



Projected rainfall

South Australia's

Environmental trend and condition report card 2018

STATEWIDE



Trend
Getting worse



Condition
Not applicable



Reliability
Fair

Trend

Average annual rainfall across South Australia is projected to decrease by between 5% and 15% by 2050 under plausible emissions scenarios.

Under intermediate emissions, average annual rainfall is projected to decrease by between 3% and 9% by 2030 and by between 5% and 11% by 2050. Changes are greater under high emissions, particularly later in the century, with projected decreases in rainfall of between 4% and 8% by 2030 and between 7% and 15% by 2050 (top figure).

In all regions across the state, the projected decrease in spring rainfall is greater than the projected decrease in the annual average. Under intermediate emissions, average spring rainfall is projected to decrease by between 13% and 19% by 2030 and by between 14% and 21% by 2050. Changes are greater under high emissions, particularly later in the century, with projected decreases of between 8% and 17% by 2030 and between 18% and 28% by 2050 (bottom figure).

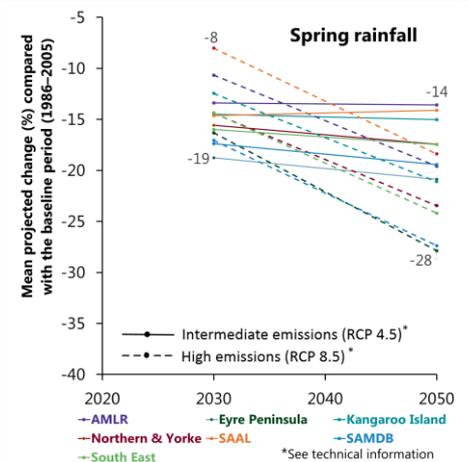
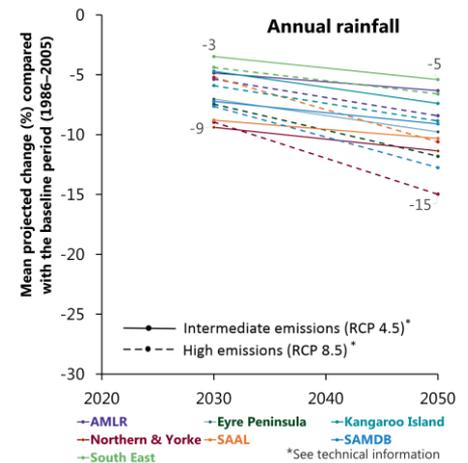
Condition

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

This assessment draws from the SA Climate Ready rainfall projections for the state. The projected changes are relative to the baseline period 1986–2005.

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.

Annual and spring rainfall across South Australia are projected to decrease significantly by 2050



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 use a range of atmospheric, terrestrial and marine sensors to track climatic trends across Australia. Trends in rainfall are assessed using a high-resolution gridded dataset developed for CSIRO's Australian Water Availability Project (AWAP). Climate change projections, including rainfall projections, are periodically improved and updated in line with advancements in climate modelling.

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



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Government of
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