CLIMATE COUNCIL

THE HOTTEST YEAR ON RECORD (AGAIN)

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Key Findings

1 2015 was the hottest year on record globally. Climate change was a major factor in driving the record-breaking heat in 2015 world wide.

- The global average temperature for 2015 was 0.90°C above the 20th century average, eclipsing the previous record set in 2014 by 0.16°C.
- The record global warmth of 2015 is part of a long-term trend. All of the world's 10 warmest years have occurred since 1998. 2015 is the 39th consecutive year with above-average global temperatures.
- No one aged under 40 has lived in a year with global average temperatures at or below the global 20th century average.

2 Climate change is a major factor in extreme heat and fire in Australia.

- Averaged across Australia, temperatures for nine of the 12 months of 2015 were above-average.
- Australia recorded its hottest ever October in 2015 and recent research has found that global warming increased the chance of these record-breaking temperatures by a factor of at least six.
- Severe bushfires across Australia over the 2015/2016 summer have been made worse by climate change, particularly by the extreme hot weather.
- The Great Barrier Reef and other marine ecosystems are under threat from rising ocean temperatures and increasing ocean acidity.

3 Temperature records are being smashed across many regions of the world, largely through the influence of climate change.

- Nine months in 2015 broke global heat records with July 2015 the hottest month ever on Earth since records began in 1850.
- The emission of greenhouse gases is driving record global heat. Countries must drastically reduce their emissions from coal, oil and gas to slow and then halt the escalating impacts of extreme heat and severe fires.

Introduction

In 2015, as world leaders geared up to renegotiate a new climate agreement in Paris, the global climate was sending them a disturbing wake up call.

As records tumbled and many of the worst impacts of climate change began to set in, the message was clear: time is running out if we are to prevent the extreme weather events we saw in 2015 from getting even worse.

Globally, record-setting heatwaves in India and Pakistan claimed more than 2000 lives. Years of warmer temperatures and drought led to the worst bushfire season in living memory in the USA with more than 50,000 fires. In the UK, daffodils bloomed in December during the warmest start to the month in more than 50 years.

At home, Australia experienced its warmest October on record for both maximum and minimum temperatures with the largest mean temperature anomaly on record for any month. These unseasonably early heatwaves led to an early start to the bushfire season and caused significant agricultural losses as large areas of crops across Southern Australia failed and were cut for hay. Estimated losses are expected to be in the order of $1-2 billion in Victoria alone.

Record warm sea-surface temperatures are also damaging the Great Barrier Reef as scientists brace for the world's third ever mass coral bleaching event. The phenomenon has already been seen in the Florida Keys, Hawaii and Samoa and is expected in the Great Barrier Reef in early 2016. Up to 38% of the world's coral reefs are likely to be affected.

The realities of what a rapidly destabilising climate means for the way we live are setting in, as extreme heat, severe fire activity, coastal flooding, heavy rainfall and intense storms are on the increase in many places across the globe.

In December, world leaders signed the world's first universal climate agreement and agreed to do everything possible to limit global warming to no more than 1.5 degrees above the pre-industrial level.

There is no time to lose if we are to meet this goal and prevent many more serious impacts and escalating risks from climate change. The 2015 global heat records are a reminder of the urgency of the challenge.

