

Updated Long Range Forecast for the Southwest Monsoon Seasonal Rainfall during June–September, 2026 and Monthly Rainfall and Temperature Outlook for June 2026

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Highlights

- a) Quantitatively, the southwest monsoon seasonal rainfall over the country as a whole is likely to be **90% of the Long Period Average (LPA) with a model error of $\pm 4\%$, indicating that below normal rainfall is most likely** over the country as a whole during the monsoon season (June to September), 2026.
- b) The southwest monsoon seasonal (June to September, 2026) rainfall is most likely to be **normal over Northeast India (94-106% of LPA) and below normal over Central & South Peninsular India (<94% of LPA) and Northwest India (<92% of LPA).**
- c) The southwest monsoon seasonal rainfall over the **Monsoon Core Zone (MCZ)** consisting of most of the rainfed agriculture areas in the country is most likely to be **below normal (<94% of LPA).**
- d) During June to September 2026, below-normal seasonal rainfall is most likely over most parts of the country, except some areas over Northwest and northeast India, eastern parts of south peninsula and adjoining areas of east-central India and isolated pockets of East India, where normal to above normal rainfall is likely.
- e) The average **rainfall** for the country as a whole during June 2026 is most likely to be **below normal(<92% of LPA).**
- f) During June 2026, below normal monthly rainfall is very likely over most parts of the country, except over some parts of Northwest India, Northeast India and south Peninsula and isolated pockets of central India where normal to above normal rainfall is likely.
- g) In June 2026, above normal monthly maximum temperatures are likely over most parts of the country, except some parts of Central, Northwest and East India, where normal to below normal maximum temperatures are very likely. Above-normal monthly minimum temperatures are likely across most parts of the country, except some parts of Northwest, Central and adjoining south Peninsular India where, where normal to below-normal minimum temperatures are very likely.

- h) During June 2026, above normal heat wave days are expected over many parts of Uttar Pradesh, Haryana, Punjab, Bihar, Odisha, Chhattisgarh, Gujarat and Andhra Pradesh and isolated regions of Maharashtra, Telangana, Himachal Pradesh, and Tamil Nadu. However, below-normal heatwave days are likely over Rajasthan and Jharkhand.
- i) Currently, neutral El Nino-Southern Oscillation (ENSO) conditions are transitioning towards El Nino conditions over the equatorial Pacific region. The latest climate model forecasts indicate that the **El Nino conditions are likely to develop during the southwest monsoon season.**
- j) At present, neutral Indian Ocean Dipole (IOD) conditions are observed over the Indian Ocean. The latest MMCFS forecast indicates that neutral IOD conditions are likely to continue during the monsoon season.
- IMD will issue the forecast for the July rainfall in the last week of June 2026.**

1. Background

Since 2021, the India Meteorological Department (IMD) has been using a new strategy for issuing operational long range forecasts on a monthly and seasonal scales for rainfall and temperatures across the country. For this, a newly developed Multi-Model Ensemble (MME) forecasting system is used. The MME system utilizes simulations from the coupled global climate models (CGCMs) sourced from various global climate prediction and research centers, including IMD's Monsoon Mission Climate Forecasting System (MMCFS) model.

On 13th April, 2026, the IMD has issued the first-stage forecast for the 2026 southwest monsoon seasonal (June to September) rainfall, consisting of quantitative and probabilistic forecasts for the country as a whole, and the spatial distribution of probabilistic forecasts for the tercile categories (above normal, normal, and below normal) of the seasonal (June-September) rainfall. As a part of the second stage forecasts, the IMD has prepared the following forecasts:

- Updated quantitative and probabilistic forecasts for the monsoon seasonal(June-September) rainfall over the country as a whole during 2026 and spatial distribution of the probabilistic forecasts for the seasonal rainfall over the country.
- Probabilistic forecasts for the seasonal rainfall over the four homogenous regions of India (northwest India, central India, south Peninsula, and northeast India) and the monsoon core zone (MCZ) consisting of most of the rainfed agriculture areas of the country.
- Probabilistic forecast for the rainfall over the country as a whole and spatial distribution of the probabilistic forecasts for the rainfall over the country during June, 2026.
- Spatial distribution of the probabilistic forecasts of Temperatures (Maximum and Minimum) and Outlook for Heatwaves over the country for the month of June 2026.

