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SEASONAL CLIMATE OUTLOOK FOR SOUTH ASIA
(March to June 2026)

Highlights

- At present, neutral El Niño–Southern Oscillation (ENSO) conditions are prevailing over the equatorial Pacific Ocean. However, some of the atmospheric circulation features over the tropical Pacific are consistent with weak La Niña–like conditions. The latest forecasts from the Monsoon Mission Climate Forecast System (MMCFS) suggest that ENSO-neutral conditions are most likely to continue during April to June 2026 season. Thereafter, the probability of development of El Niño conditions increases gradually.
- Currently, neutral Indian Ocean Dipole (IOD) conditions are prevailing over the Indian Ocean. The latest MMCFS forecast suggests that these neutral IOD conditions are likely to persist during the March to May season and thereafter.
- The probability forecast for precipitation for MAM and AMJ seasons indicates that enhanced probability of above normal precipitation is likely over most parts of South Asia except over few parts of extreme north, southeast and east parts of South Asia where enhanced probability of below normal rainfall is likely
- In March, the country averaged monthly precipitation is likely to be normal to above normal for all countries except Maldives, Nepal and Sri Lanka where it is likely to be below normal. In April, the country averaged monthly precipitation is likely to be normal to above normal for all countries. In May, it is likely to be normal to above normal for all countries except Myanmar where it is likely to be below normal. In June, it is likely to be normal to above normal for all countries except Bangladesh where it is likely to be below normal.
- Temperature probability forecast for MAM season indicates that enhanced probability of below normal temperatures is likely over most parts of South Asia except over some parts of extreme north and south east Asia where above normal temperatures are likely. The same for AMJ season indicate that enhanced probability of below normal temperatures is likely over most parts of South Asia except over some parts of western Peninsular India, extreme north, east, southeast and extreme south of South Asia where enhanced probability of above normal temperatures is likely.
- The country averaged monthly temperatures during March is likely to be normal to above normal for all the countries except Maldives and Sri Lanka where it is likely to be below normal. In April, it is likely to be below normal to normal for all the countries. In May, it is likely to be below normal to normal for all the countries except Myanmar and Maldives where it is likely to be above normal. In June, the country averaged monthly temperature is likely to be normal to above normal for all countries

1. Important Global Climate Factors

1.1 Sea Surface Temperatures over the Pacific Ocean

During February 2026, negative sea surface temperatures (SSTs) anomaly was observed over the central and some parts of eastern equatorial Pacific Ocean (Fig. 1a). However, positive SSTs anomaly observed over the western parts of the equatorial Pacific and the far eastern equatorial Pacific Ocean. In addition, warmer-than-average SSTs prevailed over the northern and southern extra-tropical regions of the Pacific Ocean (Fig. 1a). In comparison with January 2026, positive SST anomalies strengthened over the equatorial Pacific Ocean. Furthermore, cool SST anomalies were also evident over some parts of the North and South Pacific Oceans (Fig. 1b). At present, neutral El Niño–Southern Oscillation (ENSO) conditions are prevailing over the equatorial Pacific Ocean. However, some of the atmospheric circulation features over the tropical Pacific are consistent with weak La Niña–like conditions. The latest forecasts from the Monsoon Mission Climate Forecast System (MMCFS) suggest that the latest forecasts from the Monsoon Mission Climate Forecast System (MMCFS) suggest that ENSO-neutral conditions are most likely to continue during April to June 2026 season. Thereafter, the probability of development of El Niño conditions increases gradually (Fig.2).

1.2 Sea Surface Temperatures over Indian Ocean

In February 2026, sea surface temperatures (SSTs) were mostly near average over the tropical Atlantic and Indian Oceans (Fig. 1a). Compared to January 2025, cooler SSTs developed over most parts of the eastern Indian Ocean, while warmer SSTs were evident over the western Indian Ocean. In terms of anomalies, positive SST anomalies prevailed over the Arabian Sea, whereas negative SST anomalies were observed over the northern Bay of Bengal (Fig. 1b). Currently, neutral Indian Ocean Dipole (IOD) conditions are prevailing over the Indian Ocean. The latest MMCFS forecast suggests that these neutral IOD conditions are likely to persist during the March to May season and thereafter.

