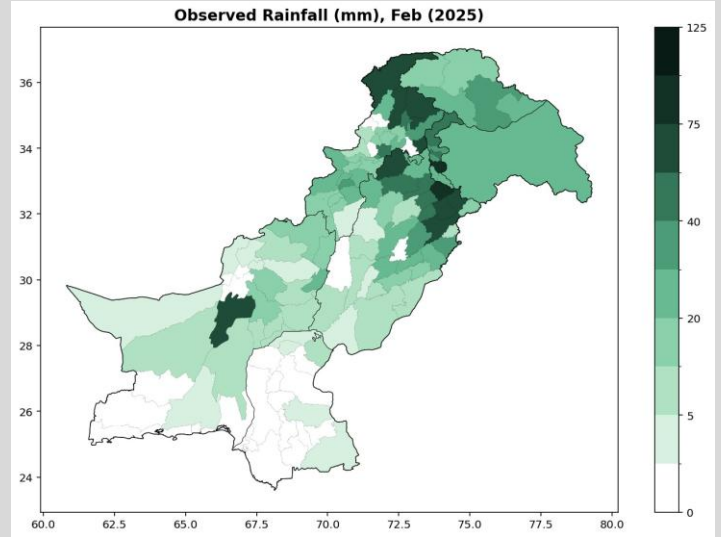




## Outlook for March 2025

### 1. Current meteorological conditions

Normal to below normal rainfall was recorded across the country during February 2025. During the second half of February, most parts of the country, including Khyber Pakhtunkhwa, Gilgit-Baltistan, Kashmir, Punjab, and Balochistan, experienced two moderate to high-intensity rainfall spells. However, most areas of Sindh and southern Balochistan remained dry, with minimal or no rainfall, leading to a continued soil moisture deficit. Additionally, above-normal temperatures were recorded across the country (Table 1).



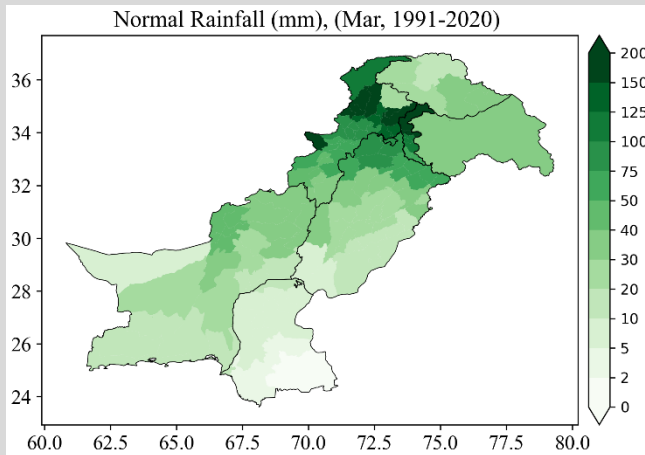
**Figure 1:** Observed rainfall (mm), February 2025

Table 1: Average / Anomaly of February 2025 rainfall and temperature

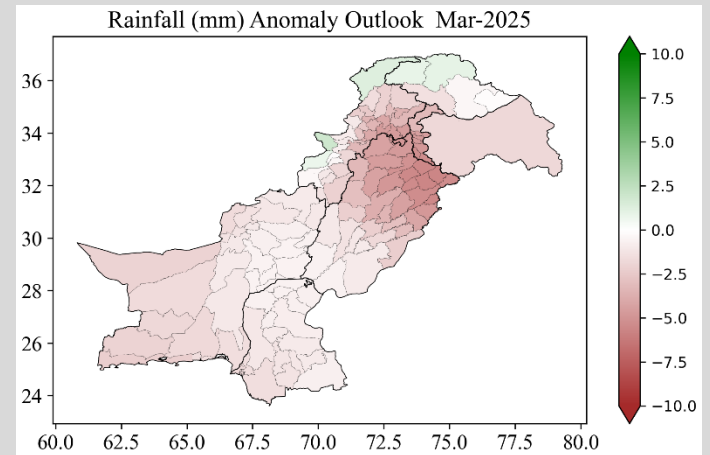
Region	Average Rainfall (mm)	Rainfall Departure (%)	Mean Temp (°C)	Anomaly (°C)
Pakistan	38	-7.8	14.7	1.4
AJK	134	-2.3	13.9	1.7
Balochistan	12	-38.3	15.6	1.2
Gilgit-Baltistan	24	-2.2	6.4	1.6
Khyber Pakhtunkhwa	81	-15.8	11.2	1.4
Punjab	41	-15.9	16.1	1.6
Sindh	0.31	-95.1	20.7	1.5

