



Projected temperature

South Australia's

Environmental trend and condition report card 2018

STATEWIDE



Trend
Getting worse



Condition
Not applicable



Reliability
Fair

Trend

Average daily maximum temperatures across South Australia are projected to increase by between 1.0 and 2.1 degrees Celsius (°C) by 2050 under plausible emissions scenarios.

This assessment draws from the SA Climate Ready temperature projections. The temperature projections are relative to the baseline period 1986–2005.

Under intermediate emissions, average maximum temperatures could increase by between 0.7 and 1.0 °C by 2030 and by between 1.0 and 1.4 °C by 2050.

Changes are even greater under high emissions, with projected increases of between 0.8 and 1.3 °C by 2030 and between 1.4 and 2.1°C by 2050 (top figure).

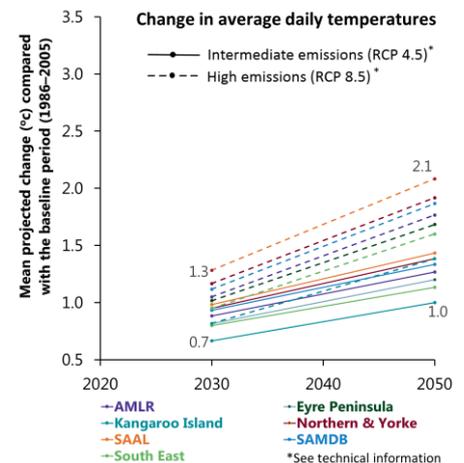
The average annual number of days reaching 40 °C or more in Adelaide in the 30 years from 2016 to 2045 is projected to be 5.9 days per year, compared with 2.9 days per year during the 1986–2005 period (bottom figure).

Condition

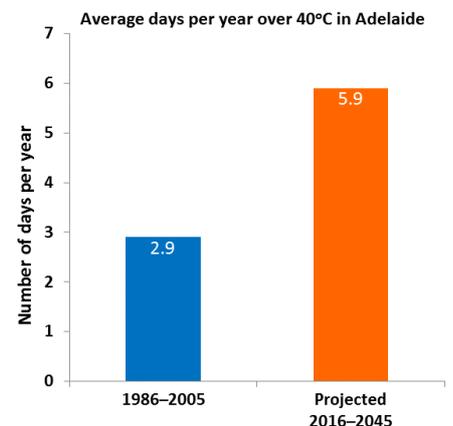
A condition rating is not applicable because this assessment is of projected temperatures under climate scenarios.

The top figure shows the average projected changes in temperature between 2030 and 2050 for seven natural resources management regions.

The projections are from a range of global climate models under two scenarios of global atmospheric greenhouse gas concentrations (representing intermediate and high emissions scenarios). Note that each model projects some variability around the averages shown.



Higher maximum temperatures and more days above 40°C are projected for South Australia



Why is climate important?

Climate affects almost every part of our lives. Communities, industries, landscapes and ecosystems all develop with a tolerance for a range of climate variation. If the climate changes beyond that range of tolerance, they must either adapt, migrate, transform or decline.

What are the pressures?

According to the Australian Academy of Science, 'Earth's climate has changed over the past century. The atmosphere and oceans have warmed, sea levels have risen, and glaciers and ice sheets have decreased in size. The best available evidence indicates that greenhouse gas emissions from human activities are the main cause. Continuing increases in greenhouse gases will produce further warming and other changes in Earth's physical environment and ecosystems.'

What is being done?

The Bureau of Meteorology and other science agencies employ a range of air, land and marine sensors to track climatic trends across Australia. The bureau's Australian Climate Observations Reference Network – Surface Air Temperature dataset is based on a network of more than 100 stations.

Climate change projections, including temperature projections, are periodically improved and updated in line with advancements in climate modelling.

For further information see: [technical information](#)



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