2. Sea Surface Temperature (SST) over the equatorial Pacific & Indian Oceans

Currently, neutral El Niño-Southern Oscillation (ENSO) conditions are transitioning towards El Niño conditions over the equatorial Pacific region. The latest MMCFS as well as other climate model forecasts indicate that the El Niño conditions are likely to develop during the southwest monsoon season.

At present, neutral Indian Ocean Dipole (IOD) conditions are observed over the Indian Ocean. The latest MMCFS forecast indicates that neutral IOD conditions are likely to continue during the monsoon season.

3. Second Stage Forecasts for the 2026 Southwest Monsoon Rainfall

3a. Updated Forecast for the Rainfall over the Country as a whole during Monsoon Season, 2026

Quantitatively, the monsoon seasonal (June-September) rainfall for the country as a whole during 2026 is likely to be 90% of the Long Period Average (LPA) with a model error of $\pm 4\%$. The LPA of the seasonal rainfall over the country as a whole based on data of 1971-2020 is 87 cm.

The five category probability forecasts for the Seasonal (June to September) rainfall over the country as a whole during 2026 are given below. It suggests 84% probability for below normal or less rainfall for the country as a whole.

Table 1. Five category probability forecasts for the Seasonal (June to September) rainfall over the country as a whole during 2026

Category	Rainfall Range (% of LPA)	Forecast Probability (%)	Climatological Probability (%)
Deficient	< 90	60	16
Below Normal	> 90 - 95	24	17
Normal	96 -104	14	33
Above Normal	> 105 -110	2	16
Excess	> 110	0	17

3.b.Updated Forecast for the Spatial Distribution of Rainfall over the Country during monsoon season, 2026

The spatial distribution of probabilistic forecasts for tercile categories (above normal, normal, and below normal) of seasonal rainfall (June to September, 2026) is depicted in **Fig. 1**.

It indicates that below-normal seasonal rainfall is most likely over most parts of the country, except some areas over Northwest & Northeast India, eastern parts of peninsular India and adjoining areas of east-central India and isolated pockets of East India, where normal to above normal rainfall is likely. There is no signal by the model over the white shaded areas within the land region of the country.

Below-normal rainfall may lead to challenges for agriculture, water availability, hydropower generation, and ecosystem sustainability, along with increased risks of drought, heat stress, and pressure on drinking water resources. To minimize these impacts, strategies can include efficient water resource management, promotion of water conservation practices, contingency planning for agriculture, strengthening drought monitoring and use of early warning services of IMD, and enhancing preparedness measures in sectors that are particularly vulnerable to rainfall deficits.

3c.Forecast for the Monsoon Rainfall over the four Homogenous regions of the country and Monsoon Core Zone (MCZ) during Monsoon Season, 2026

The tercile category forecasts for the four broad homogenous regions and MCZ for the monsoon seasonal (June-September) rainfall during 2026 are given in Table 2 below. Tercile categories have equal climatological probabilities of 33.33% of LPA each. The geographical areas of different homogeneous regions are shown in **Fig.2**.

