



# CLIMATE BULLETIN FOR SEA

Climate Monitoring Node – WMO-RCC-SEA – DOST-PAGASA

Issued: December 2023

## CLIMATE WATCH FOR RAINFALL DEFICIENCY – EL NIÑO

**Areas of Concern: Papua, Indonesia**

Area of *moderate* rainfall deficiencies have been observed in some parts of Southeast Asia region, particularly over Papua in Indonesia, as shown in Figure 1. While some other parts of Southeast Asia (Philippines, Malaysia and the rest of Indonesia) recorded *mild to moderate* rainfall deficiencies, most of the other region received adequate rainfall for the month of November.

The sea surface temperatures (SSTs) across the tropical Pacific continued to be warmer than average in November as it further strengthened and may likely have reached or reaching its peak. The strong warming was observed almost over all Niño regions. However, the SSTAs in the western Pacific and over most of the maritime continent were near to below average, particularly around Indonesia.

Strong positive IOD values were still observed during the month, as warmer than average SSTs were observed over the western equatorial Indian Ocean while the eastern equatorial Indian Ocean was cooler than average.

Inactive phase of the Madden–Julian Oscillation (MJO) in November was observed characterized by suppressed convection and precipitation in the region.

## MAPS

CMORPH Std. Precipitation Index for November 2023

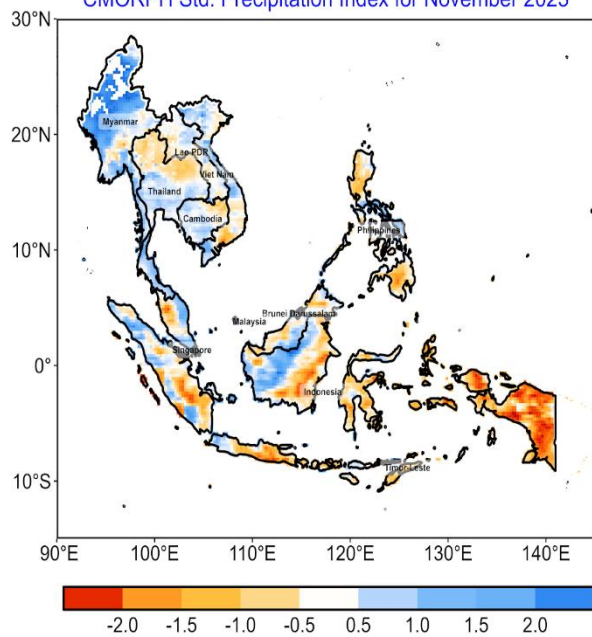


Figure 1: 1-month SPI for November 2023 (reference period, 1991-2020)

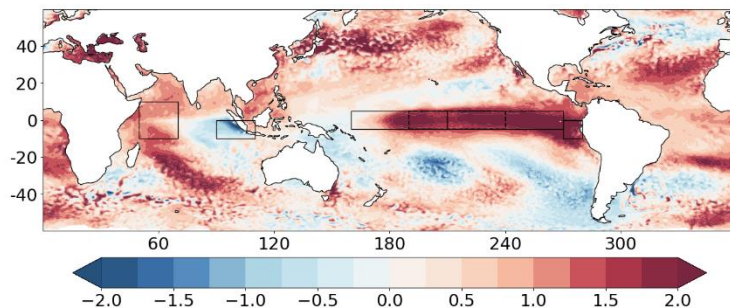


Figure 2: SSTA across the Pacific and Indian Ocean for November 2023 (reference period, 1991-2020)

