

RMD ENSO Report:

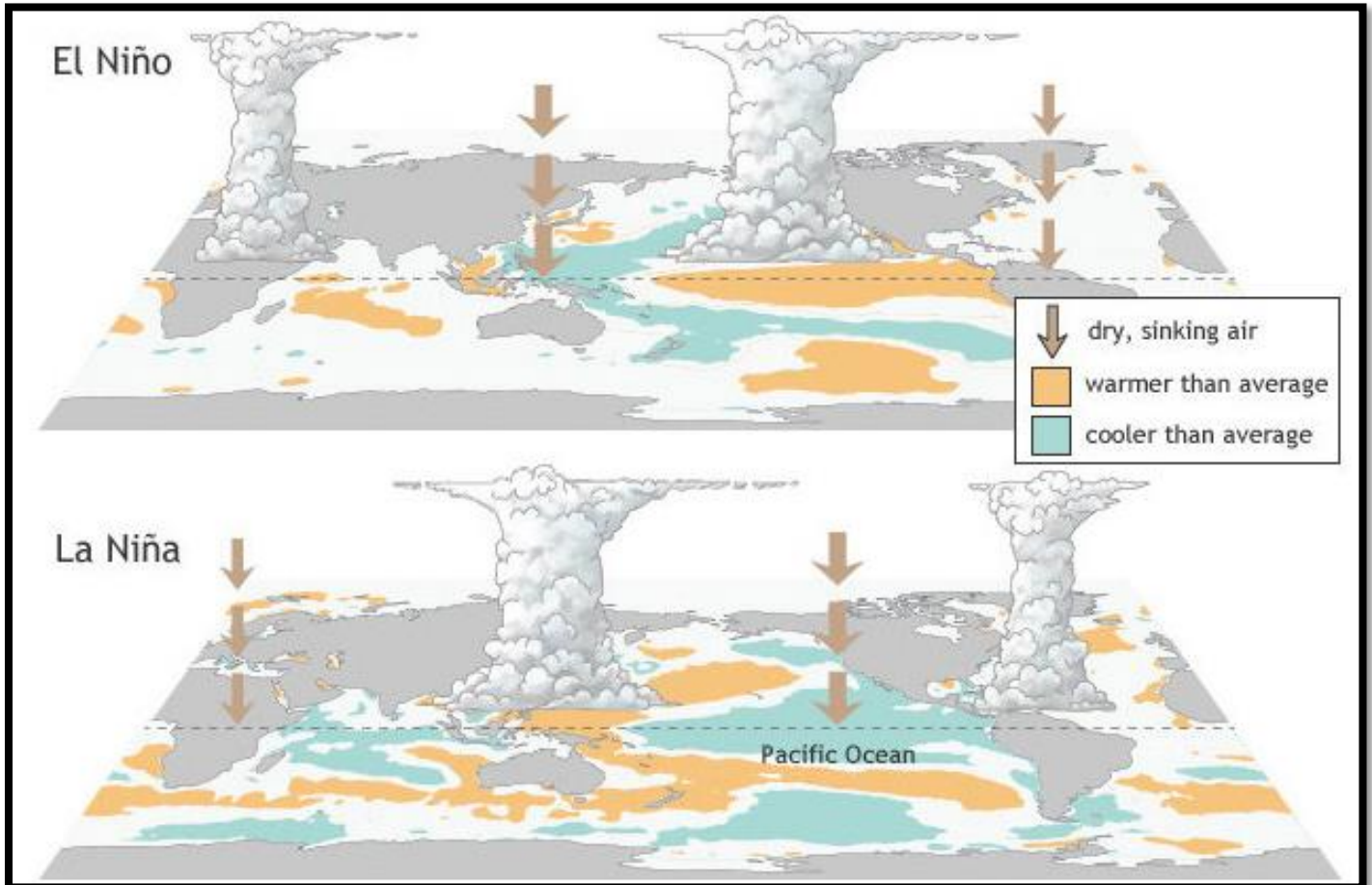
16 April 2024

Compiled by Dirk J Fourie

This is not presented as a commodity trading recommendation. Weather is only one of many factors which can influence the market on any given day.

El Niño–Southern Oscillation neutral

ENSO is the oscillation between El Niño and La Niña states in the Pacific region. El Niño typically produces drier seasons, and La Niña drives wetter years, but the influence of each event varies, particularly in conjunction with other climate influences.