1. Off the Charts

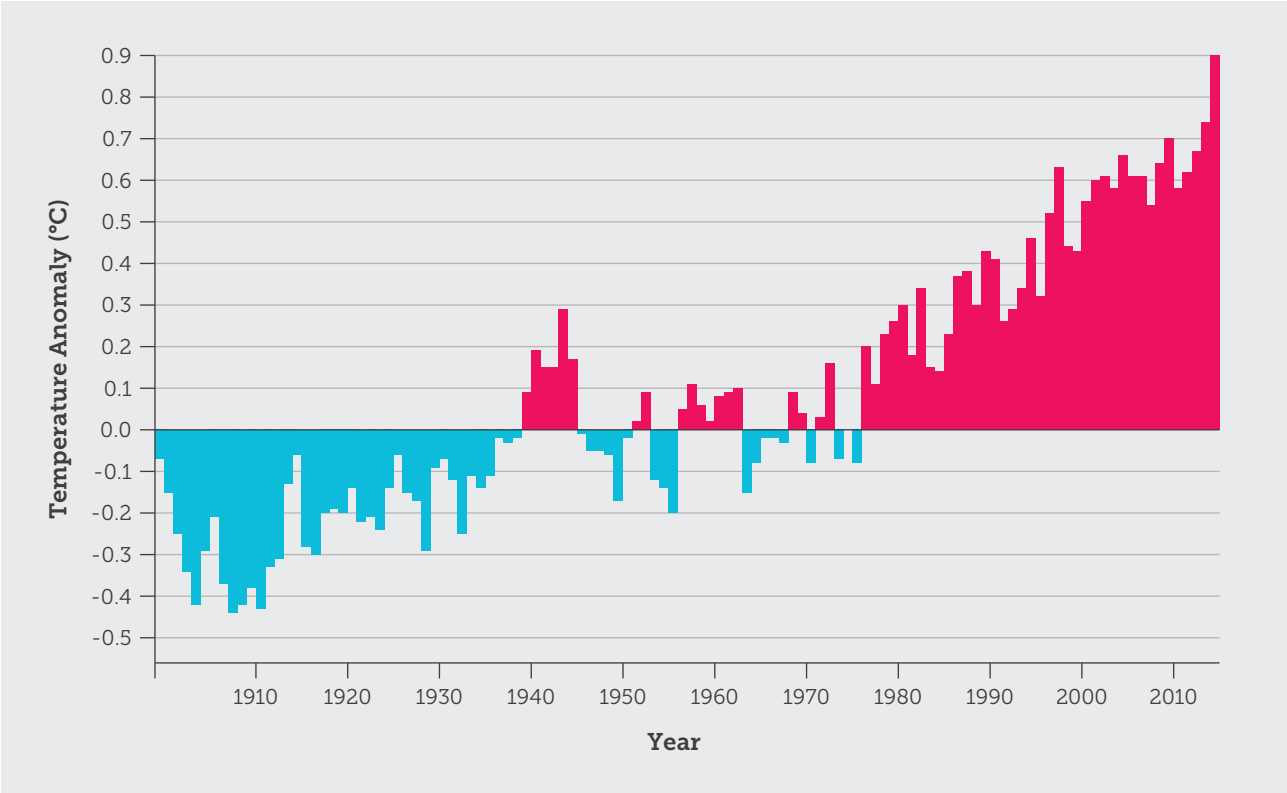
In 2015, the world experienced its hottest year on record - again. The global average temperature was the highest since global records began in 1880 (NOAA 2016). The temperature was 0.90°C* above the 20th century average, making it 0.16°C hotter than 2014 - the previous record holder (NOAA 2015a).

The 20th century average includes strong warming from 1970 through the end of the century (see Figure 1 below). If compared to pre-industrial temperatures rather than the 20th century, the 2015 temperature would be even further above average.

2015 was the 39th consecutive year with an above-average global temperature (NOAA 2016). You would now need to be at least 40 years old - born in 1975 or earlier - to have lived in a year with temperatures at or below the global 20th century average.

An increase in atmospheric greenhouse gases, resulting primarily from the burning of fossil fuels (coal, oil and gas), is driving climate change and increasing temperatures in Australia and globally. Unless we take action, the world is poised for even hotter conditions ahead as the amount of greenhouse gases in the atmosphere continues to increase (IPCC 2014a).

Figure 1: Column graph of the annual global temperature anomalies to 2015, relative to the global annual average temperature for 1901-2000 (NOAA 2015d).



* Temperature data in this report are based on the National Oceanic and Atmospheric Administration (NOAA) data, from the US. For more information regarding the data, please refer to the official NOAA website: www.noaa.gov

2015 was the world's hottest year on record - again.

Figure 2: Coal fired power stations contribute significant amounts of carbon dioxide to the atmosphere, which is the most important greenhouse gas driving climate change and increasing global temperatures.

BOX 1: HOW DO WE KNOW?

Figure 3: A drifter buoy collects measurements at and below the ocean surface.

The global average temperature anomaly (the difference between the measured temperature and the 20th century average) is calculated monthly, based on observations of land and ocean surface temperatures around the world, and satellite data. Land-surface temperatures are measured at a network of land-based weather monitoring stations and indicate the temperature in the shade at around 1-1.5 metres above the ground. Ocean-surface temperatures (Sea Surface Temperatures) are collected from buoy and ship observations. Rather than using the raw temperatures (such as -30°C in Antarctica and +45°C in Timbuktu) it is useful to have the temperature anomalies, which tell us how the raw temperature compares to the 20th century average temperature in that area (such as +0.3°C above or below the long-term average for that location). To calculate the global average, the ocean- and land-surface temperature anomalies are averaged using area-weighted calculations. The final value tells us how different the temperature of the Earth's surface was, compared to the 20th century average (NOAA 2015b).

