



Trend  
**Getting worse**



Condition  
**Fair**

★ ★ ★ Reliability  
☆ ☆ Good

STATE

### Trend

Over more than 30 years, significant regional variation can be seen in seasonal rainfall trends across South Australia with summer rainfall increasing in the north of the state and winter rainfall decreasing in the south.

Significant drying trends are seen across much of South Australia's southern agricultural areas in April to October (top figure). Rainfall totals across many southern areas of the state have been very much below average compared to all previous 30-year periods since 1900. With April to October rainfall typically averaging 300–500 mm in southern South Australia, declines of 10–40 mm per decade since 1990 are significant. These rainfall declines are consistent with climate change projections and are also seen in other mid-latitude areas in Australia such as south-west Western Australia and Victoria. Pastoral areas in north-western South Australia are seeing increased tropically influenced rainfall during November to March (bottom figure).

Trends were determined from the latest Bureau of Meteorology data based on observed rainfall across Australia.

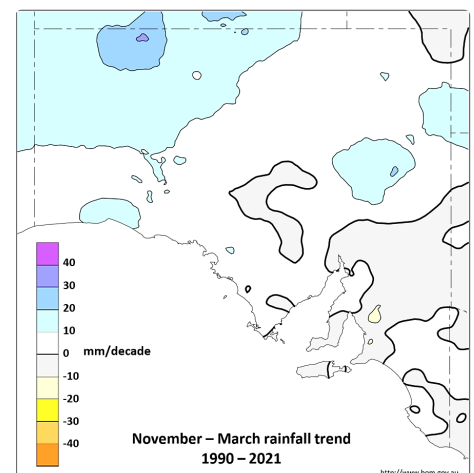
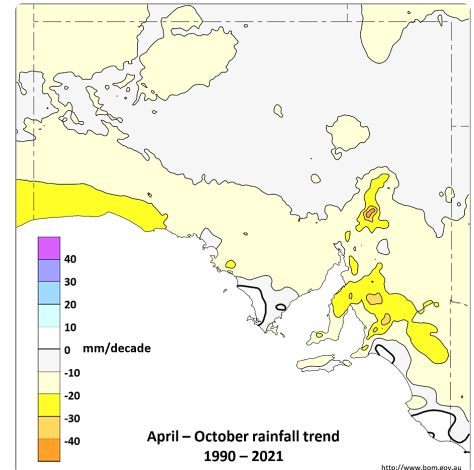
### Condition

The condition is rated as fair because there are significant declines in April to October rainfall in southern South Australia.

The persistent drying trend in southern South Australia has the potential to affect future water security, reduce agricultural yields, increase fire risk, and impact ecosystems.

Wetlands and water dependent ecosystems, particularly in the south-east of the state, have experienced a reducing duration of surface water inundation during the drier months of each year, resulting in encroachment of dryland terrestrial vegetation.

**Rainfall is declining in April to October in South Australia's southern agricultural areas and increasing in November to March in the north-west.**



### Why is rainfall 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.

One example of the impact of a warming climate is declining rainfall in mid-latitudes (including South Australia), which will follow a widening of the tropics in a warmer planet. Declining rainfall impacts water security, agricultural yields, fire risk, and ecosystem function.

### 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?

The Government of South Australia supports a wide range of initiatives to reduce greenhouse gas emissions and help the state to adapt to the changing climate. These include supporting renewable energy generation and storage, carbon sequestration, land use planning reforms, climate related hazard risk reduction, coastal protection, greening to cool urban environments, circular economy initiatives, and regional adaptation projects. The government provides downscaled climate projections information and tools for South Australia.

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



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Government of South Australia