Table 2. Forecasts for the four broad homogenous regions and MCZ for the monsoon seasonal (June-September) rainfall during 2026

Rainfall Category	NW India		Central India		South Penins	
	Range (% of LPA)	Forecast Probability (%)	Range (% of LPA)	Forecast Probability (%)	Range (% of LPA)	Fo
Below Normal	<92	46	<94	43	<94	45
Normal	92-108	33	94-106	33	94-106	34
Above Normal	>108	21	>106	24	>106	21
Rainfall Category	Northeast India			Monsoon Core Zone (MCZ)		
	Range (% of LPA)	Forecast Probability (%)		Range (% of LPA)	Fo Prc (%)	
Below Normal	<94	33		<94	43	
Normal	94-106	35		94-106	33	
Above Normal	>106	32		>106	24	

4. Probabilistic Forecast for the Rainfall over the Country during June, 2026

The average rainfall for the country as a whole during June, 2026 is **most likely to be below normal (<92% of the Long Period Average (LPA))**. The LPA of the rainfall over the country as a whole during June 2026 based on the data of 1971-2020 is 165.4 cm.

The spatial distribution of probabilistic forecasts for tercile categories (above normal, normal, and below normal) for rainfall during June, 2026 is displayed in **Fig. 3**. Below normal monthly rainfall is very likely over most parts of the country, except over some parts of Northwest and Northeast India, and many parts of south Peninsula and isolated areas of central India where normal to above normal rainfall is likely. There is no signal indicated by the model over the white shaded areas within the land region of the country.

5. Probabilistic Forecast for the Temperatures over the Country during June, 2026

Figures 4a and 4b display the forecasted probabilities of maximum and minimum temperatures, respectively, during June 2026.

In June 2026, above normal monthly maximum temperatures are likely over most parts of the country, except some parts of the Central, Northwest and East India, where normal to below normal maximum temperatures are very likely (**Fig. 4a**).

During June 2026, above-normal monthly minimum temperatures are likely across most parts of the country, except some parts of Northwest, Central and adjoining south Peninsular India where normal to below-normal minimum temperatures are very likely (**Fig. 4b**).

6. Heat Wave outlook for the Month of June 2026

The anomaly (deviation from the normal) forecast for the number of heatwave days in the country for June 2026 is shown in **Fig. 5**. During June 2026, above normal heat wave days are expected over many parts of Uttar Pradesh, Haryana, Punjab, Bihar, Odisha, Chhattisgarh, Gujarat and Andhra Pradesh and isolated regions of Maharashtra, Telangana, Himachal Pradesh, and Tamil Nadu. However, below-normal heat wave days are likely over Rajasthan and Jharkhand.

The increased likelihood of heatwave conditions during the June 2026 may have considerable impacts on public health, water availability, power consumption, and essential services. Vulnerable groups, including the elderly, children, outdoor workers, and persons with pre-existing health conditions, are particularly at risk from prolonged exposure to extreme heat. Persistent high temperatures may also place additional stress on infrastructure and resource management systems. In view of the anticipated conditions, State Governments and district administrations are advised to undertake necessary preparedness measures, including ensuring the operational readiness of cooling shelters, availability of safe drinking water, and enhanced health surveillance and emergency response mechanisms. The India Meteorological Department

regularly issues weekly and extended-range forecasts, along with Early Warnings and Impact-Based Forecasts (IBF), indicating the probable intensity and spatial distribution of heatwave conditions to facilitate timely preparedness and response planning. The public is advised to stay informed about official forecasts and warnings, and to follow

precautionary measures such as maintaining adequate hydration, minimising exposure during the peak afternoon hours, and taking special care of vulnerable individuals throughout the heatwave season.

7. Extended Range Forecast and short to medium range forecasting services

IMD also regularly prepares and provides extended range forecasts (7-day averaged forecasts for the next four weeks) for rainfall, maximum temperatures, and minimum temperatures over the country. These forecasts are updated every week on Thursday. These forecasts are based on the Multi-model Ensemble Dynamical Extended Range Forecasting System, which is currently operational at IMD. The forecasts are available through IMD website https://mausam.imd.gov.in/imd_latest/contents/extendedrangeforecast.php).

