



**Australian Government**  
**Bureau of Rural Sciences**

# Climate and Agricultural Update

## National Report

Issued December 2009



**SCIENCE** *for* **DECISION MAKERS**

**DEPARTMENT OF AGRICULTURE, FISHERIES AND FORESTRY**

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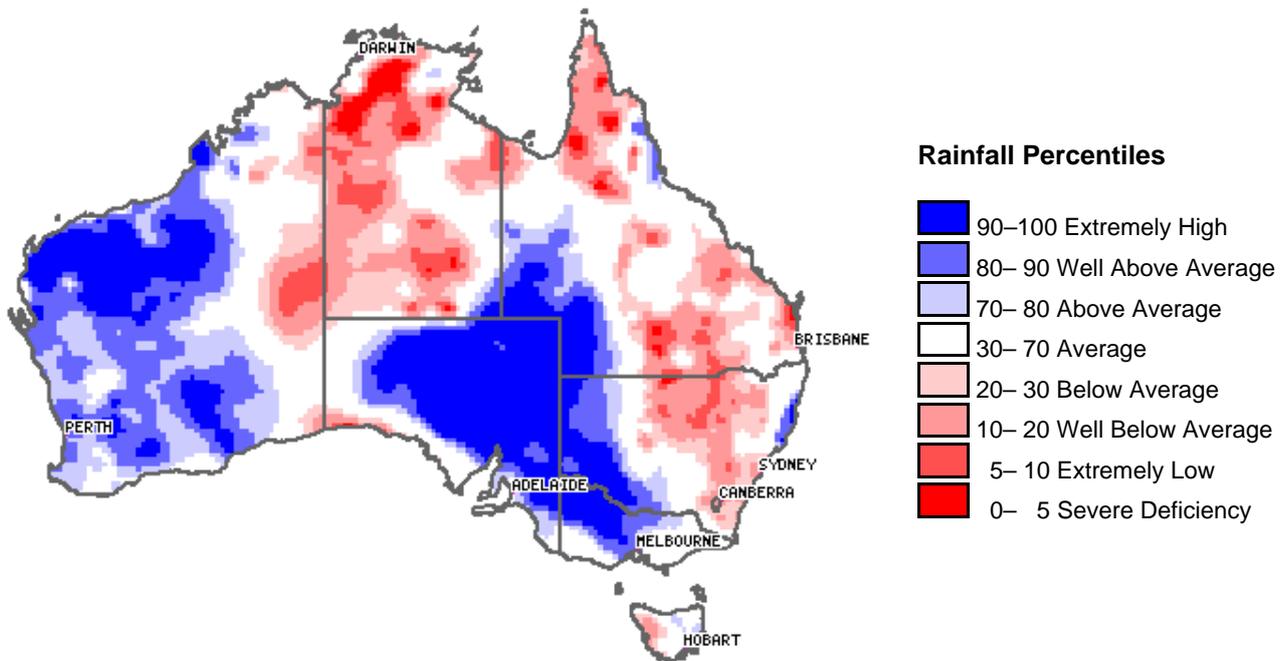
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# 1.0 Rainfall and temperature

## 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 (November 2009)*

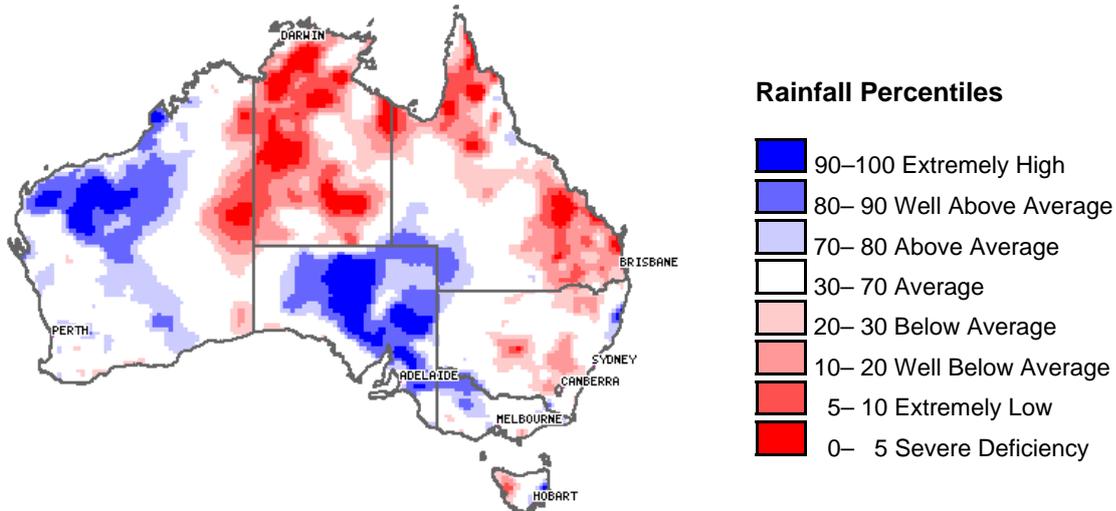


**Rainfall percentiles for November 2009**

Rainfall for Australia during November 2009 was ten per cent below the long-term average (forty-ninth lowest of 110 years). Rainfall was generally below average across the north and east of the continent. The Northern Territory recorded its fourteenth-driest November (59 per cent below average), with Queensland and NSW recording 37 and 21 per cent below average rainfall, respectively.

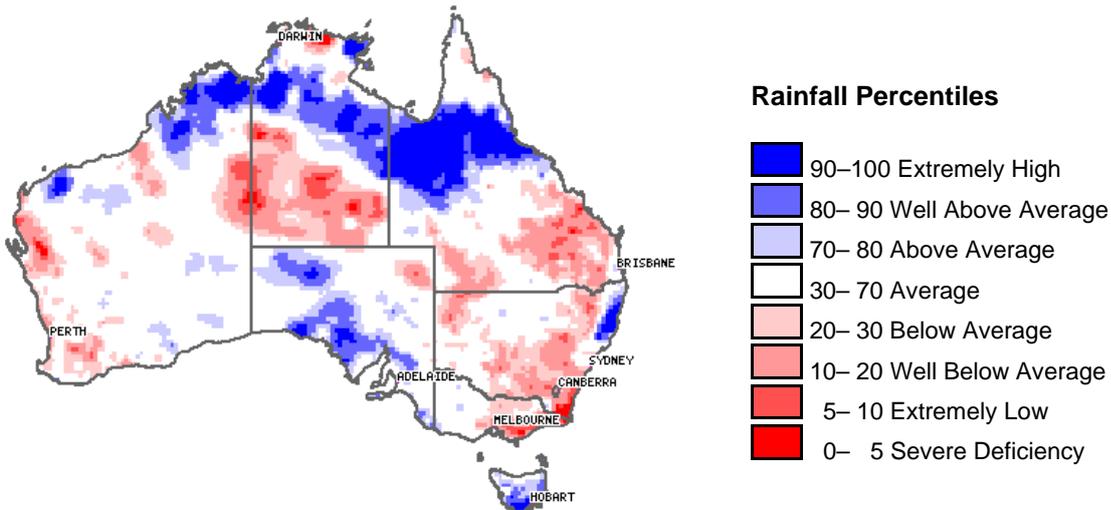
In contrast, much of South Australia and Western Australia, large parts of Victoria, the far west and the north coast of NSW and south western Queensland recorded above average rainfall during November. Rainfall in South Australia was 176 per cent above average, which made it the fifth wettest November on record (106 highest of 110 years). Across the rest of Australia, rainfall was generally average.

## Ongoing or emerging rainfall situations



**Rainfall percentiles for the last three months  
September 2009—November 2009**

During the past three months, large areas of northern and eastern Australia have experienced below average rainfall. Rainfall deficiencies have eased in the last month across South Australia, parts of western, central and southern Queensland, western New South Wales and Victoria. Areas of the Northern Territory, central and northern New South Wales and northern and eastern Queensland are still experiencing severe deficiencies.



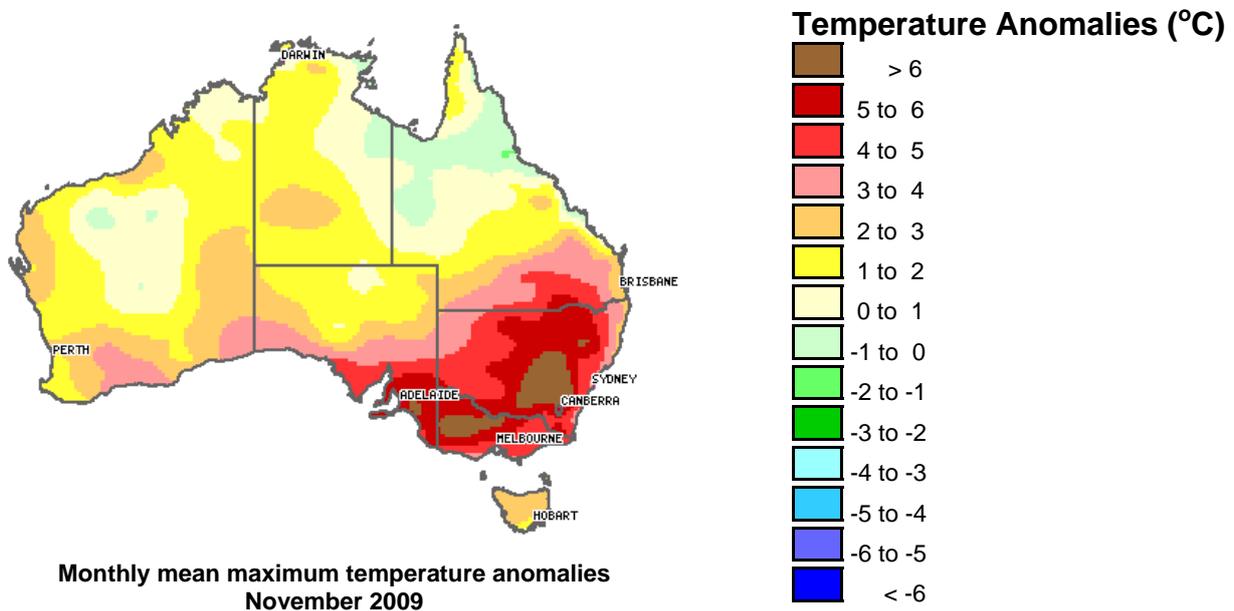
**Rainfall percentiles for the last 12 months  
December 2008—November 2009**

For the 12 month period from December 2008 to November 2009, above average to extremely high rainfall was recorded in a broad band across northern Australia, parts of South Australia, north-east New South Wales and Tasmania. 12 month rainfall deficiencies persist in all states except Tasmania.

