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SEASONAL CLIMATE OUTLOOK FOR SOUTH ASIA
(February to May 2026)

Highlights

- At present, weak La Niña conditions persisted, marked by sustained below normal sea surface temperatures across the east-central and eastern equatorial Pacific. The latest forecasts from the Monsoon Mission Climate Forecast System (MMCFS) indicate that the transition to ENSO-neutral is most likely in the February-April 2026 season and thereafter.

- 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 February to April season and thereafter.

- The probability forecast for precipitation for FMA season indicates that enhanced probability of below normal precipitation is likely over most parts of South Asia except over some parts of extreme northwest, north and northeast of South Asia. The same for MAM season indicates that enhanced probability of below normal rainfall is likely over most parts of South Asia except over some parts of plains along Himalayas, northeast and Western peninsular India.

- In February the country averaged monthly precipitation is likely to be normal to above normal for Afghanistan, Pakistan and Maldives and below normal for all the other countries. In March, the country averaged monthly precipitation is likely to be normal to above normal for all countries except Maldives, Myanmar and Sri Lanka where it is likely to be below normal. In April, it is likely to be normal to above normal for all countries except Maldives where it is likely to be below normal. In May it is likely to be normal to above normal for all countries.

- Temperature probability forecast for FMA season indicates that enhanced probability of above normal temperatures is likely over most parts of South Asia The same for MAM season indicate that enhanced probability of above normal temperatures is likely over most parts of South Asia except over some parts of north of peninsular India where enhanced probability of below normal temperatures is likely.

- The country averaged monthly temperatures during February to April is likely to be above normal for all countries. In May, the country averaged monthly temperature is likely to be above normal for all countries except Bhutan where it is likely to be below normal.

1.   Important Global Climate Factors

1.1   *Sea Surface Temperatures over the Pacific Ocean*

During January 2026, the continuation of cooler-than-average sea surface temperatures (SSTs) over the east-central and eastern equatorial Pacific indicated ongoing weak La Niña conditions. (Fig. 1a), while the western equatorial Pacific exhibited warmer SSTs relative to the eastern Pacific. The northern and southern extratropical Pacific also experienced warmer-than-normal SSTs. As compared to December 2025, warming of SST anomalies was observed over some parts of the equatorial Pacific Ocean (Fig.1b). Cooling of SST anomalies was observed over some parts of the north and west Pacific Ocean (Fig. 1b). At present, weak La Niña conditions persisted, marked by sustained below-normal sea surface temperatures across the east-central and eastern equatorial Pacific. The latest forecasts from the Monsoon Mission Climate Forecast System (MMCFS) indicate that the transition to ENSO-neutral is most likely in the February-April 2026 season and thereafter (Fig.2).