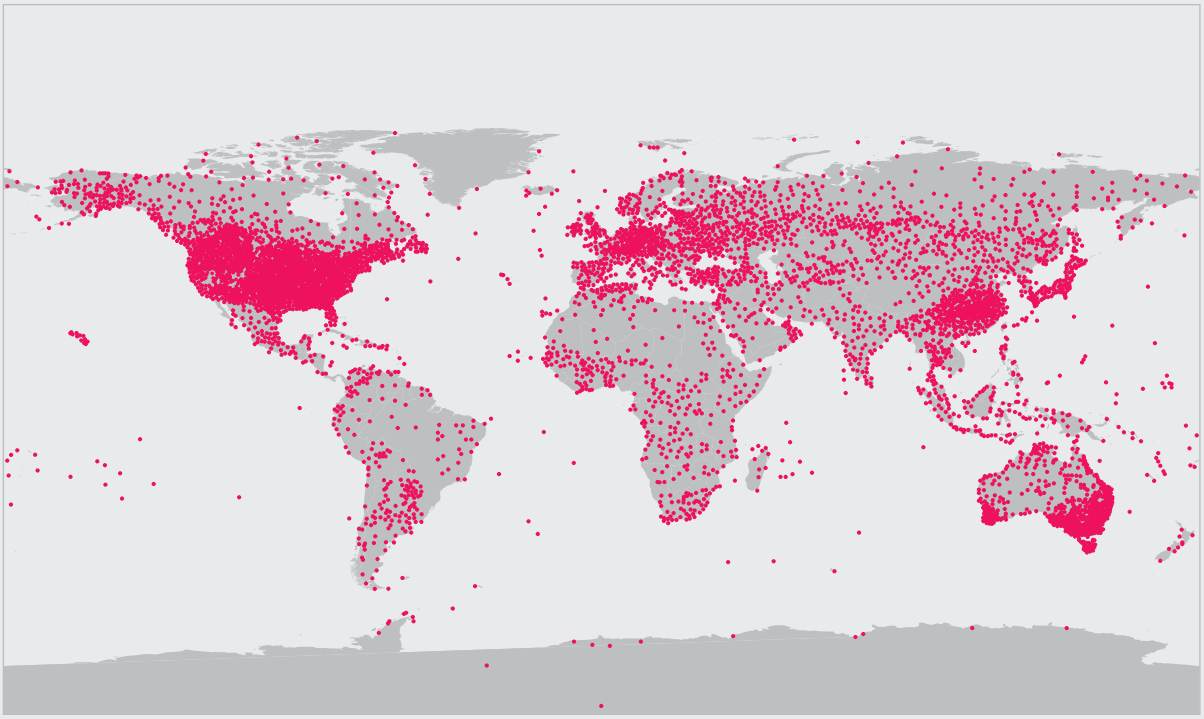


Figure 4: A world map showing the locations of fixed temperature monitoring stations which contribute to the global surface temperature anomaly records, adapted from NOAA (2015c).

The monthly analysis is available for all years after 1880 because there are more observations from this time onwards (NOAA 2015d). Nowadays, fixed temperature monitoring stations, measuring temperatures year-round, are located all around the world - as shown in Figure 4.

The 20th century global average temperature is used as the long-term average reference because it represents the temperature over quite a long period and therefore allows trends to be differentiated from shorter periods of variability. It is also an easy reference period to understand.

However, it is not the same as the pre-industrial temperature. Unlike the pre-industrial period which is before major human influence, the 20th century average includes climate change-driven temperature rise, particularly from 1970 onwards. Global policy targets, such as the aim to limit temperature rise to no more than 2°C, are referenced against a pre-industrial baseline and not a 20th century average.

2. The Influence of Climate Change on Record Breaking Heat

Climate change is driving an increase in temperatures across the globe, relative to the long-term average. The hottest year on record in 2015, succeeding the previous hottest in 2014, is just the latest record in a long-term trend of increasing surface temperatures worldwide (Figure 1).

While there is considerable variability from year-to-year, there is a clear warming trend since the middle of the 20th century, and especially since the 1970s. The 1990s were warmer than the 1980s and the 2000s were warmer than the 1990s. All three decades were hotter than any preceding decade since 1850 (IPCC 2013). In Australia, average surface temperature has increased by 0.9°C since 1910, with higher increases in night-time minimum temperatures than in daytime maximum temperature (CSIRO and BoM 2014).

Climate change has also increased the likelihood of extreme heat events in Australia. A number of recent studies investigating the effect of climate change on the occurrence of major heat events have found events to be much more likely with climate change than without (Knutson et al. 2014; Lewis and Karoly 2014; Black et al. 2015; King et al. 2015; Climate Council 2015). For example, 2013 was Australia's hottest year on record and research has shown that, without climate change, such a hot year would only occur about once every 12,300 years, if at all. Studies on the summer 2012/2013 heatwaves found that climate change tripled the odds that heatwaves would occur as frequently as they did and doubled the odds that they would be as intense as they were (Knutson et al. 2014; Lewis and Karoly 2014).

It has been well established for nearly two decades that human activities, primarily the emission of greenhouse gases from the combustion of fossil fuels – coal, oil and gas - are driving the changes of the climate system observed since the mid-20th century. The fundamental physics of the greenhouse effect has been known for nearly two centuries; the observations of a warming climate reflect this well-established scientific understanding of the physical climate system (IPCC 2013).