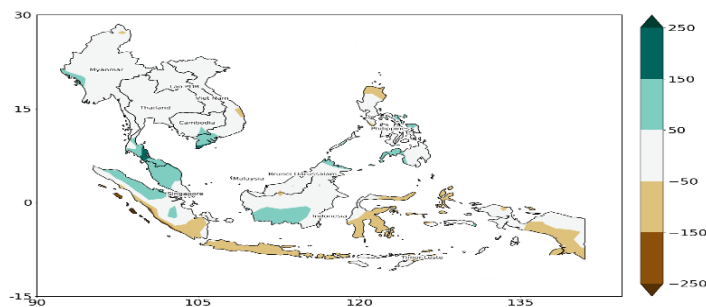
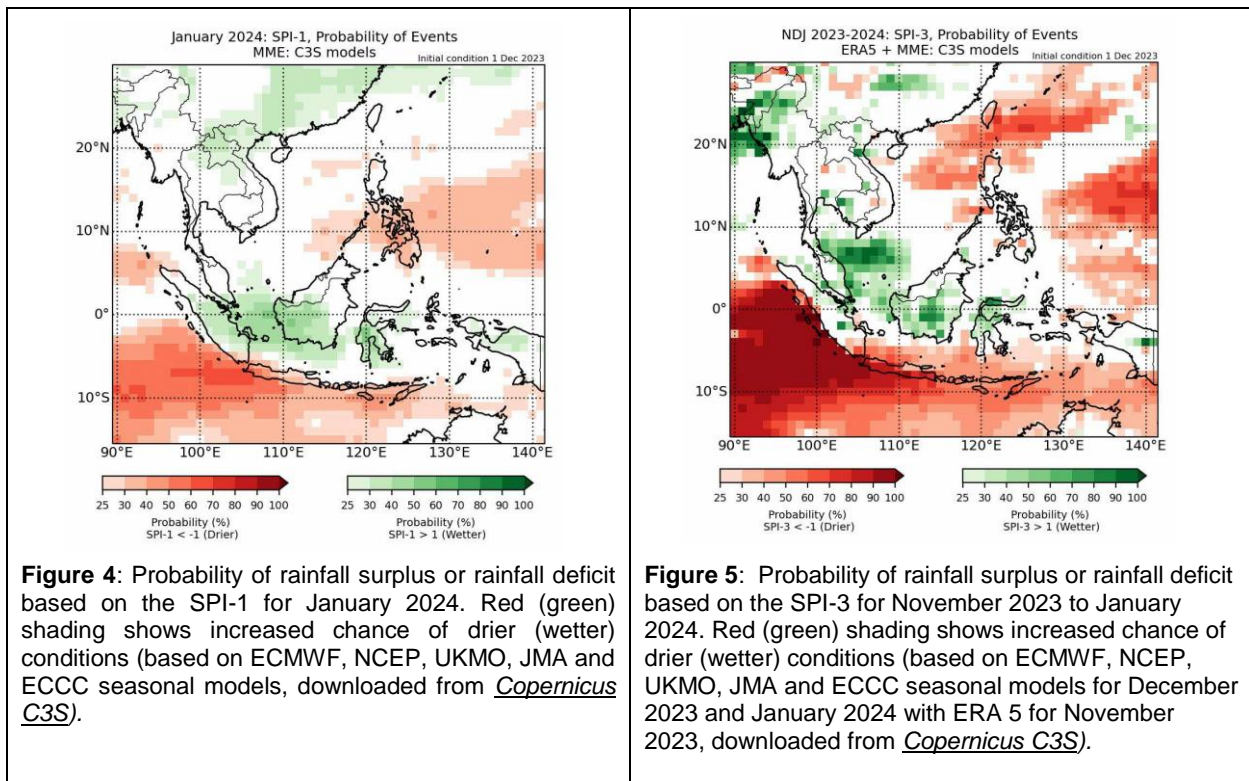


Figure 3: Rainfall Anomaly for November 2023 (reference period, 1991-2020)



## OUTLOOK:



From the outlook of SPI-1 over the region (Figure 4), there is moderate chance (40-70%) of the rainfall deficit over western Java and some chance (25-40%) of rainfall deficit continuing over the rest of southern Indonesia in January 2024. There is also some chance (25-40%) of rainfall deficit over parts of the Philippines for January 2024.

When considering the longer-term conditions for November 2023 to January 2024 (SPI-3, Figure 5), there is a high chance of rainfall deficit (>60%) for much of Java, and moderate chance of rainfall deficit (40-60%) for the rest of southern Indonesia.

El Niño conditions are predicted to continue until at least February-March 2024. The positive Indian Ocean Dipole has likely reached its peak strength and is predicted to last until January-February 2024. Both positive Indian Ocean Dipole and El Niño events can bring drier conditions to parts of Southeast Asia. These conditions are in line with an increased chance of rainfall deficit (25-70%) in January 2024 over the southern and northeastern Maritime Continent (Figure 4).