1.2   *Sea Surface Temperatures over Indian Ocean*

January 2026 featured mostly near-average SSTs in the tropical Atlantic and Indian Oceans (Fig. 1a) however, warmer SSTs occurred in the northern Arabian Sea and the northern Bay of Bengal. Compared with December 2025, cooler SSTs developed over most of the Indian Ocean. Positive SST anomalies were evident over the northern Arabian Sea, while negative SST anomalies prevailed 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 February to April season and thereafter.
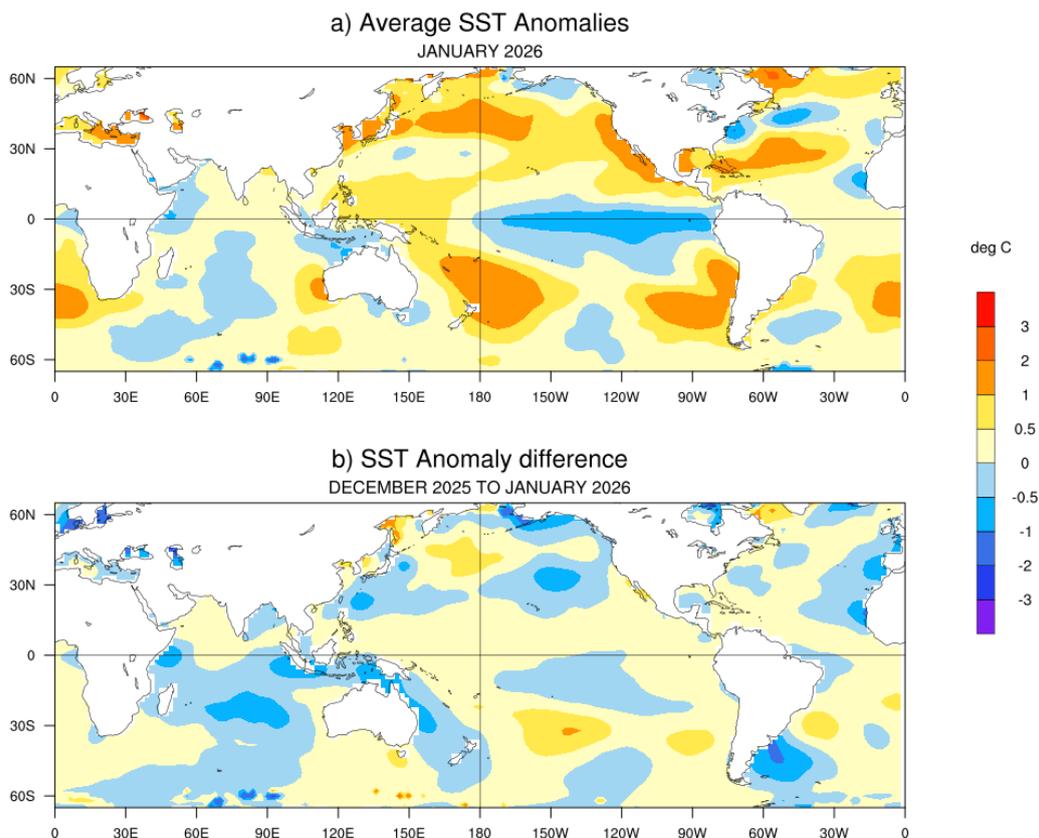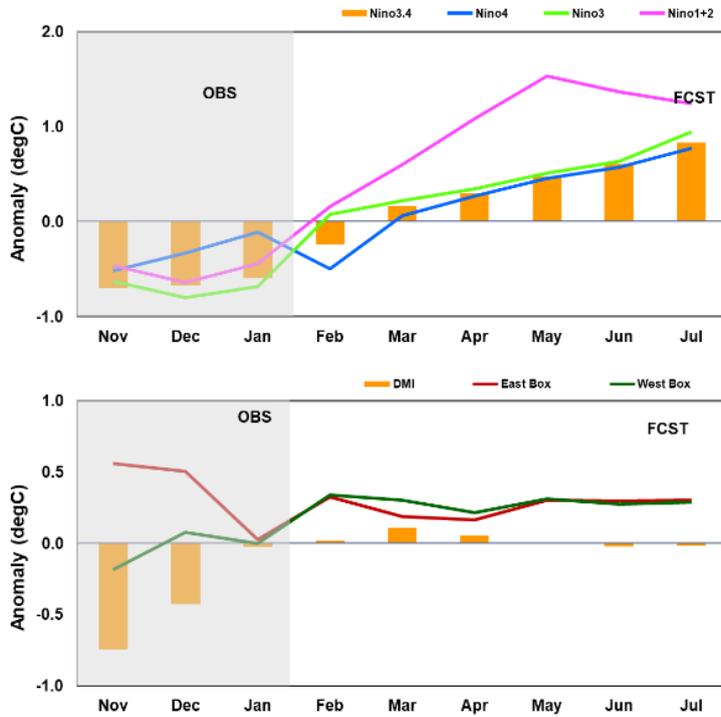

Fig.1: (a) Sea surface temperature (SST) anomalies (^{0}C) during January 2026 and (b) changes in the SST anomalies (^{0}C) from December 2025 to January 2026. SSTs are based on the ERSSTv5, from NOAA, and anomalies are computed with respect to 30-year (1991-2020) long term mean.