The world is poised for even hotter conditions ahead as the amount of carbon dioxide and other greenhouse gases in the atmosphere continue to increase (IPCC 2014a).

The world is poised for even hotter conditions ahead.

BOX 2: HEAT STRESS ON CORAL REEFS

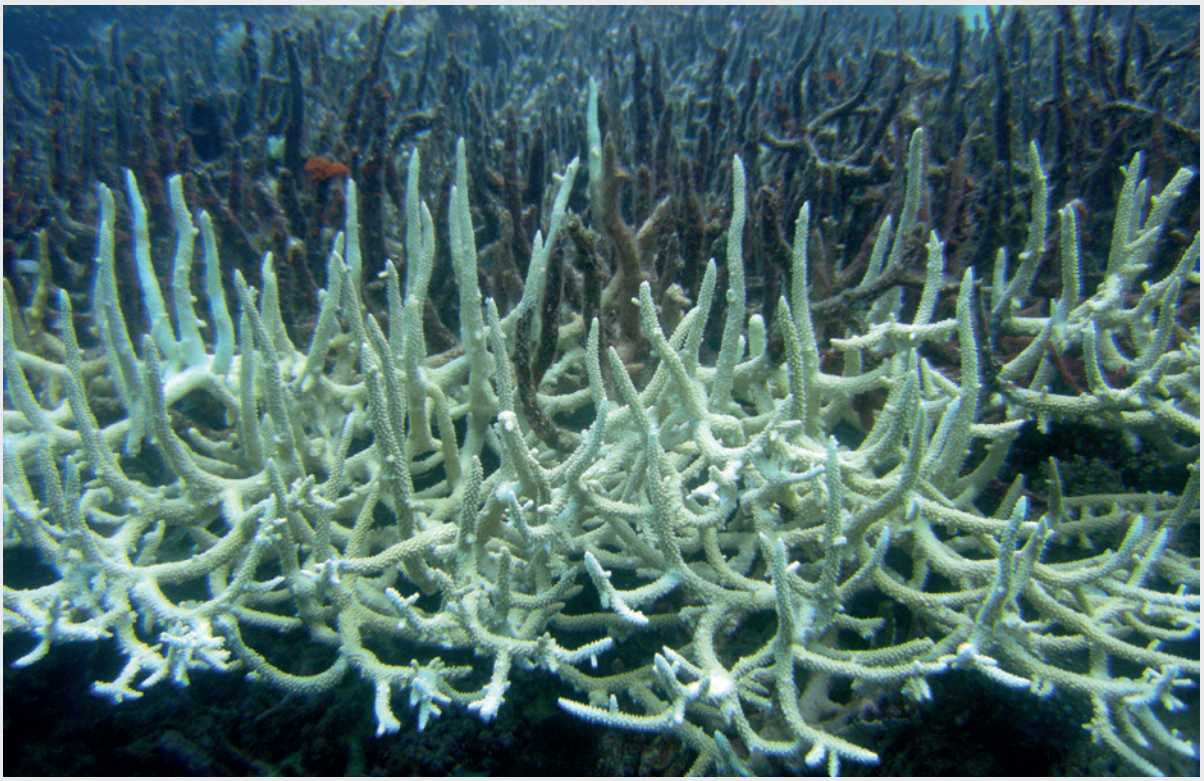


Figure 5: Coral reefs are very vulnerable to bleaching as the oceans warms.

Climate change is putting most marine organisms at very high risk of serious impacts from warming and increasing acidity this century (Gattuso et al. 2015). And there is probably no better-known Australian marine ecosystem than the Great Barrier Reef (GBR). However, the reef is not faring well. Over the past 30 years the GBR has lost 50% of its coral cover due to multiple climate and non-climate related stresses (De'ath et al. 2012).

Heatwaves can occur in the surface waters of the ocean, sometimes leading to dramatic impacts on marine ecosystems. When coral reefs are subject to sea surface temperatures more than 1–2°C above average summer maximum temperatures, the corals can bleach. Repeated bleaching events can lead to the death of the corals. Bleaching events on the GBR have occurred repeatedly since the late 1970s, while none were observed before the 1970s. These bleaching events have contributed to the decline in coral cover observed from 1985 to 2002 (De'ath et al. 2012). The 2011 marine heat wave in Western Australia caused the first-ever reported bleaching at Ningaloo Reef (Wernberg et al. 2013), with temperatures peaking at 28.7°C off the Houtman Abrolhos Islands, 5°C above the long-term average (Smale and Wernberg 2012). Coral reefs are also at risk from the increasing acidity of ocean waters, which reduces calcification rates of corals and many other marine organisms, making it more difficult for them to recover from other stresses (De'ath et al. 2009). The ability to recover from bleaching events varies among coral species and among regions, but there is only limited evidence so far that corals can adapt to rising temperatures and to ocean acidification (Hoegh-Guldberg et al. 2007).

