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# Special Climate Statement 56—Australia's warmest autumn on record

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## 1 Introduction—persistent warmth throughout autumn

Autumn 2016 was Australia’s warmest on record (Figure 1, Table 1). The national mean temperature for the season was 1.86 °C above average<sup>[1]</sup>. This is 0.22 °C warmer than the previous autumn anomaly record of 1.64 °C set in 2005. More than 53% of the country experienced highest on record mean temperatures. All States and Territories recorded very-much-above-average mean temperatures during autumn, with Queensland, New South Wales, Victoria and the Northern Territory all reporting their warmest autumn on record. In addition, the autumn national mean temperature anomaly was the largest such departure from average for any calendar season since national temperature records began in 1910. The previous largest positive seasonal departure was in spring 2014, which was 1.67 °C above average.

Maximum temperatures were above or very much above average across nearly all of Australia (Figure 2). Maximum temperatures were highest on record for autumn across 28% of the country, including large areas in Victoria, New South Wales and the southern half of Queensland. Areas of the Pilbara and Kimberley districts of Western Australia, parts of the Northern Territory and eastern Tasmania also recorded highest-on-record maxima. The autumn national mean maximum temperature was the second-highest for Australia as a whole at +1.84 °C above average, behind +2.17 °C set in autumn 2013. Maximum temperature anomalies for all States and the Northern Territory were amongst the eight warmest on record for autumn.

Nights were exceptionally warm throughout the season. Minimum temperatures were above or very much above average for nearly all of Australia (Figure 2). Autumn minima were highest on record for large areas of the Northern Territory, northern Western Australia, northern South Australia, much of Queensland, the southern half and central areas of Victoria and almost all of Tasmania. About 29% of Australia recorded the highest autumn mean minimum temperature on record. The autumn national mean minimum temperature was +1.87 °C above average. State mean minimum temperatures for autumn were highest on record in Queensland, Tasmania and the Northern Territory, and second-highest on record for New South Wales and Victoria.

The season started with a prolonged heatwave that included Australia’s hottest March days on record. Notably warm nights persisted throughout March, resulting in a record national March mean temperature for Australia as a whole. Warmth continued into April, resulting in daytime temperatures that were highest on record across large areas of the continent. Late-season<sup>[2]</sup> heat records were observed in all States and Territories as warm weather persisted throughout the second half of April. There was yet more unseasonable warmth in May, with record high maximum and minimum temperatures being recorded for many locations across large areas of northern and eastern Australia. May finished the season with another spell of well-above-average temperatures and late-season warmth across the tropics and eastern states, with some further records being set in the month’s final week.

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<sup>[1]</sup> Averages are calculated over the standard 1961 to 1990 reference period.

<sup>[2]</sup> A late-season record is a temperature higher than any previously observed between the date in question and 30 June.

## 2 Antecedent conditions and climate influences

Autumn 2016 was characterised by long runs of days with above-average temperatures as well as many record high temperatures (Tables 2 and 3, Figure 3). A strong El Niño had a substantial influence on Australia’s weather since winter 2015. This has resulted in extended periods of little or no rainfall across large areas of the country. In the months leading up to autumn there was a predominance of high pressure over the continent. A general decrease in cloud cover, particularly across the northern tropics, was one of the sources of persistently high temperatures. Meanwhile, southern Australia experienced relatively few intrusions of cold air from the south, allowing surface temperatures to remain above average for extended periods. Sea surface temperatures have been above average in the Australian region throughout much of autumn. Water temperatures to the north and northwest of Australia, the Coral Sea (including the Great Barrier Reef), and the Tasman Sea were highest on record for extended periods since late summer 2016. These warm waters have also contributed to surface temperature warmth over Australia.

Across the tropical north of Australia, below-average rainfall was recorded from October 2015 to April 2016. This northern [wet season](#) was characterised by a very dry ‘build-up’, a burst of monsoonal activity in late December, and generally below average monthly rainfall and well-above-average temperatures from January through to April. Both maximum and minimum temperatures were above average across the northern tropics, especially from January. The mean temperature for Northern Australia<sup>[3]</sup> for the wet season as a whole was highest on record, at 1.34 °C above average.

The low rainfall and above-average temperatures are consistent with the background climate influence of a strong El Niño that developed in late autumn 2015. The impact of El Niño on Australian rainfall and temperature typically results in drier and warmer conditions across much of northern and eastern Australia. Its arrival in May 2015, and its peak that spring, came on the back of already poor rainfall that had been reported across large areas of the country, including inland Queensland. Spring 2015 saw large areas of central and southern Australia record very-much-below-average rainfall, particularly in the southeast; Tasmania recorded its driest spring on record.

Only three tropical cyclones made landfall in the Australian region during the 2015–16 season, the lowest number since comparable records began in the 1970s. Fewer cyclones means reduced rainfall and cloudiness; this leads to a reduction in evaporative cooling and thus higher land surface temperatures. The timing and spatial extent of rainfall and temperature anomalies observed across Australia reflect the influence of the strong El Niño on Australian climate since winter 2015.

Dry conditions continued across the northern tropics into early autumn 2016. However, central parts of the continent and across the southeast had above-average rainfall in March and again in May. Tasmania in particular had a very wet May. Parts of the tropical north recorded significant rainfall in what would normally be the start to the dry season. Dry

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<sup>[3]</sup> Northern Australia defined as the continental land-mass north of 26 ° south

conditions continued along coastal New South Wales, while southwest Western Australia and southern areas of South Australia reported significant rainfall late in May.