El Niño /La Niña World map

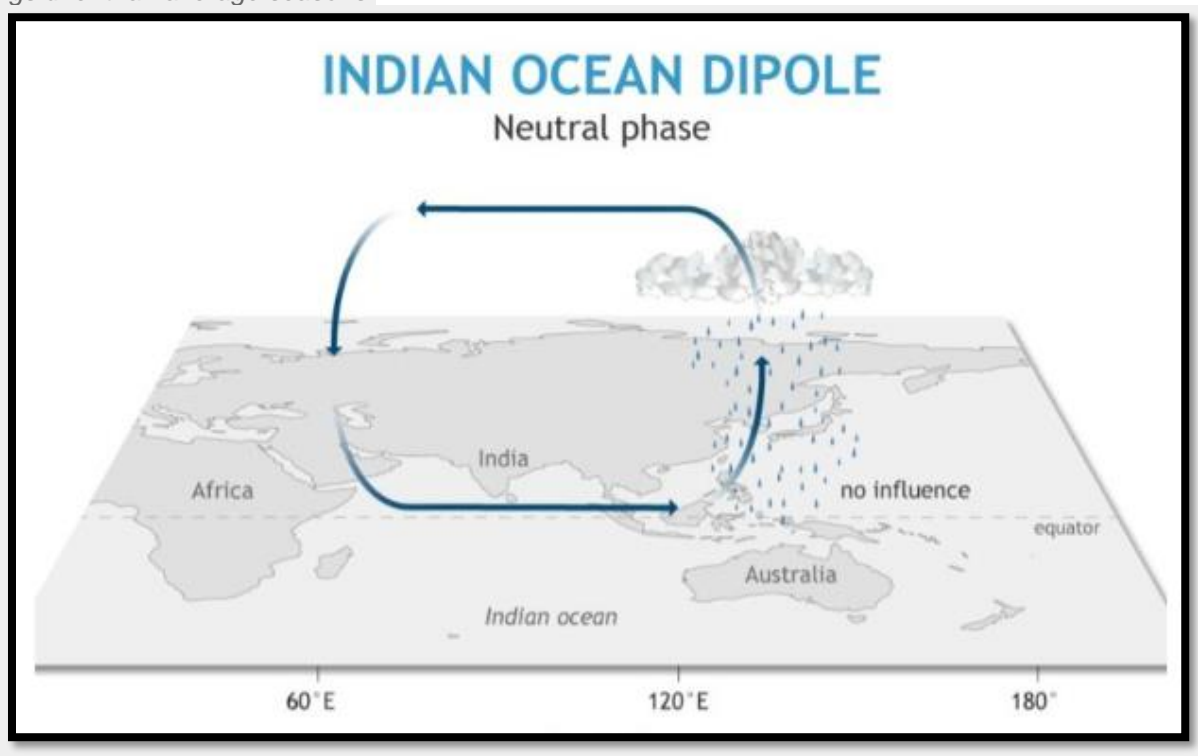
El Niño has ended and the El Niño–Southern Oscillation (ENSO) has returned to neutral. Climate models indicate ENSO will likely continue to be neutral until at least July 2024. Oceanic and atmospheric indicators are now indicative of neutral ENSO. Sea surface temperatures (SSTs) in the central Pacific have been steadily cooling since December 2023. There has been substantial cooling over the last fortnight, with the NINO3.4 index now within the historical thresholds for the neutral phase of ENSO. This surface cooling is supported by a significant amount of sub-surface cooling underneath the central and eastern Pacific, which is typical at the end of the El Niño phase of ENSO. Recent cloud and surface pressure patterns are indicative of short-term weather variability, rather than being influenced by ENSO.

International climate models suggest ENSO is likely to continue to remain neutral until at least July 2024. While three out of seven international models are predicting central Pacific SSTs to reach La Niña thresholds in July, El Niño and La Niña predictions made in mid-autumn tend to have lower accuracy than predictions made at other times of the year. This means that current forecasts of the ENSO state beyond July should be used with caution.

Global sea surface temperatures (SSTs) have been the warmest on record for each month between April 2023 and March 2024. Month-to-date data for April 2024 indicates this month is tracking warmer than April 2023. The global pattern of warmth is affecting the typical historical global pattern of sea surface temperatures associated with ENSO variability. As the current global ocean conditions have not been observed before, inferences of how ENSO may develop in 2024 that are based on past events may not be reliable.

Indian Ocean

The Indian Ocean Dipole (IOD) is defined by the difference in sea surface temperatures between the eastern and western tropical Indian Ocean. A negative phase typically sees above average summer rainfall in Southern Africa, while a positive phase brings drier than average seasons.

