

2014 Regional Snapshot

How good is the scientific understanding of the causes and consequences of climate change?

In 2012–13, Australia experienced its hottest summer, hottest month, hottest day and longest heatwave. In the same year, atmospheric carbon approached 400 parts per million – 40 per cent higher than 100 years ago and a level not seen for millions of years.

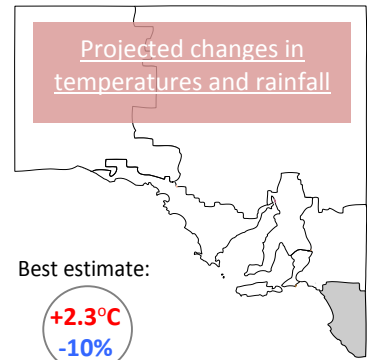
In the South East NRM region, average temperatures are projected to increase by 1.3–3.5 degrees Celsius by 2070 (map on right). We can also expect longer and hotter heatwaves, which will result in increased heat-related illness, hospital admittance and mortality rates.

Rainfall is projected to decrease by 0–30 per cent by 2070 (map on right). This could impact on key water resources for the South East by decreasing the amount of surface water runoff and groundwater recharge.

Increasing temperatures and decreasing rainfall are likely to degrade the habitats of some native plants and animals and improve conditions for some pest animals and weeds.

Sea levels around the South East have been rising by about 2.8 millimetres each year. By 2100, sea levels could be 1.1 metres higher than in 1990. Increases in the frequency of storm surge events in coming decades are likely, with impacts including erosion of costal habitats and inundation in low lying communities such as Kingston SE and Robe.

This report summarises research by the Australian Bureau of Meteorology, the Government of South Australia, the Australian Government and the Intergovernmental Panel on Climate Change. The views of the South Australian public are addressed in a [separate report](#).



State target

Improve capacity of individuals and community to respond to climate change

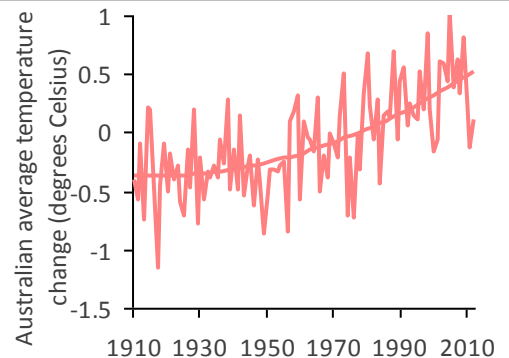
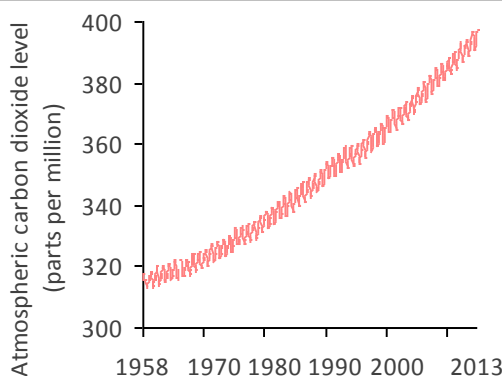
Trend (1990–2013)

Getting better

Scientific understanding of the causes and the projected impacts of climate change is improving

Scientific understanding of climate change is improving, and increased data is resulting in increased certainty in projections of changes and impacts.

Observations of rising atmospheric carbon and temperatures contribute to improving the understanding climate change (graphs on right).



Where we are at (2013)

Good

Research is focused on understanding the consequences of climate change to help us plan and adapt

The warming of the climate is unequivocal and human influence on the climate system is clear. Research is currently focused on improving our understanding of the consequences of climate change to help plan for potential impacts and help us adapt.

Policies, such as those under the [Climate Change Adaptation Framework](#), are being developed to help South Australians prepare for the projected changes to our climate.

Reliability of information



Excellent

Further information: [Technical information for this report](#), [Bureau of Meteorology data and information on Climate Change](#)