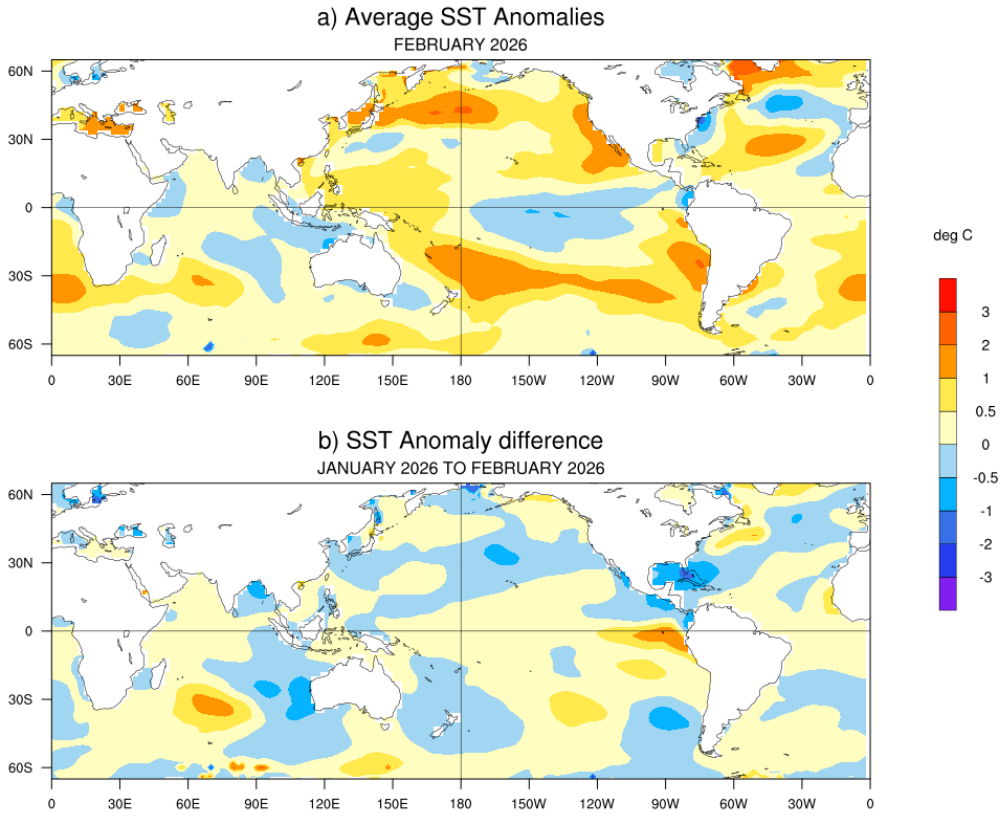

Fig.1: (a) Sea surface temperature (SST) anomalies (^{0}C) during February 2026 and (b) changes in the SST anomalies (^{0}C) from January to February 2026. SSTs are based on the ERSSTv5, from NOAA, and anomalies are computed with respect to 30-year (1991-2020) long term mean.

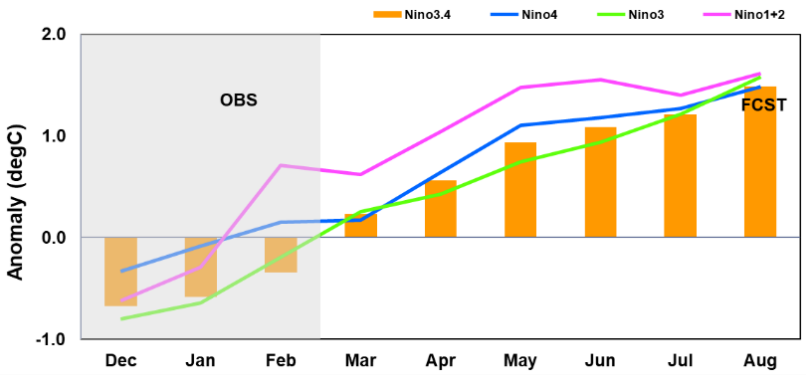

Fig.2: Time series of monthly area-averaged SST anomalies (°C) in the 4 Niño regions. ERSSTv5 observed anomaly for the last 3 months and MMCFS model PDF corrected anomaly forecast for the next 6 months.