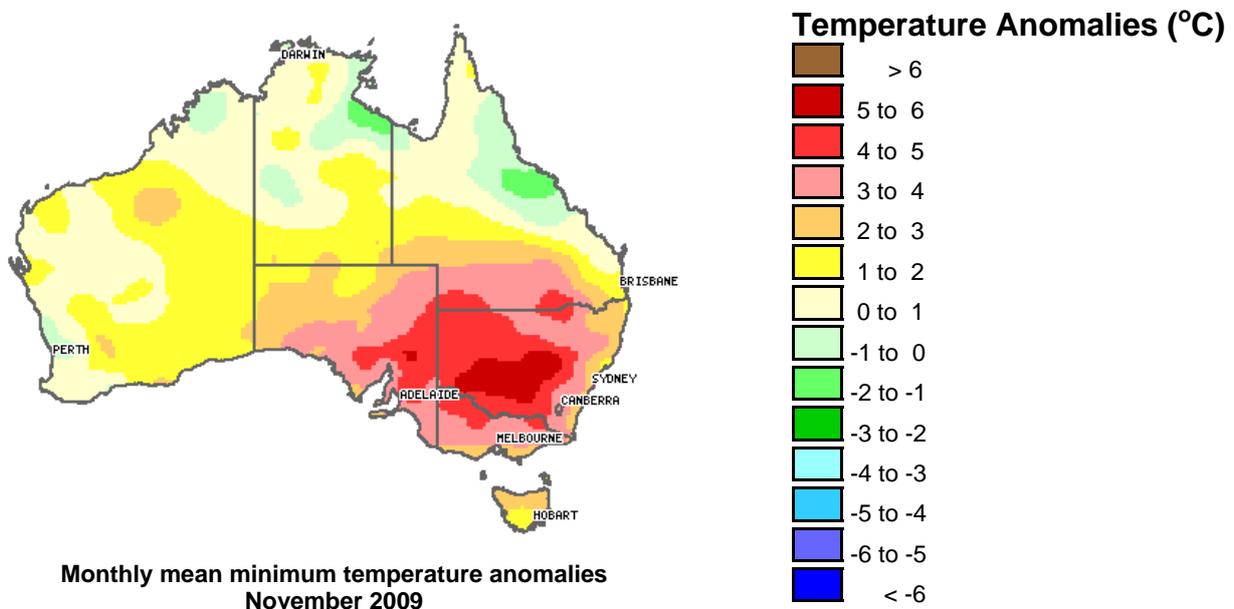
## 1.2 Maximum and minimum temperature anomalies

Spatial temperature analyses are based on historical monthly temperature data provided by the Bureau of Meteorology. These temperature anomaly maps show the departure of the maximum and the minimum temperature from the long-term average. Temperature anomalies are calculated with respect to the reference period 1961–1990. For further information on temperature anomalies go to:

<http://www.bom.gov.au/climate/austmaps/>.

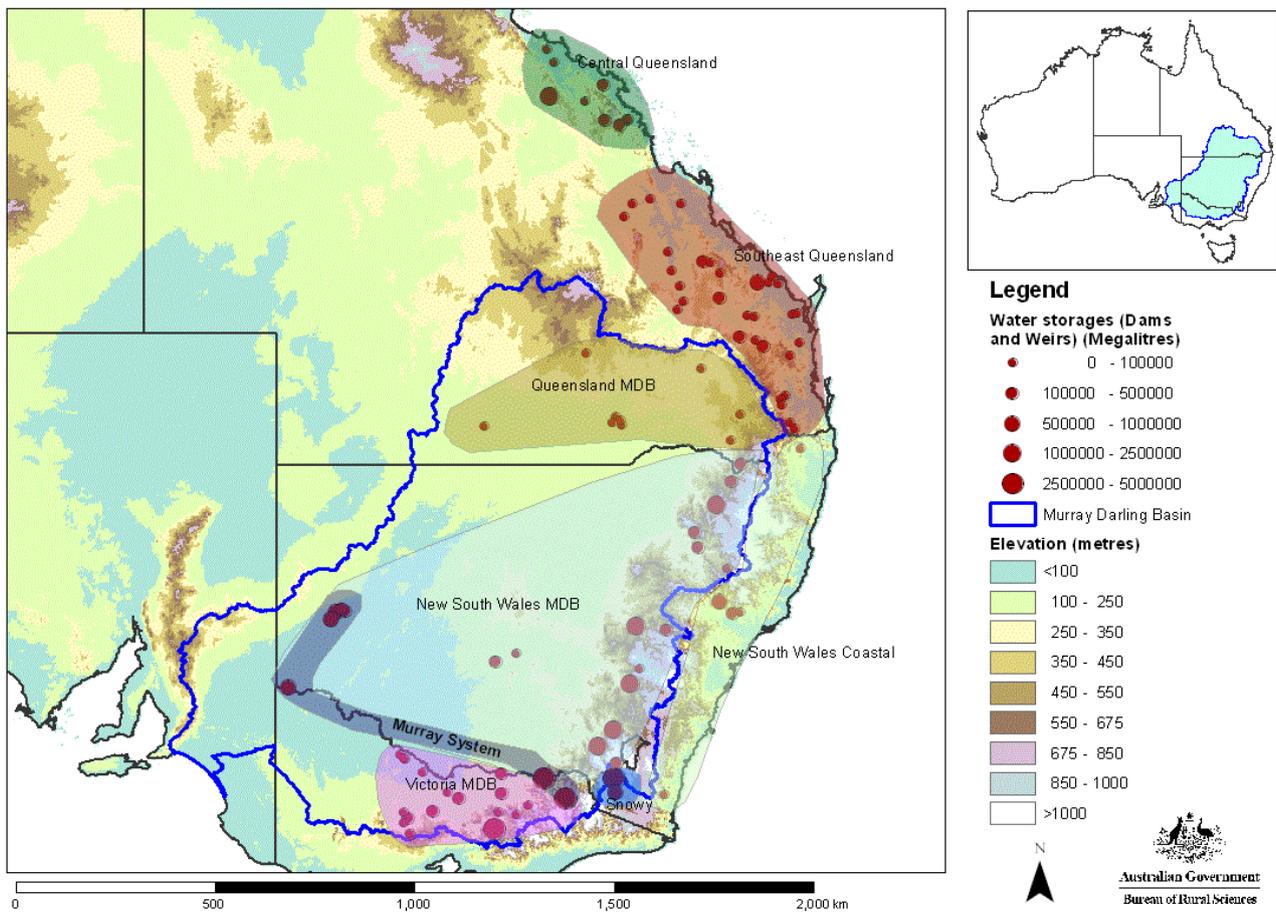


Australia experienced its hottest November on record in 2009. Day-time temperatures in Australia were 2.12 °C above the long term average, the second highest on record. Maximum temperature anomalies were more extreme in south-eastern Australia. Mean maximum temperatures across New South Wales, Victoria and Tasmania were the highest on record. The maximum temperature anomaly of +4.99 °C for New South Wales was the highest ever recorded for any state in Australia. Individual station records were set over an area covering all of Victoria, the east coast south of Sydney, south-east South Australia, north-western Tasmania and inland New South Wales.



Minimum temperatures during November averaged over Australia were the highest on record (1.61°C above normal). Again the abnormal warmth was concentrated in the south-east with state anomalies setting records in NSW, Victoria and South Australia (for the first two states it was a record anomaly for any month). Anomalies were in the +4 to +6°C range in most of inland NSW and northern Victoria, and adjacent areas of eastern South Australia. Records were set in most of Victoria, as well as in south-western New South Wales and most of the settled areas of South Australia.

