

# RMD ENSO Report:

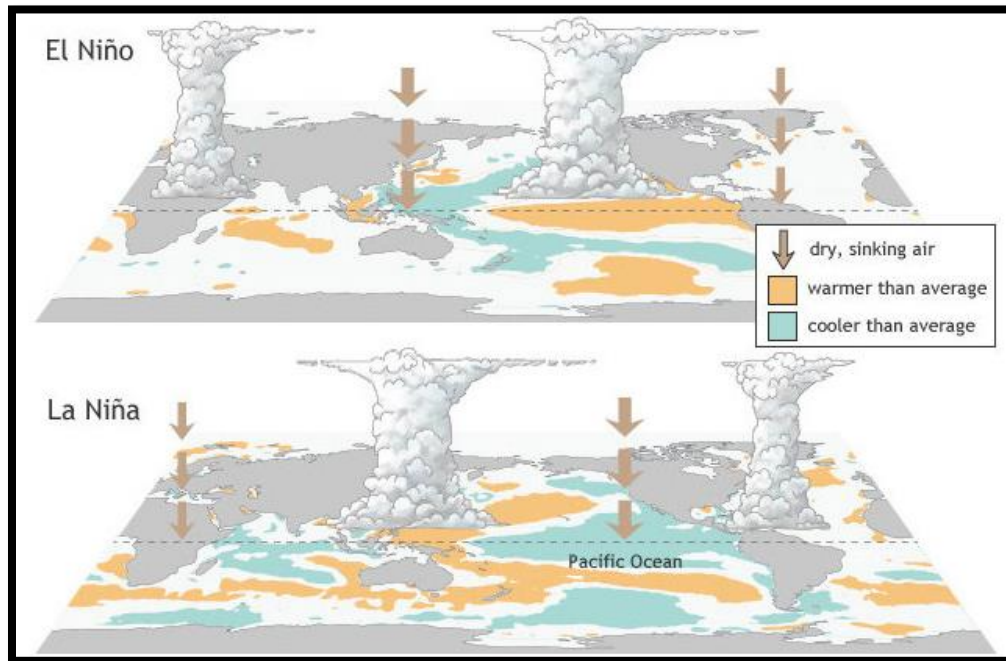
23 July 2024

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.*

## Increased chance of negative IOD in spring

*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.*

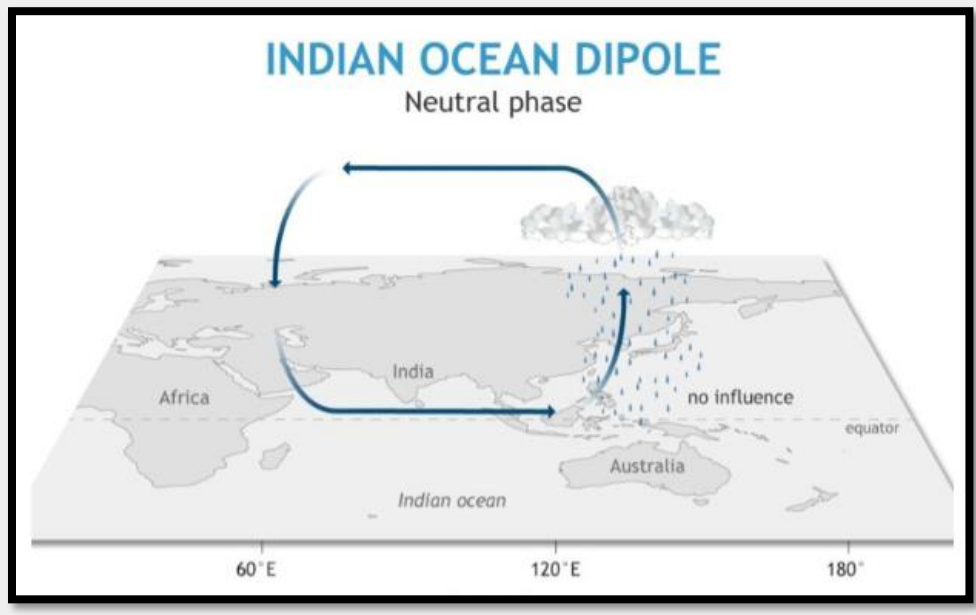


El Niño /La Niña map

- The El Niño–Southern Oscillation (ENSO) is currently neutral.
- Sea surface temperatures (SSTs) in the central Pacific Ocean are ENSO-neutral but have been cooling since December 2023. This surface cooling is being sustained by deep waters surfacing in the central and eastern Pacific. Since June, the rate and extent of cooling both at the surface and at depth have slowed. Atmospheric patterns, including cloud and surface pressure, are currently ENSO-neutral.
- ENSO is likely to remain neutral until at least early spring. Four of 7 climate models suggest the possibility of SSTs reaching the La Niña threshold (below  $-0.8\text{ }^{\circ}\text{C}$ ) by October. The remaining 3 models maintain ENSO-neutral throughout the forecast period. Compared with earlier forecasts, the potential for La Niña development is now later in spring.
- The ENSO Outlook remains at La Niña Watch. La Niña Watch does not guarantee La Niña development, only that there is about an equal chance of either ENSO remaining neutral or La Niña developing during the remainder of 2024.

## 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.

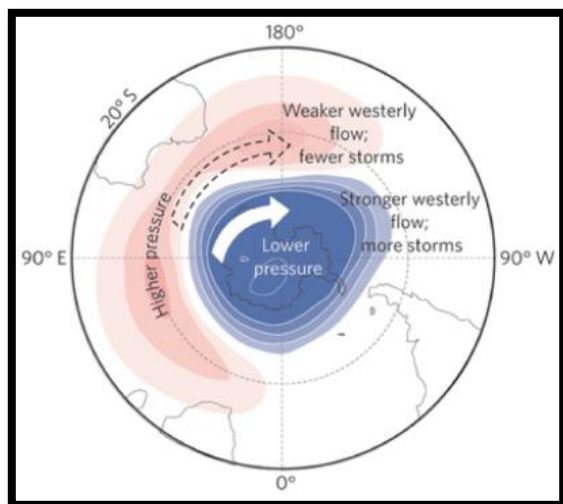


**The IOD is currently neutral.**

The latest model outlooks indicate that the IOD is likely to remain neutral until at least the end of winter. Three of 5 climate models suggest that during spring, negative IOD development is likely, while 2 maintain a neutral state of the IOD.

