

# RMD ENSO Report:

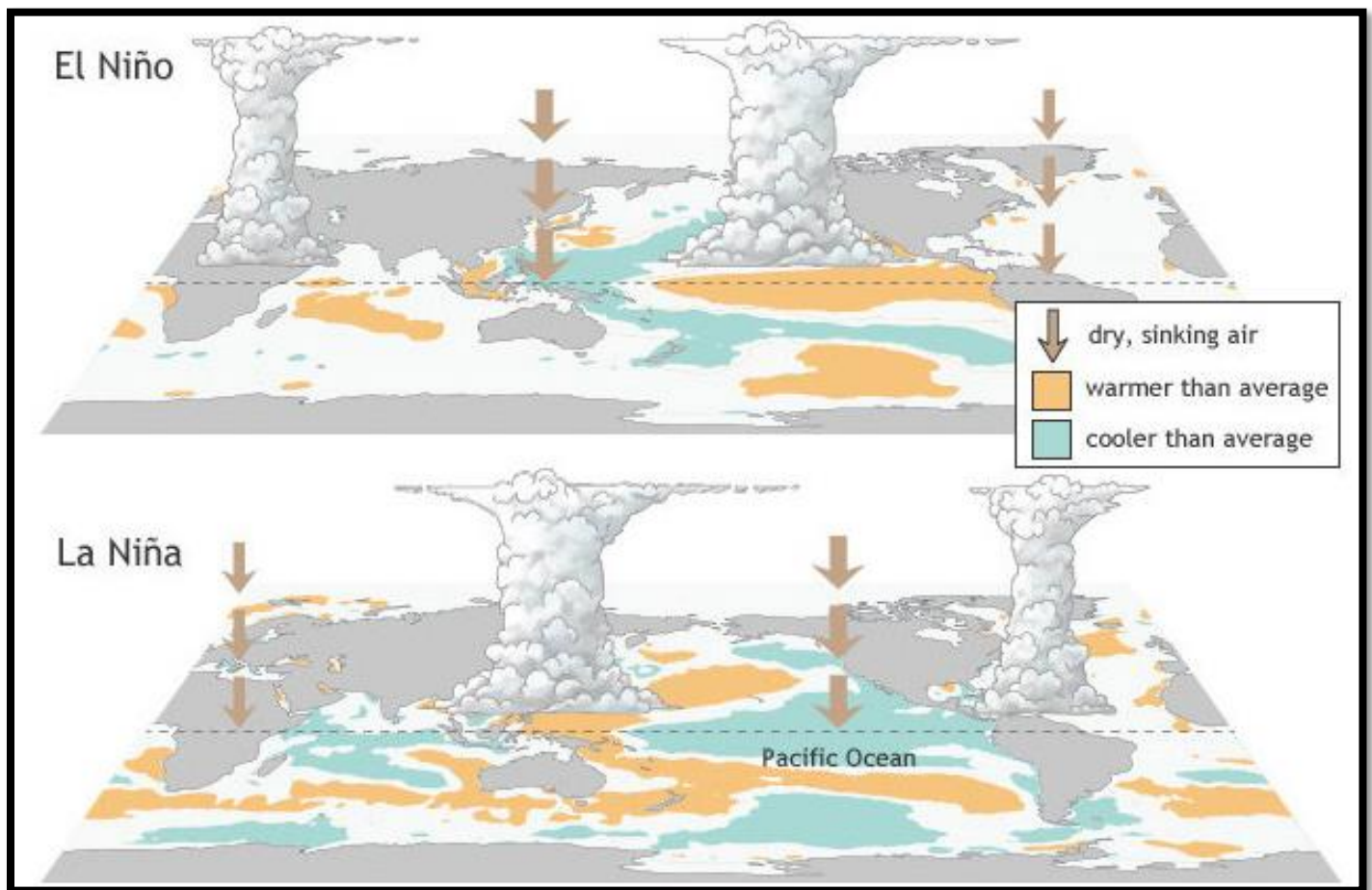
30 April 2024

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; Indian Ocean Dipole tending positive.**

