



भारत सरकार
Government of India
पृथ्वी विज्ञान मंत्रालय (एम. ओ. ई. एस.)
Ministry of Earth Sciences (MoES)



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

Monthly Outlook for Rainfall and Temperature during July 2025

Highlights

- a) **Rainfall over India** – Monthly average rainfall over the country as a whole in July 2025 is most likely to be above normal, exceeding 106% of the Long Period Average (LPA). Geographically, most parts of the country are likely to experience normal to above-normal rainfall. However, most parts of Northeast & East India, and many areas of extreme South Peninsular India and some areas of Northwest India, are likely to receive below-normal rainfall.
- b) **Surface Air Temperature over India** – In July 2025, monthly average maximum temperatures are expected to remain normal to below normal in many regions, except northeast India and some areas of the northwest, east and southern peninsula, where they are likely to be above normal. Monthly minimum temperatures are expected to be normal to below normal over many parts of the country. However, above-normal minimum temperatures are likely over northeast India, many parts of southern peninsular India and some parts of northwest, east and central India.
- c) **Sea Surface Temperature (SST)** - Neutral El Niño–Southern Oscillation (ENSO) conditions currently prevail over the equatorial Pacific Ocean. Forecasts from the latest Monsoon Mission Climate Forecast System (MMCFS) and other climate models suggest that these neutral conditions will likely to persist till the end of the monsoon season. Currently, neutral Indian Ocean Dipole (IOD) conditions are being observed over the Indian Ocean. The model forecast indicates a possible transition to negative IOD conditions during the coming months.

IMD will issue the forecast for the rainfall during the second half of the season (August + September 2025) and for the month of August towards the end of July 2025.

1. Background

Since 2021, IMD has been issuing monthly and seasonal forecasts for the southwest monsoon rainfall over the country based on the Multi-Model Ensemble (MME) forecasting system. The MME approach uses the coupled global climate models (CGCMs) from different global climate prediction and research centers including IMD's Monsoon Mission Climate Forecasting System (MMCFs) model.

IMD had issued the first stage forecast for the 2025 southwest monsoon seasonal (June to September) rainfall over the country on 15th April and update for the forecast on 27th May 2025. In addition, IMD also issued the forecast for rainfall during June on 27th May, 2025. The Monthly Outlook for Rainfall and Temperature over the country during July 2025 is given below.

2. Probabilistic Forecast of the Rainfall during July 2025

Monthly rainfall over the country as a whole during July 2025 is most likely to be above normal (>106 % of long period average (LPA)). The LPA of rainfall over the country as a whole during July based on data from 1971-2020 is about 280.4 mm.

The probabilistic forecast for the spatial distribution of tercile rainfall categories (above normal, normal and below normal) over the country for July 2025 is shown in Fig.1. Monthly average rainfall over the country as a whole in July 2025 is most likely to be above normal, exceeding 106% of the Long Period Average (LPA). The most parts of the country are likely to experience normal to above-normal rainfall. However, most parts of Northeast & East India, many areas of extreme South Peninsular India and some areas of Northwest India, are likely to receive below-normal rainfall. There is no signal by the model over the white shaded areas within the land region of the country.

Above-normal rainfall can significantly benefit agriculture and water resources but also brings potential risks such as flooding, landslides, surface transport disruptions, public health challenges, and ecosystem damage. To manage these risks effectively, it is essential to reinforce infrastructure, utilize IMD's early warnings, enhance surveillance and conservation efforts, and establish robust response systems in vulnerable sectors.

3. Probabilistic Forecast of Temperature for July 2025

Fig.2 and Fig.3 show forecast probabilities of the maximum and minimum temperatures respectively for July 2025. During July 2025, monthly average maximum temperatures are expected to remain normal to below normal in many regions, except northeast India and some areas of the northwest, east and southern peninsula, where they are likely to be above normal. There is no signal by the model over the white shaded areas within the land region of the country.

In July 2025, the monthly average minimum temperatures are expected to be normal to below normal over many parts of the country. However, above-normal minimum temperatures are likely over northeast India, many parts of southern peninsular India and some parts of northwest, east and central India (Fig.3). There is no signal by the model over the white shaded areas within the land region of the country.

4. SST conditions in the Pacific and the Indian Oceans

Neutral El Niño–Southern Oscillation (ENSO) conditions currently prevail over the equatorial Pacific Ocean. Forecasts from the latest Monsoon Mission Climate Forecast System (MMCFS) and other climate models suggest that these neutral conditions will likely to persist till the end of the monsoon season.

Currently, neutral Indian Ocean Dipole (IOD) conditions are being observed over the Indian Ocean. The model forecast indicates a possible transition to negative IOD conditions during the coming months.

5. Extended Range Forecast and Short to Medium Range Forecasting Services

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

The extended range forecast is followed by a short to medium range forecast issued daily by IMD. The forecasts are available through the IMD website https://nwp.imd.gov.in/gfsproducts_cycle00_mausam.php.