Australia's climate has warmed substantially in recent decades, and continues to warm. The total warming evident in autumn mean temperatures are slightly more than one degree above average. Natural climate variations such as El Niño now occur on a much warmer mean temperature state. Entering the 2015–16 El Niño, temperatures over Australia were already much warmer than the previous El Niño events.

Australia's warmest summer, autumn and spring have all occurred since 2010. While it is quite likely that autumn 2016 would have been warmer than average from El Niño and other climate drivers alone, it is the background trend which now largely explains the more frequent high temperature records.

## 3 The autumn warmth, month by month

### 3.1 March 2016—the warmest March on record for Australia

The national March mean temperature was the warmest on record at 1.70 °C above the average, exceeding the previous record set in March 1986 (+1.67 °C). The national mean minimum temperature anomaly, of +1.97 °C, was also the highest recorded for March, clearly exceeding the previous record of 1.14 °C set in 1983. The national March mean daily maximum temperature anomaly was the seventh-highest on record at +1.42 °C.

National maximum temperatures were well above average at the beginning of the month, following extended periods of heat across northern and central Australia that began in late February. New daily maximum temperature records were observed across the country, including Australia’s three hottest March days on record. The national average daily maximum temperature exceeded 37 °C on the 1st (37.51 °C), 2nd (38.14 °C) and 3rd (37.59 °C) of the month. The previous highest on record for March was 37.16 °C on 1 March 1966. This is the first time the national average daily maximum temperature had exceeded 37 °C on three consecutive days in March. Maximum temperatures were four degrees or more above average in the following days over most of the continent and up to twelve degrees above average over much of the southeast Australia. Details about the heat during March 2016 can be found in [Special Climate Statement 55—prolonged March heatwave affects many parts of Australia](#).

Sea surface temperatures around Australia were also exceptionally warm during March, with the average over the Australian region<sup>4</sup> the highest on record and about 0.3 °C above the previous record from 2015 (Figure 4). Large areas around Australia reported record warm sea surface temperatures in March, and into April. Particularly warm conditions affecting tropical and eastern waters including the Great Barrier Reef and Coral Sea resulted in the warmest sea surface temperatures on record across these areas that persisted throughout March, and indeed much of the season (Figure 5). Similar conditions were also reported in the waters of the northern tropics, and the Tasman Sea.

### 3.2 April 2016—persisting warmth

With very warm conditions continuing in April, the Australian national mean maximum temperature was the second-highest on record with an anomaly +2.38 °C above average (behind April 2005 with a 3.10 °C anomaly). Maximum temperatures were well above average across all States and Territories, ranging between +1.38 °C in Tasmania and +3.25 °C in New South Wales. April mean, maximum and minimum temperatures were highest on record for Queensland.

Temperatures were very high at the beginning of April, particularly across large areas of Western Australia, the Northern Territory, Queensland and New South Wales. Maximum temperatures were up to ten degrees above average across broad areas of the continent,

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<sup>4</sup> The Australian region defined from 4°S to 46°S and from 94°E to 174°E – further details on sea surface temperature data used is available [here](#)

and several locations reported record-high temperatures early in the month. These were mostly in the north of Western Australia, but there was also abnormal warmth in coastal New South Wales: Sydney (Observatory Hill) observed 34.2 °C on 6 April, surpassing the previous April record of 33.9 °C from 5 April 1986.

While temperatures moderated across southern parts of the continent in the second week of April, above-average temperatures persisted across the northern tropics. The third week of the month saw a return of abnormal heat to the southeast of the continent, with day and night-time temperature anomalies in excess of six degrees persisting to the end of the month.

### 3.3 May 2016—record breaking temperatures continue

Unseasonably warm conditions continued into May, giving an Australian mean temperature that was the second-highest on record at 1.88 °C above average. Maximum, minimum and mean temperatures were well above average across all States and Territories. May mean minimum temperatures were highest on record for Queensland and the Northern Territory.

May was marked by significantly high minimum temperatures (Figure 6) at the beginning of the month. The first ten days of the month saw nights more than six degrees warmer than average across most of the country. On the 1st, the national mean minimum temperature was 16.88 °C, surpassing the previous warmest night on 14 May 1958 of 16.81 °C. This new record did not last long, as on the 7th the national mean minimum temperature was 16.96 °C. The mean minimum temperature on the 1st was a May record for Queensland (20.79 °C) and the Northern Territory (22.45 °C). Queensland’s value was 1.31 °C above the previous record, set on 3 May 1987; a value exceeded four times during May 2016.

Troughton Island, off the north coast of Western Australia, had a minimum of 29.6 °C on 2 May, the warmest May minimum temperature on record for any Australian site. State and Territory records were also set for the Northern Territory (28.9 °C at McCleure Island on 7 and 9 May), Queensland (27.9 °C at Sweers Island on 4 May) and New South Wales (22.2 °C at Smoky Cape on 10 May).<sup>5</sup>

Many station records were set (Table 4), some on multiple occasions or by large margins. For example, Longreach’s minimum of 25.2 °C on 9 May was 3.6 °C above the previous May record from 1995, and also surpassed the pre-2016 April record. Longreach exceeded its pre-2016 May record on seven separate days during the month.

Daily maximum temperatures were also well above average at the start of May, with very high temperatures in Queensland, Western Australia and the Northern Territory. Bradshaw set a new Northern Territory record for May when the maximum reached 40.2 °C, some 1.6 °C above the previous Territory record (also at Bradshaw, in 2015). Numerous station records were also set, particularly in Queensland (Table 5). High temperatures persisted across the tropics and into the eastern States late into the month.

