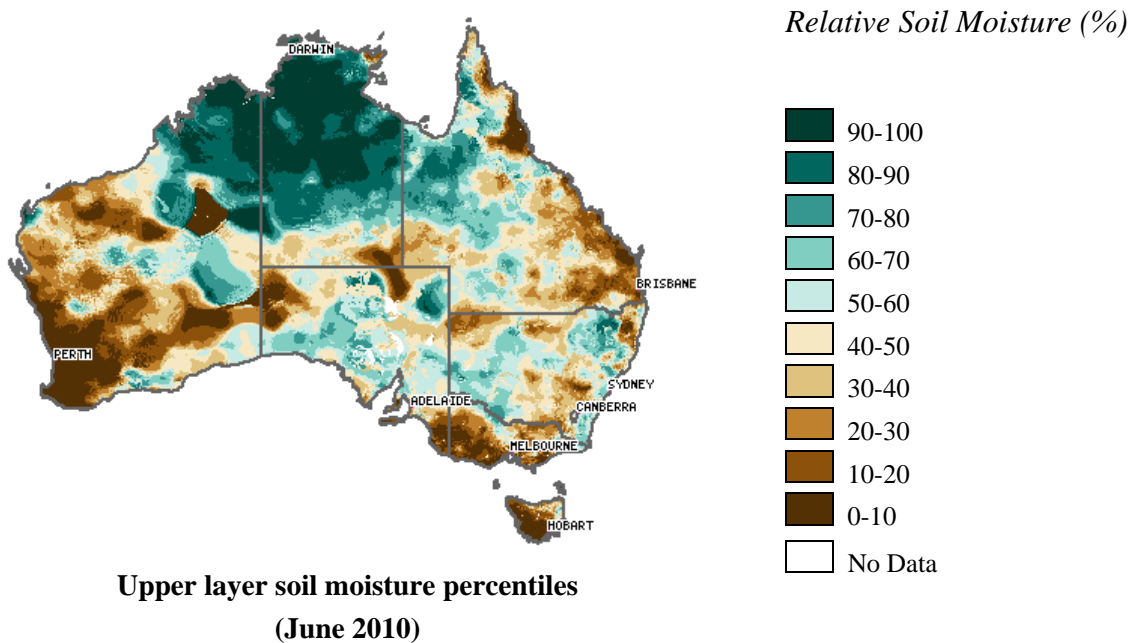
1.3 Relative soil moisture

Relative soil moisture maps presented below show the relative levels of modelled upper (~0.2 metres) soil moisture and lower (~0.2 to ~1.5 metres) soil moisture at the end of June 2010. This data comes from a collaborative project between the Bureau of Meteorology, CSIRO and ABARE-BRS (formerly the Bureau of Rural Sciences) to develop estimates of soil moisture and other components of the water balance at high resolution across Australia. These maps show soil moisture estimates relative to the long-term average with respect to the reference period 1961 to 1990.

For further information on relative soil moisture go to <http://www.daff.gov.au/brs/climate-impact/awap>.

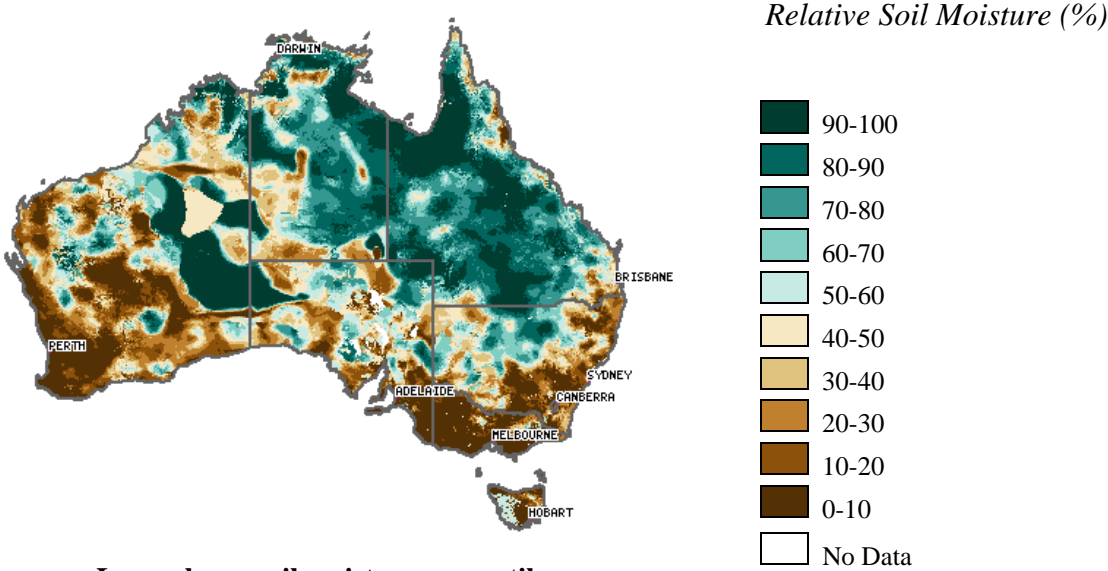
Upper layer soil moisture

Soil moisture levels in the upper layer of the soil profile were relatively low in areas of southern Queensland due to the generally dry conditions during June 2010. Upper layer soil moisture responds quickly to seasonal conditions and will often show a pattern that reflects the rainfall and temperature events of the same month.



Lower layer soil moisture

Soil moisture levels in the lower layer of the soil profile were relatively low in cropping areas of Western Australia, South Australia, Victoria and southern New South Wales. As such, crops in these areas will be particularly reliant on in-season rainfall. Lower layer soil moisture is a larger, deeper store that is slower to respond and tends to reflect accumulated events over seasonal and longer time scales.