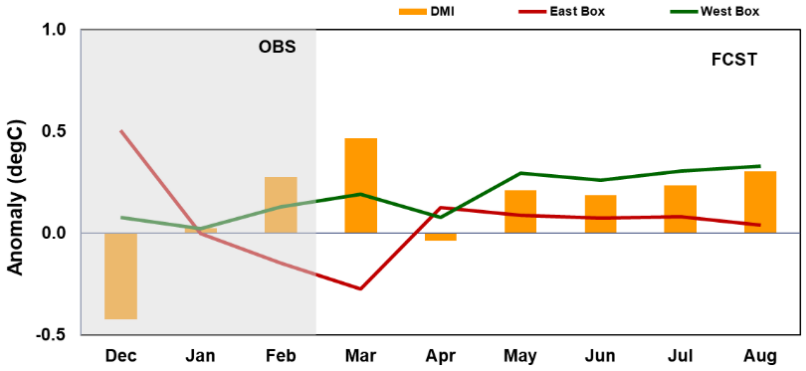

Fig.3: The time series of the monthly area-averaged SST anomaly Indices (°C) over west equatorial Indian Ocean (WEI) & east equatorial Indian Ocean (EEI) along with Dipole Mode Index (DMI=WEI-EEI) representing Indian Ocean Dipole (IOD). ERSSTv5 observed anomaly for the last 3 months and MMCFS model PDF corrected anomaly forecast for the next 6 months.

1.3 Convection (OLR Anomaly) Pattern over the Asia Pacific Region

The Outgoing Longwave Radiation (OLR) anomaly during February 2026 is shown in (Fig.4). Negative OLR anomalies (enhanced convection, blue shading) were observed over Bay of Bengal, western and central tropical Pacific Ocean, western parts of southern tropical Pacific Ocean. Negative OLR anomalies were also observed over Maritime Continent, Australia, some parts of Southeast Africa and South America. Positive OLR anomalies (suppressed convection, orange/red shading) were observed over central equatorial Pacific Ocean, eastern tropical Pacific Ocean, southcentral tropical Pacific Ocean, South Indian Ocean and northwest regions of South Asia.

