



Trend  
**Getting worse**



Condition  
**Fair**



Reliability  
**Very good**

### Trend

**Significant regional variation in seasonal rainfall trends have been observed across South Australia since 1990. Winter rainfall has decreased in the state's south, while summer rainfall has increased in the north.**

This assessment uses the latest Bureau of Meteorology (BoM) observed rainfall data in the Australian climate change and variability tracker.

Significant drying trends were evident across much of the southern agricultural areas from April to October (top figure). The observed decrease in rainfall during these months of 10–40 mm per decade are significant since the typical average rainfall ranges from 300 to 500 mm across the region. Such winter drying is consistent with climate change predictions and has occurred in other mid-latitude areas of Australia, such as south-west Western Australia and Victoria.

Pastoral areas in northern South Australia had increased tropically influenced summer rainfall of up to 40–60 mm per decade (bottom figure), with some increase in extreme rainfall events.

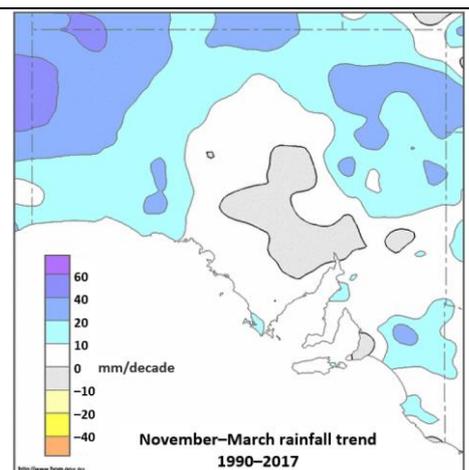
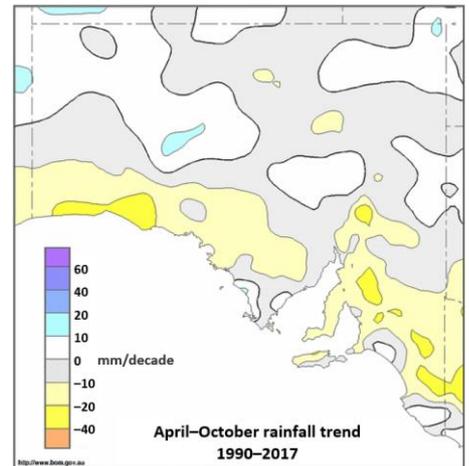
### Condition

**The condition is rated as fair because rainfall changes across South Australia have been manageable.**

Persistent drying trends in the southern agricultural areas may reduce water security and agricultural yields, impact ecosystems and increase fire risk in the future.

In wetlands and water-dependent ecosystems, particularly in the south-east of the state, the duration of surface water inundation has fallen during the drier months of the year, leading to encroachment of dryland terrestrial vegetation.

**Since 1990, April to October rainfall in the south has decreased and November to March rainfall in the north has increased**



### 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?

BoM 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).

The BoM's biennial State of the Climate report draws on the latest monitoring, science and projection information to describe variability and changes in Australia's climate (including rainfall), and how it is likely to change in the future.

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