**Lower layer soil moisture percentiles
(June 2010)**

1.4 Climate outlook

El Niño Southern Oscillation (ENSO)

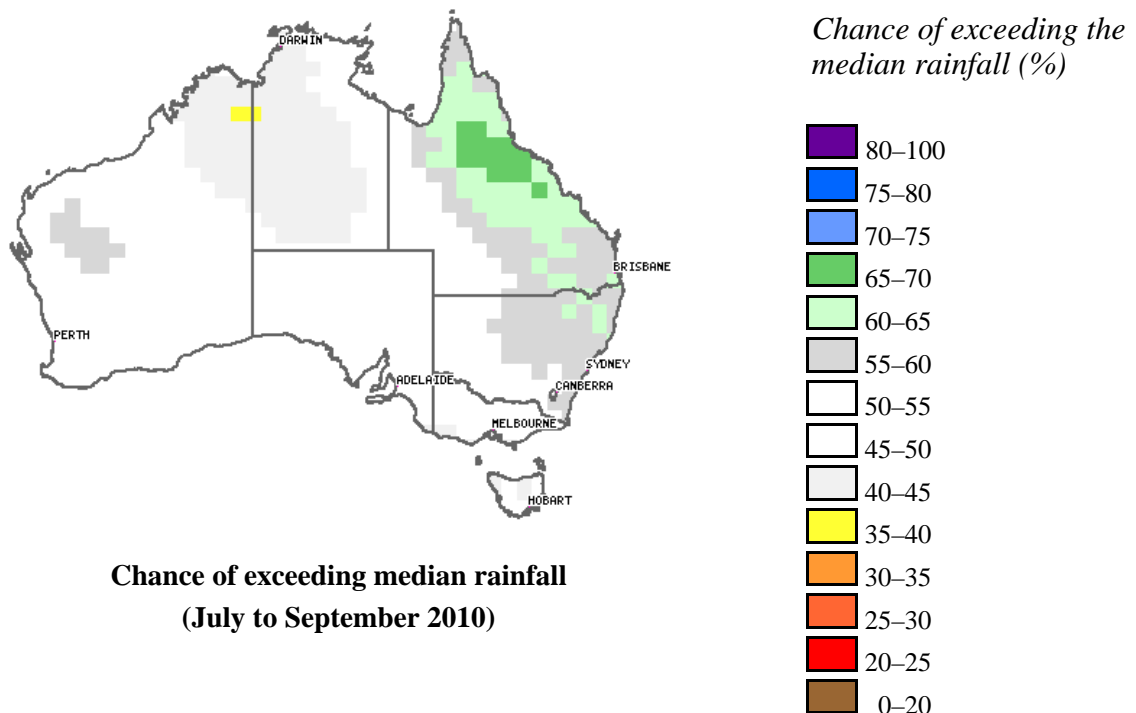
ENSO indicators across the equatorial Pacific are consistent with the developing stages of a La Niña event. Ocean temperatures in the central equatorial Pacific are cooler than average, trade winds in the western Pacific have strengthened, and cloudiness near the date-line has reduced. The Southern Oscillation Index (SOI) has been consistently positive since April, falling from +10 on 1 June to +1.7 on 29 June. The majority of climate models suggest an increased likelihood of further ocean cooling beyond La Niña thresholds before the end of the winter. Wetter conditions from a La Niña event would benefit pasture and winter crop growth, particularly in spring

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

Rainfall outlook

The likelihood of exceeding median rainfall during July to September 2010 is higher (60 to 70 per cent) across most of eastern and northern Queensland stretching to parts of far northern NSW. Wetter conditions during this period would be favourable for winter crop and pasture production in these areas.

Across the rest of the country there is an equal chance of receiving either above or below the median rainfall between July and September 2010.