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 January 2026 is shown in (Fig.4). Negative OLR anomalies (enhanced convection, blue shading) were observed over northern tropical Pacific Ocean, western parts of southern tropical Pacific Ocean and the eastern Indian Ocean. Negative OLR anomalies were also observed over Maritime Continent, some parts of Southeast Africa and South America. Positive OLR anomalies (suppressed convection, orange/red shading) were observed over equatorial Indian Ocean, and Australia. Positive OLR anomalies were also observed over most parts of the tropical Pacific and northern parts of South Asia.
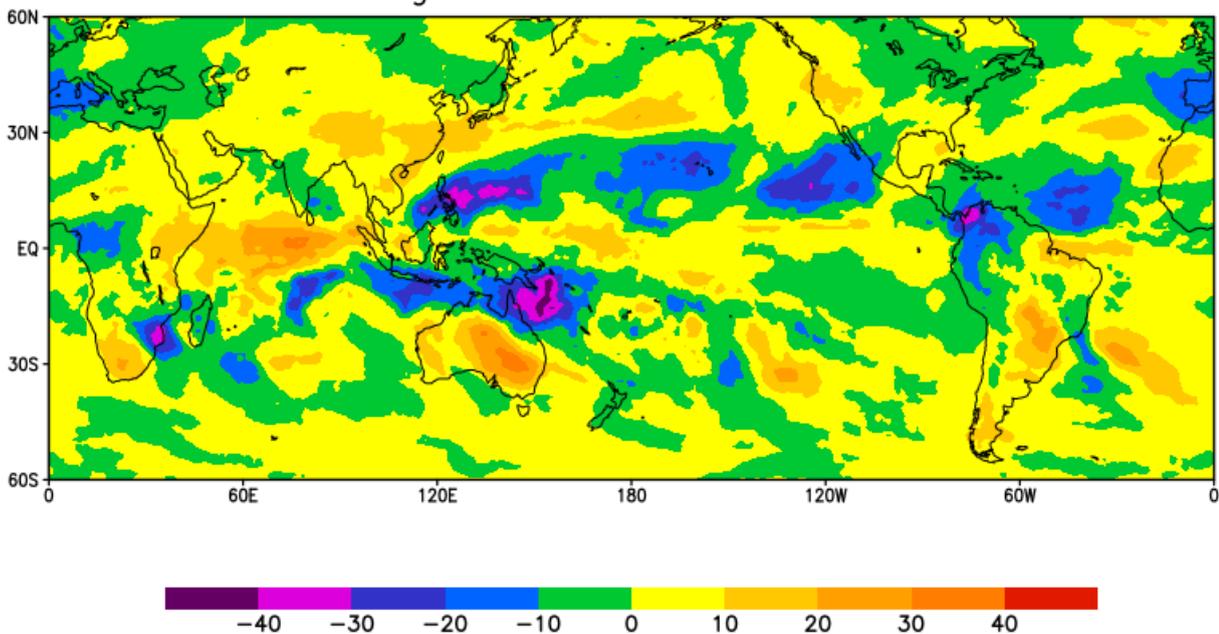

Fig.4: Outgoing Long Wave Radiation (OLR) Anomaly (W/m^2) for January 2026 (Data source: NCEP-NOAA)