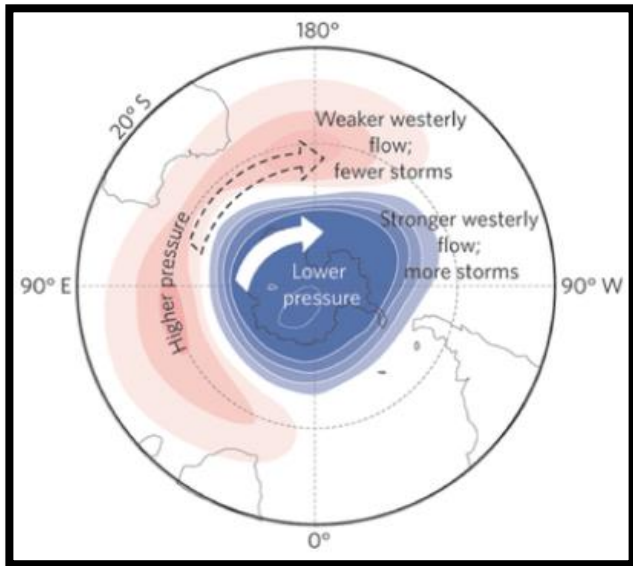


The IOD is currently neutral.

Although the most recent value of the Indian Ocean Dipole (IOD) index (+0.57 °C) is above the positive IOD threshold, the IOD is neutral. Despite the positive IOD values being mostly from record warmth in the north-west Indian Ocean, atmospheric indicators in the eastern Indian Ocean may be consistent with a developing positive IOD.

Southern Annular Mode (SAM)

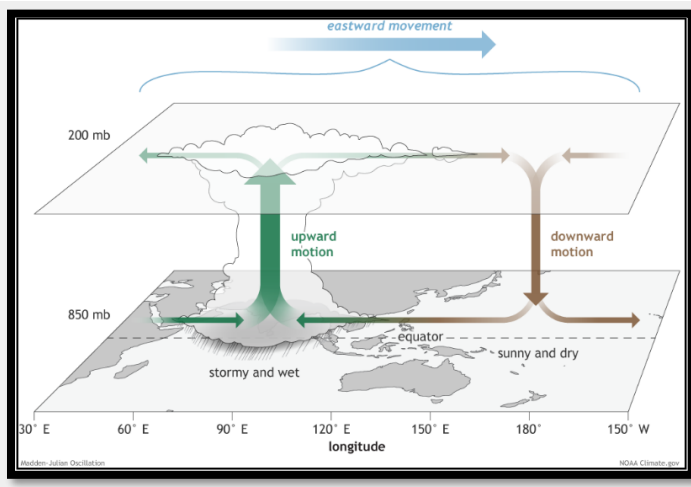
The SAM has three phases: neutral, positive, and negative. Each positive or negative SAM event tends to last for around one to two weeks, though longer periods may also occur. The time frame between positive and negative events is quite random, but typically in the range of a week to a few months. The effect that the SAM has on rainfall varies greatly depending on season and region.



The Southern Annular Mode (SAM) is currently positive. Forecasts indicate it will become neutral during the coming week and remain neutral for the coming fortnight.

Madden–Julian Oscillation (MJO)

The Madden–Julian Oscillation (MJO) is the major fluctuation in tropical weather on weekly to monthly timescales. It can be characterised as an eastward moving 'pulse' of cloud and rainfall near the equator that typically recurs every 30 to 60 days.



The Madden–Julian Oscillation (MJO) is currently weak or indiscernible. Most climate models indicate the MJO will remain indiscernible for the coming week, possibly emerging as a weak pulse in the western Pacific over the next fortnight. Following this, it is forecast to move towards the Western Hemisphere and Africa, away from the Australian tropics.

Source:

SAWB / GRADS/ NASS / DTN / AWB / CWB / Intellicast / FNMOC / Unisys/ NOAA/ YR / KBWS / Wunderground / TWC / WordPress / WXRisk / Drovers / TWC / AG-BoM / Accuweather / SPC / NOAA / soybeansandcorn / Windy / agrimony / en sat24 / agweb / blackseagrain / Europa / woeurope / timeanddate / myweather2 / meteox / meteoblue / intellicast / iweather / Columbia / weather-atlas / ec.europa.eu / NASA / nasagrace / usda.gov / USDA/WAOB

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