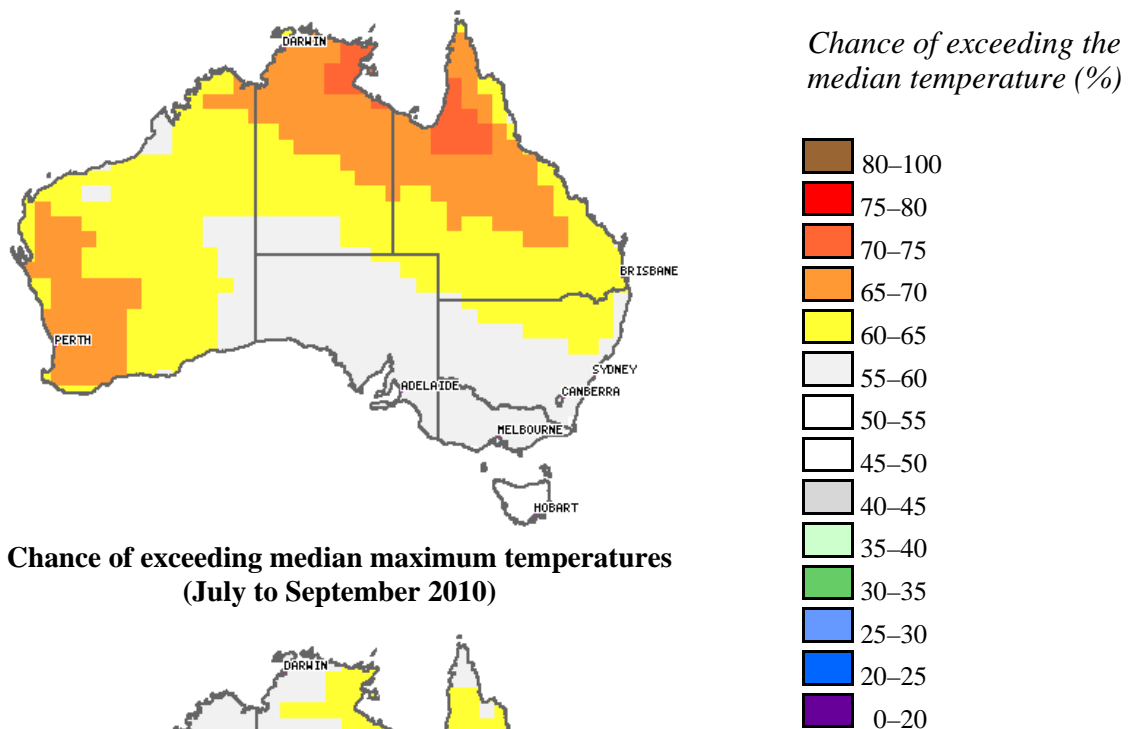


Temperature outlook

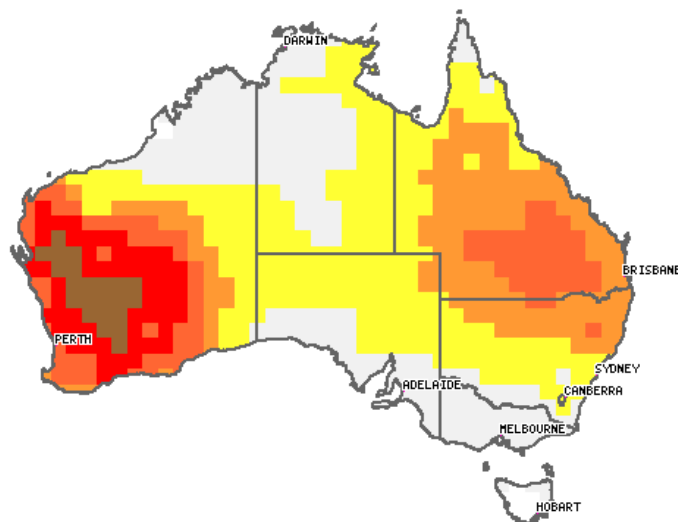
There is a 60 to 70 per cent chance of warmer day time temperatures across northern and south-western Australia. The likelihood increases to between 70 and 75 per cent in parts of the Northern Territory and Queensland.

Forecasts indicate that most of eastern and western Australia will experience warmer nights during July to September 2010, with the likelihood approaching 100 per cent in the south-west of Western Australia.

Warmer temperatures may assist pasture and crop growth rates, although increased temperatures during the flowering stage of crop growth (around September) can limit final yield.



**Chance of exceeding median maximum temperatures
(July to September 2010)**



**Chance of exceeding median minimum temperatures
(July to September 2010)**

These outlooks are based on the statistics of chance (the odds) and are not categorical predictions.

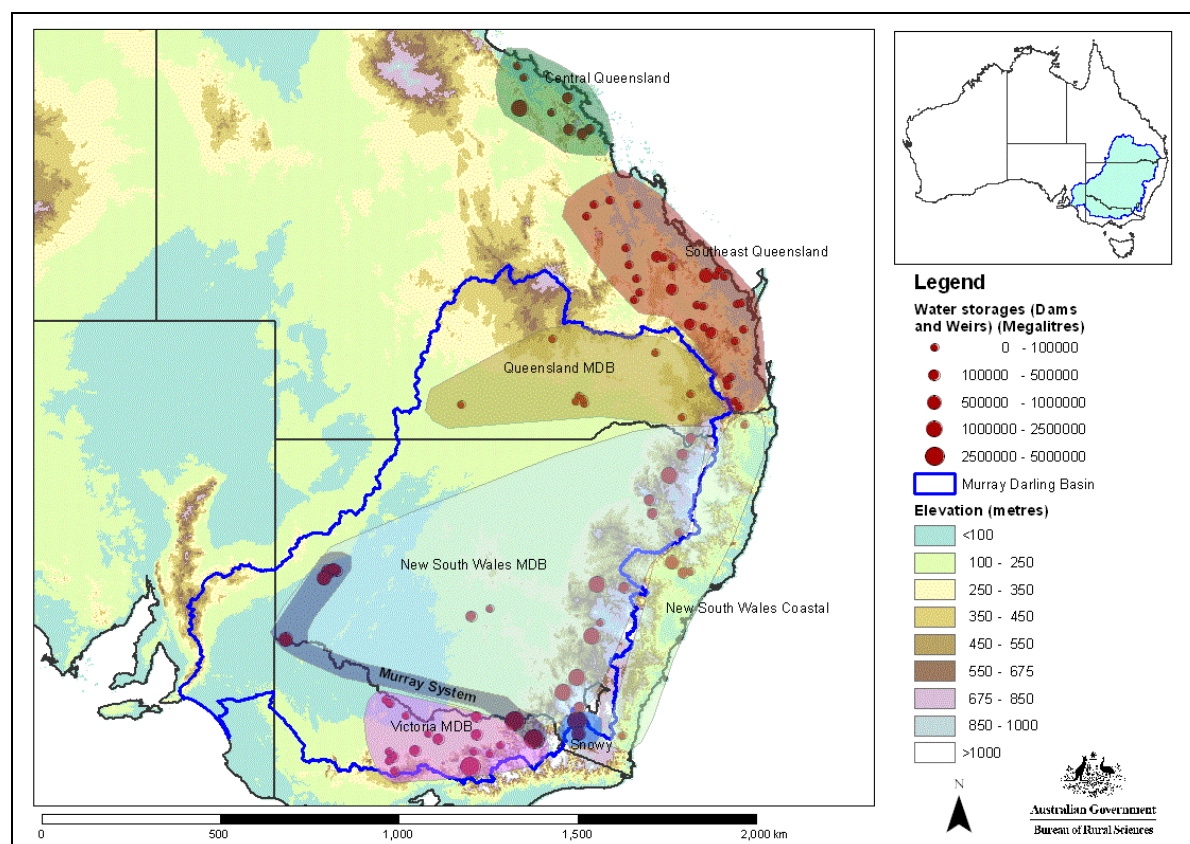
For further information on these seasonal outlooks and their interpretation go to <http://www.bom.gov.au/climate/ahead/>.