## 1.4 Snow Cover Area over the Northern Hemisphere (NH)

During January 2026, the NH snow cover area (46.925 million Sq. km) was less than the 1991-2020 normal by 0.32 million Sq. km (Fig. 5). Eurasian Snow cover area (29.73 million Sq. km) was 0.9 million Sq. km more than the 1991-2020 normal. North America snow cover area of 17.19 million sq. km was less by 0.4 million Sq. Km with respect to 1991-2020 normal.
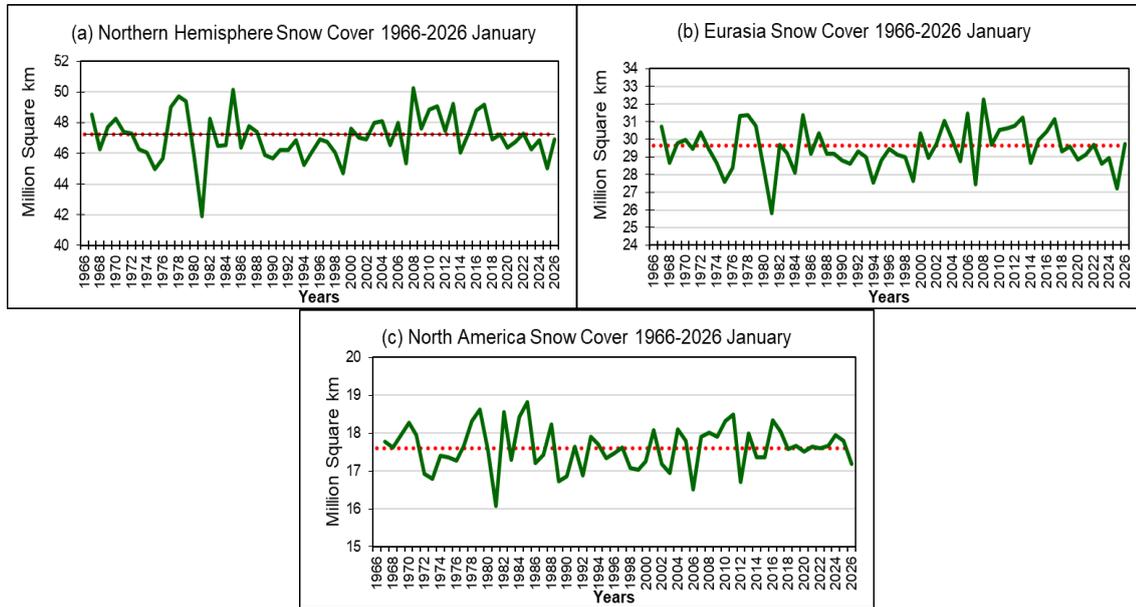
Fig.5. Snow cover area (million Sq. km) for the month of January during the period 1966-2026 (green solid lines) and normal value (1991-2020) (red dotted line) for (a) Northern Hemisphere (b) Eurasia and (c) North America. (Data Source: Rutgers University Snow Lab).

1.5. Madden Julian Oscillation (MJO)

During the first week of January 2026, MJO remained confined to the unit circle with amplitude < 1. During the next three weeks it moved from phase 6 to 7 (Western Pacific) with amplitude > 1. The MJO phase diagram illustrates the progression of the MJO through different phases, which generally coincide with locations along the equator around the globe.
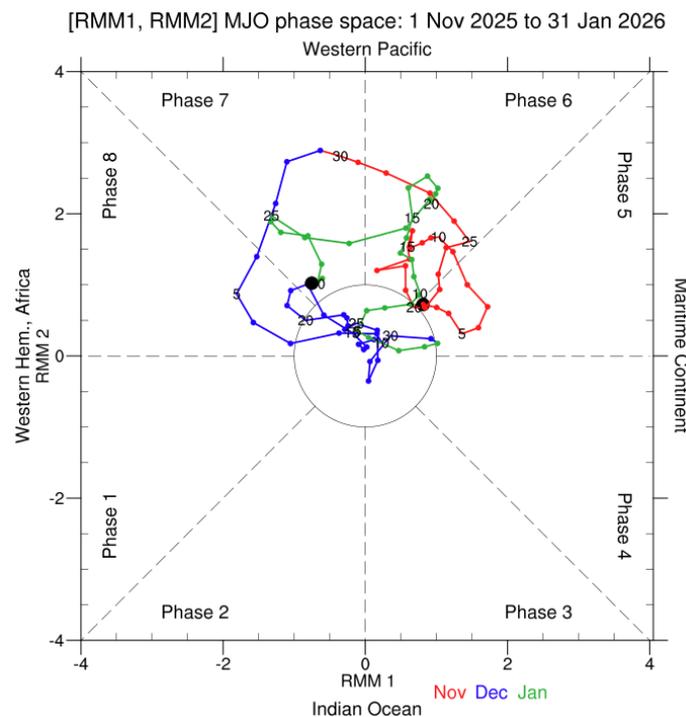