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<sup>5</sup> Previous records were: Australia and Western Australia 29.2 °C at Cockatoo Island on 7 May 1967 and Troughton Island on 6 May 1973; Northern Territory 28.5 °C at Minjilang on 7 May 1988; Queensland 27.3 °C on four occasions, most recently at Sweers Island on 2 May 2013; New South Wales 21.9 °C at Ballina Airport on 5 May 1996.

Tropical regions continued to experience exceptionally warm temperatures through May. Darwin registered three consecutive days over 35 °C from 16 to 18 May, the latest occurrence of such a run of days observed at Darwin Airport since observations began in 1941. A final period of abnormal warmth occurred in the month's last days, with a number of sites in eastern Queensland setting May records on the 27th. Wyndham and Bradshaw both reached 38.0 °C on that day, a late-season Australian record. The temperature reached 35 °C at Charters Towers, a full month later than the latest previous date of such a high temperature there, whilst Mackay exceeded its pre-2016 May record high maximum temperature four times in the month.

The last week of May saw much cooler temperatures across southern parts of the country bringing a return to more seasonable conditions for autumn.

## 4 Summary of key temperatures

### 4.1 Area-averaged significant temperature anomalies

A number of significant national temperature anomalies were reported during autumn 2016, including:

- Australia’s warmest autumn for mean temperature (1.86 °C above average)
- Australia’s warmest autumn for mean minimum temperature (1.87 °C above average)
- Australia’s largest positive mean temperature anomaly for any season (surpassing +1.67 °C set in spring 2014)
- Australia’s warmest March for mean (+1.70 °C) and minimum (+1.97 °C) temperatures
- Australia’s second-warmest twelve-month period with an anomaly of +1.28 °C (behind +1.31 °C during November 2012– October 2013).

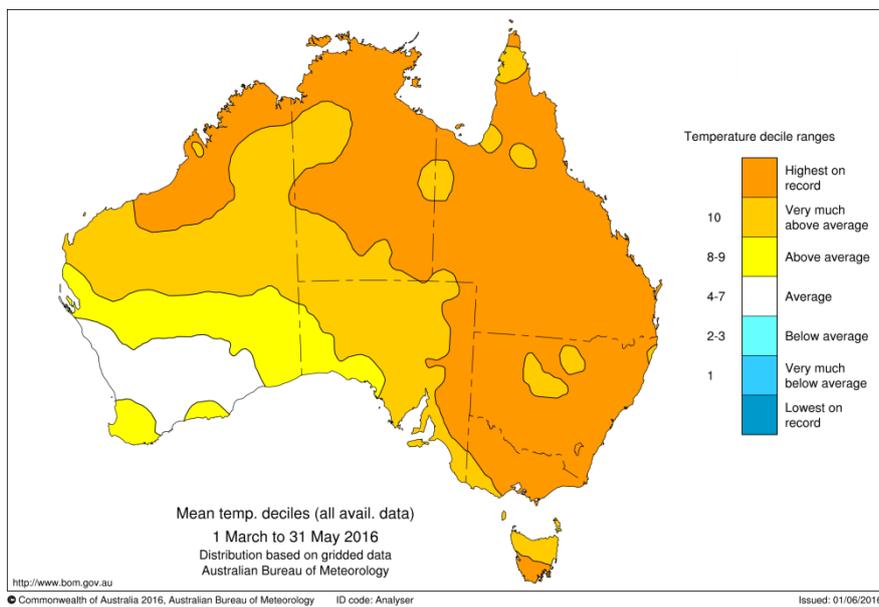
Significant daily maximum and minimum temperature records were set during autumn 2016:

- Australia’s warmest March day(s), recorded on three consecutive days (the 1st (37.51 °C), 2nd (38.14 °C) and 3rd (37.59 °C) of the month)
- Australia’s warmest May night, recorded on 7 May of 16.96 °C, surpassing the previous warmest recorded on 14 May 1958 of 16.81 °C

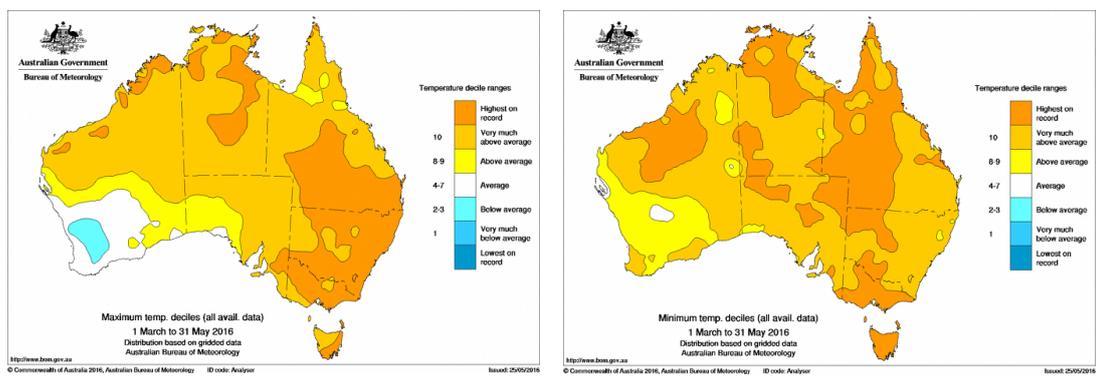
Autumn 2016 resulted in numerous State and Territory temperature records including:

- Queensland’s warmest autumn for mean temperature (2.35 °C above average)
- New South Wales’ warmest autumn for mean temperature (2.21 °C above average)
- Victoria’s warmest autumn for mean temperature (1.88 °C above average)
- The Northern Territory’s warmest autumn for mean temperature (2.21 °C above average)
- The warmest March minimum temperature anomalies for Queensland, New South Wales and the Northern Territory (with respective anomalies of +1.96 °C, +2.48 °C, +1.80 °C)
- The warmest March mean temperature anomalies for New South Wales (+2.48 °C) and Victoria (+2.42 °C)
- The warmest April maximum, minimum and mean temperature anomalies for Queensland (with respective anomalies +2.91 °C, +2.47 °C, +2.69 °C)

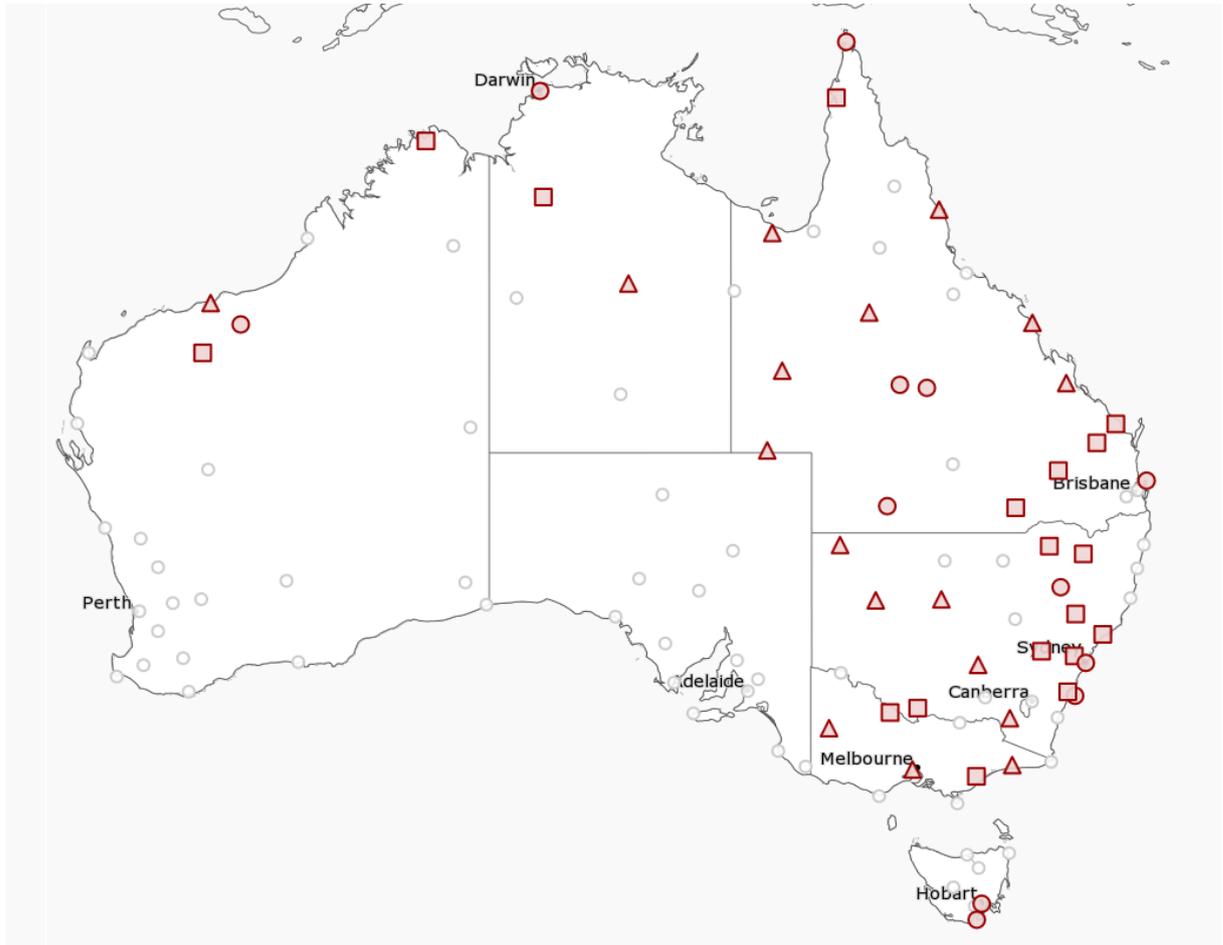
## 4.2 Figures and tables



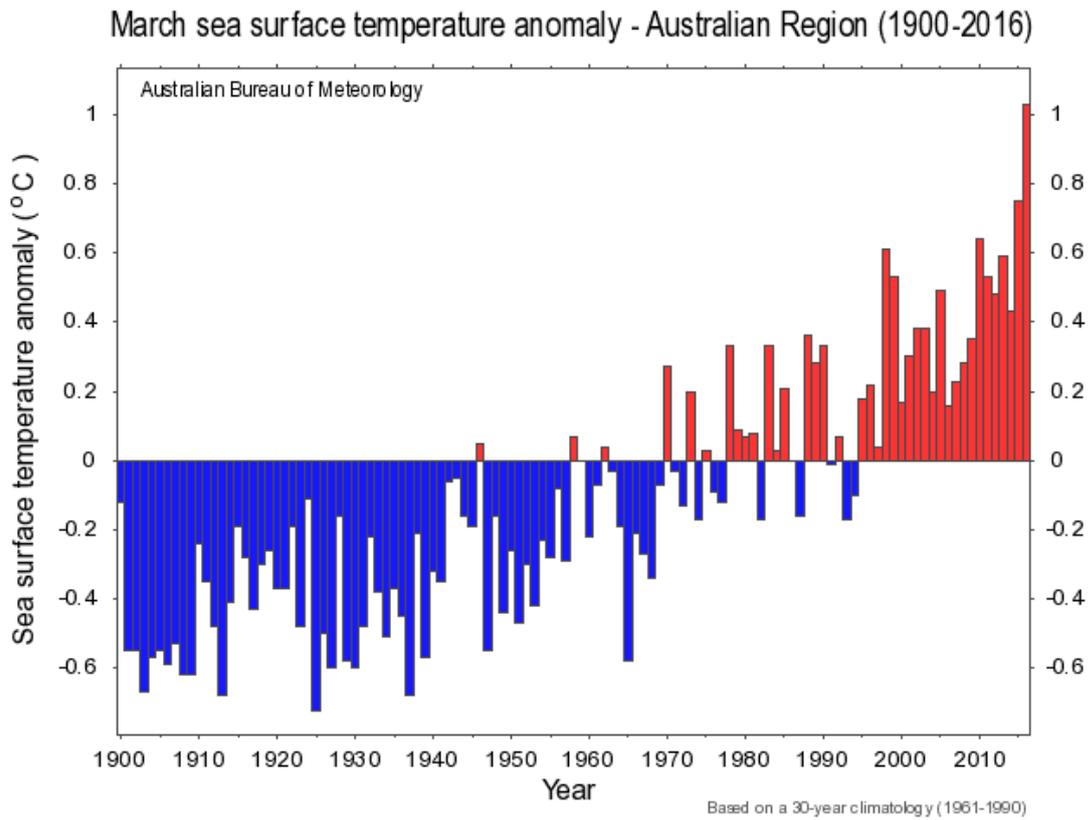
**Figure 1.** Australian mean temperature deciles for autumn 2016. Areas which are warmest on record are shown in dark orange.



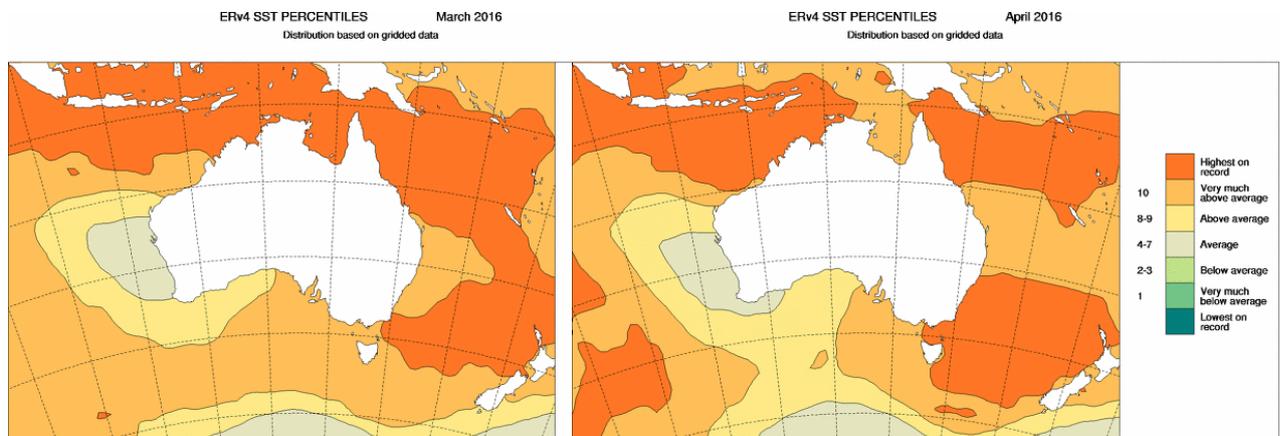
**Figure 2.** Australian maximum (left) and minimum (right) temperature deciles for autumn 2016.



**Figure 3.** ACORN-SAT station network, showing locations that have reported highest seasonal mean minimum (triangles) or seasonal mean maximum (squares) temperatures for autumn 2016. Circles denote locations that observed both a mean maximum and mean minimum temperature record.