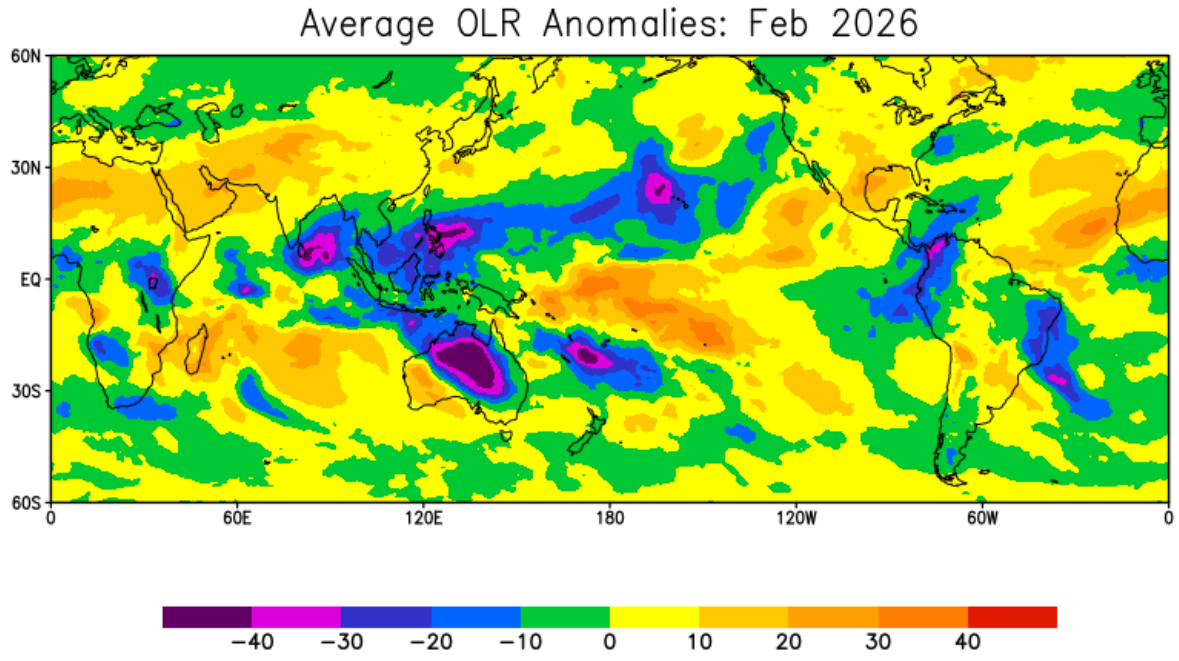

Fig.4: Outgoing Long Wave Radiation (OLR) Anomaly (W/m^2) for February 2026 (Data source: NCEP-NOAA)

1.4 Snow Cover Area over the Northern Hemisphere (NH)

During February 2026, the NH snow cover area (43.312 million Sq. km) was less than the 1991-2020 normal by 2.4 million Sq. km (Fig. 5). Eurasian Snow cover area (27.005 million Sq. km) was 1.51 million Sq. km less than the 1991-2020 normal. North America snow cover area of 16.31 million sq. km was less by 0.9 million Sq. Km with respect to 1991-2020 normal.

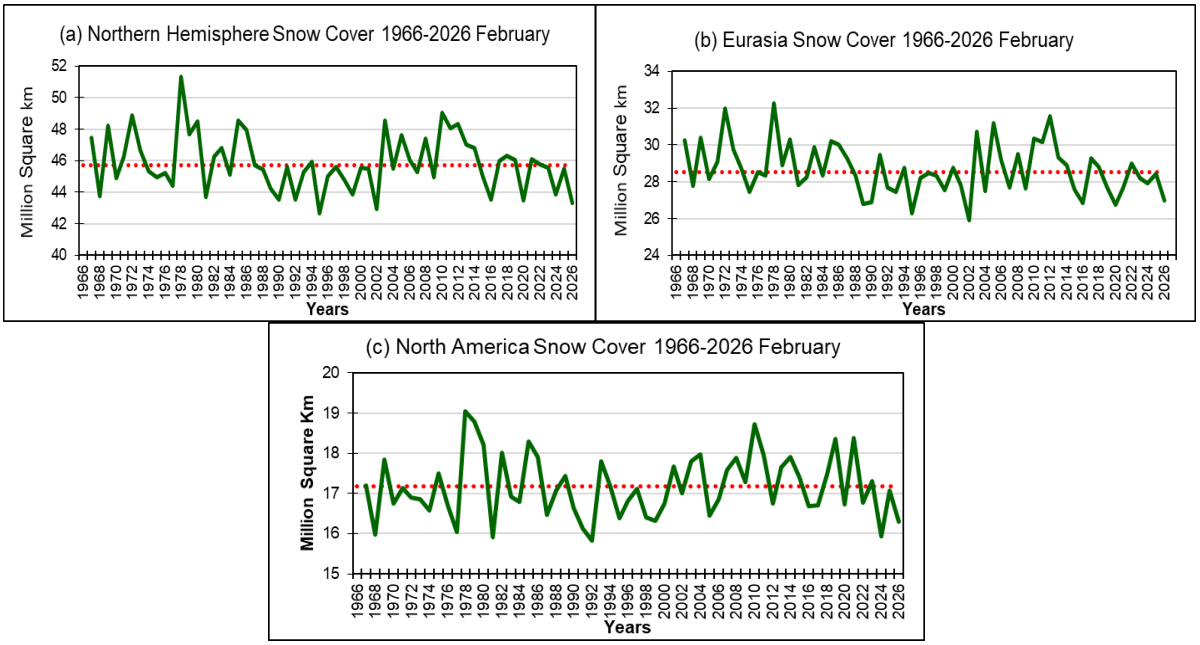

Fig 5: Snow cover area (million Sq. km) for the month of February during the period 1966-2026 (green solid lines) and normal value (1991-2020) (red dotted line) for (a) Northern Hemisphere (b) Eurasia and (c) North America. (Data Source: Rutgers University Snow Lab).