The extended range forecast is followed by short to medium range forecasts issued daily based on various very high resolution Global and Regional Models. The forecasts are available through IMD website https://nwp.imd.gov.in/gfsproducts_cycle00_mausam.php.

Tercile probability rainfall forecast for 2026 southwest monsoon season

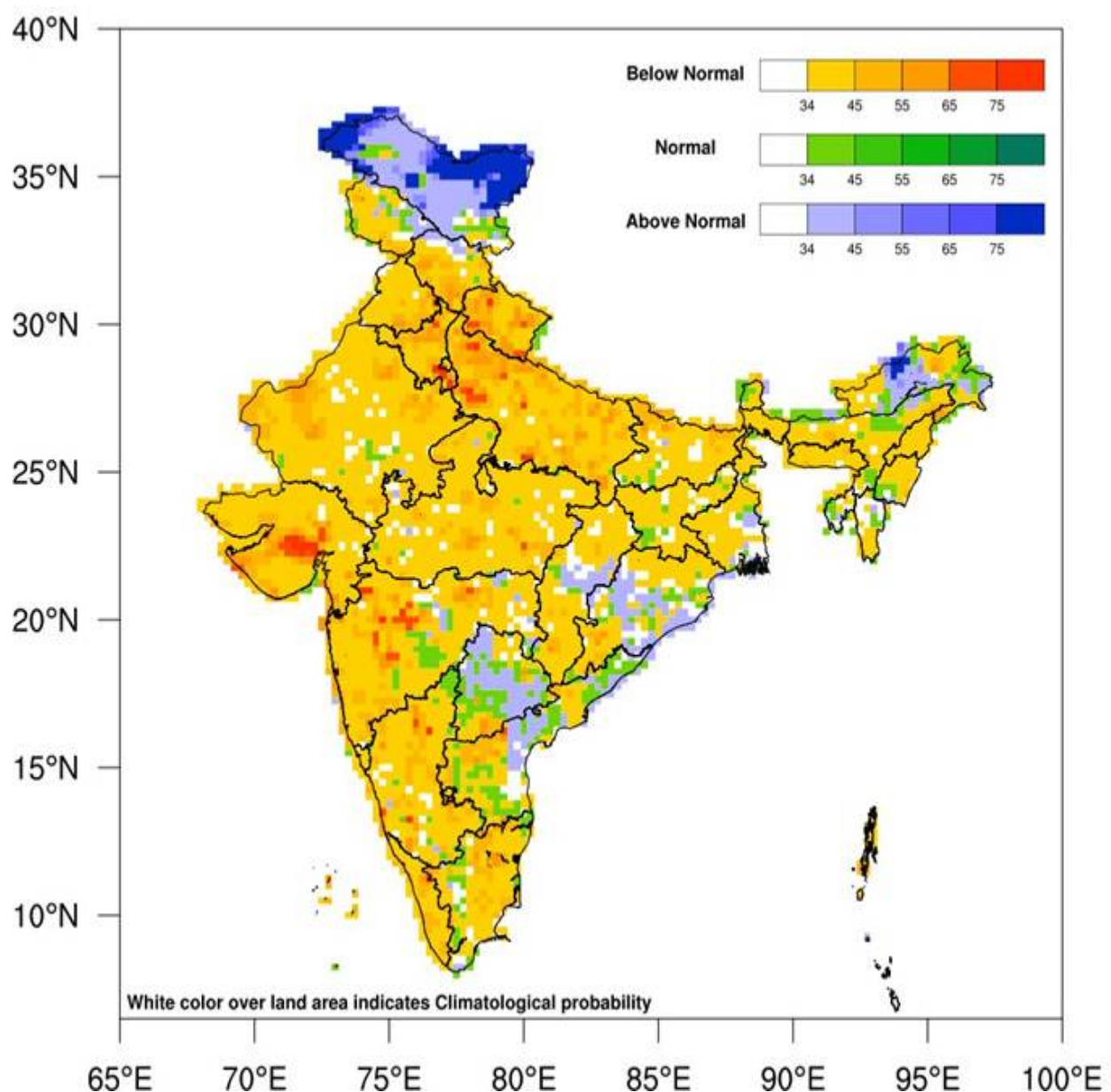


Fig.1. Updated Probability forecast of tercile categories* (below normal, normal, and above normal) of rainfall over India during southwest monsoon season (June-September), 2026. The figure illustrates the most likely categories as well as their

probabilities. The white shaded areas within the land region represent no signal from the model.