**Figure 4.** March area-average time series of sea surface temperatures in the Australian Region



**Figure 5.** Sea surface temperature deciles for March 2016 (left) and April 2016 (right)

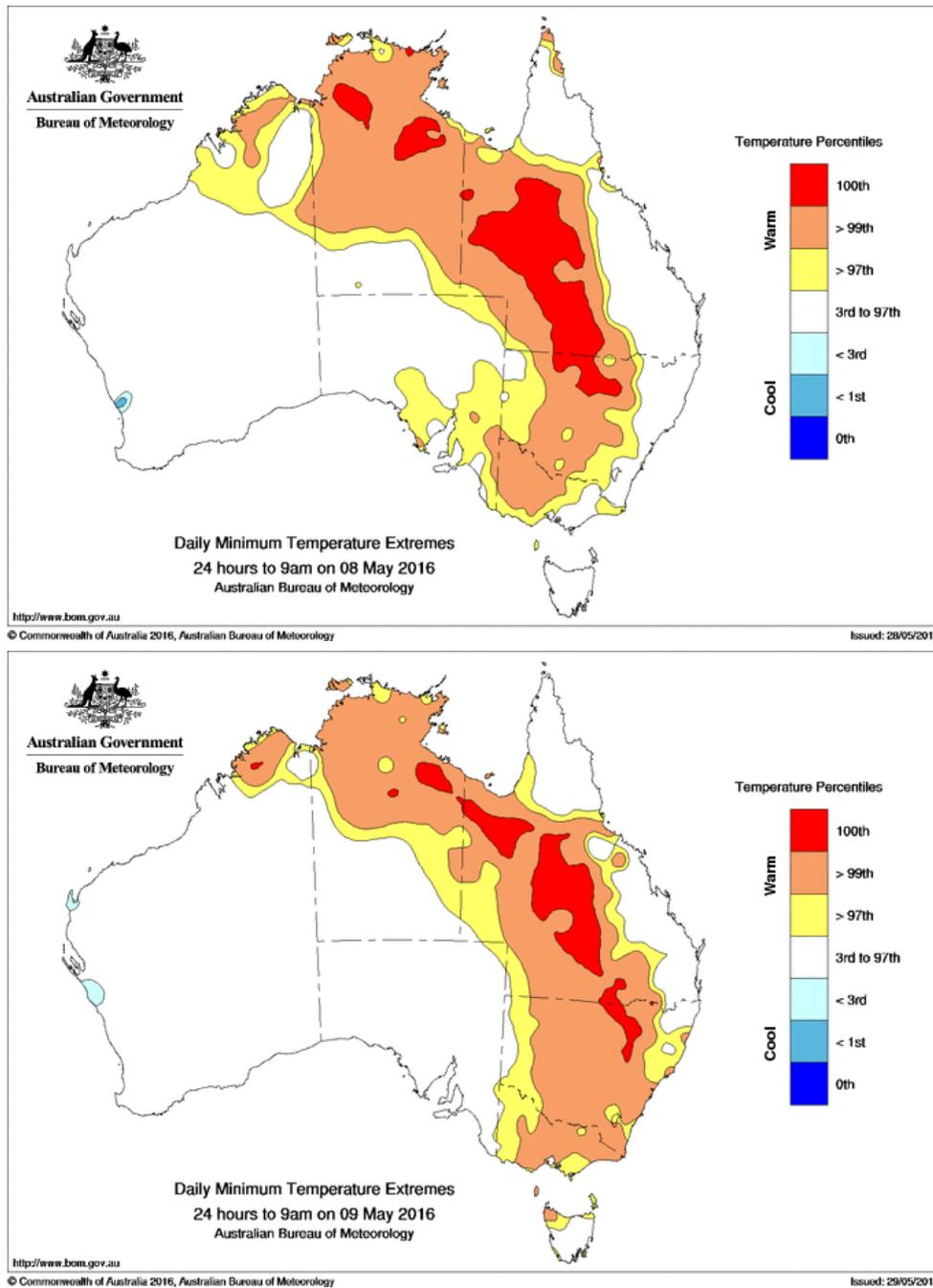


Figure 6. Daily minimum temperature percentiles for 8 May (upper) and 9 May (lower)

**Table 1.** National and State and Territory area-averaged temperature anomalies (from 1961–1990 average) for autumn 2016.

Element	Region	Anomaly (°C)	Rank	Highest/Lowest Since (°C)
Maximum temperature	Australia	1.84	106 of 107	highest since 2005
	Queensland	2.22	107 of 107	prev. high 1.83 (2007)
	NSW	2.41	107 of 107	prev. high 2.10 (1938)
	Victoria	1.84	107 of 107	prev. high 1.55 (2005)
	Tasmania	0.92	100 of 107	highest since 2013
	SA	1.41	100 of 107	highest since 2013
	WA	1.29	103 of 107	highest since 2005
	NT	2.4	107 of 107	prev. high 2.33 (2005)
Minimum temperature	Australia	1.87	107 of 107	prev. high 1.20 (1992)
	Queensland	2.47	107 of 107	prev. high 1.88 (1989)
	NSW	2.01	106 of 107	highest since 1989
	Victoria	1.91	106 of 107	highest since 1974
	Tasmania	1.26	107 of 107	prev. high 1.23 (1956)
	SA	1.71	105 of 107	highest since 2014
	WA	1.41	104 of 107	highest since 2005
	NT	2.02	107 of 107	prev. high 1.85 (1992)
Mean temperature	Australia	1.86	107 of 107	prev. high 1.64 (2005)
	Queensland	2.35	107 of 107	prev. high 1.60 (2007)
	NSW	2.21	107 of 107	prev. high 1.68 (2007)
	Victoria	1.88	107 of 107	prev. high 1.49 (2007)
	Tasmania	1.1	106 of 107	highest since 2007
	SA	1.56	103 of 107	highest since 2014
	WA	1.35	105 of 107	highest since 2005
	NT	2.21	107 of 107	prev. high 1.83 (1958)

**Table 2.** ACORN-SAT and other long-term stations which have set or equalled autumn mean minimum temperature records during autumn 2016