1.5. Madden Julian Oscillation (MJO)

During the month of February, MJO remained confined to the unit circle with amplitude < 1 during most of the days and moved east from phase 7 (Western Pacific) to phase 5 (Maritime continent). The MJO phase diagram illustrates the progression of the MJO through different phases, which generally coincide with locations along the equator around the globe.

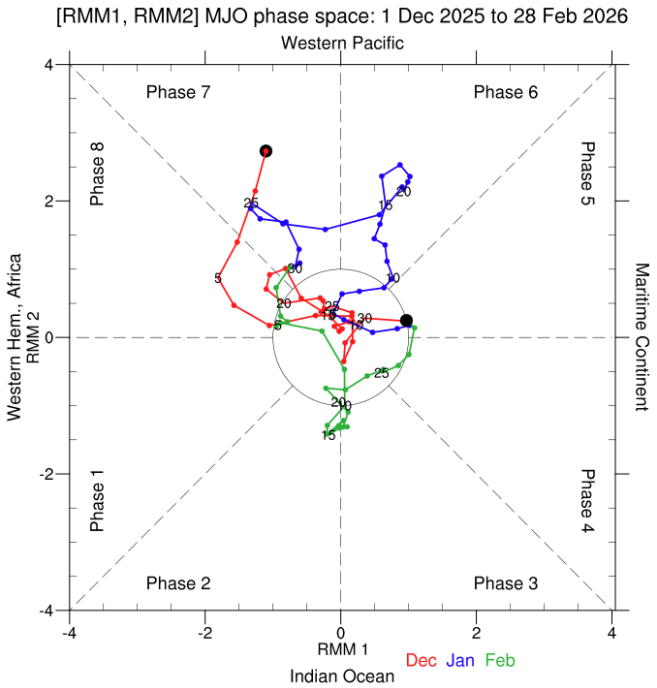

Fig.6. RMM phase diagram for Madden Julian Oscillation (MJO) for the period December 2025 to February 2026. (Data Source: http://www.bom.gov.au/climate/mjo/).

2. Seasonal Outlook for South Asia

The seasonal outlook was prepared based on the forecast from Monsoon Mission Coupled Forecasting System (MMCFS). The model is a fully coupled ocean-atmosphere-land model. The atmospheric component of CFSv2 is Global Forecast System (GFS) with spectral resolution of T382 (approximately 38 km) and 64 hybrid vertical levels and the ocean component is Geophysical Fluid Dynamics Laboratory (GFDL) Flexible Modelling System (FMS) Modular Ocean Model version.

2.1. Precipitation Probability Forecast:

The probability forecasts for precipitation for the seasons March to April 2026 (MAM) and April to June 2026 (AMJ) are given in the Figures 7a and 7b respectively. The forecast is prepared based on the February initial conditions. The probability forecast for precipitation for MAM and AMJ seasons indicates that enhanced probability of above normal precipitation is likely over most parts of South Asia except over few parts of extreme north, southeast and east parts of South Asia where enhanced probability of below normal rainfall is likely.