BOX 3: CLIMATE CHANGE AND THE AUSTRALIAN BUSHFIRE THREAT

Figure 6: A forest in Kersbrook, South Australia, following the January 2015 bushfires.

Human activities, such as the burning of coal, oil and gas, are causing dramatic changes to the climate system, which is influencing fire danger weather (Climate Council 2013). In particular, hot days are becoming hotter, and heatwaves are becoming longer, more frequent and more intense (Perkins and Alexander 2013). CSIRO and the Bureau of Meteorology (2015) have projected with high confidence that the number of days with severe fire danger weather will increase in southern and eastern Australia.

Climate change is also having an impact on the length of the Australian fire season, which now extends beyond summer, into October and March, in many regions (Clarke et al. 2013). Analysis of global climate data has shown that the frequency of long fire weather seasons has increased in eastern Australia (VIC, NSW, ACT and QLD) - where around 77% of the population live (ABS 2015; Jolly et al. 2015). Longer fire seasons will reduce opportunities for controlled burning and increase pressure on firefighting resources (Matthews et al. 2012; IPCC 2014b).

Record-breaking spring temperatures in 2015, strongly influenced by climate change, contributed to an early start to the 2015-2016 bushfire season in Australia. During the previous bushfire season in January 2015, a severe South Australian bushfire caught the nation's attention. The Sampson Flat bushfire caused devastation in the Adelaide Hills region. It was active for six days, burning 12,500 ha of land, 27 homes, numerous sheds and killing 900 head of livestock (Slattery et al. 2015). The insured value of damages from the fire was $36.6 million (Insurance Council of Australia 2015). This season there have since been devastating bushfires again in South Australia as well as in Victoria and Western Australia, resulting in the tragic loss of human life, wildlife and livestock and the destruction of property.

3. The Heat is On: The Australian Story

Australia was not exempt from the record-breaking temperatures of 2015 (BoM 2016). Averaged across Australia, temperatures for nine of the 12 months of 2015 were above-average (BoM 2015b).

Summer

- The Australian summer of 2014–15 was the fifth-warmest on record. The national maximum temperature anomaly was the fourth-warmest on record and the minimum temperature anomaly was the equal-sixth-warmest on record (BOM 2015b).
- Each of the States recorded above-average maximum temperature anomalies for the season (BOM 2015b)
- The average February temperature was the second highest since records began in 1910, 1.93°C above the 1961–1990 average. February's maximum temperature was also the second hottest on record (NOAA 2015b).

Autumn

- The Australian autumn brought slightly above-average maximum temperatures and slightly below-average minimum temperatures (BOM 2015b).
- Autumn was particularly warm in Queensland, where the maximum temperature, averaged across the month for the whole state, was the 9th-warmest on record (BOM 2015b). For March alone, Queensland's maximum, minimum and average temperatures – averaged across the whole month and state – were above average (1961-1990) by +2.88°C, +1.62°C, and +1.89°C respectively (NOAA 2015b).

Winter

- Winter was a warm season for most of Australia, with a national maximum temperature anomaly equal-eighth warmest on record (BOM 2015b).
- June was the fifth warmest on record (1910-2015) for Australia with a temperature 1.35°C higher than the 1961–1990 average.
- Western Australia recorded its highest maximum June temperature on record, smashing the previous record of 1962 by 0.48°C (NOAA 2015b).

Spring

- Spring 2015 in Australia was the 2nd warmest since records began (BoM 2015b).
- October maximum and minimum temperatures were the highest on record for Australia. The national average temperature for October was 2.89°C above average, the warmest monthly average temperature anomaly since records began (BoM 2015b).
- November saw a lack of cool conditions across Australia. The monthly minimum temperature was the equal-first warmest on record (BoM 2015b).

BOX 4: OCTOBER – THE EARLY SUMMER

Australia - The national average temperature, maximum temperature and minimum temperature for October 2015 were the highest ever recorded for that month, making it the nation's warmest October on record. The average temperature was 2.89°C above the long-term average, the highest positive departure from the average ever recorded for any month of the year (BoM 2015b).

Such warm temperatures are more likely now than they have been historically due to the warming global climate. Analysis of historical data and of climate model data has shown that climate change substantially increased (by at least a factor of six) the chances of setting a new October record maximum temperature for Australia (Karoly and Black 2015).