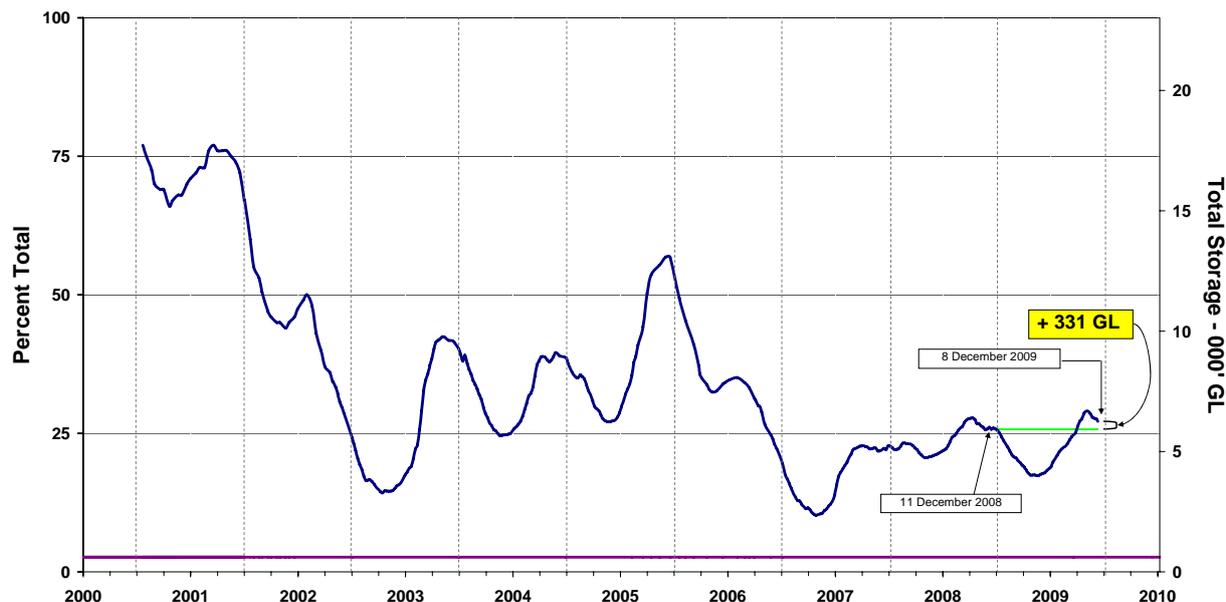
## 2.0 Water storages and announcements



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

## 2.1 Water storages (current at 8 December 2009)

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

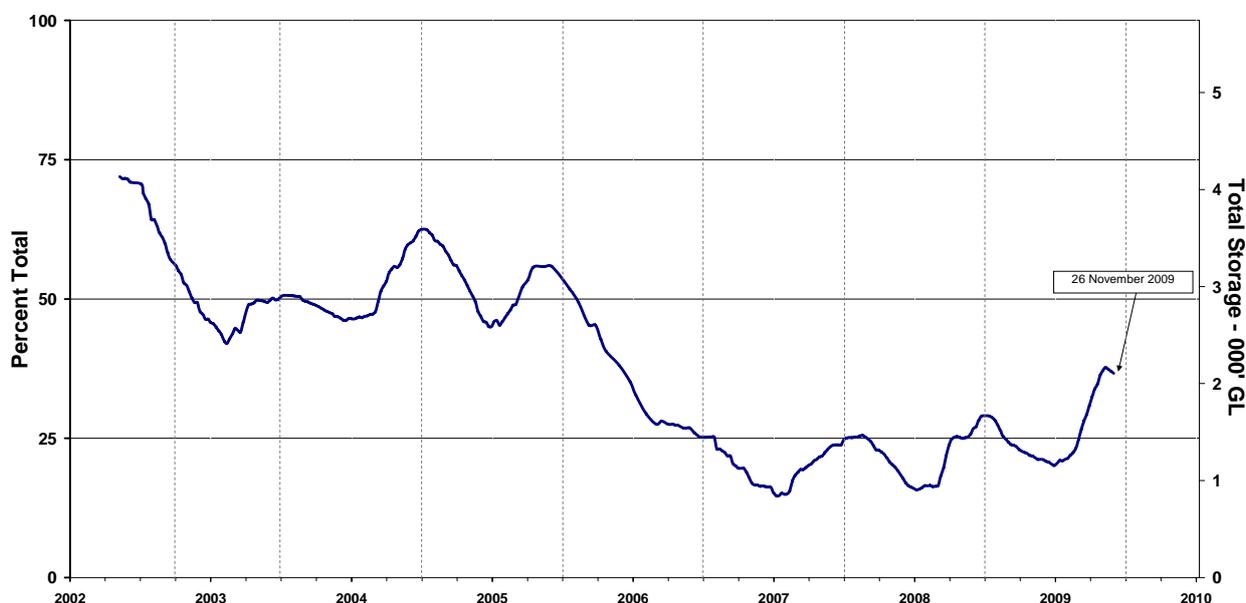


**Water storage levels in the Murray-Darling Basin from 1 January 2001 to 8 December 2009. The green line shows the storage level at the same time last year and the purple line shows the dead storage (not calculated).**

Source: Bureau of Rural Sciences

Over the past month, storage levels within the Murray-Darling Basin (MDB) have decreased by 420 GL (approximately 2 per cent of total capacity), with storage levels on 8 December 2009 at 6253 gigalitres (GL) (27.16 per cent of a total capacity of 23 020 GL). Storage levels are expected to fall at this time of the year because the peak inflow period is finished and irrigation drawdown has commenced. Current storage levels are approximately 331 GL (approximately 1.5 per cent) higher than the same time last year.