Fig.6. RMM phase diagram for Madden Julian Oscillation (MJO) for the period November 2025 to January 2026. (Data Source: http://www.bom.gov.au/climate/mjo/).

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 February to April 2026 (FMA) and March to May 2026 (MAM) are given in the Figures 7a and 7b respectively. The forecast is prepared based on the January initial conditions. The probability forecast for precipitation for FMA season indicates that enhanced probability of below normal precipitation is likely over most parts of South Asia except over some parts of extreme northwest, north and northeast of South Asia where enhanced probability of above normal precipitation is likely. The same for MAM season indicates that enhanced probability of below normal rainfall is likely over most parts of South Asia except over some parts of plains along Himalayas, northeast and Western peninsular India where enhanced probability of above normal precipitation is likely.
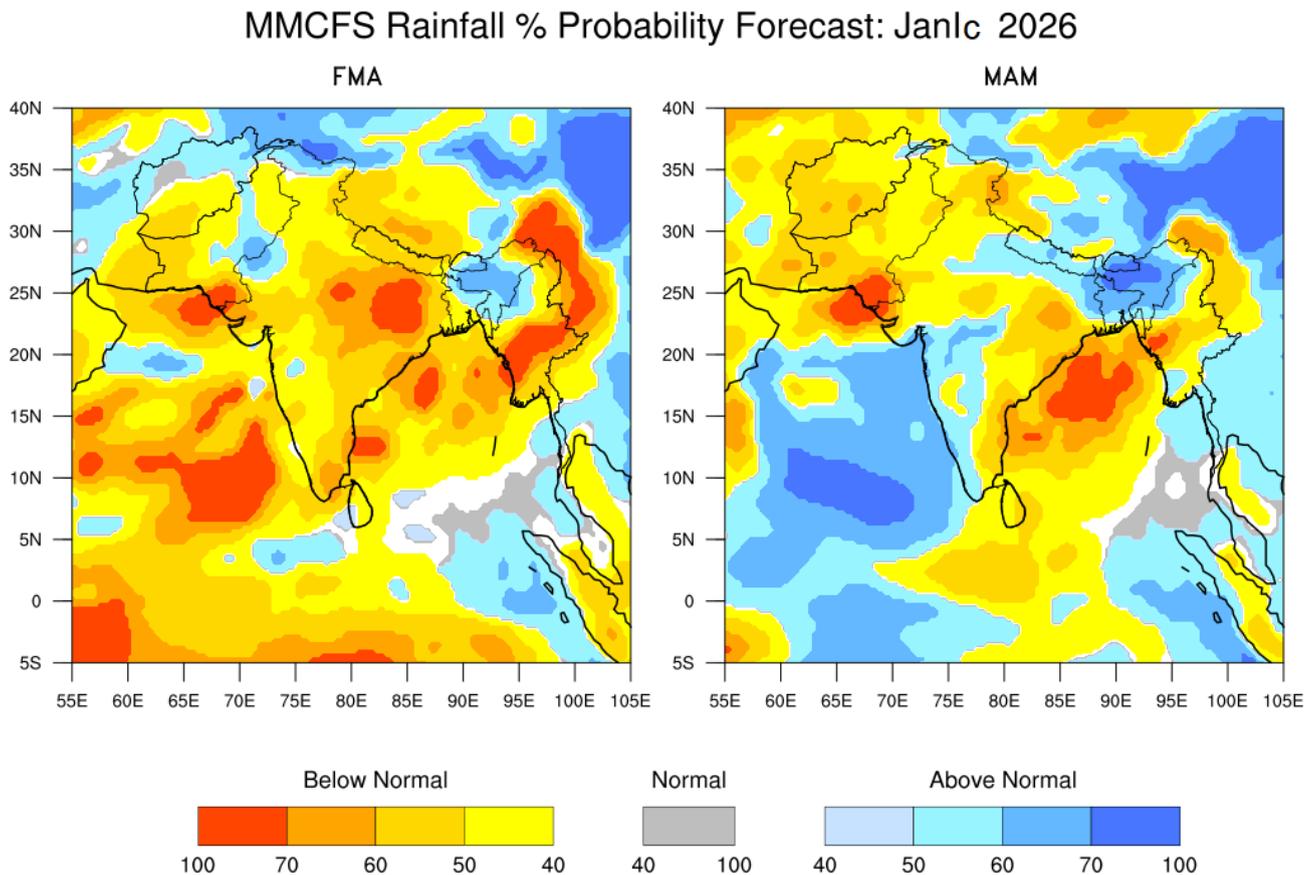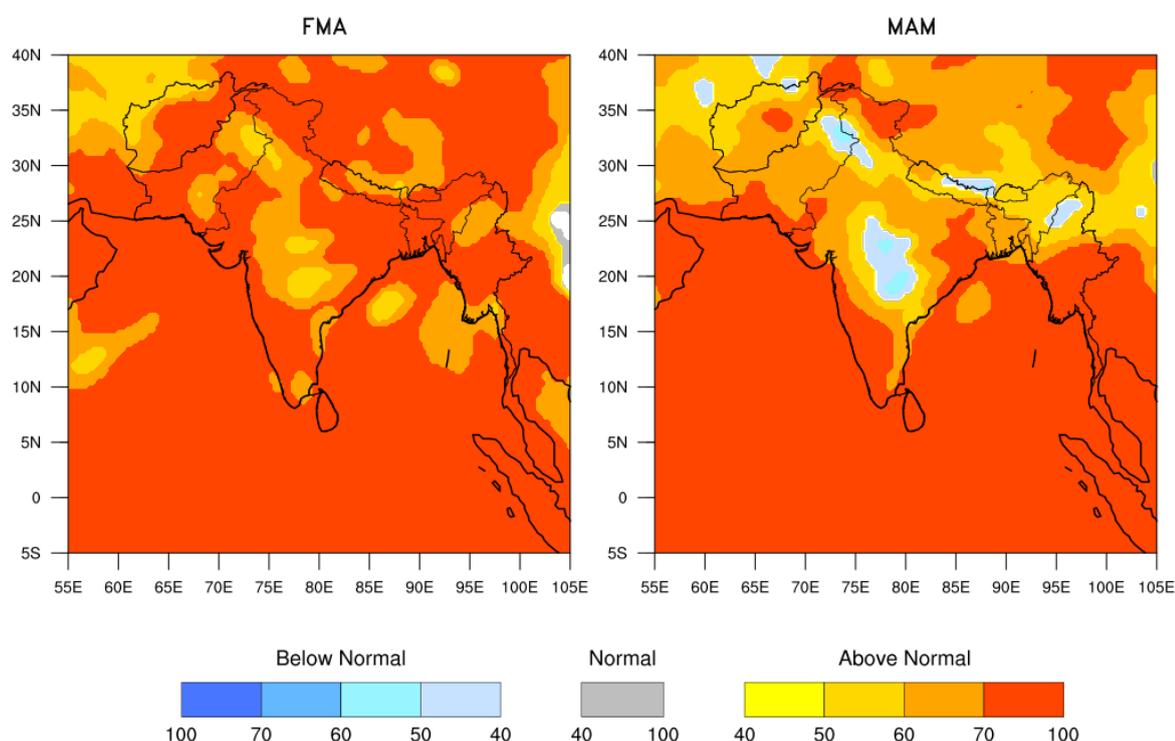

Fig.7: Seasonal probability (%) forecasts of precipitation for (a) FMA 2026 (left) and (b) MAM 2026 (right) based on initial conditions of January 2026.The white colour indicates climatological probability.