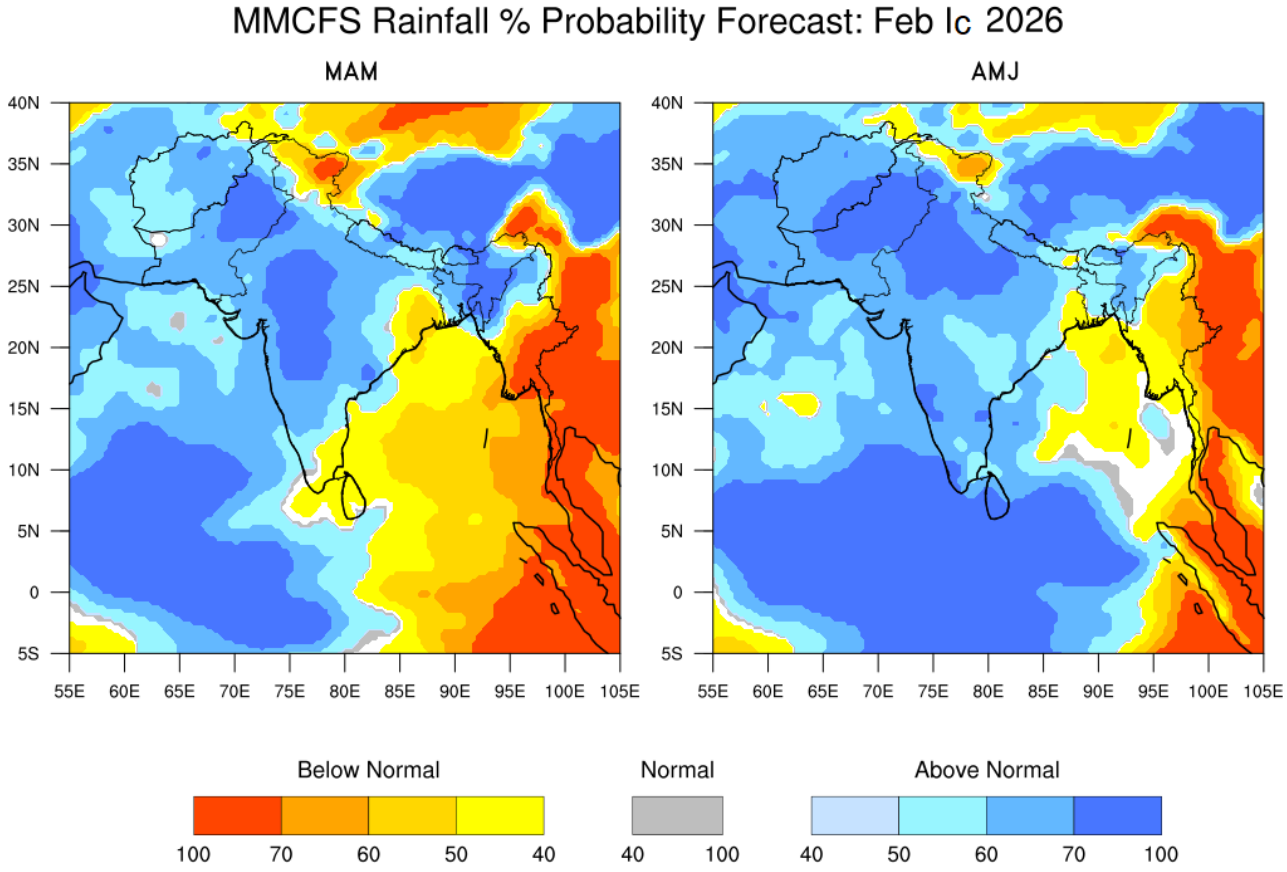

Fig.7: Seasonal probability (%) forecasts of precipitation for (a) MAM 2026 (left) and (b) AMJ 2026 (right) based on initial conditions of February 2026.The white color indicates climatological probability.

2.2. Temperature Probability Forecast*:*

The probability forecasts for temperature for the season March to May 2026 (MAM) and April to June 2026 (AMJ) are given in the Figures 8a and 8b respectively. The forecast is prepared based on the February initial conditions. Temperature probability forecast for MAM season indicates that enhanced probability of below normal temperatures is likely over most parts of South Asia except over some parts of extreme north and south east Asia where above normal temperatures are likely. The same for AMJ season indicate that enhanced probability of below normal temperatures is likely over most parts of South Asia except over some parts of western Peninsular India, extreme north, east, southeast and extreme south of South Asia where enhanced probability of above normal temperatures is likely.