## 2. Monthly Rainfall Outlook for March 2025:

The monthly and seasonal outlook is derived from the outputs of nine global seasonal prediction models with optimal skill. The output of the selected models is used to generate operational forecasts for monthly and seasonal rainfall and temperature through the Multi-Model Ensemble (MME) technique. The prevailing neutral phase of the El Niño Southern Oscillation (ENSO), is expected to persist, alongside a neutral phase of the Indian Ocean Dipole (IOD). Based on this analysis, overall, a tendency for **slightly below-normal\*** rainfall is anticipated in northern Punjab, Kashmir and the adjoining areas of northern Khyber Pakhtunkhwa during March 2025. In contrast, the southern regions are expected to experience rainfall that is closer to normal, with a reduced negative anomaly as per the region's climatological patterns. Gilgit-Baltistan and northern Khyber Pakhtunkhwa may get nearly normal rainfall during the forecast month (Figure 2).

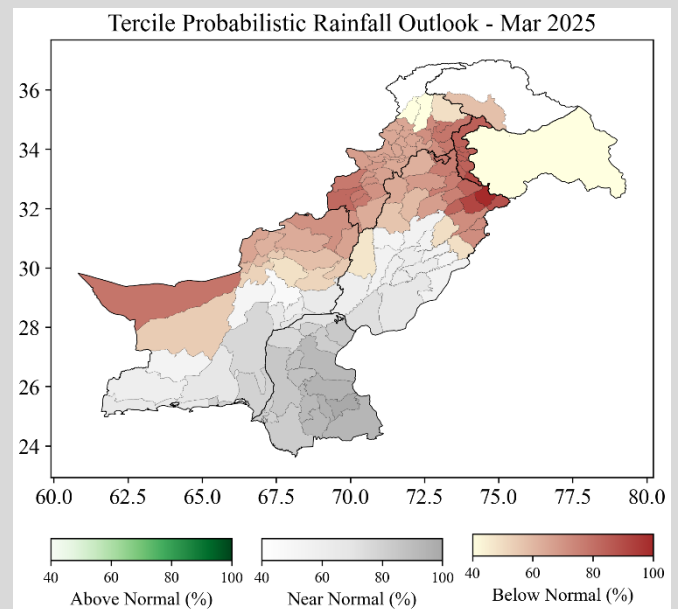


**Figure 2:** Normal (1991-2020) rainfall for March



**Figure 3:** Monthly rainfall anomaly for March 2025

The probabilistic rainfall outlook reflects a consensus among all models used as ensembles. The tercile probability map (Figure 4) indicates that most ensemble members predict the likelihood of below-normal rainfall in northern Punjab, Kashmir, most parts of Khyber Pakhtunkhwa and northwestern Balochistan, while Sindh, southern Punjab and southern Balochistan are likely to receive near-normal rainfall during the forecast month.

