



Trend
Getting worse



Condition
Fair



Reliability
Excellent

Trend

Over the past 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 the southern agricultural areas from April to October (top figure). 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. 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. Pastoral areas in the north are seeing increased tropically influenced rainfall during November to March (bottom figure), and some increase in extreme rainfall events. Trends were determined from the latest Bureau of Meteorology (BOM) data presented in Australian Climate Change and Variability Tracker. These are based on observed rainfall from BOM monitoring stations across Australia.

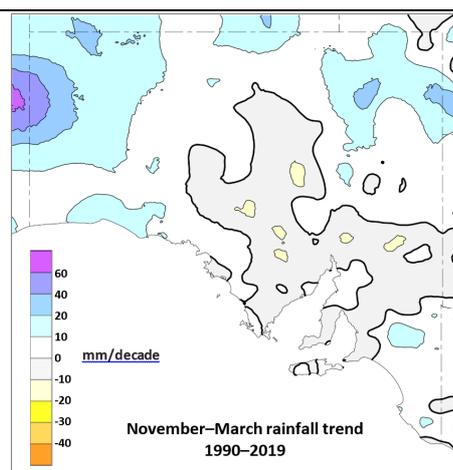
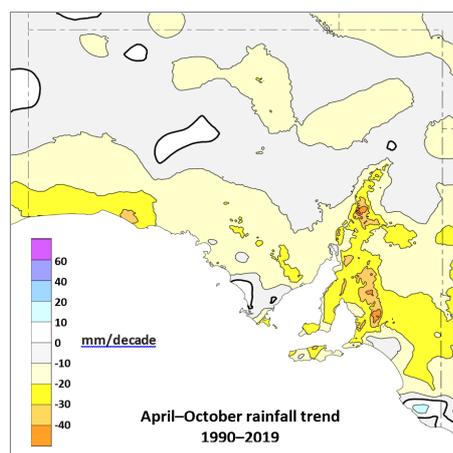
Condition

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 areas over recent decades has the potential to affect future water security, reduce agricultural yields, increase fire risk and impact ecosystems.

The duration of surface water inundation in wetlands and water-dependent ecosystems, particularly in the south-east of the state, has been reducing during the drier months of each year, resulting in encroachment of dryland terrestrial vegetation.

Rainfall is declining in April–October in southern agricultural areas and increasing in November–March in the far north.



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.

One example of the effect 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.

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 South Australian Government 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, climate change science and information, land-use planning reforms, climate-related hazard risk reduction, coastal protection, greening to cool urban environments, circular economy initiatives, and regional adaptation projects. More information can be found on the Climate Smart South Australia website.

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