2.0 Water

2.1 Water storages

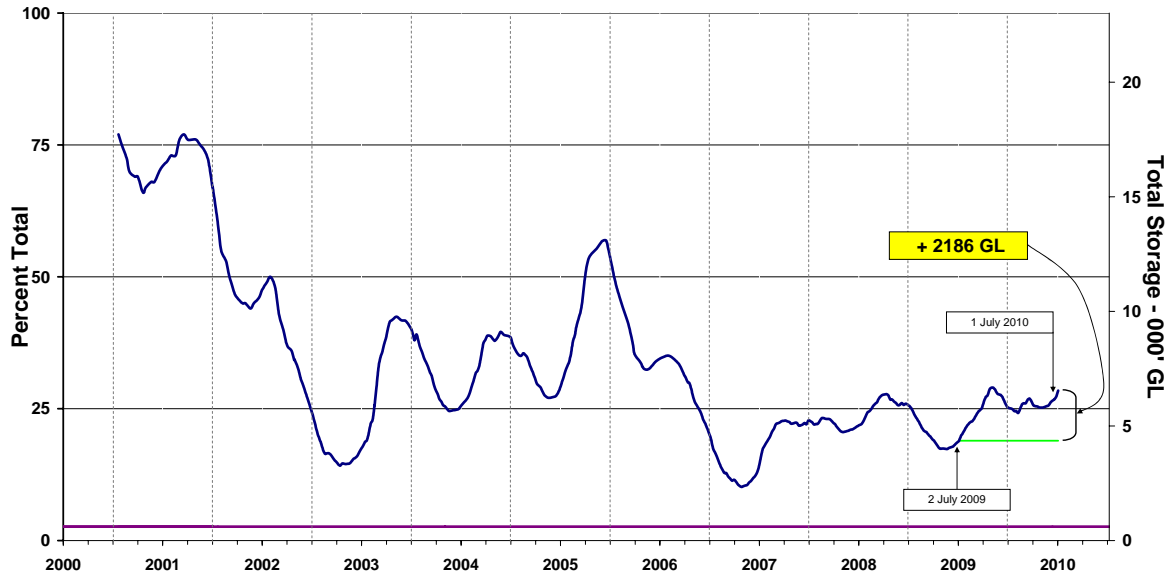
Changes in regional water storage for June 2010 and the previous 12 months are summarised in the table and graphs below (current at 1 July 2010).

Region	Total capacity (GL)	Current volume (GL)	Current volume (%)	Monthly change (GL)	Monthly change (%)	Annual change (GL)
Murray-Darling Basin (MDB)	23020	6547	28	+515	+2.2	+2186
Snowy Scheme	5744	1418	25	+6	+0.1	+240
Murray-Darling Basin Authority (MDBA)	7621	2248	27	+194	+2.6	+1048
Queensland MDB	185	107	58	-8	-4.3	+7
Central Queensland	3155	3006	95	-25	-0.8	-13
South-east Queensland	3517	2752	78	-43	-1.2	+715
New South Wales MDB	13884	3748	27	+338	+2.4	+994
Coastal New South Wales	1073	751	70	+6	+0.6	-58
Victoria MDB	8903	2675	30	+185	+2.1	+1182

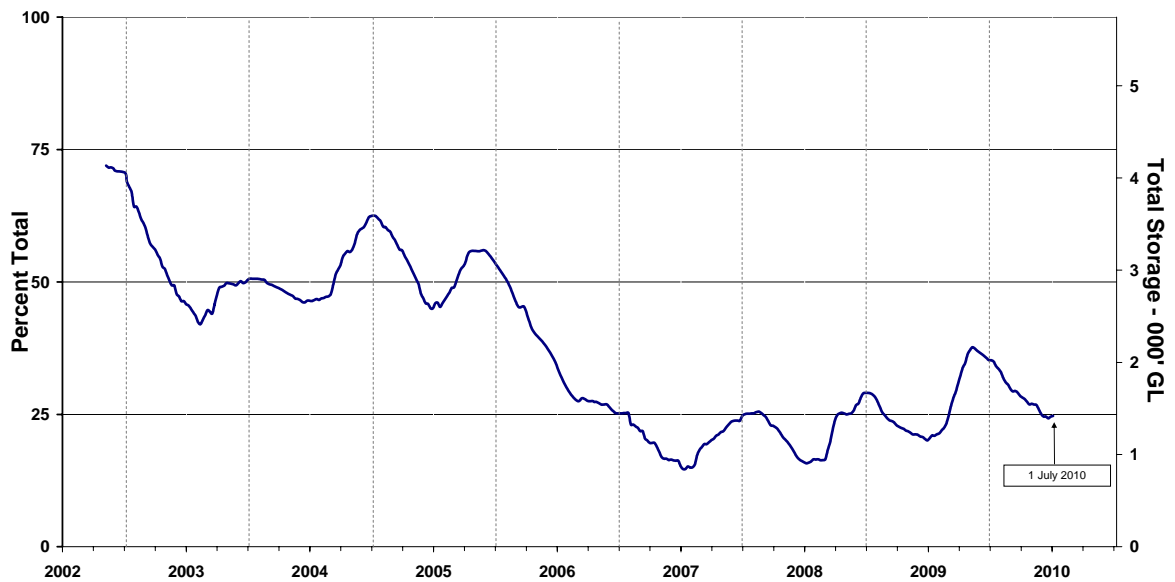


Water storages in Queensland, New South Wales and Victoria: The blue line indicates the extent of the Murray-Darling Basin and the shaded areas denote the coverage of the individual reporting regions.