(*Tercile categories have equal climatological probabilities, of 33.33% each).

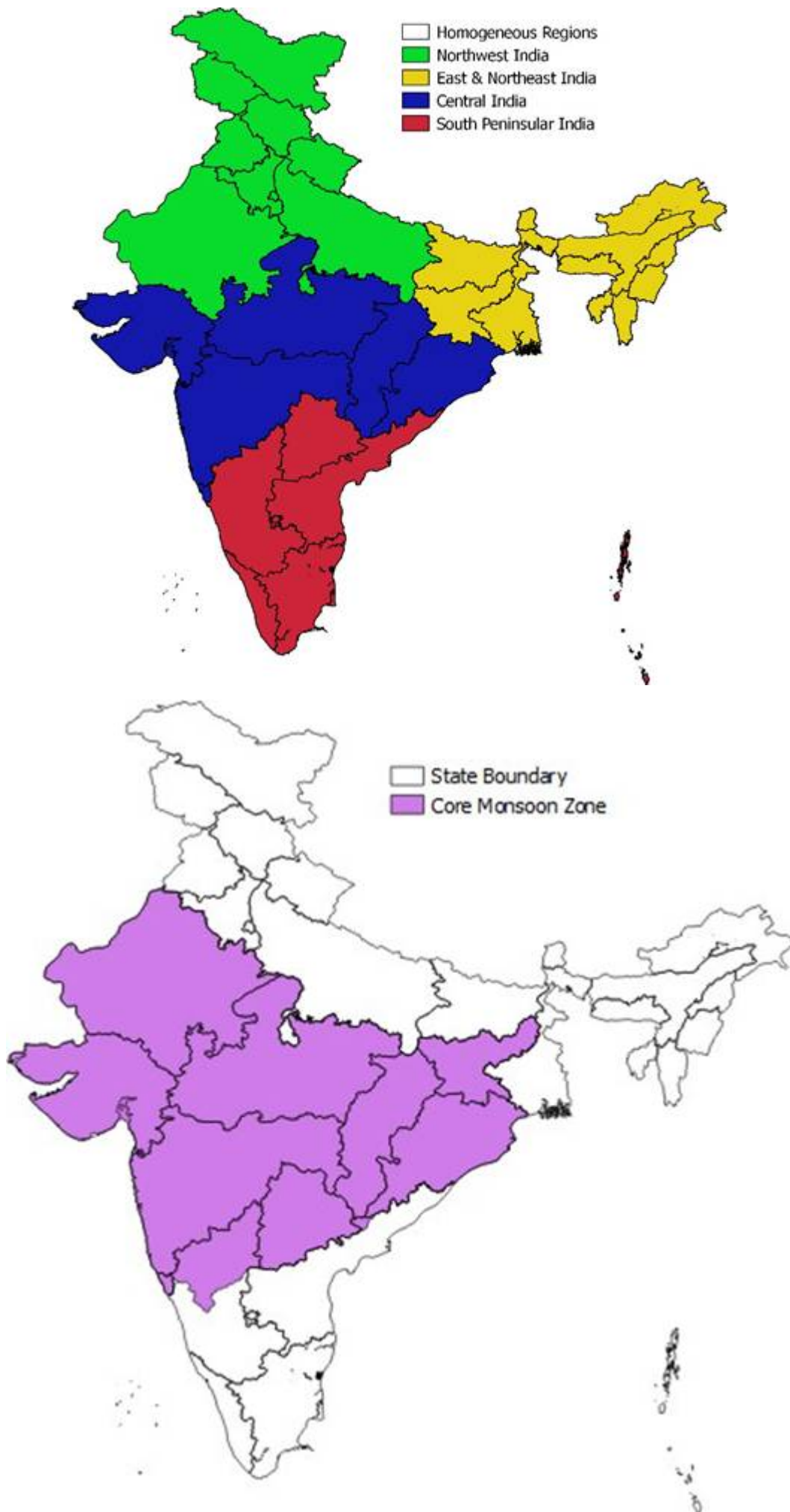


Fig.2. Four broad homogeneous regions of India and Core Monsoon Zone of the country considered for monsoon rainfall forecast