### Water storage in the Snowy Scheme

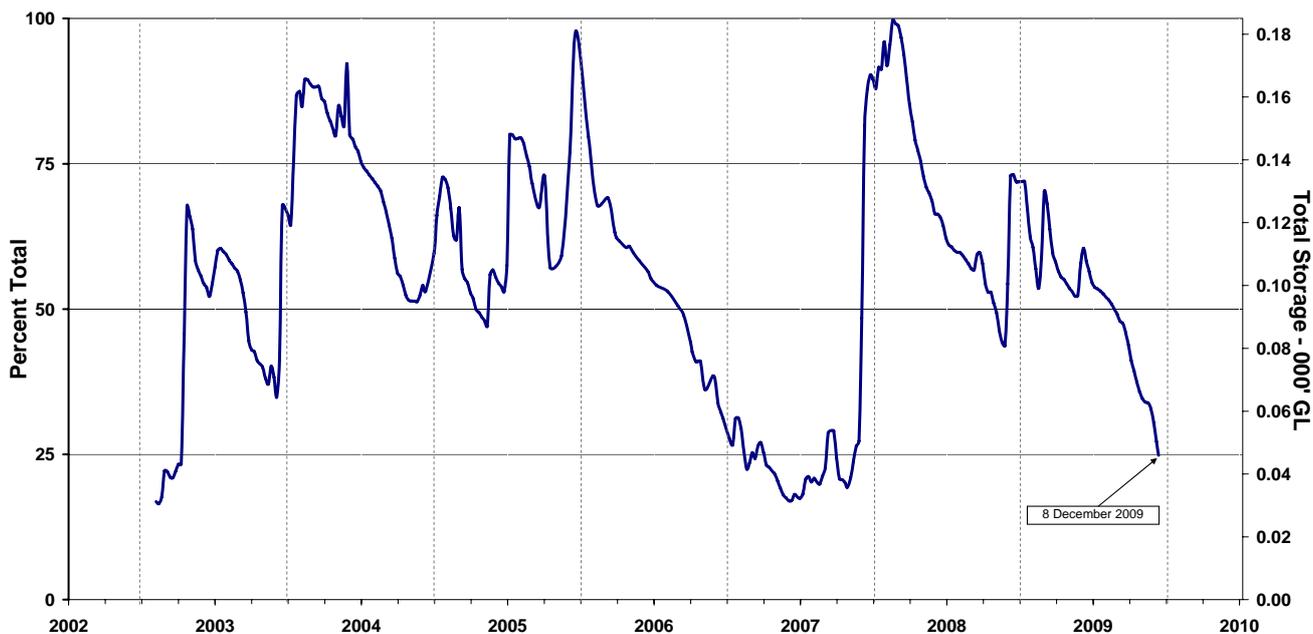


**Water storage levels in the Snowy Scheme from 6 November 2002 to 26 November 2009.**

Source: Bureau of Rural Sciences

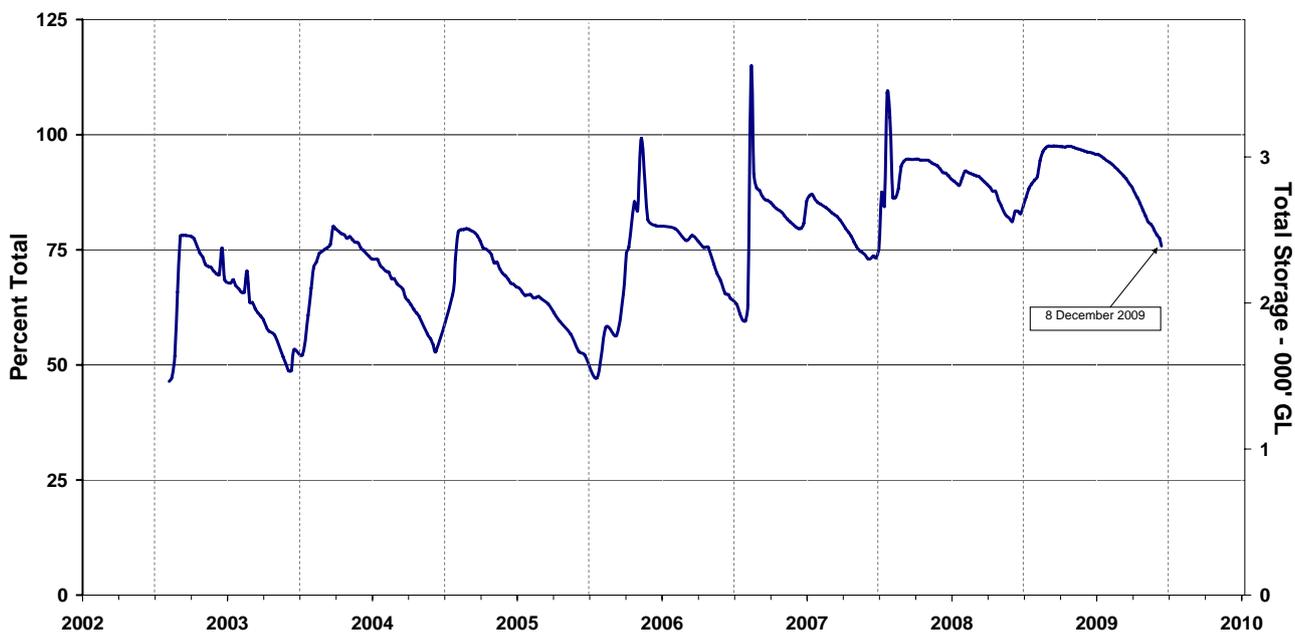
The figure 'Water storage in the MDB' (above top) does not include the capacities of Lake Eucumbene, Tantangara Reservoir and Lake Jindabyne (collectively the Snowy Scheme) which are reserved for hydro-electricity generation and irrigation purposes. The current storage level in the Snowy Scheme is 2106 GL (approximately 37 per cent of a total capacity of 5744 GL), 570 GL (approximately 10 per cent) higher than the same time last year. This is a decrease of 28 GL (approximately 0.5 per cent) on the previous month.

## Water storage in Queensland



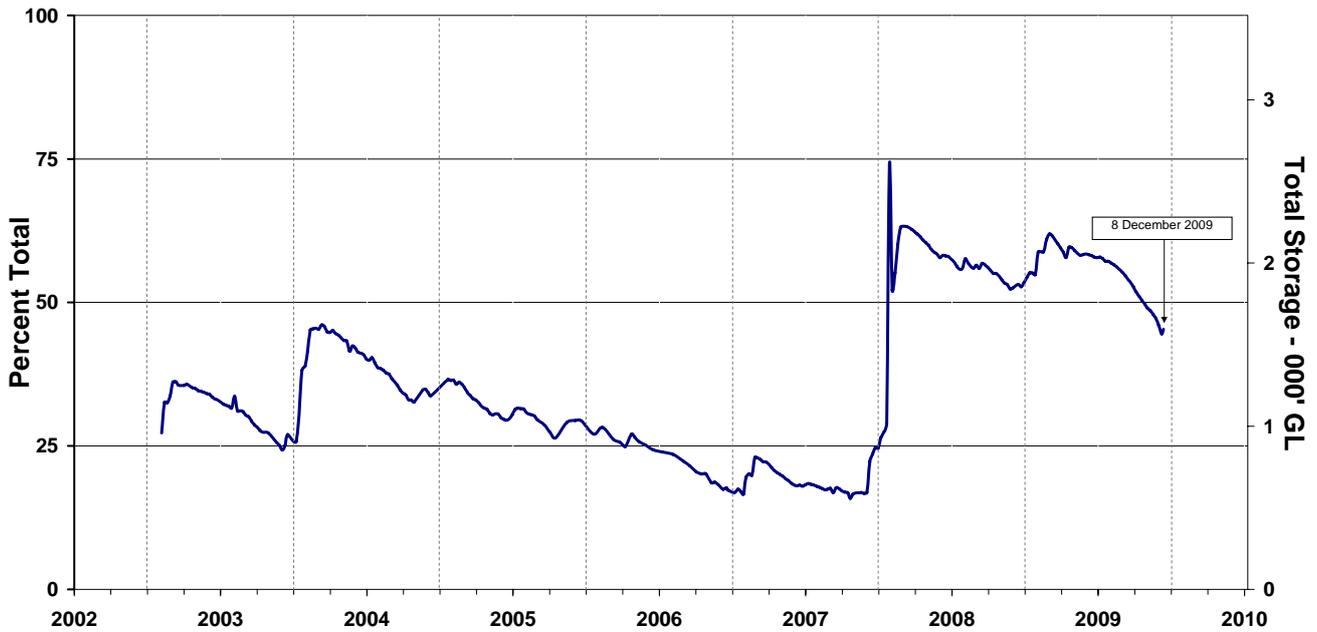
**Water storage levels in Queensland MDB from 3 February 2003 to 8 December 2009.**  
**Source: Bureau of Rural Sciences**

Storage levels in Queensland MDB decreased over the last month by 17 GL to 46 GL (25 per cent of a total capacity of 185 GL). The current storage level is approximately 89.5 GL (48 per cent) lower than the same time last year.



**Water storage levels in central Queensland from 3 February 2003 to 8 December 2009.**  
**Source: Bureau of Rural Sciences**

In central Queensland, storage levels decreased over the last month by 163 GL to 2392 GL, which is 76 per cent of a total capacity of 3155 GL. The current storage level is approximately 239 GL (approximately 8 per cent) lower than the same time last year.



**Water storage levels in south-east Queensland from 3 February 2003 to 8 December 2009.**  
**Source: Bureau of Rural Sciences**

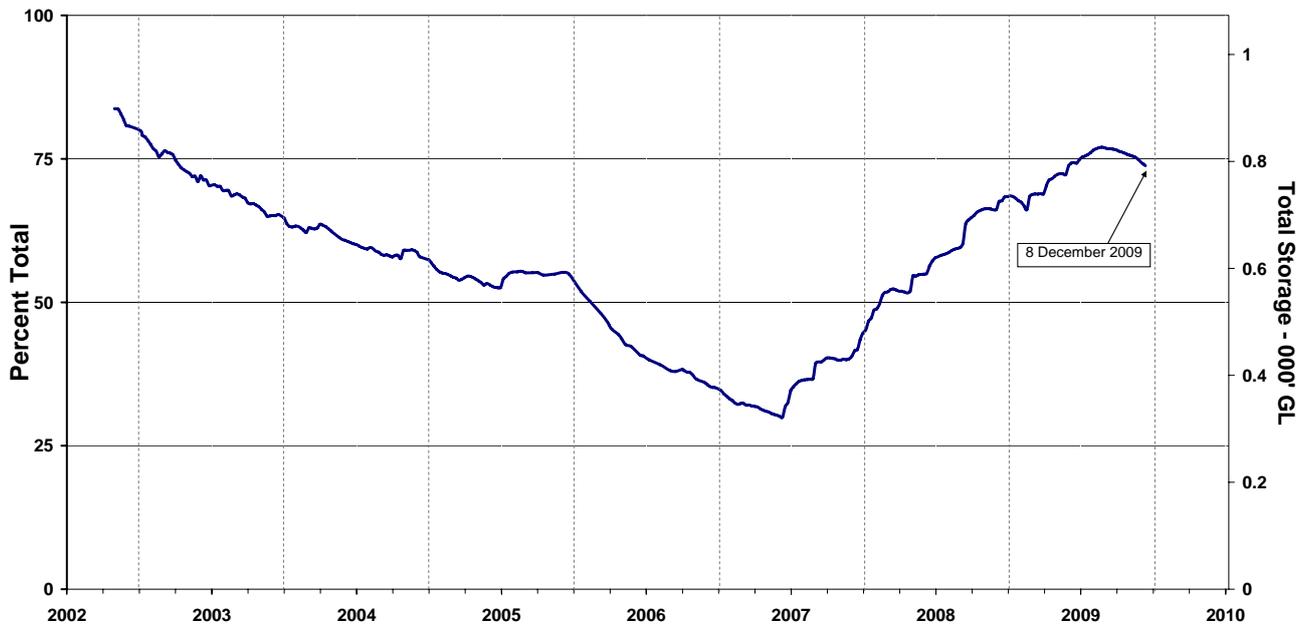
In south-east Queensland, storage levels decreased over the last month by 114 GL to 1594 GL (approximately 45 per cent of a total capacity of 3517 GL). The current storage is approximately 275 GL (8 per cent) lower than the same time last year.