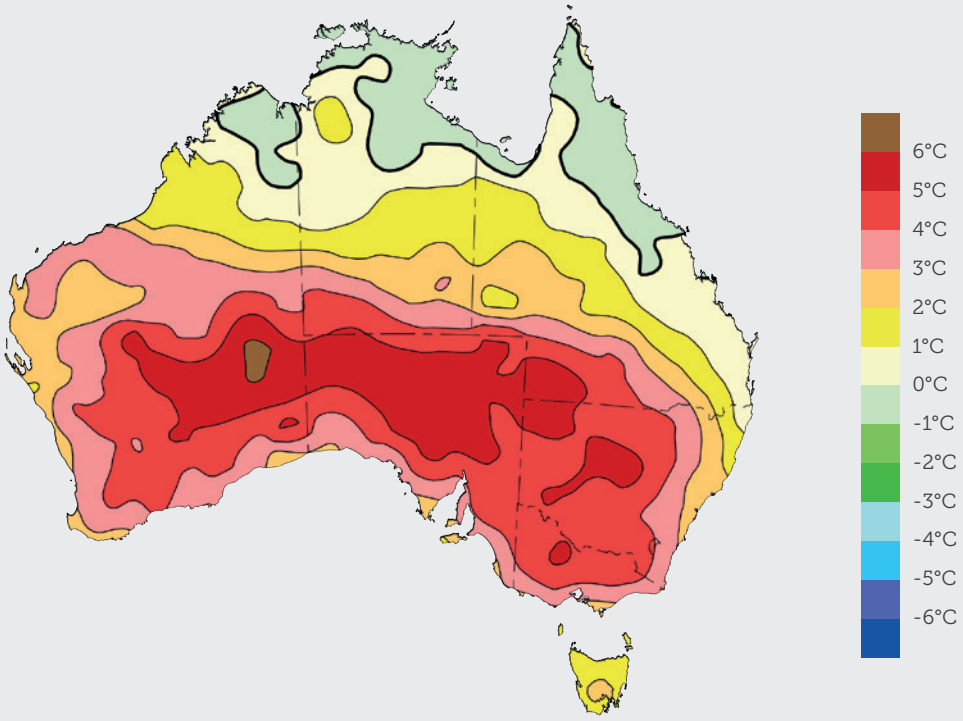


Figure 7: A map of the October 2015 temperature anomalies across Australia (difference between the average temperatures of October 2015 and the long-term average October temperatures) (BoM 2015b).

4. The Heat is On: The Global Picture

Climate change is a global problem. The trend towards warmer temperatures is being experienced across many regions of the world, with record-breaking heat occurring throughout all seasons of year and records tumbling at locations on all six inhabited continents.

Globally averaged temperatures are a good indicator of the state of the climate system as a whole, and paint a large-scale, long-term picture of change. Broken down to land-sea, month-to-month and region-by-region scales, the data present a detailed pattern of record-breaking warmth and of changing climate conditions across regions and ocean basins.

LAND-SEA

The record-breaking heat of 2015 consisted of both land-surface and ocean-surface temperatures.

The 2015 globally-averaged land surface temperature was the highest ever recorded (1880–2015) at 1.33°C above the 20th century average. This surpassed the previous record of 2007 and 2010 by +0.25°C (NOAA 2016).

In 2015, the globally-averaged sea surface temperature was 0.74°C above the 20th century average, exceeding the 2014 record by +0.11°C (NOAA 2016). Representing more than two-thirds of the Earth's surface, the increasing heat content of the upper ocean has a very important influence on the global climate. Large portions of the eastern equatorial Pacific Ocean, the Indian Ocean, and parts of the Atlantic Ocean had record warm temperatures in 2015 (NOAA 2015b). During the 2015 southern hemisphere winter, for example, temperatures in the southern Indian Ocean were their warmest since at least 1950 (BoM 2015a).

The trend towards warmer temperatures is being experienced across many regions of the world.

MONTH-TO-MONTH

Every season was a warm season in 2015. The hottest year on record didn't just result from a single, extremely hot, part of the year. It was the result of 12 months of very warm temperatures, nine of them record-breaking.

July was the hottest month since records began in 1880. The globally-averaged surface temperature was 16.61°C (actual temperature, rather than anomaly), which is the highest of all 1632 months since records began in January 1880. Although this temperature sounds quite low, it is an average of the whole surface – including the poles, the equator, and everywhere in between. July is summer in the northern hemisphere and winter in the southern, so this value also includes temperatures for both seasons, including the Antarctic winter.

At 1.11°C above the long-term average, December 2015 recorded the highest departure from the average for any month since records began in January 1880.

The 2015 global land surface temperature was the warmest ever recorded.

Figure 8: Warming temperatures have wide-reaching impacts, including on human health.

July 2015 was the hottest month since records began.

Table 1: Monthly global temperature anomalies for 2015, relative to the 1901-2000 average, and how they compare to previous years (NOAA 2016). Grey shading indicates months in which new monthly temperature records were set.