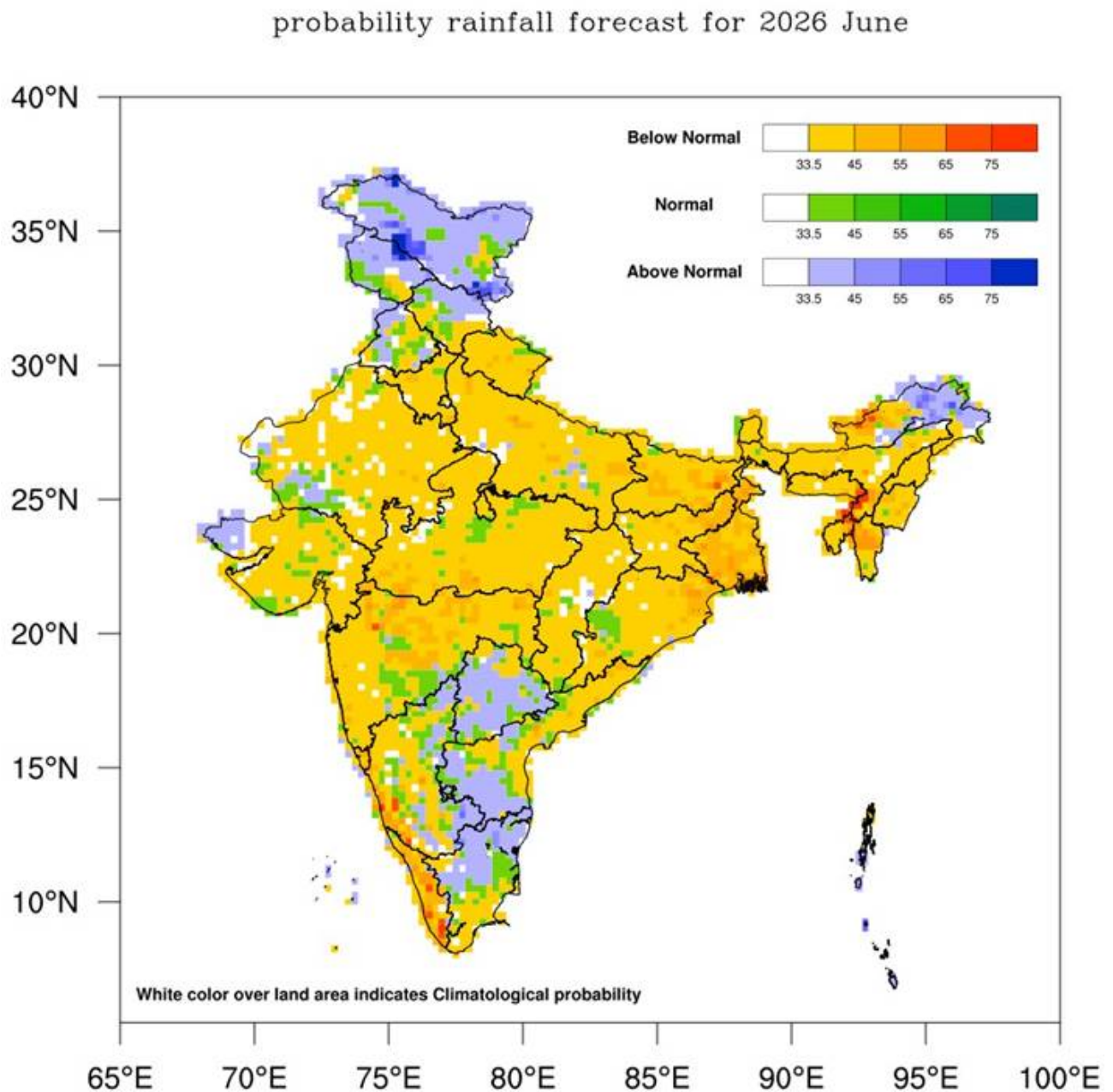


Fig.3. Probability forecast of tercile categories* (below normal, normal, and above normal) for the 2026 June rainfall over India. The figure illustrates the most likely categories as well as their probabilities. The white shaded areas within the land region represent no signal from the model.

