



Indian Ocean sea temperature linked to Australian drought

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New research suggests sea temperatures in the Indian Ocean are to blame for the long running drought in south-eastern Australia.

It's like the El Nino-Southern Oscillation in the Pacific, but researchers at the University of New South Wales believe the Indian Ocean Dipole is even more influential on Australia's weather.

Traditionally, scientists have linked drought in Australia with El Nino - a climate pattern resulting from temperature fluctuations in the Pacific Ocean.

The reverse of El Nino, or La Nina, is thought to be responsible for bringing drought-breaking rains to Australia.

But, despite numerous La Nina events over the past 15 years, southern Australia has been virtually starved of rainfall, raising questions over the role of the Pacific Ocean climate pattern.

"El Nino and La Nina cycles cannot explain the cause," Dr Caroline Ummenhofer of the Climate Change Research Centre at the University of New South Wales.

The dipole tracks surface temperatures in the waters to Australia's west.

In a negative phase, moist winds are driven across Indonesia and down through north-western Australia bringing good rains.

In a positive phase, drier winds bring less rain.

Looking back over the last 100 years of data, Dr Ummenhofer and colleagues found that all of Australia's long-lasting droughts, including the Federation drought (1885-1902) and the World War II drought (1937-1945), were linked to a low number of negative IOD phases.

They said that the most recent big dry has seen no negative phases at all.

"We have found the Indian Ocean plays a profound role in driving [the southern Australian] drought," Dr Ummenhofer said.

"We really hope this will improve forecasting of rainfall in that area."



PHOTO

Scientists say temperature fluctuations in the Indian Ocean are to blame for south-east Australia's drought. [ABC]

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