FORTNIGHTLY DROUGHT WATCH BULLETIN

(16th to 31st May, 2025)

Pakistan Meteorological Department

National Drought Monitoring Centre

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1. Rainfall Analysis during Second Fortnight of May, 2025

Light to moderate rainfall was recorded in various parts of the country during the period from May 16 to 31, 2025. Substantial rainfall occurred in the Potohar region, Hazara Division, and Kashmir during the period. Figure 1 illustrates the spatial distribution of rainfall across the country for this period, while Table -1 provides the quantitative measurements from the top ten stations, obtained from meteorological observatories.

Table 1: Chief amounts of rainfall (mm)

Rainfall Table					
S. No	**Station**	**Rainfall (mm)**	**S. No**	**Station**	**Rainfall (mm)**
1.	Attock	72.6	6.	Kakul	51.0
2.	Islamabad, Zero point	62.8	7.	Cherat	50.4
3.	Malam Jabba	61.0	8.	Kotli	46.4
4.	Gari Dopatta	60.4	9.	Chaklala Airbase	45.0
5.	Murree	51.5	10.	Islamabad, Airport	44.4

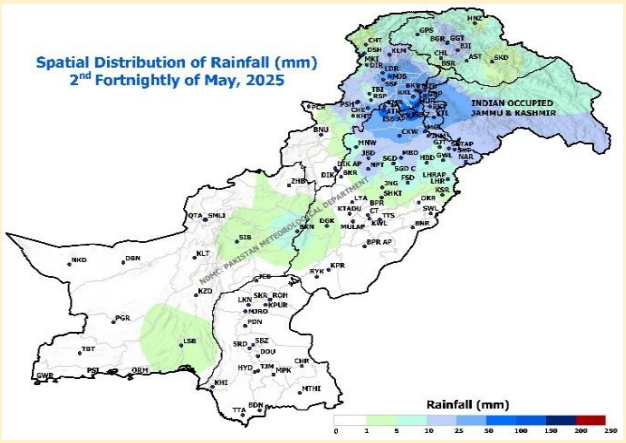

Figure 1: Spatial distribution of rainfall (mm)

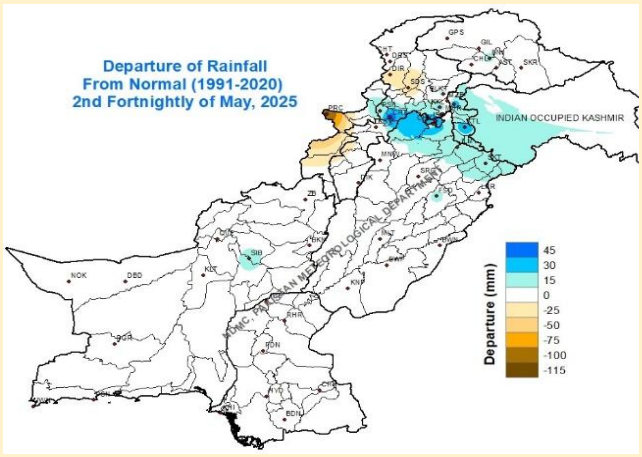

Figure 2: Departure of rainfall (mm)

2. Departure of Rainfall during Second Fortnight of May, 2025

Figure 2 illustrates the deviation of observed precipitation from the 30-year climatological average (1991–2020) across Pakistan during the second half of May 2025. Significant positive anomalies were recorded in the Potohar region, upper Punjab, and Kashmir, indicating above-normal rainfall. In contrast, Parachinar experienced below-normal precipitation. The rest of the country largely exhibited near-normal dry conditions, consistent with the established climatological patterns for this period.

Figure 3 shows the average rainfall distribution (in millimeters) during the second half of May, based on climatological data from 1991 to 2020. During this period, most central and southern regions of the country—including parts of Gilgit-Baltistan—typically receive between 0 and 30 mm of rainfall. However, areas such as Kashmir, upper Khyber Pakhtunkhwa, the Potohar region, and Parachinar generally receive higher average rainfall, ranging from 31 to 100 mm.

The fortnightly climatological temperature distribution for the second half of May are given in the Figure 4 below. Sindh and the plains of Punjab are identified as the warmest regions during this period. In contrast, the country's mountainous areas experience comparatively cooler conditions. Across Pakistan, mean temperatures range between 15°C and 35°C.