probability rainfall forecast for 2025 July

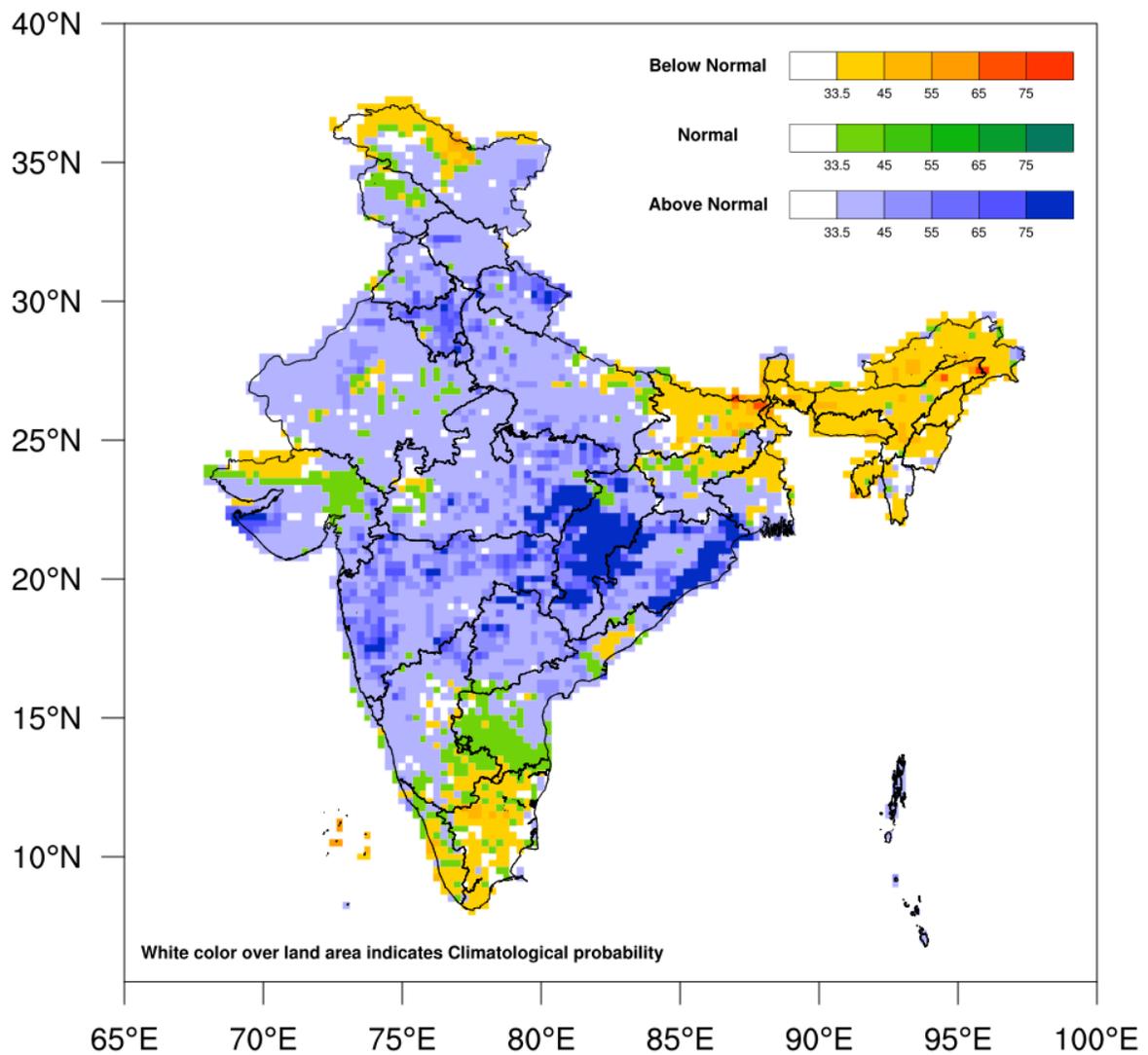


Fig.1. Probability forecast of tercile categories* (below normal, normal, and above normal) of rainfall over India during July 2025. There is no signal by the model over the white shaded areas within the land region of the country. *Tercile categories have equal climatological probabilities, of 33.33% each.

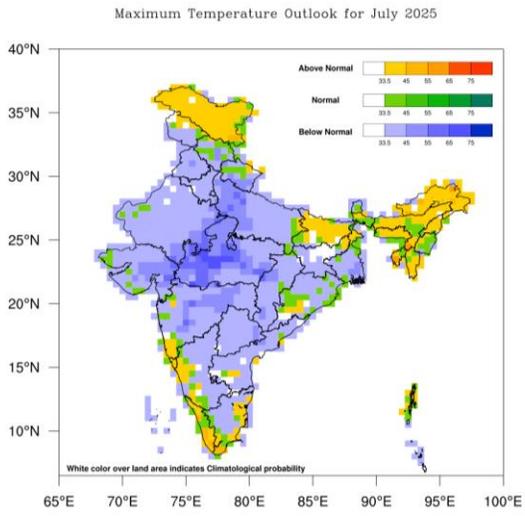


Fig.2. Probability forecast of Maximum Temperature for July 2025.

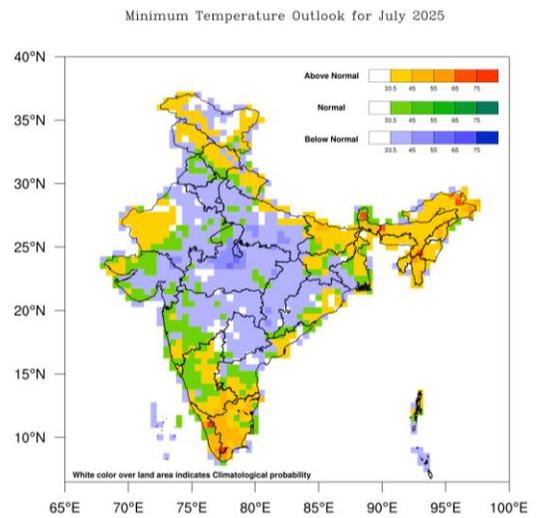


Fig.3. Probability forecast of Minimum Temperature for July 2025.