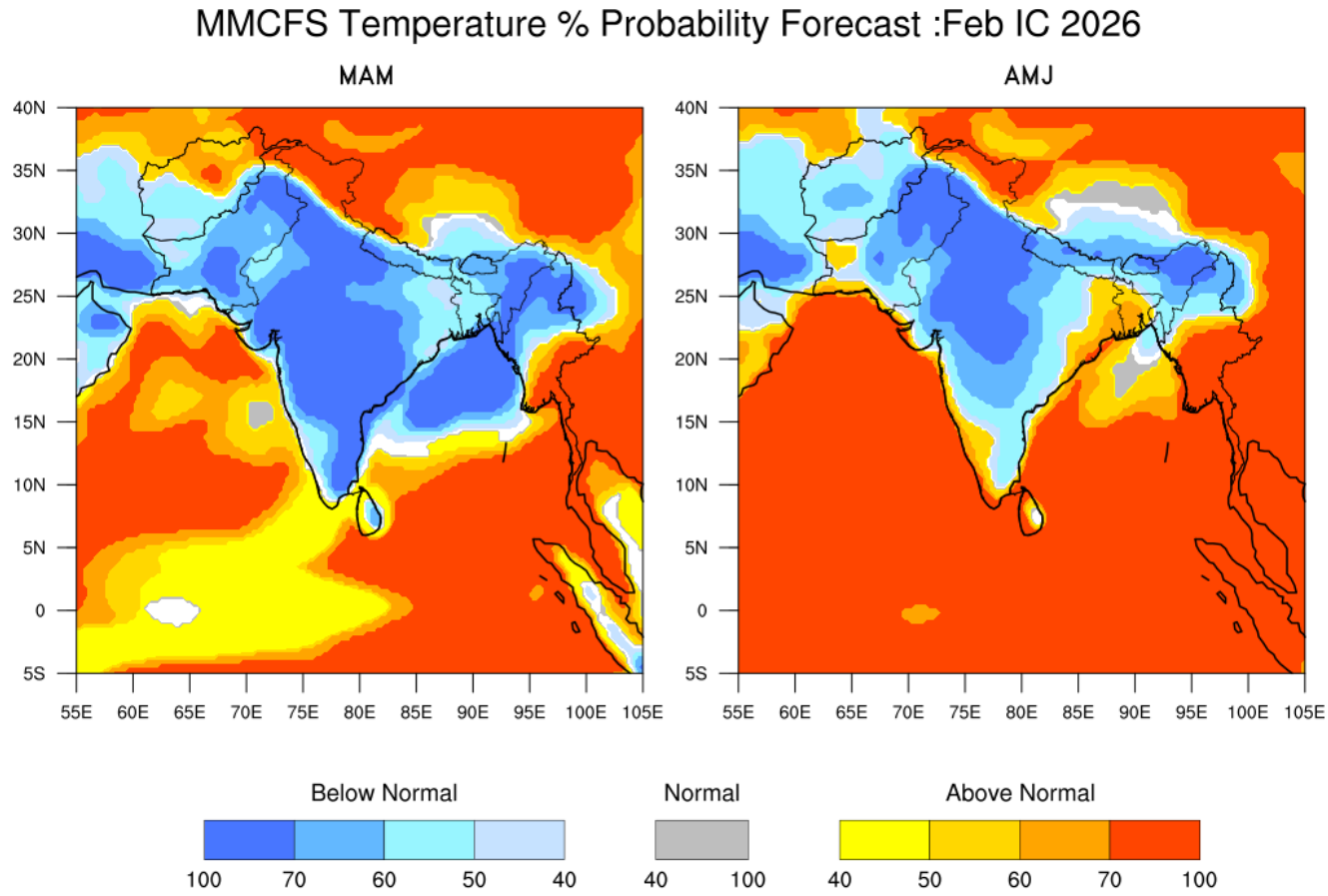

Fig. 8: Probability (%) forecast for the seasonal mean temperature for (a) MAM 2026 (left) and (b) AMJ 2026 (right) based on initial conditions of February 2026. The white color indicates climatological probability.