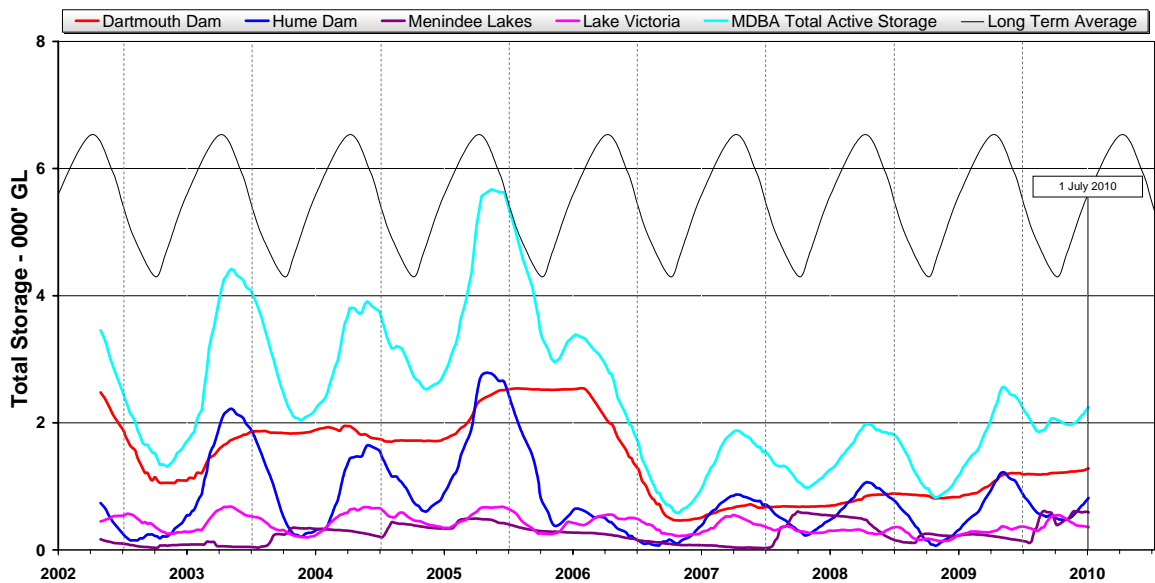
MDB (New South Wales, Victoria and Queensland)