Station number(s)	Location	State	Temperature (°C)	Previous record (°C)
<b>4032/4002/4104</b>	Port Hedland	WA	23.2 (=)	23.2 in 1941
<b>4106/4020</b>	Marble Bar	WA	23.9	23.7 in 2005
<b>14015/14016/14040</b>	Darwin	NT	25.3	25.1 in 1938
<b>15135/15087</b>	Tennant Creek	NT	22.1	21.9 in 2005
<b>27058/27022/27021</b>	Horn Island	QLD	26.3	25.7 in 2010
<b>29077/29004</b>	Burketown	QLD	22.9	22.6 in 2004
<b>30045</b>	Richmond	QLD	20.4	19.6 in 2014
<b>31011/31010</b>	Cairns	QLD	23.2	22.9 in 2006
<b>33119</b>	Mackay	QLD	21.7	21.0 in 1973
<b>36007</b>	Barcaldine	QLD	20.6	19.1 in 1989
<b>36031/36030</b>	Longreach	QLD	20.0	18.9 in 1989
<b>38003</b>	Boulia	QLD	21.0	20.0 in 2007
<b>38026/38002</b>	Birdsville	QLD	18.7	18.6 in 2014
<b>39083</b>	Rockhampton	QLD	19.9	19.6 in 1989
<b>40043</b>	Cape Moreton	QLD	21.0	20.6 in 1973
<b>45025/45017</b>	Thargomindah	QLD	18.6	18.2 in 1989
<b>46012</b>	Wilcannia	NSW	13.9	13.7 in 2007
<b>46126</b>	Tibooburra	NSW	17.2	16.1 in 2007
<b>48027/48030</b>	Cobar	NSW	15.1 (=)	15.1 in 2007
<b>50017</b>	West Wyalong	NSW	11.7 (=)	11.7 in 2007
<b>55024</b>	Gunnedah	NSW	14.4	14.3 in 1998
<b>66062</b>	Sydney	NSW	16.6	16.5 in 1989
<b>68151/68034</b>	Jervis Bay	NSW	16.3	16.1 in 2014
<b>72161/72091</b>	Cabramurra	NSW	7.3	6.9 in 2007
<b>78015/78031</b>	Nhill	VIC	11.2	11.1 in 1974
<b>84145</b>	Orbost	VIC	12.0	11.7 in 2014
<b>87031</b>	Laverton	VIC	12.4	12.2 in 1974
<b>94010</b>	Cape Bruny	TAS	11.2	11.0 in 2007
<b>94029/94008</b>	Hobart	TAS	10.7	10.3 in 1980, 1988, 1989, 2007 and 2010

**Table 3.** ACORN-SAT and other long-term stations which have set or equalled autumn mean maximum temperature records during autumn 2016

Station number(s)	Location	State	Temperature (°C)	Previous record (°C)
1019/1021	Kalumburu	WA	36.8	36.1 in 2002
4106/4020	Marble Bar	WA	38.1	38.0 in 1938
5026	Wittenoom	WA	35.7 (=)	35.7 in 2005
14015/14016/14040	Darwin	NT	33.9	33.8 in 1924
14825	Victoria River Downs	NT	36.5	35.9 in 1988
27045/27042	Weipa	QLD	33.1	32.9 in 1998 and 1992
27058/27022/27021	Horn Island	QLD	31.5	31.3 in 1952 and 1958
36007	Barcaldine	QLD	32.8	32.1 in 2007
36031/36030	Longreach	QLD	33.8	33.4 in 2007
39066/39039	Gayndah	QLD	30.9	30.6 in 2007
39128/39015	Bundaberg	QLD	29.1	28.7 in 2007
40043	Cape Moreton	QLD	26.7	25.6 in 2007
42112/42023	Miles	QLD	29.9 (=)	29.9 in 1922
43109/43034	St George	QLD	30.2	30.1 in 1973
45025/45017	Thargomindah	QLD	31.2	31.1 in 2002
53115/53027/53048	Moree	NSW	29.3	29.2 in 1922 and 1923
55024	Gunnedah	NSW	27.3	26.7 in 1973
56242/56017	Inverell	NSW	27.2	26.8 in 1965
61078/61407	Williamtown	NSW	25.6	25.1 in 1973
61363/61089	Scone	NSW	27.5	26.4 in 1986
63005/63305	Bathurst	NSW	22.9 (=)	22.9 in 2005
66062	Sydney	NSW	24.8	24.5 in 2014
67105/67033	Richmond	NSW	26.8	25.6 in 1940 and 1980
68072/68076	Nowra	NSW	24.0	23.5 in 2014
68151/68034	Jervis Bay	NSW	22.3 (=)	22.3 in 2014
74258/74128	Deniliquin	NSW	25.3 (=)	25.3 in 1923
80023	Kerang	VIC	25.2 (=)	25.2 in 1938
85072/85298	East Sale	VIC	21.8	21.7 in 2005
94010	Cape Bruny	TAS	17.3	17.2 in 1971
94029	Hobart	TAS	19.2 (=)	19.2 in 2010

**Table 4.** ACORN-SAT locations which set records for highest minimum temperature for March, April or May during autumn 2016.

