



Trend
Getting worse



Condition
Not applicable



Reliability
Good

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 for South Australia. The temperature projections are relative to a baseline period spanning 1986–2005.

Under an intermediate emissions scenario, average maximum temperatures could increase by between 0.7 °C and 1.0 °C by 2030, and by between 1.0 °C and 1.4 °C by 2050. Changes are even greater under a high emissions scenario, with projected increases of between 0.8 °C and 1.3 °C by 2030, and between 1.4 °C and 2.1 °C by 2050 (top figure).

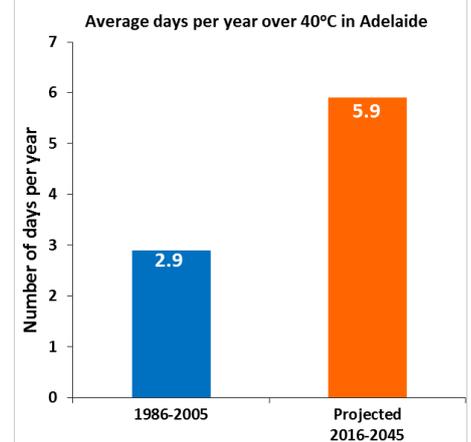
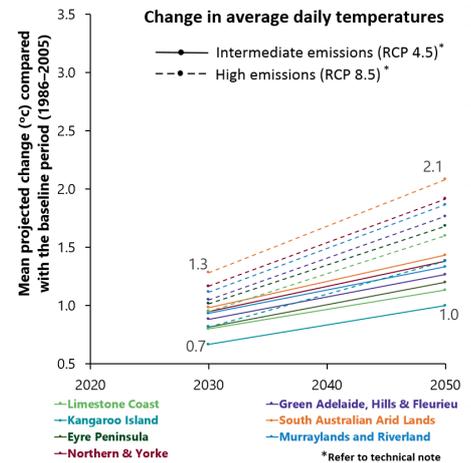
The average annual number of days reaching 40 °C or more in Adelaide in the 30 years from 2016 to 2045 is projected to be 5.9 days per year, compared with 2.9 days per year during the 1986–2005 period (bottom figure).

Condition

Because this assessment is of projected temperatures under likely climate scenarios, a condition rating is not applicable.

The top figure shows the average projected changes in temperature between 2030 and 2050 for eight regions across the state. The projections are from a range of global climate models under two scenarios of global atmospheric greenhouse gas concentrations (representing intermediate and high greenhouse gas emission 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, then they must either adapt, migrate, transform or decline.

What are the drivers?

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?

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

Management actions in response to the changing climate include those that mitigate the state's emissions as part of a global effort to stem further change in the global climate. To accelerate the transition to net zero emissions by 2050, the South Australian Government has set an interim goal to reduce the state's net emissions by more than 50% from 2005 levels by 2030.

For further information, see [Technical information](#)



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Government of South Australia