(*Tercile categories have equal climatological probabilities, of 33.33% each).

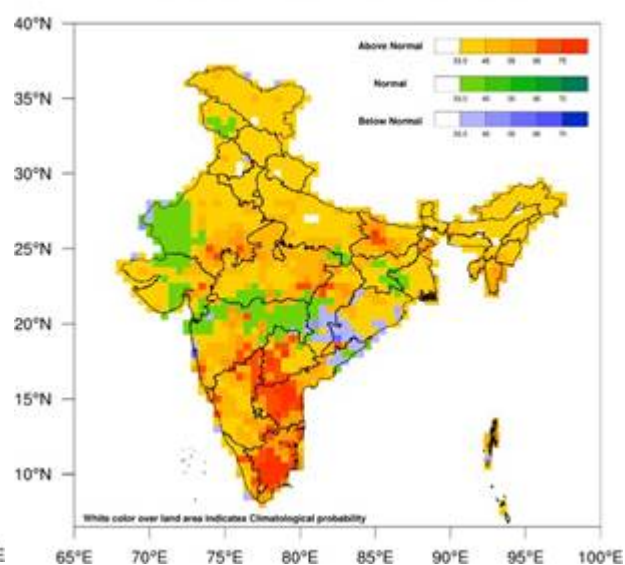
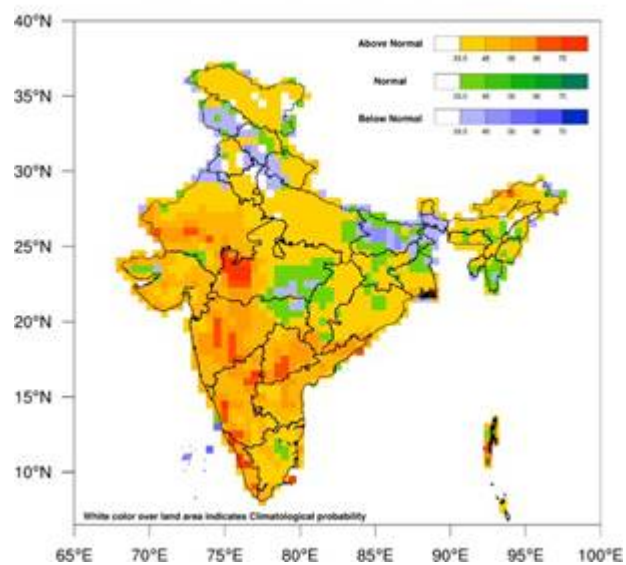


Fig.4a. Probability forecast of Maximum Temperature for June 2026.

Fig.4b. Probability forecast of Minimum Temperature for June 2026.