Station number(s)	Location	State	Temperature (°C)	Previous record
March				
<b>003003</b>	Broome	WA	30.6 (6 Mar)	30.5 (30/3/2010)
<b>014015</b>	Darwin	NT	29.2 (=) (3 Mar)	29.2 (3/3/1988)
April				
<b>006011</b>	Carnarvon	WA	25.7 (13 Apr)	25.6 (5/4/1955)
<b>036031</b>	Longreach	QLD	25.9 (4 Apr)	25.0 (9/4/1996)
<b>038003</b>	Boulia	QLD	27.6 (=) (7 Apr)	27.6 (1/4/1931)
May				
<b>005026</b>	Wittenoom	WA	24.7 (=) (4 May)	24.7 (3/5/2005)
<b>014825</b>	Victoria River Downs	NT	26.8 (1 May)	26.1 (11/5/1992)
<b>015135</b>	Tennant Creek	NT	25.2 (1 May)	24.5 (6/5/1988)
<b>015666/015548</b>	Rabbit Flat	NT	24.9 (=) (2 May)	24.9 (4/5/1992)
<b>027058/027022/ 027021</b>	Horn Island	QLD	27.8 (6 May)	27.3 (8/5/1995, 5/5/2010, 1/5/2012)
<b>029077/029004</b>	Burketown	QLD	26.3 (4 May)	26.1 (12/5/1968)
<b>030045</b>	Richmond	QLD	24.6 (9 May)	23.1 (10/5/2005)
<b>031011</b>	Cairns	QLD	24.7 (1 May)	24.6 (23/5/1990)
<b>034084/034002</b>	Charters Towers	QLD	22.0 (=) (6 May)	22.0 (5/5/1973, 1/5/1986)
<b>036007</b>	Barcaldine	QLD	23.1 (9 May)	21.1 (17/5/1995)
<b>036031</b>	Longreach	QLD	25.2 (9 May)	21.6 (15/5/1995)
<b>039066/039039</b>	Gayndah	QLD	21.4 (1 May)	21.0 (2/5/2000)
<b>039083</b>	Rockhampton	QLD	22.5 (4 May)	22.0 (3/5/2000)
<b>040842/040223</b>	Brisbane Airport	QLD	21.9 (1 May)	21.2 (6/5/1996)
<b>043109/043034</b>	St. George	QLD	21.6 (1 May)	21.5 (6/5/1942)
<b>044021</b>	Charleville	QLD	22.9 (9 May)	20.1 (1/5/1995)
<b>048245/048239/ 048013</b>	Bourke	NSW	19.6 (8 May)	19.5 (9/5/2007)
<b>050017/073054</b>	West Waylong	NSW	17.5 (1 May)	16.6 (4/5/2000)
<b>053115/053048/ 053027</b>	Moree	NSW	21.4 (1 May)	20.0 (23/5/1938)
<b>058012</b>	Yamba	NSW	21.4 (=) (10 May)	21.4 (6/5/1998)
<b>059151/059040</b>	Coffs Harbour	NSW	21.6 (10 May)	20.7 (1/5/1973)
<b>085072</b>	Sale	VIC	15.5 (=) (13 May)	15.5 (15/5/1974)

**Table 5.** ACORN-SAT locations which set records for highest maximum temperature for March, April or May during autumn 2016.

Station number(s)	Location	State	Temperature (°C)	Previous record
March				
<b>013017</b>	Giles	WA	42.2 (=) (1 Mar)	42.2 (6/3/1959)
<b>015666/015548</b>	Rabbit Flat	NT	43.6 (2 Mar)	43.3 (18/3/2015)
<b>036031</b>	Longreach	QLD	44.4 (28 Feb)	43.6 (18/3/1983)
<b>072161/072091</b>	Cabramurra	NSW	28.4 (8 Mar)	27.8 (15/3/2008)
<b>076031</b>	Mildura Airport	VIC	42.1 (6 Mar)	41.5 (12/3/1998)
<b>080023</b>	Kerang	VIC	42.1 (7 Mar)	41.7 (13/3/1934)
April				
<b>001019/001021</b>	Kalumburu	WA	40.2 (18 Apr)	39.9 (1/4/1996)
<b>003003</b>	Broome	WA	41.0 (=) (10 Apr)	41.0 (15/4/2005)
<b>004032</b>	Port Hedland	WA	42.5 (4 Apr)	42.4 (6/4/1986)
<b>005007</b>	Learmonth	WA	41.8 (4 Apr)	41.4 (13/4/2005)
<b>005026</b>	Wittenoom	WA	42.0 (5 Apr)	41.3 (1/4/1970)
<b>066062</b>	Sydney	NSW	34.2 (6 Apr)	33.9 (5/4/1986)
May				
<b>001019/001021</b>	Kalumburu	WA	39.0 (1 May)	38.3 (1/5/2007)
<b>002012</b>	Halls Creek	WA	37.5 (2 May)	36.9 (1/5/2007)
<b>015135</b>	Tennant Creek	NT	36.8 (1 May)	36.4 (4/5/2007)
<b>015666/015548</b>	Rabbit Flat	NT	38.8 (1 May)	38.2 (4/5/1988)
<b>027045/027042</b>	Weipa	QLD	35.5 (10 May)	35.0 (24/5/1978)
<b>030045</b>	Richmond	QLD	37.8 (2 May)	37.0 (4/5/2007)
<b>031011</b>	Cairns	QLD	31.3 (=) (2 May)	31.3 (29/5/1958)
<b>033119</b>	Mackay	QLD	30.3 (4 and 10 May)	29.2 (20/5/2002)
<b>034084/034002</b>	Charters Towers	QLD	35.0 (27 May)	34.7 (1/5/1926)
<b>036007</b>	Barcaldine	QLD	35.2 (=) (2 May)	35.2 (4/5/2007)
<b>036031</b>	Longreach	QLD	36.5 (2 May)	36.2 (4/5/2007)
<b>037010</b>	Camooweal	QLD	38.4 (1 May)	38.2 (4/5/2007)
<b>039083</b>	Rockhampton	QLD	34.4 (27 May)	32.6 (20/5/2003)
<b>044021</b>	Charleville	QLD	32.5 (1 May)	32.4 (1/5/1964)
<b>058012</b>	Yamba	NSW	29.4 (=) (10 May)	29.4 (25/5/1958)
<b>084016</b>	Gabo Island	VIC	26.6 (15 May)	26.1 (19/5/1923)

## 5 Notes and contacts

Values in this statement are current at 1 June 2016, and subject to the Bureau’s quality control processes.

The dataset from which area averages are drawn (ACORN-SAT) commences in 1910 as are the seasonal temperature maps, while that the daily mapped analyses are drawn from data that commences in 1911. Station data prior to national introduction of standardised instrument shelters in 1910 are used only if they are known to have been measured using standard equipment comparable with current standards. This matter is discussed further at <http://www.bom.gov.au/climate/change/acorn-sat/#tabs=Early-data>.

Further information is available from <http://www.bom.gov.au/climate/>.

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