3. Forecast Outlook for the Country Averaged Monthly Precipitation and Temperature

The MMCFS model forecast for monthly precipitation and temperature for the next four months (from March to June 2026) averaged over the 9 south Asian countries viz., Afghanistan, Bangladesh, Bhutan, India, Maldives, Myanmar, Nepal, Pakistan and Sri Lanka were shown in the Figures 9. The monthly rainfall anomaly is expressed as percentage departure from Long Period Model Average (LPMA) and monthly temperature anomaly is expressed in degree Celsius.

In March, the country averaged monthly precipitation is likely to be normal to above normal for all countries except Maldives, Nepal and Sri Lanka where it is likely to be below normal. In April, the country averaged monthly precipitation is likely to be normal to above normal for all countries. In May, it is likely to be normal to above normal for all countries except Myanmar where it is likely to be below normal. In June, it is likely to be normal to above normal for all countries except Bangladesh where it is likely to be below normal.

The country averaged monthly temperatures during March is likely to be normal to above normal for all the countries except Maldives and Sri Lanka where it is likely to be below normal. In April, it is likely to be below normal to normal for all the countries. In May, it is likely to be below normal to normal for all the countries except Myanmar and Maldives where it is likely to be above normal. In June, the country averaged monthly temperature is likely to be normal to above normal for all countries.

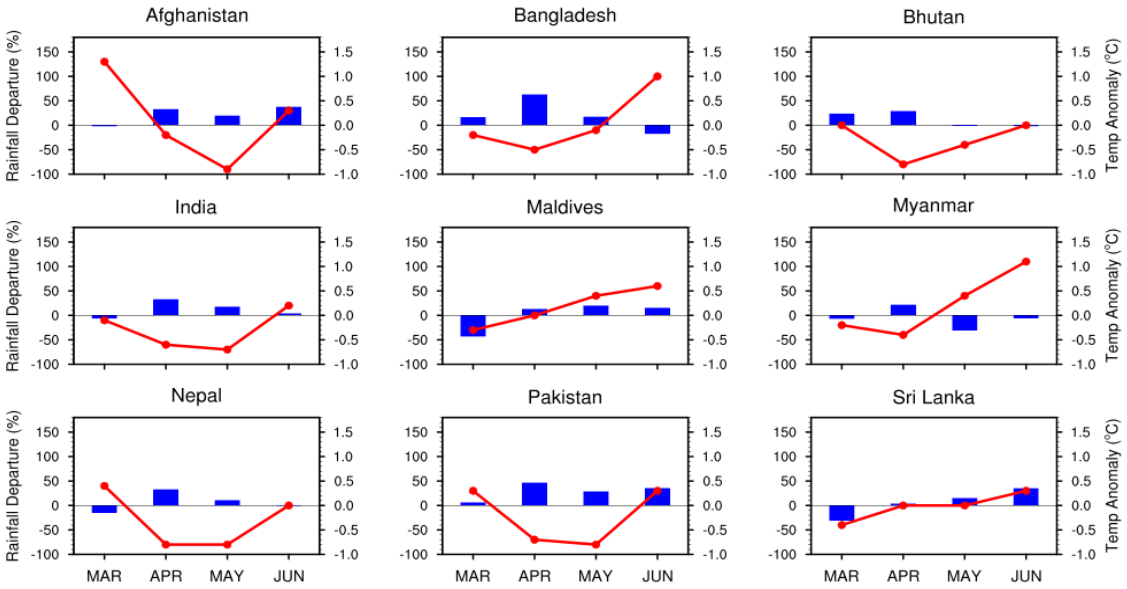

Fig. 9: Monthly country averaged rainfall forecast expressed as percentage departures (%) and monthly country averaged temperature anomaly (°C) forecast during March to June 2026. Here, the normal range for country averaged monthly precipitation is taken as -10% to +10% (Left Vertical Axis Scale for Precipitation indicated in blue shaded bars) and the normal range for country averaged monthly temperature is taken -0.25ºC to +0.25ºC (Right Vertical Axis Scale for Temperature indicated in red colored lines).