Month	Global land-ocean average temperature anomaly	How does it compare?
January	+0.77°C	The second hottest on record
February	+0.82°C	The second hottest on record
March	+0.85°C	**NEW RECORD:** The hottest March on record, surpassing the previous record set in 2010 by 0.05°C.
April	+0.74°C	The fourth hottest on record
May	+0.87°C	**NEW RECORD:** The hottest May on record, surpassing the previous record set in 2014 by 0.08°C.
June	+0.88°C	**NEW RECORD:** The hottest June on record, surpassing the previous record set in 2014 by 0.11°C.
July	+0.81°C	**NEW RECORD:** The hottest July on record, surpassing the previous record set in 1998 by 0.08°C.
August	+0.88°C	**NEW RECORD:** The hottest August on record, surpassing the previous record set in 2014 by +0.09°C.
September	+0.90°C	**NEW RECORD:** The hottest September on record, surpassing the previous record set in 2014 by +0.12°C.
October	+0.98°C	**NEW RECORD:** The hottest October on record, surpassing the previous record set in 2014 by +0.20°C.
November	+0.97°C	**NEW RECORD:** The hottest November on record, surpassing the previous record set in 2013 by 0.15°C.
December	+1.11°C	**NEW RECORD:** The hottest December on record, surpassing the previous record set in 2014 by 0.29°C.

2015: WAS THE HOTTEST YEAR IN RECORDED HISTORY

NORTH AMERICA:

> Alaska, USA observed its **warmest May** on record (NOAA 2015b).

> Ontario, Canada, had record warmth during September, with temperatures **up to 5°C above average** (NOAA 2015b).

EUROPE:

> The United Kingdom recorded its hottest **July maximum temperature ever at 36.7°C** (Met Office 2015; NOAA 2015f).

> Spain, Germany, and the Netherlands recorded their **hottest July day ever** (NOAA 2015f; Statista 2015; NOAA 2015b).

MIDDLE EAST:

> In July, temperatures in Doha (Qatar) **reached 48.5°C**, 6°C above average (Al Jazeera 2015b).

> In June temperatures in Sweihan, UAE, **reached 50.7°C** (NOAA 2015b).

SOUTH AMERICA:

> June and August 2015 were the **warmest June and August on record** for South America (NOAA 2015b).

> Colombia set a new record for the hottest temperature in July ever recorded, **hitting 42.2°C in Urumita** (NASA 2015).

AFRICA:

> August and October 2015 were Africa's **warmest August and October on record** (NOAA 2015b).

> Vredendal, South Africa, set a new record for the **hottest temperature ever recorded in October, at 48.4°C** (Masters 2015; Weather SA 2015).

ASIA:

> China observed its **warmest January** since national records began (CMA 2015; NOAA 2015b).

> In June, **Turkmenistan's capital city reached 47.2°C**, its highest ever temperature (NASA 2015).

AUSTRALIA:

> October was the **hottest on record** for Australia (BoM 2015b).

CLIMATE CHANGE MEANS MORE RECORD HOT WEATHER IS OCCURRING AROUND THE PLANET. THIS IS THE CRITICAL DECADE FOR ACTION.

Appendix 1

RECORD HEAT ACROSS THE WORLD

The record-breaking global temperatures didn't come from extreme heat in just one country, or just one continent. 2015 brought hot temperatures across the globe.

Asia

- China observed its warmest January since national records began in 1961, at 1.9°C above the 1981–2010 average (CMA 2015; NOAA 2015b).
- In May, India experienced its worst extreme heat event in a decade. For a ten-day period, average daily maximum temperatures in the capital city of New Delhi were over 43°C, around 4°C above average (NOAA 2015e; JMA 2015). Over 2,000 deaths were attributed to the heat event, making It the world's fifth most deadly extreme heat event in history (ABC 2015; JMA 2015).
- Pakistan was struck with extreme heat in June, with temperatures rising to 45°C in Karachi. The heat is estimated to have contributed to 1,233 deaths and to 65,000 people being treated for heatstroke (Al Jazeera 2015a).
- Turkmenistan measured its highest temperature ever on 30 June, reaching 47.2°C in the capital city of Ashgabat (NASA 2015).

Europe

- During February 2015, Norway was 4.2°C warmer than its 1961–1990 average, with some regions as much as 6–9°C warmer than their monthly averages (NOAA 2015b; MET Norway 2015).
- In the United Kingdom, temperatures rose to 36.7°C on July 1 – the hottest July maximum temperature ever recorded (Met Office 2015; NOAA 2015f).
- Paris (France) temperatures reached 39.7°C on 2 July 2015 – the second hottest day since records began in 1872 (Meteo France 2015; NOAA 2015f).
- In Madrid (Spain), temperatures of 40°C were observed in July for the first time (NOAA 2015f).
- Kitzingen (Germany) reached a record temperature of 40.3°C in July – the highest temperature ever recorded in the country (NOAA 2015f; Statista 2015).
- Geneva (Switzerland) had its hottest July day on record, reaching 38.7°C on 7 July (NOAA 2015b).
- The Netherlands recorded its highest maximum July temperature, reaching 38.2°C on 2 July (NOAA 2015b).