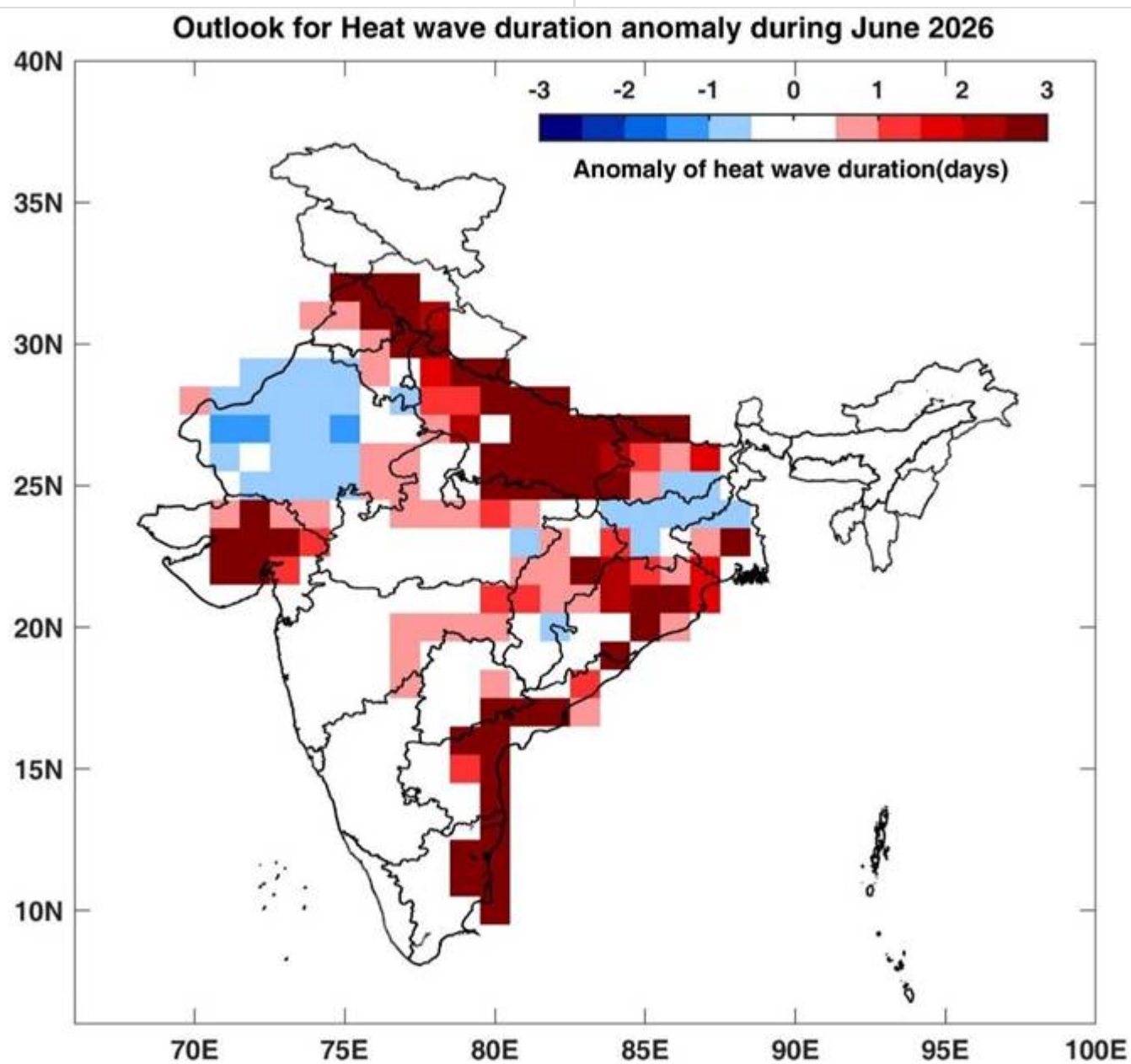


Fig.5. Probability forecast of heatwave days during June 2026.





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