## Southern Annular Mode (SAM)

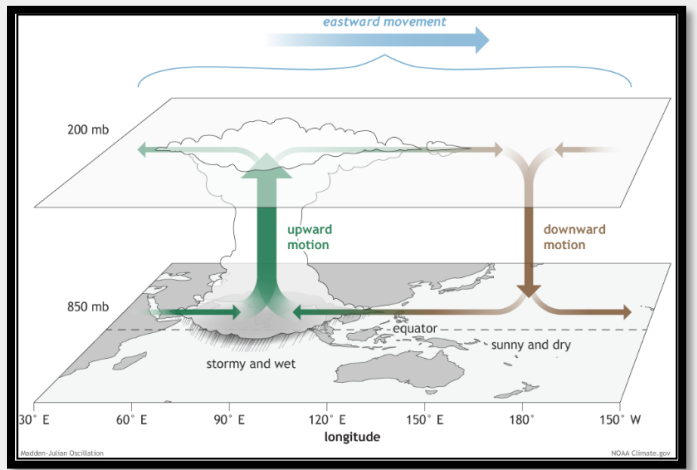
The SAM has three phases: neutral, positive, and negative. Each positive or negative SAM event tends to last for around one to two weeks, though longer periods may also occur. The time frame between positive and negative events is quite random, but typically in the range of a week to a few months. The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



SAM is neutral (as on 20 July). The index is forecast to remain neutral for the coming fortnight, beyond which predictability of the SAM is typically low.

## **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.*



MJO is currently weak or indiscernible (as on 20 July). Most models forecast it to remain weak for the coming fortnight. A weak MJO has little impact on Australian rainfall.

Global SSTs have been the warmest on record for each month between April 2023 and June 2024. July 2024 SSTs are comparable with 2023 but are much warmer than for any other July on record. The current global pattern of warmth differs to historical patterns of SSTs associated with ENSO and IOD. This means future predictions based on SSTs during past ENSO or IOD events may not be reliable. Phenomena such as ENSO and the IOD are only broad indicators of the expected climate. The long-range forecast provides better guidance on local rainfall and temperature patterns.

### **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 / agrimoney / en sat24 / agweb / blackseagrain / Europa / woerpe / timeanddate / myweather2 / meteox / meteoblue / intellicast / iweather / Columbia / weather-atlas / ec.europa.eu / NASA / nasagrace / usda.gov / USDA/WAOB