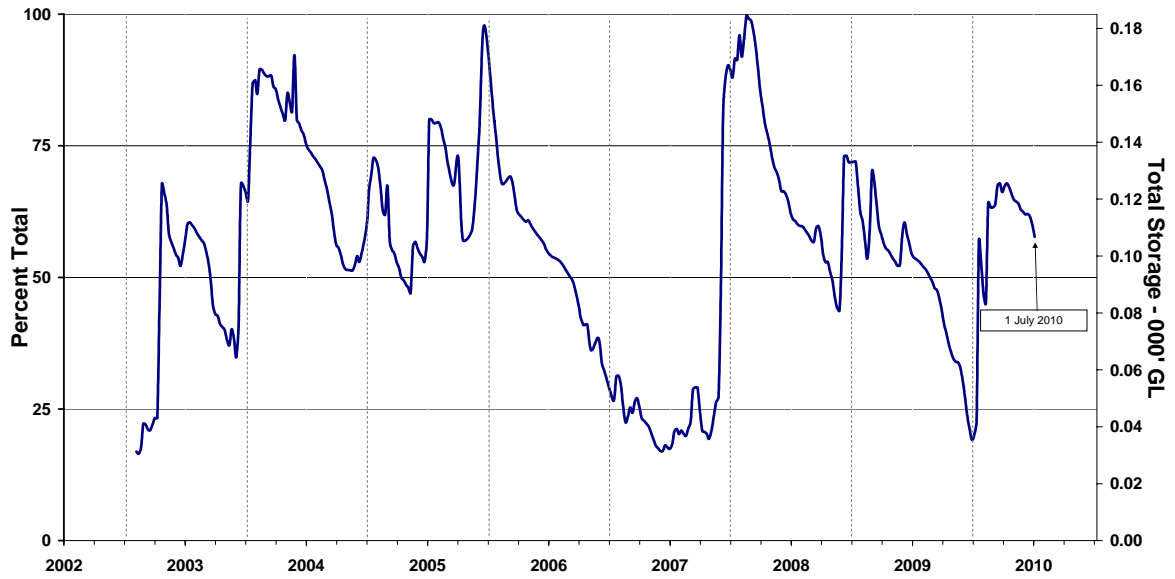
Snowy Scheme



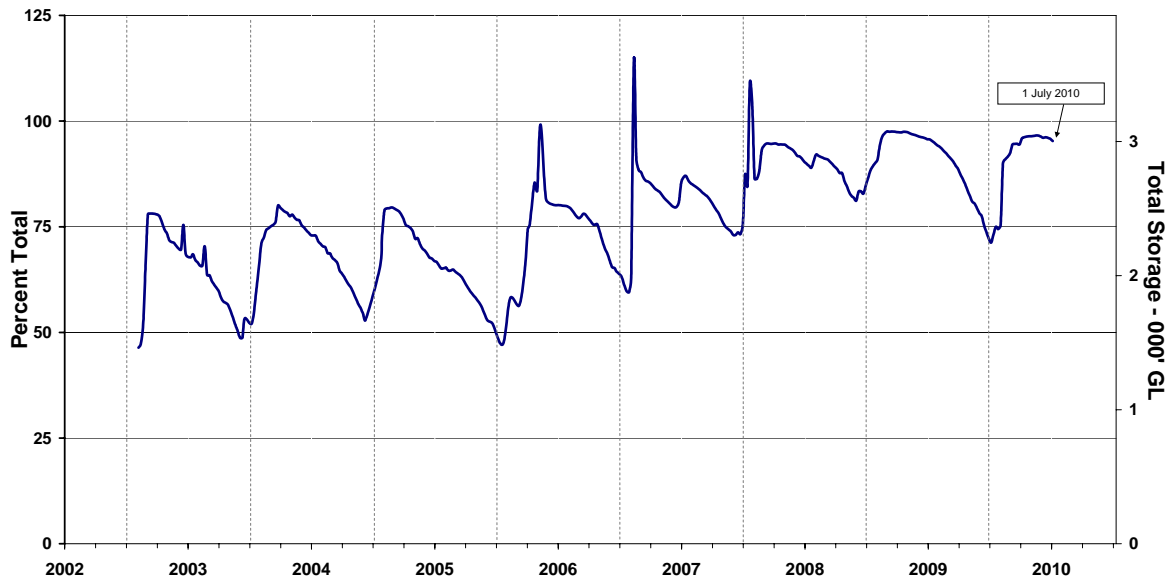
MDBA



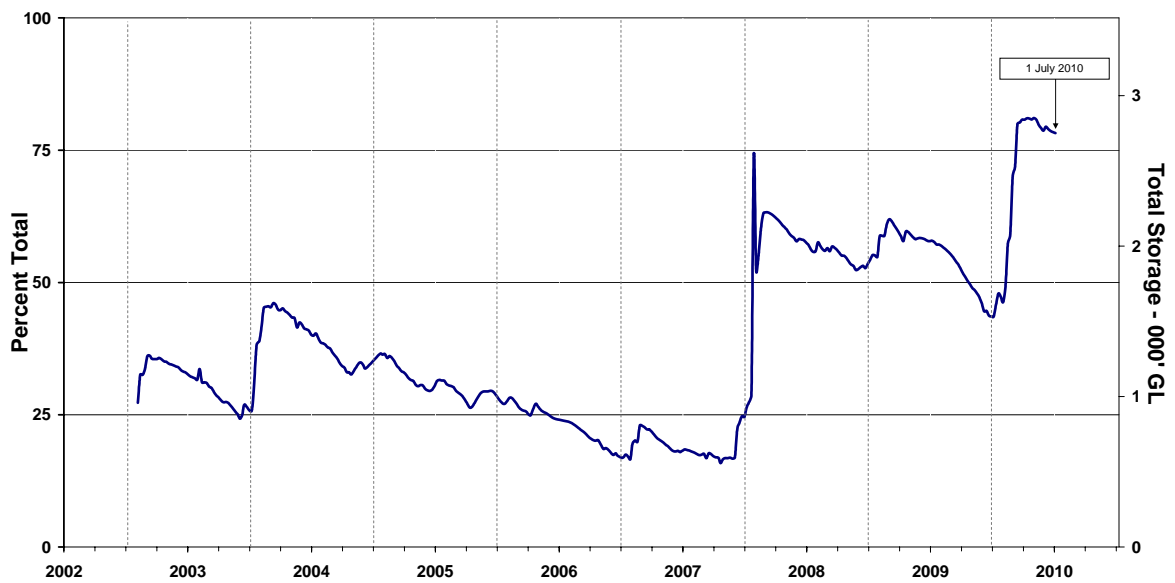
Queensland MDB



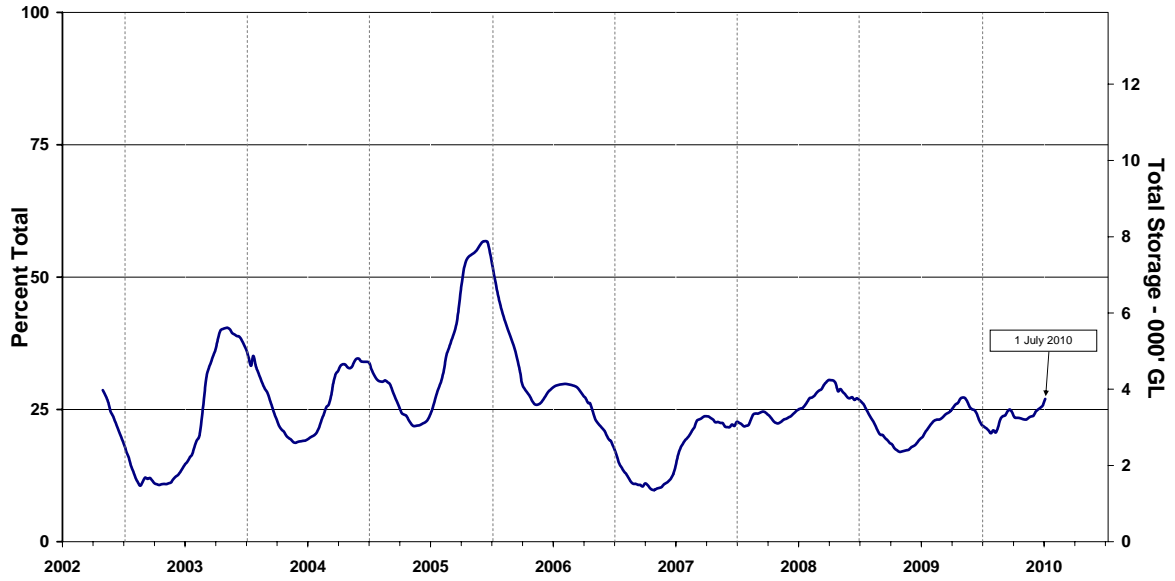
Central Queensland



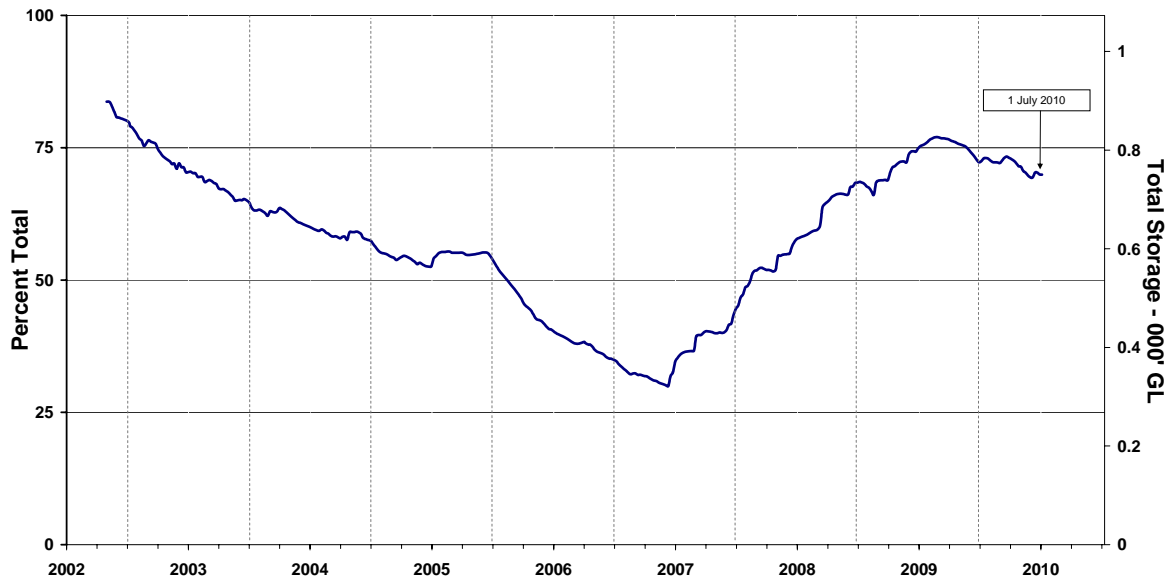
South-east Queensland



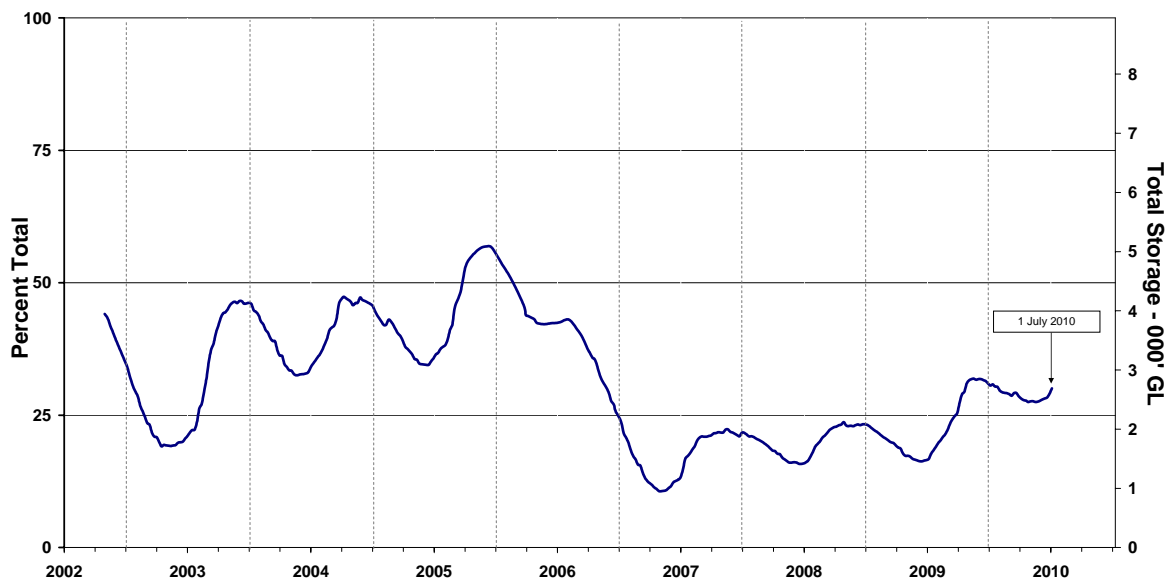
New South Wales MDB



Coastal New South Wales



Victoria MDB



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.waterinfo.nsw.gov.au/>
- Northern Victoria:
<http://www.g-mwater.com.au/water-resources/storage-levels/>
- Murray-Darling Basin Authority:
<http://www.mdba.gov.au/>

2.2 Water allocations

The water allocations and changes over the past month for all licence holders in New South Wales, Victoria and South Australia water systems are summarised in the following table.

	Closing allocations 2009–10 (%)	Increase from 1 July 2010 (%)	Allocations at 1 July 2010 (%)
NSW Murray Valley			
High security	97	0	0
General security	27	0	0
NSW Murrumbidgee Valley			
High security	95	0	20
General security	27	0	0
NSW Lower Darling			
High security	100	0	100
General security	100	0	100
NSW Macquarie Valley			
High security	100	0	100
General security	0	0	0
NSW Hunter Valley			
High security	100	0	100
General security	100	0	100
NSW Lachlan Valley*			
High security	10	0	10
General security	0	0	0
NSW Border Rivers			
High security	100	0	100
General security	4.4	0	0
NSW Peel Valley			
High security	100	0	100
General security	100	0	60
Victoria Murray Valley			
High reliability	100	0	0
Victoria Goulburn			
High reliability	71	0	0
Victoria Campaspe			
High reliability	0	0	0
Victoria Loddon			
High reliability	3	0	0
Victoria Bullarook			
High reliability	19	0	0
Victoria Broken			