North America

- June 2015 was the second warmest on record for mainland USA (excl. Alaska) (NOAA 2015g).
- The northwest USA experienced record-breaking temperatures in June. Six locations within the states of Washington and Idaho measured their highest maximum temperature ever recorded and seventeen locations across the states of California, Idaho, Montana, Oregon and Washington measured their highest June temperatures on record (NOAA 2015g).
- Alaska (USA) observed its warmest May in its 91-year period of records. The temperature was 3.1°C higher than the 1981–2010 average (NOAA 2015b).
- In Canada, the province of Ontario experienced record warmth during September, when temperatures were above average by up to 5°C (NOAA 2015b).

South America

- June 2015 was the warmest June on record for South America, with the monthly average temperature 1.7°C above the long-term (1910-2000) average (NOAA 2015b).
- August 2015 was South America's warmest August on record, 1.93°C above the long-term (1910-2000) average (NOAA 2015b).
- Colombia set a new record for the hottest temperature in July, with 42.2°C measured in Urumita on 1 July (NASA 2015).

Africa

- August of 2015 was Africa's warmest on record, 1.36°C above the long-term (1910-2000) average (NOAA 2015b).
- In early autumn, Cape Town (South Africa) experienced its hottest day in 100 years of temperature records, reaching 42°C (EWN 2015).
- South Africa set a new record for the hottest temperature ever recorded in October – a land-surface temperature of 48.4°C was measured at the town of Vredendal during a severe heatwave (Masters 2015; Weather SA 2015).
- October 2015 was the warmest October on record for the African continent (NOAA 2015b).

Middle East

- In July, temperatures in Doha (Qatar) reached 48.5°C, exceeding the average temperature for that time of year by 6°C. In mid-August, both Cairo (Egypt) and Jerusalem (Israel) reached temperatures that were 7°C above local averages (Al Jazeera 2015b).
- In the United Arab Emirates early June brought extreme heat with temperatures in Sweihan, Abu Dhabi emirate, reaching 50.7°C (NOAA 2015b).

Arctic

- Land surface temperatures in the Arctic were the highest since records began in 1900, and 1.3°C above the 1981-2010 average (NOAA 2015h).
- Air temperatures across large areas of the Arctic were more than 3°C warmer than average in all four seasons (Oct '14- Sept '15) (NOAA 2015h).

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What to do in a heatwave

Dr Liz Hanna, *Health Expert*

IN AN EMERGENCY, CALL TRIPLE ZERO (106 FOR PEOPLE WITH A HEARING OR SPEECH IMPAIRMENT) 000

- Take care of yourself – everyone is at risk
- Stay cool
- Stay hydrated
- Stay informed – Listen to local ABC Radio Station
- Keep in touch with family, friends and neighbours

STAY COOL

- Minimise exertion
- Keep out of the sun. Minimise heat exposure for yourself and others
- Limit trips outside and reschedule work meetings and tasks wherever possible
- Spend time in cooled, well air-conditioned places. If you do not have air-conditioning at home spend time in places that do, such as public libraries, cinemas etc
- Keep your building cool. Close blinds during the day, and open to cool in the evening
- Wear cool, comfortable clothes
- Spray misted water onto body and clothes
- Spend time lying on and under a wet sheet. Indoor fans can be helpful
- Avoid using a fan where the indoor temperature is higher than 37°C
- Remind the elderly of these cooling strategies, and assist them to achieve optimal cooling
- Check with your local council to hear their heatwave response plan.

STAY HYDRATED

- Drink plenty of fluids, chilled if possible
- Drink enough to urinate at least three times a day, and urine should be very pale in colour. If yellow, or darker, keep drinking. Avoid tea, coffee and alcohol.

FOOD

- Ensure that food is refrigerated properly
- Dispose of spoilt food.

TRANSPORT/INFRASTRUCTURE

- Stay informed and up-to-date about planned blackouts
- Have a backup plan in case electricity or transport (road/rail) infrastructure fails.

WILDLIFE

- Leave out shallow containers of water for birds, possums and other animals. Place small stones in the bottom of the container and ensure that the water is left in a shady, protected environment (out of view from birds of prey and high enough to be safe from cats)
- If you find injured or heat-stressed wildlife, bring them into cooler environments and lightly mist them with water
- If you are concerned about an animal, call a wildlife rescue centre near you.

PETS

- If dogs or cats appear heat stressed, panting or restless, bathe them in cool water. Call your vet if you are concerned
- Bring your pets indoors when it's very hot, or ensure they have outdoor shelter
- Leave out two bowls of cool drinking water (in case one is knocked over)
- Never leave your pets alone in the car.

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