*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**

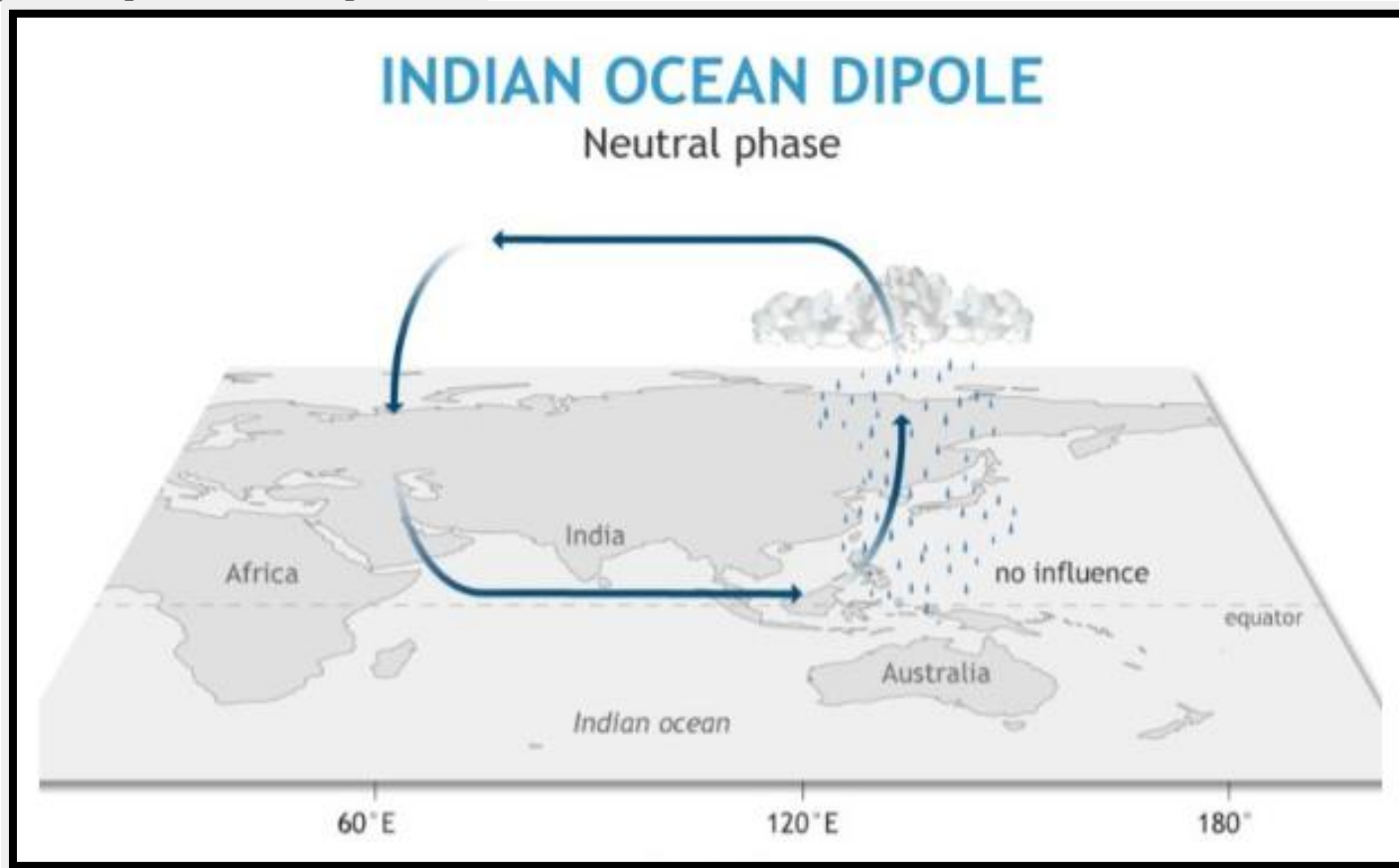
The El Niño–Southern Oscillation (ENSO) is currently neutral. Sea surface temperatures (SSTs) in the central Pacific have been steadily cooling since December 2023. This surface cooling is supported by a significant amount of sub-surface cooling underneath the central and eastern Pacific. Recent cloud and surface pressure patterns are also neutral.