High reliability	17	0	0
South Australia Murray Valley			
High security	62	0	21

*Water sharing plans remain suspended in NSW for the Lachlan River valley at 1 July 2010.

For further information on water announcements, go to:

- New South Wales Office of Water, Department of Environment, Climate Change and Water:
<http://www.water.nsw.gov.au/About-Us/Media-Releases/default.aspx>,
<http://www.water.nsw.gov.au/Water-Management/Water-availability/Available-water-determinations/default.aspx> and
<http://www.wix.nsw.gov.au/wma/DeterminationSearch.jsp?selectedRegister=Determination>
- Goulburn-Murray Water:
<http://www.g-mwater.com.au/news/media-releases/>
- South Australian Department of Water:
<http://www.waterforgood.sa.gov.au/>
- Murray-Darling Basin Authority:
<http://www.mdba.gov.au/>

3.0 Production

3.1 Summer crops

Australia

Total summer crop production in 2009–10 is estimated to have declined by 36 per cent to around 2.5 million tonnes, reflecting lower grain sorghum production estimates. Total summer crop area is estimated to have declined by approximately 31 per cent to 799 000 hectares in 2009–10. Below to very much below average rainfall in key growing regions of northern New South Wales and southern Queensland throughout spring and early summer resulted in a decline in the area planted to grain sorghum. Also contributing to the decline was heavy rainfall over central Queensland in February, which restricted plantings.

The total area planted to grain sorghum in 2009–10 is estimated at 389 000 hectares, a 49 per cent decline from the area sown last year. As a result, grain sorghum production in 2009–10 is forecast to decline by approximately 54 per cent to 1.2 million tonnes.