***Water storage in New South Wales***



**Water storage levels in New South Wales MDB from 28 October 2002 to 8 December 2009.**  
**Source: Bureau of Rural Sciences**

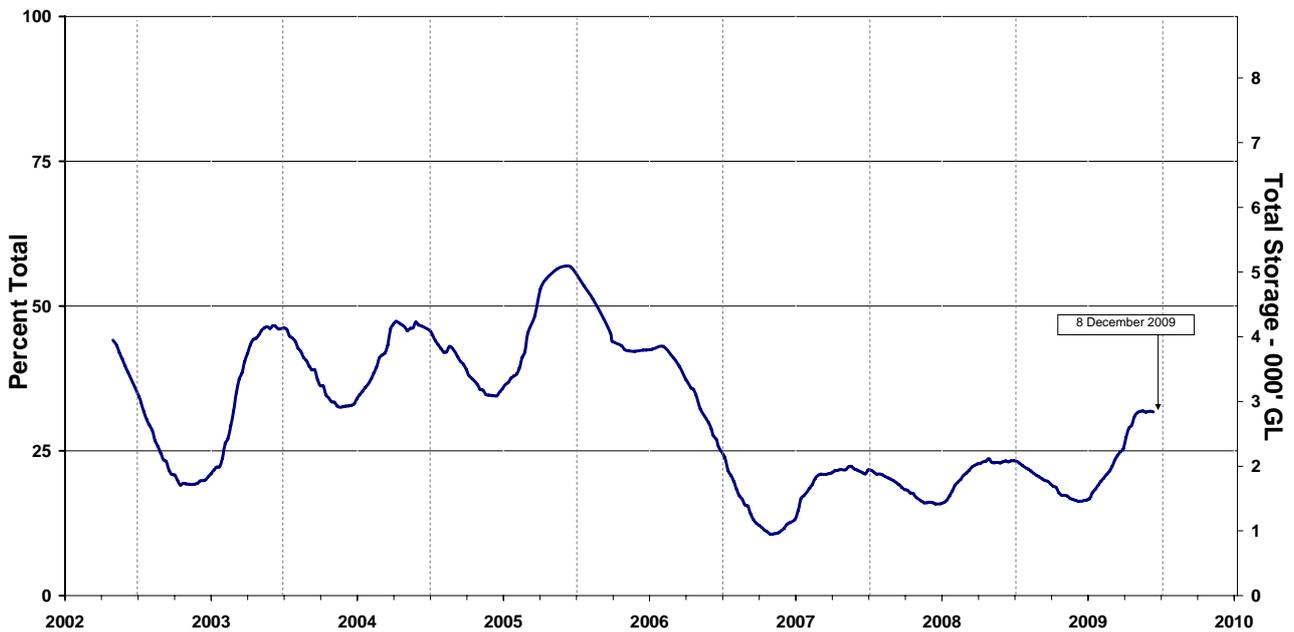
Storage levels in the New South Wales MDB decreased over the last month by 391 GL to 3375 GL (24 per cent of a total capacity of 13 884 GL). The current storage level is approximately 347 GL (2.5 per cent) lower than the same time last year.



**Water storage levels in coastal New South Wales from 28 October 2002 to 8 December 2009.**  
**Source: Bureau of Rural Sciences**

In coastal New South Wales, storage levels decreased over the last month by 18 GL to 792 GL (approximately 74 per cent of a total capacity of 1073 GL). The current storage level is approximately 66 GL (approximately 6 per cent) higher than the same time last year.

***Water storage in Victoria***



**Water storage levels in Victoria MDB from 28 October 2002 to 8 December 2009.**  
**Source: Bureau of Rural Sciences**

Storage levels in Victoria MDB decreased over the last month by 10 GL to 2822 GL (approximately 32 per cent of a total capacity of 8903 GL). The current storage level is approximately 765 GL (approximately 9 per cent) higher than the same time last year.

## Murray-Darling Basin Authority water storages

November rainfall was above and very much above average in the south west of the Murray-Darling Basin but below average in the north east.

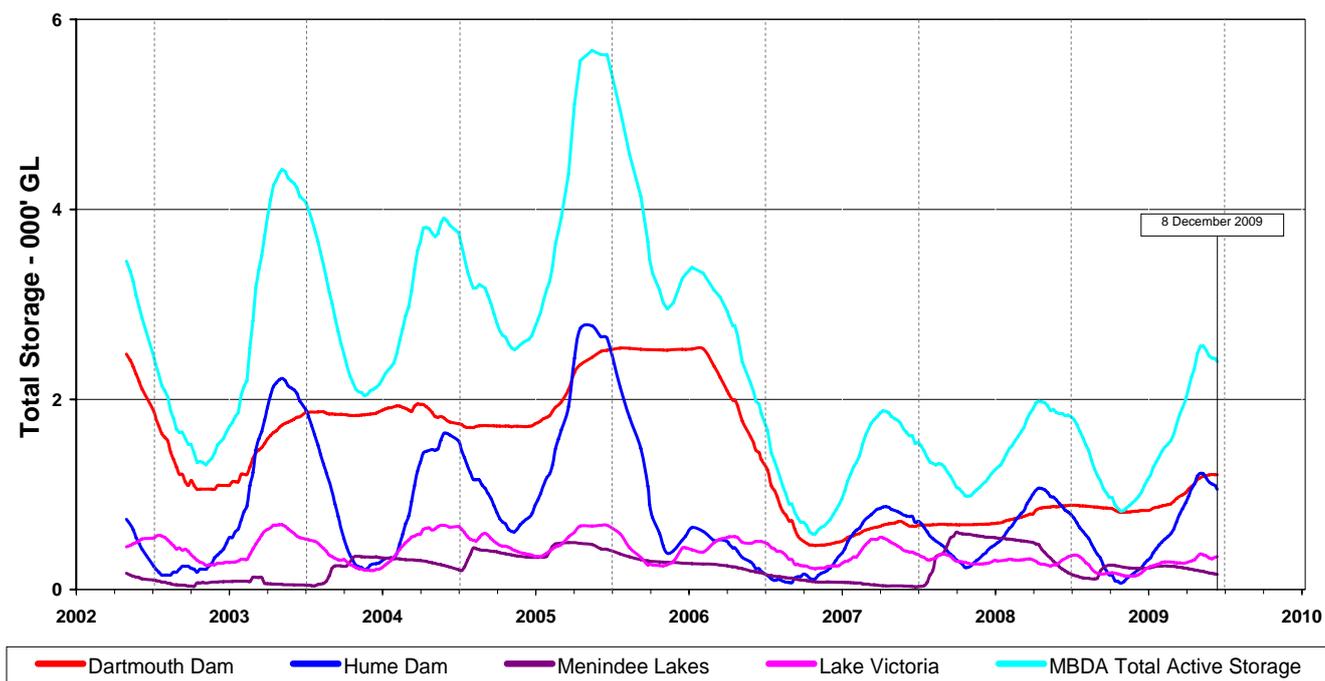
Due, in part to continued inflows from October rainfall events, Murray system inflows for November were about 250 GL, which is the highest November inflow since 2005 (690 GL), but still well below the long term November average of 765 GL.

Murray-Darling Basin Authority (MDBA) active storages at the end of November had decreased by 164 GL over the last month to 2397 GL (approximately 29 per cent capacity). This storage level is approximately 571 GL higher than this time last year (1826 GL), but remains well below the long-term average of 6530GL. MDBA active storage has now been below average since early 2002.

The total volume of water in all Basin storages managed by the MDBA, or by State governments, decreased over the last month. At the start of December 2009, Basin storages held about 6253 GL (27 per cent capacity). Storage in the Snowy Mountains reservoirs (managed by Snowy Hydro) remains low, with Lake Eucumbene at 35 per cent capacity, having decreased 28 GL over November. Storage in Menindee Lakes, under New South Wales control, is at approximately 9.5 per cent capacity (160 GL). This compares to approximately 12 per cent capacity at this time last year. Storage in Hume Dam decreased during November by 162 GL to 1054 GL (35 per cent capacity). The Hume release is around 10 500 ML/day, meeting downstream requirements. Storage in Dartmouth Dam increased during November by 16 GL to 1207 GL (approximately 31 per cent capacity). The peak of the pulsed release was 3,000 ML/day and the release is currently at 1,600 ML/day and gradually falling.

Storage in Lake Victoria decreased during November by 18 GL to 345 GL (approximately 51 per cent capacity). This is slightly higher than the same time last year (324 GL). The water level is expected to continue gradually rising in the coming week. The target flow to South Australia has decreased from 5,000 to 4,700 ML/day.

The trend of MDBA water storages at 8 December 2009 is shown in the figure below.



**Water volumes in the Murray-Darling Basin Authority Storages  
from 28 October 2002 to 8 December 2009.  
Source: Murray-Darling Basin Authority**

For further information on water storages, go to:

Snowy Scheme

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

Queensland

<http://www.sunwater.com.au/pdf/water/CurrentStorageSummary.pdf>

New South Wales

<http://www.statewater.com.au/indexes/index.asp>

Northern Victoria

<http://www.g-mwater.com.au/water-resources/storage-levels/>

Murray–Darling Basin Authority

<http://www.mdba.gov.au/>

## 2.2 Water allocation announcements

### ***Announcements for New South Wales (current at 8 December 2009)***

An increase to general security water allocations in the Murrumbidgee Valley was announced on 1 December 2009. The water allocations for all licence holders are summarised in the table below. The units of water allocation changed at the start of the 2009–10 water year from per cent allocations to share units of the available water determination (AWD\*).

<b>Water system</b>	<b>High Security Licences (Megalitres per share unit or %)</b>	<b>Change (Megalitres per share unit or %)</b>	<b>General Security Licences (Megalitres per share unit or %)</b>	<b>Change (Megalitres per share unit or %)</b>
NSW Murray Valley	97%	0	10%	+9%
Murrumbidgee Valley	95%	1%	15%	+11%
Lower Darling	100%	0	25%	0
Macquarie Valley	1	0	0	0
Hunter Valley	1	0	1	0
Lachlan Valley	0.1	0	0	0
Border Rivers	1	0	0	0
Peel Valley	100%	0	80%	0

\* AWDs are expressed as a percentage of the share component where share is expressed as a volume on the licence or as a volume per unit share where the licence share is expressed in unit shares.

November saw very high rainfall across parts of the southern basin, with some areas experiencing their best rainfall all year. However due to the dry nature of the catchment, very little runoff was generated. On 1 December 2009, Murrumbidgee Valley general security allocations increased from 14 per cent to 15 per cent of entitlement. Allocations in the Murray valley and Lower Darling remain unchanged.

