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Climate Change Bulletin: Thoughts of water with drought up ahead

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Australians have a special affinity with drought, and several recently released reports and statements confirm this for our recent history.



Credit: CSIRO

In Western Australia, a 30-year downward trend in rainfall in the state's south-west has become a 40 year-downward trend. In eastern Australia, a 13-year drought, which has focused attention on water as a precious resource, has been deemed officially over.

As the rains fell across parched regions, the Murray–Darling Basin Authority was finishing the guide to the proposed Murray–Darling Basin Plan. The Plan will revolutionise the way that water is managed across the food bowl of Australia, an area that generates more than 40 per cent of the gross value of Australian agricultural production and includes natural features and places of high environmental and cultural value.

Signalling continuing change in the climate, a report by the South-East Australia Climate Initiative has pointed to increasing risk of below-average rainfall and runoff into streams, and drier conditions into the future in south-east Australia.

A key finding of the report is that the recent drought was unprecedented in the historical record in terms of its extent, reduced year-to-year rainfall variability, and the seasonal pattern of the rainfall decline. As a result of the nature of the changes in rainfall, the reductions in runoff have been greater than expected.

‘While 2010 has brought welcome rains for much of south-eastern Australia, there is growing evidence from our research that a long-term trend towards a drier climate is taking place,’ says SEACI Director, CSIRO’s Dr David Post.

‘Changes to large-scale atmospheric circulation patterns are impacting on rainfall and runoff in the south-east, particularly in the southern Murray–Darling Basin and Victoria.’

These observed changes indicate a shift in the overall climate of south-eastern Australia, similar to what has been experienced in rainfall and runoff in south-west Western Australia since the 1970s.

‘The research indicates that these changes can be linked to global warming, making it a likely contributor to the recent drought,’ says Post. The report notes that natural climate variability is also likely to be a contributing factor to the rainfall and runoff decline.

More information

Special climate statement 21, Bureau of Meteorology: www.bom.gov.au/climate/current/statements/scs21a.pdf

South East Australia Climate Initiative: www.seaci.org/

Murray-Darling Sustainable Yields: www.csiro.au/partnerships/SYP.html

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