Both Bureau and international climate models suggest ENSO will likely remain neutral until at least July 2024. El Niño and La Niña predictions made in mid-autumn tend to have lower accuracy than predictions made at other times of the year, meaning 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, with April 2024 SSTs currently 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.*

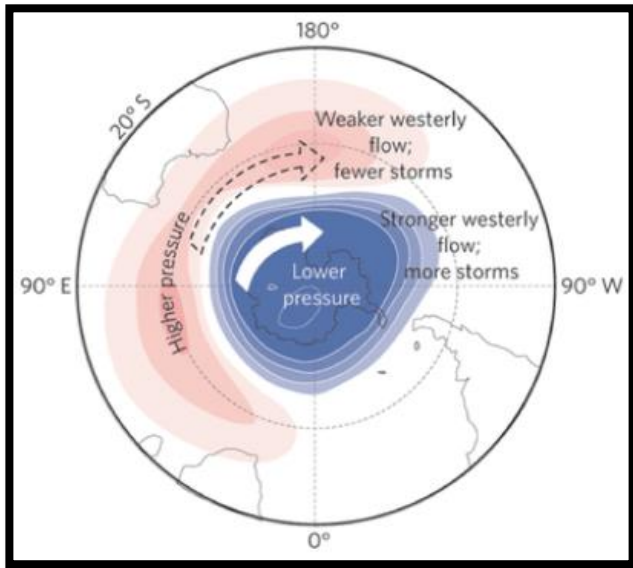


### **The IOD is currently neutral.**

The Indian Ocean Dipole (IOD) is currently neutral. The most recent value of the IOD index (+0.68 °C) is above the positive IOD threshold (+0.40 °C). This is its seventh week above the positive IOD threshold. Typically, a positive IOD event is considered underway once the IOD index is sustained above +0.40 °C for about 8 weeks. Along with signs in atmospheric indicators, the model outlooks also indicate a positive IOD event may be developing. If a positive IOD develops, it would be earlier in the calendar year than is typical historically.

## **Southern Annular Mode (SAM)**

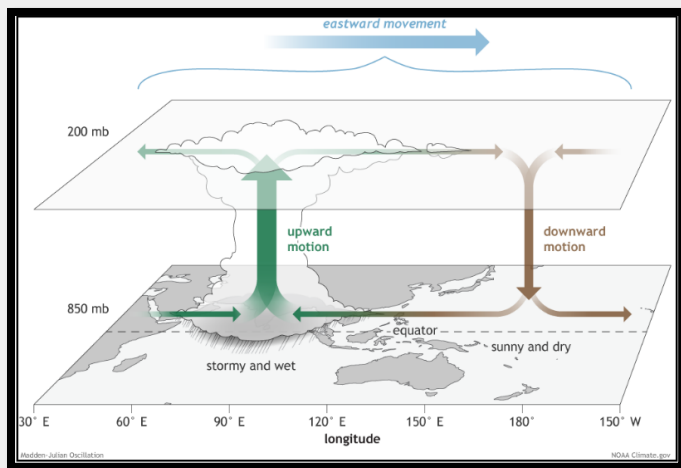
*The SAM has three phases: neutral, positive, and negative. Each positive or negative SAM event tends to last for around one to two weeks, though longer periods may also occur. The time frame between positive and negative events is quite random, but typically in the range of a week to a few months. The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



SAM is currently neutral (as of 30 April). Forecasts indicate the index is mostly likely to rapidly fall, dipping into negative values at the beginning of May, and remaining at negative SAM levels for at least the first two weeks of May. However, SAM historically has little influence on Southern African rainfall patterns in autumn.

## **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 moderately strong, located in the eastern Indian Ocean. Most international climate models indicate the MJO will track further eastwards into the Maritime Continent in the coming week.

### **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 / woeurope / timeanddate / myweather2 / meteoX / meteoblue / intellicast / iweather / Columbia / weather-atlas / ec.europa.eu / NASA / nasagrace / usda.gov / USDA/WAOB