### ***Announcements for Victoria (current at 8 December 2009)***

On 1 December 2009, Goulburn-Murray Water (G-MW) announced improvements in the seasonal allocations for the Murray and Goulburn systems. The allocations in the Broken, Campaspe, Loddon and Bullarook systems remained at zero.

Seasonal allocations in the Murray system are at 57 per cent of high-reliability water shares (HRWS), which is an increase of four per cent over the past month. The seasonal allocation in the Goulburn system is 46 per cent HRWS, which is an increase of six per cent over the past month. At the same time last year, the allocations in the Murray and Goulburn systems were 24 per cent HRWS and 21 per cent HRWS, respectively.

Rainfall during November produced minor inflows to the major storages. Despite totals being quite substantial, in some areas they did not produce the volumes of inflows seen earlier in the spring due to drying of the catchments over the previous few weeks. The increases in Murray and Goulburn allocations are the result of a combination of inflows, reduced demand for water, and lower than expected evaporation and system operating requirements. However, the benefits of the rain and lower evaporation rates were not enough to reduce the shortfalls in allocations in the Broken, Campaspe, Loddon and Bullarook systems.

### ***Announcements for South Australia (current at 8 December 2009)***

On 1 December 2009 allocations for South Australian River Murray licence holders were announced to remain unchanged at 46 per cent of their entitlement.

While some rainfall was recorded across much of the upper Murray catchment in mid to late November, inflows were low due to the very dry conditions within the catchment. Under the latest assessment by the Murray-Darling Basin Authority, there was a 20 GL improvement for South Australia. This 20 GL of water has been allocated to secure the remainder of South Australia's critical human needs water for 2010-11.

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/>

Goulburn-Murray Water  
<http://www.g-mwater.com.au/news/media-releases/>

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

Murray-Darling Basin Authority  
<http://www.mdba.gov.au/>

## 3.0 Crop and livestock production

### 3.1 Crops

#### *Winter Crops*

##### **Australia**

Total winter crop production is estimated at 36 million tonnes, an eight per cent increase on 2008–09. Of the major winter grains, Australia's wheat production is forecast to be 22 million tonnes in 2009–10, five per cent higher than last season. Barley production is estimated to reach 8.3 million tonnes in 2009–10 compared with 7.7 million tonnes in 2008–09. Canola production in 2009–10 is expected to be around 1.8 million tonnes, down from the 1.9 million tonnes produced in 2008–09.

[http://www.abare.gov.au/publications\\_html/cr/cr\\_09/cr09\\_Dec.pdf](http://www.abare.gov.au/publications_html/cr/cr_09/cr09_Dec.pdf)

##### **New South Wales**

Expectations for winter crop production have fallen across most of the cropping regions of southern and central New South Wales as lack of spring rainfall, excessive heat and frosts in some areas reduced yields and caused crop losses. Rainfall in late November caused concerns over crops that were still to be harvested. Harvest is complete in northern New South Wales and yields are better than in other areas of the state. Total winter crop production for the state is estimated at 7.6 million tonnes in 2009–10, a significant reduction from the 9.4 million tonnes harvested in 2008–09.

[http://www.abare.gov.au/publications\\_html/cr/cr\\_09/cr09\\_Dec.pdf](http://www.abare.gov.au/publications_html/cr/cr_09/cr09_Dec.pdf)

##### **Queensland**

After a promising start to the winter cropping season, a lack of winter and spring rainfall over Queensland's major winter cropping regions resulted in yields being well below average. Harvest of winter crops was completed by early November with crop quality reported as good. Total winter crop production is estimated to have fallen to 1.5 million tonnes in 2009–10, 26 per cent lower than last year, reflecting the unfavourable seasonal conditions.

[http://www.abare.gov.au/publications\\_html/cr/cr\\_09/cr09\\_Dec.pdf](http://www.abare.gov.au/publications_html/cr/cr_09/cr09_Dec.pdf)

##### **South Australia**

Only 30 to 40 per cent of crops have been harvested due to delays from November rainfall this compares to 60 per cent of crops harvested last year at this time. The rainfall, combined with excessive heat in November has resulted in some lower yields and higher screenings for many later sown crops. The Eyre Peninsula has avoided most of the heavier rains. Total winter crop production is estimated to be 7.7 million tonnes, a rise of 58 per cent from 2008–09, and the second highest on record behind the 2001–02 harvest.

[http://www.abare.gov.au/publications\\_html/cr/cr\\_09/cr09\\_Dec.pdf](http://www.abare.gov.au/publications_html/cr/cr_09/cr09_Dec.pdf)

##### **Victoria**

Over most of Victoria's cropping regions, above average November rainfall resulted in delays to the winter harvest and excessive heat has affected yield potential in some areas. In the Mallee region, the majority of wheat escaped damage and yields from 0.4–4 t/ha are expected. In the Wimmera and North Central districts, excessive heat and high rainfall in November has downgraded the quality and expected yields of wheat, lentil, oilseed and barley crops. Grain harvest is well underway in the Northern Irrigation district, with yields ranging from below average to average, while some crops will not be harvested due to extremely low yields. In the North East, excessive November heat brought the growing season to a rapid end and crops did not benefit from late November rainfall. There are some reports of low yields and damaged crops. Similarly, high temperatures and rainfall in November have affected crops throughout the South West but overall, average yields are expected in this district.

<http://www.dpi.vic.gov.au/DPI/nrenfa.nsf/LinkView/EE0979247A7038C6CA257684007A86182B72296A5108C4FFCA25734F0009F96F>

Total winter crop production is estimated to be around 6.7 million tonnes in 2009–10, which is an increase of 74 per cent from last season's drought affected harvest.

[http://www.abare.gov.au/publications\\_html/cr/cr\\_09/cr09\\_Dec.pdf](http://www.abare.gov.au/publications_html/cr/cr_09/cr09_Dec.pdf)

## **Western Australia**

The winter grain harvest is well underway in Western Australia after rainfall delayed progress earlier in the month. There have been reports of weather and hail damage across the wheatbelt. Wheat yields in the northern agricultural region are average to above average ranging from 1.5–2.5 t/ha in the north-east to 2–3 t/ha in western areas. Yields for most crops in the central agricultural region are expected to be average, although early reports for canola indicate that yields are lower than anticipated through the northern and central agricultural regions. In the southern agricultural region, yields are generally average or slightly below, with some quality issues resulting from unstable weather conditions over the past few months. Horticulture crops in southern regions are generally looking good.

[http://www.agric.wa.gov.au/objtwr/imported\\_assets/content/lwe/cli/seasonalupdatedec09.pdf](http://www.agric.wa.gov.au/objtwr/imported_assets/content/lwe/cli/seasonalupdatedec09.pdf)

Total winter crop production is estimated at 12.1 million tonnes in 2009–10, a reduction of more than 1.3 million tonnes compared with last season. Widespread rainfall during November has delayed harvest by approximately three weeks.

[http://www.abare.gov.au/publications\\_html/cr/cr\\_09/cr09\\_Dec.pdf](http://www.abare.gov.au/publications_html/cr/cr_09/cr09_Dec.pdf)

## **Summer Crops**

### **Australia**

Total summer crop production is forecast to fall by around 28 per cent to 2.8 million tonnes in 2009–10, reflecting a forecast decline in grain sorghum production. Below average to very much below average rainfall throughout winter and spring in key growing regions of northern New South Wales and southern Queensland is forecast to result in a decline in the area planted to grain sorghum and further rain is required to improve prospects. Total summer crop area planted is estimated to fall by around nine per cent to slightly more than one million hectares. Availability of irrigation water remains a critical issue for cotton and rice production.

[http://www.abare.gov.au/publications\\_html/cr/cr\\_09/cr09\\_Dec.pdf](http://www.abare.gov.au/publications_html/cr/cr_09/cr09_Dec.pdf)

Soil water conditions and seasonal rainfall outlook at the end of October indicate a low chance of an above median sorghum yield during the 2009–10 summer growing season for most of the north-eastern Australia cropping region.

[http://www.dpi.qld.gov.au/documents/PlantIndustries\\_FieldCropsAndPasture/Sorghum-Report-Nov09.pdf](http://www.dpi.qld.gov.au/documents/PlantIndustries_FieldCropsAndPasture/Sorghum-Report-Nov09.pdf)

### **Queensland**

Drier than normal conditions have decreased sorghum crop yield expectations in central and southern Queensland. Crop yield expectations in central Queensland are currently very much below average, while in southern Queensland expectations are currently below the long-term average. However, for sorghum, the range of likely yield outcomes is variable as it is early in the season. Widespread average to above average rainfall is needed to induce plantings and improve the currently poor crop outlook for most of the summer cropping region.

[http://www.dpi.qld.gov.au/documents/PlantIndustries\\_FieldCropsAndPasture/Sorghum-Report-Nov09.pdf](http://www.dpi.qld.gov.au/documents/PlantIndustries_FieldCropsAndPasture/Sorghum-Report-Nov09.pdf)

The area planted to sorghum in 2009–10 is forecast to be 460 000 hectares, a decline of 11 per cent compared with 2008–09, in response to lower prices and low soil moisture conditions. Increased rainfall is required for expected plantings to be fully realised. Taking into account the low soil moisture conditions in most producing regions, grain sorghum production in Queensland in 2009–10 is forecast to be 1.08 million tonnes, compared with 1.72 million tonnes in 2008–09.