**Next issuance will be on January 2024.**



Attachment:

### CMORPH Std. Precipitation Index for 3-Month Ending November 2023

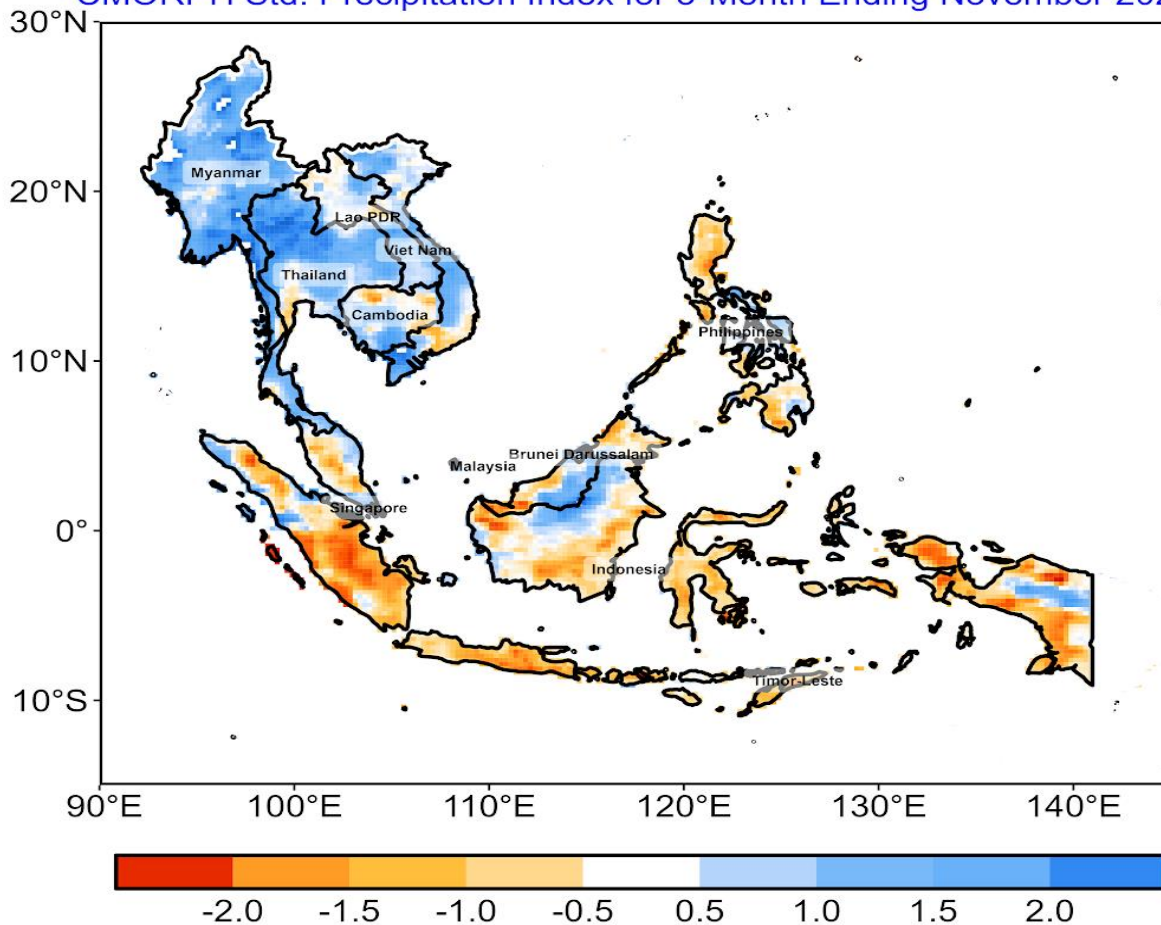


Figure 4: 3-month SPI for September - November 2023 (reference period, 1991-2020)

Table 1: McKee and others (1993) SPI value-classification table as recommended in World Meteorological Organization, 2012: Standardized Precipitation Index User Guide (M. Svoboda, M. Hayes and D. Wood). (WMO-No. 1090), Geneva.

Table 1. SPI values

2.0+	extremely wet
1.5 to 1.99	very wet
1.0 to 1.49	moderately wet
-.99 to .99	near normal
-1.0 to -1.49	moderately dry
-1.5 to -1.99	severely dry
-2 and less	extremely dry