2.2.   Temperature Probability Forecast:

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

Fig. 8: Probability (%) forecast for the seasonal mean temperature for (a) FMA 2026 (left) and (b) MAM 2026 (right) based on initial conditions of January 2026. The white colour 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 February to May 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 February the country averaged monthly precipitation is likely to be normal to above normal for Afghanistan, Pakistan and Maldives and below normal for all the other countries. In March, the country averaged monthly precipitation is likely to be normal to above normal for all countries except Maldives, Myanmar and Sri Lanka where it is likely to be below normal. In April, it is likely to be normal to above normal for all countries except Maldives where it is likely to be below normal. In May it is likely to be normal to above normal for all countries.

The country averaged monthly temperatures during February to April is likely to be above normal for all countries. In May, the country averaged monthly temperature is likely to be above normal for all countries except Bhutan where it is likely to be below normal.
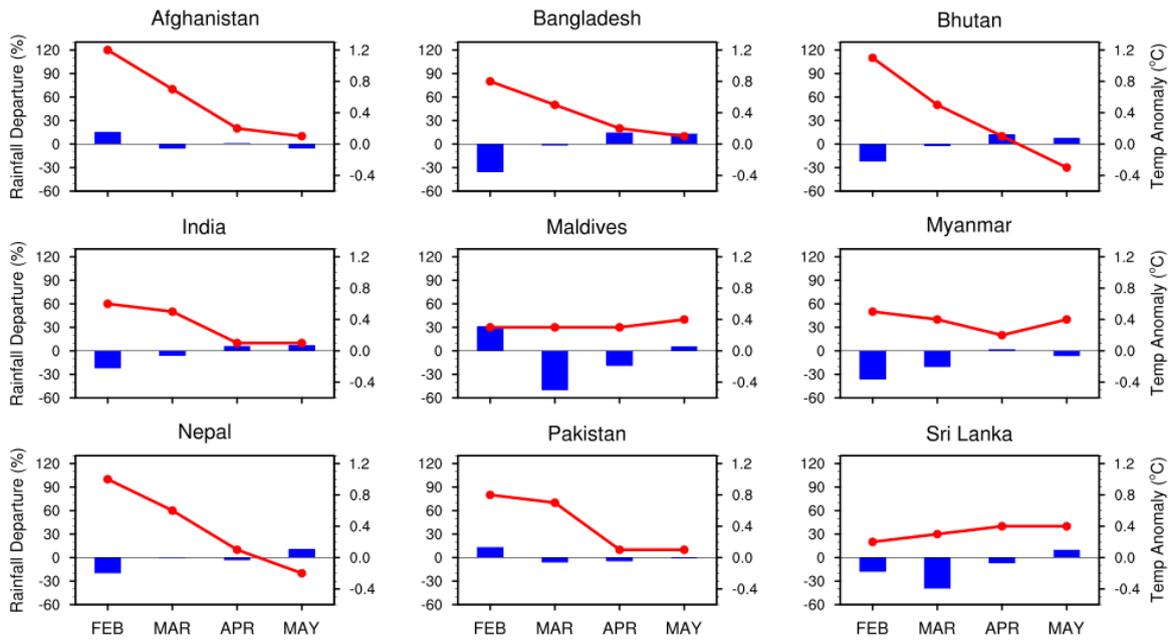
Fig. 9: Monthly country averaged rainfall forecast expressed as percentage departures (%) and monthly country averaged temperature anomaly (°C) forecast during February to May 2026. Here, the normal range for country averaged monthly precipitation is taken as -10% to +10% (Left Vertical Axis Scale for Precipitation indicated in blue shaded bars) and the normal range for country averaged monthly temperature is taken -0.25°C to +0.25°C (Right Vertical Axis Scale for Temperature indicated in red colored lines).