[http://www.abare.gov.au/publications\\_html/cr/cr\\_09/cr09\\_Dec.pdf](http://www.abare.gov.au/publications_html/cr/cr_09/cr09_Dec.pdf)

### **New South Wales**

The area planted to grain sorghum is forecast to decline by 25 per cent in 2009–10 to 175 000 ha, compared to 2008–09, in response to poor soil moisture conditions. Grain sorghum production for 2009–10 is forecast to be 516 000 tonnes, 46 per cent lower than 2008–09.

[http://www.abare.gov.au/publications\\_html/cr/cr\\_09/cr09\\_Dec.pdf](http://www.abare.gov.au/publications_html/cr/cr_09/cr09_Dec.pdf)

## 3.2 Livestock

### **Beef cattle**

Low demand for cattle in the international and domestic markets continued through November. Continued dry conditions as well as hot temperatures in many parts of New South Wales and Queensland caused an influx of cattle to market. This combined with the lack of demand has led to prices falling further.

The total national supply of cattle across MLA National Livestock Reporting Service saleyards during November equalled the supply of 2008. Queensland producers offloaded 18 per cent more cattle year-on-year during November due to the hot and dry conditions. New South Wales offloaded 28 per cent more cattle year-on-year for the same reason. Good rainfall in Victoria and South Australia combined with the lack of demand resulted in numbers plummeting 33 per cent and 28 per cent year-on-year respectively.

<http://www.mla.com.au/TopicHierarchy/News/MarketNews/2009/Cattle+market+wrap.htm>

An increase of cattle in reduced condition arrived at saleyards, reflecting the feed shortages in Queensland and New South Wales.

<http://www.mla.com.au/NR/exeres/B0722077-0226-4636-A052-AC9974183B0C.htm>

Water storages in these areas are at critically low levels, and some producers have been forced to off-load livestock despite low demand and low prices in the markets.

<http://www.mla.com.au/TopicHierarchy/News/MarketNews/2009/Cattle+market+wrap.htm>

National cattle slaughter dropped 12 per cent year-on-year during November, due to a tighter supply of suitable cattle meeting specifications. New South Wales cattle slaughter fell six per cent, while Queensland numbers dropped 11 per cent year-on-year. Victorian slaughter fell 27 per cent for November compared to 2008.

<http://www.mla.com.au/TopicHierarchy/News/MarketNews/2009/Cattle+market+wrap.htm>

In the domestic market, demand from restockers has been low while feedlots have shown some resilience compared with other buying sectors, with purchases increasing 24 per cent year-on-year in November. This activity by feedlots comes as a response to the low value of grain and cheaper cattle prices. Despite the increased purchases from feedlots, prices received for feeder cattle continue to fall because of the limited demand from other buying sectors. Interest from restockers in Victoria for young cattle has lifted four per cent compared to last year due to improved conditions.

<http://www.mla.com.au/TopicHierarchy/News/MarketNews/2009/Cattle+market+wrap.htm>

The Eastern Young Cattle Indicator settled at 293c/kg, while trade steer and feeder steer indicators closed at 158c/kg and 157c/kg respectively. Japan ox finished at 155c/kg and the US cow finished at 116c/kg. The national feeder steer indicator fell nine per cent year-on-year to settle at 158c/kg live weight.

<http://www.mla.com.au/TopicHierarchy/News/MarketNews/2009/Cattle+market+alert.htm>

Australian beef exports declined 17 per cent year-on-year during November. Total shipments for the month only reached 70 360 tonnes shipped weight, the lowest November total since 1997. Exports were influenced by the high Australian dollar and a reduction in beef production since October 2009. Exports to Japan during November were three per cent higher than in 2008, at 27 720 tonnes shipped weight. Demand from Indonesia remained strong importing 5 117 tonnes shipped weight from Australia, 79 per cent higher than November 2008. Exports to the US fell to their lowest level since January 2008 at 13 115 tonnes shipped weight, 55 per cent below November 2008.

<http://www.mla.com.au/TopicHierarchy/News/MarketNews/2009/Beef+exports+back+17+in+November.htm>

Total shipments from January to November this year are three per cent lower than the same period in 2008, totalling 850 919 tonnes shipped weight.

<http://www.mla.com.au/TopicHierarchy/News/MarketNews/2009/Beef+exports+back+17+in+November.htm>

Beef exports to Korea during 2009 have fallen 12 per cent on 2008 for the January to November period. Beef exports during November were 10 388 tonnes shipped weight, a drop of 25 per cent on November 2008. Exports have been influenced by the high Australian dollar and supply constraints.

<http://www.mla.com.au/TopicHierarchy/News/MarketNews/2009/An+improved+second+half+for+Korea.htm>

## **Sheep and lambs**

Dry conditions in New South Wales and Queensland have been unfavourable for sheep and lamb production during November. However, favourable spring conditions have continued through November in eastern South Australia and western Victoria. Rainfall in these areas during November provided run-off serving to boost water storages heading into summer. Domestic competition along with strong international demand for sheep and lambs has held prices firm despite an increase in lambs to saleyards.

<http://www.mla.com.au/TopicHierarchy/News/MarketNews/2009/Hit+and+miss+end+to+Spring.htm>

The supply of lambs during November increased 2 per cent year-on-year at MLA's NLRS reported saleyards. The supply was primarily due to a flush of lambs in western Victoria where average to above average rainfall was received, but hot periods in November dried off pastures. New South Wales also contributed increased numbers compared to last year as conditions were hot and dry during November in the majority of the state. Conversely, lamb supply declined 16 per cent year-on-year in South Australia where conditions for pasture production have been favourable and producers have held onto stock to rebuild their flocks.

<http://www.mla.com.au/TopicHierarchy/News/MarketNews/2009/Lamb+and+sheep+market+wrap.htm>

Competition for lambs has been strong from various domestic buying sectors. Restocker competition for lightweight lambs has been strong as the season remains favourable for lamb production in Victoria and South Australia. Restocker purchases have increased 26 per cent year-on-year in South Australia, reflecting the improved seasonal conditions. Lambs purchased by feeder operators in New South Wales during November more than doubled compared with the same period last year, influenced by the lack of feed and the low grain prices, while competition from feeder operators in Victoria has also occurred.

<http://www.mla.com.au/NR/exeres/C7F6686B-5090-405F-B68D-1F97AF2870AA.htm>

Australian lamb exports rose 14 per cent year-on-year during November. Total shipments for the month reached 15 914 tonnes shipped weight. Exports rose to most major markets year-on-year over the month, despite the continued appreciation of the Australian dollar. Compared with the same month last year, exports to the US rose 1 per cent to 3 905 tonnes shipped weight, with importers now attempting to build stocks ahead of Christmas. Shipments also rose 40 per cent year-on-year to the Middle East (3 005 tonnes shipped weight), and 30 per cent to China (1 331 tonnes shipped weight), where large stockpiles reportedly caused a dip in exports the previous year. Shipments also lifted 88 per cent to the United Kingdom to 1 154 tonnes shipped weight, and 70 per cent to the European Union (1 971 tonnes shipped weight), with exporters more active as we approach the end of the year.

<http://www.mla.com.au/TopicHierarchy/News/MarketNews/2009/Lamb+exports+higher+in+November.htm>

Conditions for pasture production have been favourable in Victoria and South Australia and as a result, significantly larger proportions of trade (16 to 22 kg carcass weight) and heavyweight (24 to 26 kg carcass weight) categories entered the saleyards, increasing five and four per cent on November 2008, respectively.

<http://www.mla.com.au/TopicHierarchy/News/MarketNews/2009/Lamb+and+sheep+market+wrap.htm>

This was not true of lamb quality in New South Wales where a greater proportion of store quality lambs were offered.

<http://www.mla.com.au/NR/exeres/9EFB0471-92CD-486F-8AC3-F06D2ACEB035.htm>

There has been strong demand for lambs from both overseas markets as well as domestic markets, and despite larger lamb yardings from western Victoria, prices have remained strong. The eastern states trade lamb indicator finished at 418¢/kg due to strong demand from restockers experiencing favourable spring conditions in South Australia and Victoria. The store lamb indicator settled at 393¢/kg carcass weight, while the restocker lamb indicator finished at 422¢/kg carcass weight. The heavy lamb indicator finished at 411¢/kg and the merino lamb prices settled at 354¢/kg carcass weight.

<http://www.mla.com.au/TopicHierarchy/News/MarketNews/2009/Lamb+and+sheep+market+wrap.htm>

The eastern states mutton indicator settled at 297¢/kg carcass weight, and intense competition continues in the market from export processors and restockers.