The Australian cotton harvest is more than 95 per cent complete. Australian cotton production in 2009–10 is forecast to be 389 000 tonnes, 18 per cent higher than in 2008–09. Heavy rains in January and February adversely affected yields in the Emerald and Dawson-Callide regions, but resulted in excellent yields in most other cotton growing regions. Around half of the 2009–10 cotton crop has already been classed. Cotton quality is good, with more than 90 per cent of lint being classified as base grade or better, which is an improvement on the 2008–09 season.

Total rice production in 2009–10 is estimated at 205 000 tonnes. This is a significant increase from the 61 000 tonnes produced in the previous season, reflecting both an increase in the area sown and record yields. Ideal growing conditions have resulted in yields averaging 11 tonnes per hectare, compared with the five-year average of 8.3 tonnes per hectare. The area sown to rice in 2009–10 is estimated at 19 000 hectares, more than double the area sown in the previous year, reflecting an increase in the availability of irrigation water for rice growing.

3.2 Winter crops

Australia

The majority of Australia's eastern state winter cropping regions received average to above average autumn rainfall. This rainfall has allowed most winter crops to be sown at an optimal time into good soil moisture profiles, particularly in Queensland, New South Wales and Victoria. In Western Australia, below average autumn rainfall followed a very dry summer, which has resulted in winter crop prospects being less positive at this stage.

The total area planted to winter grains is forecast to fall marginally in 2010–11 to 22.1 million hectares. This decrease is driven by lower world wheat prices and a gradual rebuilding of livestock numbers in some states. Assuming average yields in 2010–11, total winter crop production is forecast to reach 35.1 million tonnes, largely unchanged from 2009–10.

Of the major winter grains, wheat production in 2010–11 is forecast to increase to 22.1 million tonnes, a 2 per cent rise from the previous season. Barley production is forecast to decrease by around 10 per cent, to 7.3 million tonnes in 2010–11, reflecting a decrease in the area sown. Canola production is forecast at around 2 million tonnes, a 3 per cent rise from the previous season, which reflects an increase in the area sown.

The above crop production estimates and forecasts are sourced from the *ABARE Australian crop report* that was released in June 2010

http://www.abare.gov.au/publications_html/cr/cr_10/cr10_june.pdf

3.3 Livestock

Graziers in the north of the country have benefited from below average rainfall during June. Rainfall events during the dry season in northern Australia reduce the quality of standing pasture and do not favour pasture growth. Low rainfall in June is likely to restrict pasture and winter crop growth conditions in some southern agricultural regions.

Beef cattle

Numbers of Australian cattle delivered to saleyards from January to June 2010 increased by 5 per cent compared to the same period last year, and equalled the five-year average. An increased proportion of these numbers were bought by restockers in response to improved production conditions in parts of the country.

<http://www.mla.com.au/Prices-and-markets/Market-news/Cattle-market-wrap>

Australian beef and veal exports reached 87 212 tonnes shipped weight in June 2010, a 6 per cent increase on the same period last year. Exports to Japan were 27 691 tonnes shipped weight in June 2010, 14 per cent lower than the same period last year. Australian beef exports to Korea reach a record for June at 12 109 tonnes shipped weight, and exports for January to June 2010 were 17 per cent higher than the same period last year. Exports to the United States of America were 105 462 tonnes shipped weight for January to June 2010, a decline of 28 per cent compared to the previous year.

<http://www.mla.com.au/Prices-and-markets/Market-news/Beef-exports-up-6-in-June>

Sheep and lambs

Lamb prices for 2009–10 were well above the 2008–09 price and the five-year average. Heavy export lamb prices were 6 per cent higher during 2009–10 compared to 2008–09, and 20 per cent higher than the five-year average. Trade lamb prices were 9 per cent higher during 2009–10 compared to 2008–09, and 22 per cent higher than the five-year average. Light lamb (12 to 18 kilogram range) prices were 18 per cent higher during 2009–10 compared to 2008–09, and 27 per cent higher than the five-year average. These high prices were influenced by the reduced supply of lambs in Australia, strong demand from the international market as a result of a reduced supply of sheepmeat internationally, demand from producers restocking flocks, and demand from processors. The particularly strong restocker demand was in response to improved seasonal conditions in south-eastern Australia and strong price outlooks. Lamb slaughter numbers for the 12 months ending in April 2010 were 16.6 million, a decline of 5 per cent on slaughter numbers of the previous 12 months ending in April 2009.

<http://www.mla.com.au/Prices-and-markets/Market-news/Lamb-prices-push-to-new-heights-in-2009-10>

Graziers in the eastern states delivered heavier conditioned lambs to market during June 2010 compared to the same time in recent years, owing to the improved seasonal conditions in recent months. Increased numbers of lighter conditioned lambs became available as the month progressed, as is the usual trend with the onset of winter and reduced pasture growth rates. In comparison, lamb quality at market in Western Australia has been much lighter as a result of unfavourable seasonal conditions in that state.

<http://www.mla.com.au/Prices-and-markets/Market-news/Lamb-and-sheep-market-wrap-110610>

<http://www.mla.com.au/Prices-and-markets/Market-news/Sheep-and-lamb-market-alert230610>

The above livestock information is summarised from industry sources and does not represent forecasts by ABARE–BRS. Forecasts on livestock and across the commodity sectors were released by ABARE in *Australian commodities* in June 2010.

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–Bureau of Rural Sciences:
<http://www.abare-brs.gov.au/>
- 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/>
<http://www.dpi.nsw.gov.au/aboutus/resources/periodicals/newsletters/grains-report-nsw>
- Primary Industries and Resources South Australia:
<http://www.pir.sa.gov.au/grains/cpr/>
- Queensland Drought Monitor:
<http://www.longpaddock.qld.gov.au/QueenslandDroughtMonitor/>
- The Land Farmonline:
<http://theland.farmonline.com.au/>
- Victorian Department of Primary Industries:
<http://www.dpi.vic.gov.au>