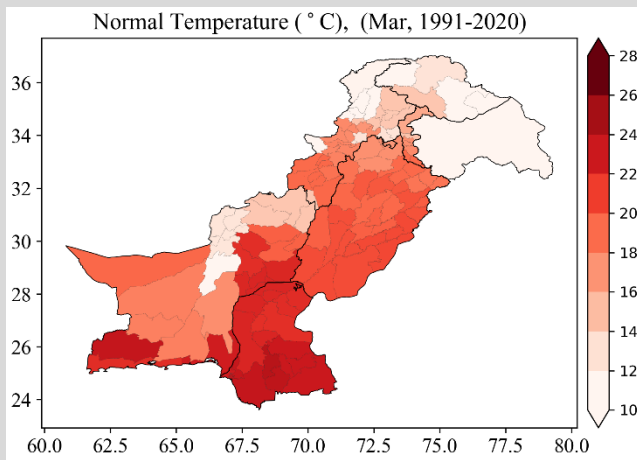


**Figure 4:** Probabilistic rainfall outlook for March 2025

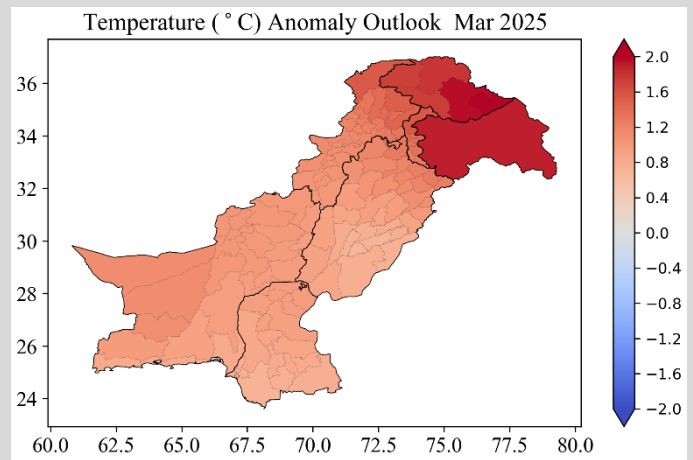
\* Normal = 30-years average climatology

### 3. Monthly Temperature Outlook:

Mean temperatures are expected to remain **above normal\*** nationwide, with maximum departure over Kashmir, Gilgit Baltistan and northern Khyber Pakhtunkhwa (Figure 6).

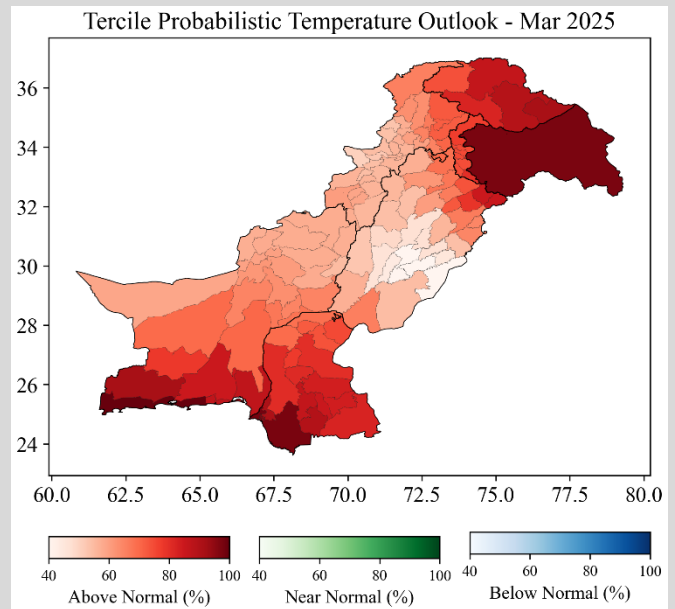


**Figure 5:** Normal (1991 - 2020) temperature for March



**Figure 6:** Monthly temperature anomaly outlook for March 2025

The tercile probabilistic temperature outlook (Figure 7) indicates that the majority of models agree on the above-normal temperatures across the country.



**Figure 7:** Probabilistic temperature outlook for March 2025

#### 4. Impacts:

- Due to the above normal temperature, the Rabi crops including “wheat” may acquire early maturity in most parts of the country.
- Near normal to below normal rainfall in southern parts may enhance soil moisture stress in areas that are already affected.
- Slightly below-normal rainfall in the upper parts of the country is likely to reduce water availability for agriculture in irrigated areas, enhancing the reliance on stored water resources.
- The onset of the pollen season is anticipated to occur in the first week of March, facilitated by rainfall episodes during the last week of February in major cities (e.g. Islamabad/Rawalpindi and Lahore).
- Spatial temperature gradient may cause strong winds, dust storm, and hailstorm.

**Note:** The seasonal outlook is updated monthly in the first week of the month. The forecast reliability varies with location, time of year, and global ocean/atmospheric conditions. It provides general trends using probabilities rather than precise predictions and compares expected conditions to historical averages. For better decision-making, it should be used alongside short-term forecasts and other climate data.