<http://www.mla.com.au/TopicHierarchy/News/MarketNews/2009/Lamb+and+sheep+market+wrap.htm>

For further information on crops and livestock, go to:

Australian Bureau of Statistics

<http://www.abs.gov.au/>

Australian Bureau of Agricultural and Resource Economics

<http://abareconomics.com/>

Meat and Livestock Australia

<http://www.mla.com.au/>

Department of Agriculture and Food Western Australia

<http://www.agric.wa.gov.au/>

New South Wales Department of Primary Industries

<http://www.dpi.nsw.gov.au/aboutus/news/>

Primary Industries and Resources South Australia

<http://www.pir.sa.gov.au/grains/cpr/>

Queensland Department of Primary Industries and Fisheries

<http://www.dpi.qld.gov.au/fieldcrops/>

The Land Farmonline

<http://theland.farmonline.com.au/>

Victorian Department of Primary Industries

<http://www.dpi.vic.gov.au>

## 4.0 Climate Outlook

### 4.1 El Niño Southern Oscillation (ENSO)

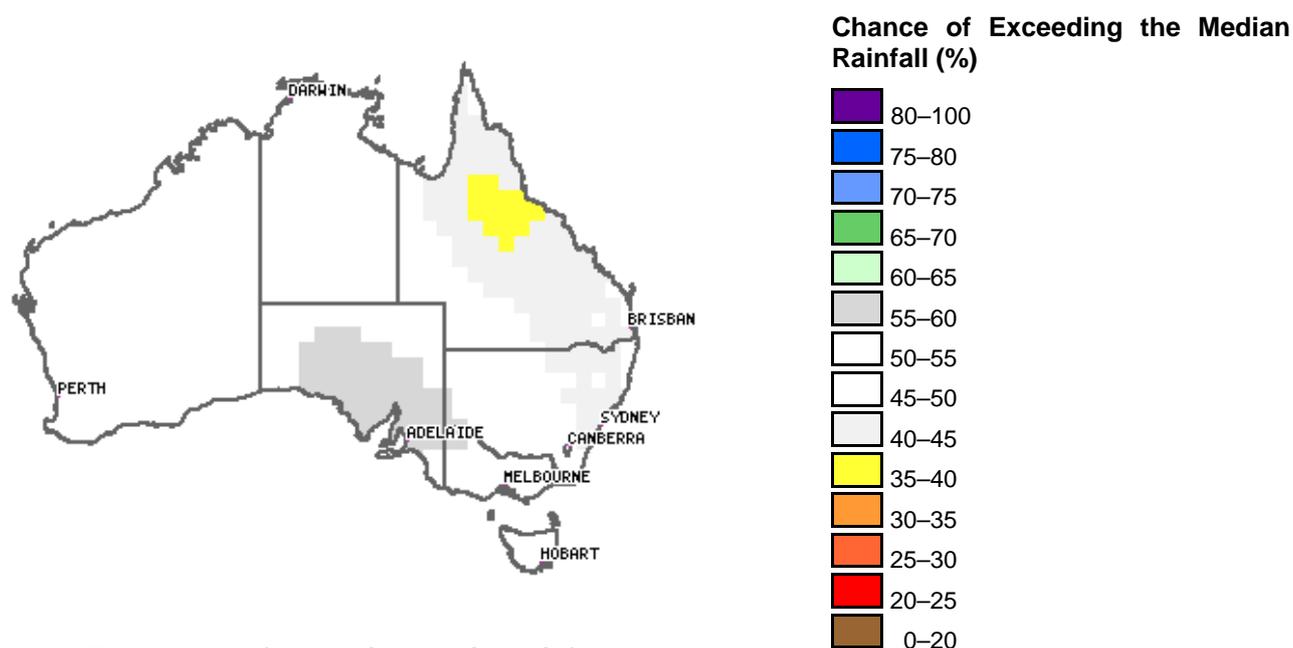
On 9 December 2009, the Australian Bureau of Meteorology announced that El Niño conditions continue to dominate the equatorial Pacific Ocean. Ocean surface temperatures in the central Pacific remain at levels not seen since the El Niño events of 2002-03 and 1997-98, with values more than 2°C above normal in places along the equator. Over the past fortnight, the Southern Oscillation Index has remained steady at levels typical of an El Niño event, while temperatures below the tropical Pacific Ocean surface have cooled slightly in central regions. However, Trade Winds have weakened considerably over the same period, which may lead to some renewed warming of the equatorial Pacific Ocean.

Leading climate models suggest that El Niño conditions will persist throughout summer, with sea surface temperatures not expected to cool until March 2010. The slow start to the northern wet season and the occurrence of spring heatwaves are both typical impacts for an El Niño event. However, the influence of El Niño events on Australian rainfall typically declines by mid to late summer.

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

### 4.2 Rainfall Outlook

The Bureau of Meteorology provides seasonal outlooks that are statements about the probability of wetter or drier than average weather over a three month period. The outlooks are based on the statistics of chance (the odds) taken from Australian rainfall, temperature and sea surface temperature records for the tropical Pacific and Indian Oceans. They are not categorical predictions about future rainfall and they do not indicate the expected rainfall amount for the three month outlook period.

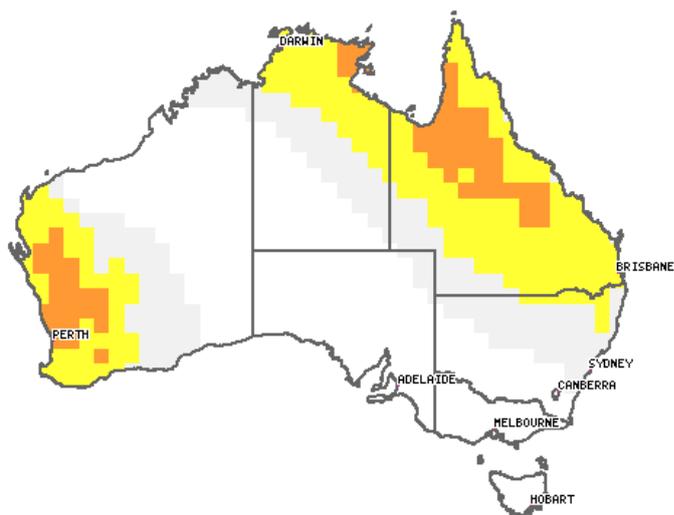


**The chance of exceeding median rainfall  
December 2009—February 2010**

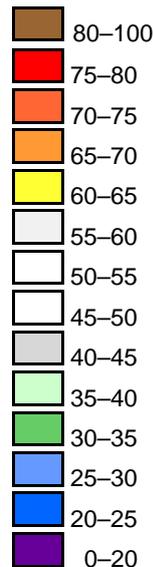
The summer (December 2009 to February 2010) seasonal outlook indicates that there is an increased chance of drier conditions (35–40 per cent chance of exceeding the median rainfall) in northern Queensland. Otherwise across most of Australia there is 40–60 per cent chance of exceeding the median rainfall. This means that for most of Australia there is no strong indication of either a wetter or drier than normal summer.

The pattern of seasonal rainfall odds across Australia is a result of above average temperatures in the Indian and Pacific Oceans. Warmer temperatures in the Pacific tend to indicate below average rainfall across eastern Australia while the warm Indian Ocean temperatures influence wetter than average conditions across the west of Western Australia and the tropics.

### 4.3 Temperature Outlook



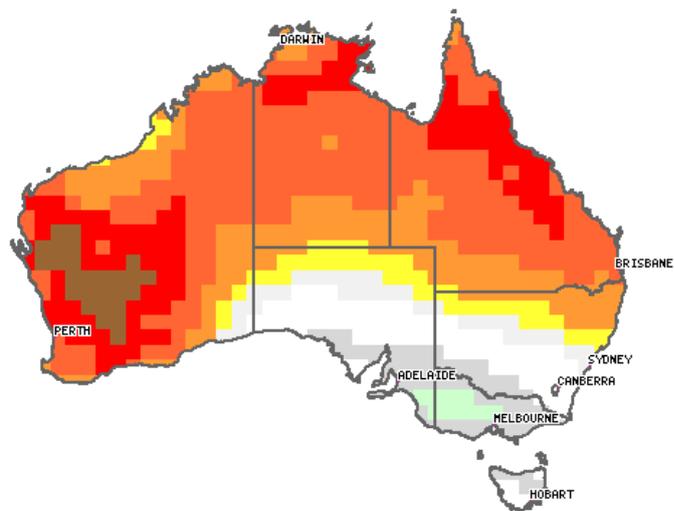
**3 Month Temp. Max Outlook (%)**



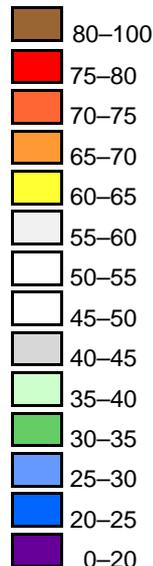
**The chance of exceeding median maximum temperatures  
December 2009—February 2010**

There is a 60 to 70 per cent chance of exceeding the median maximum temperature between December 2009 to February 2010 for the west of Western Australia and north-east Australia from the Northern Territory to far north-east NSW. Across the rest of Australia there is an average chance (40–60 per cent) of exceeding median maximum temperatures during the summer season.

The pattern of seasonal temperature odds across Australia is a result of higher than average temperatures in both the Pacific and Indian Oceans.



**3 Month Temp. Min Outlook (%)**



**The chance of exceeding median minimum temperatures  
December 2009—February 2010**

The average minimum temperatures during December 2009 to February 2010 are likely to be above average across most of Australia, except for south-east Australia. There is a 60 to 80 per cent chance of exceeding the median minimum temperature for Western Australia, Northern Territory, Queensland and northern areas of NSW and South Australia, with values above 80 per cent across the west of Western Australia. Cooler minimum temperatures are expected across south-east South Australia and Victoria due to a 35 to 45 per cent chance of exceeding median minimum temperatures during the summer season.

History shows the oceans' effect on minimum temperatures during summer to be moderately consistent over much of the country, with the exception of south-east Australia and southern South Australia.

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