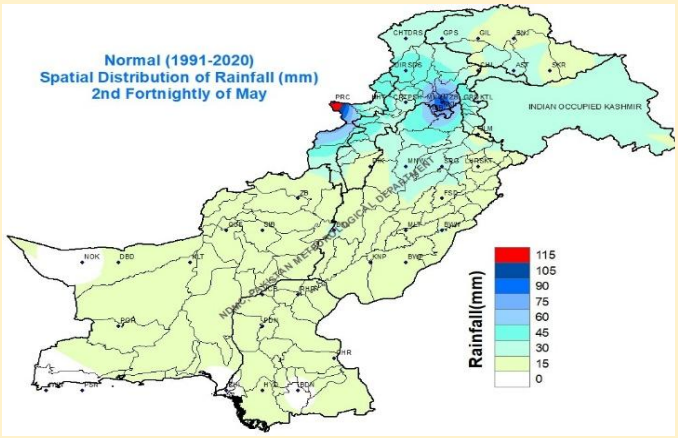

Figure 3: Normal distribution of rainfall (mm)

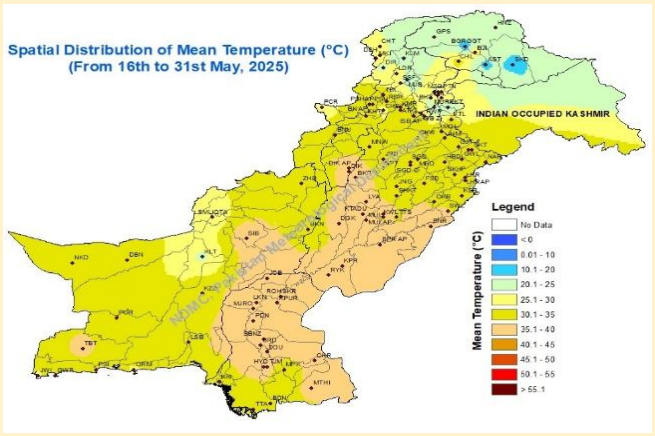

Figure 4: Normal distribution of Temperature (°C)

3. Mean Temperature Analysis during the Second Fortnight of May, 2025

Figure 5 presents the spatial distribution of mean surface air temperatures (°C) across Pakistan during the second half of May 2025. The lowest average temperatures were recorded in the northern mountainous regions, including upper Khyber Pakhtunkhwa, Kashmir, and Gilgit-Baltistan, where high-altitude topography and residual snow cover contributed to cooler conditions. Central areas of the country experienced moderate temperatures, reflecting transitional climatic zones. Conversely, elevated temperatures were observed in the southern regions, particularly in the Sibi and Nasirabad divisions of Balochistan, as well as in southern Punjab and Sindh. These areas are characterized by arid to semi-arid climates, which—combined with early seasonal warming—results in higher temperature readings.

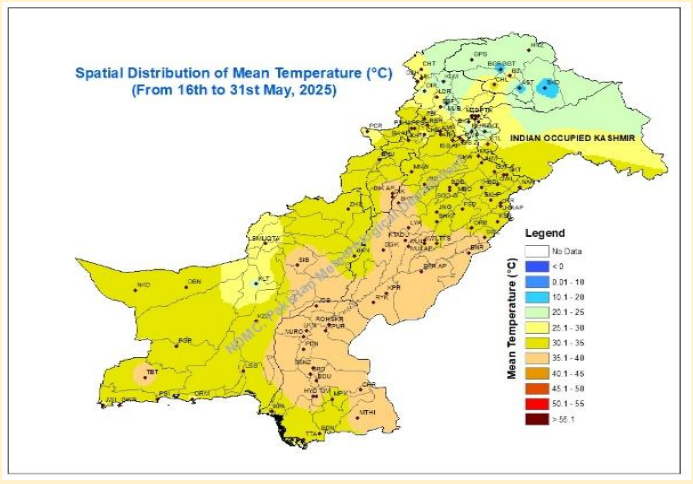

Figure 5: Spatial distribution of the Mean Temperature(°C)

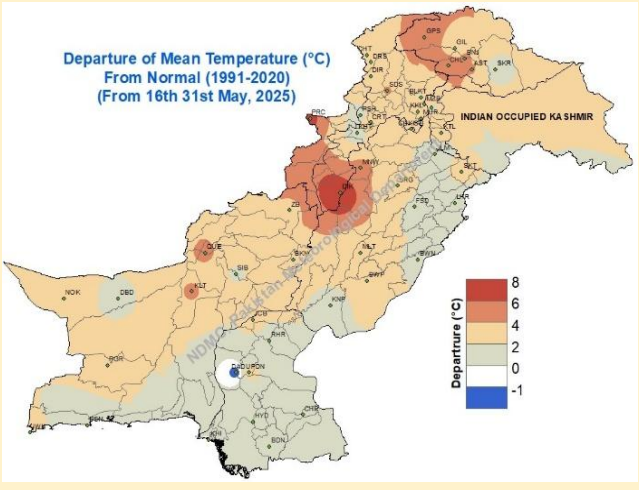

Figure 6: Departure of Mean Temperature (°C) from the Normal (1991-2020)

4. Departure of Temperature during the Second Fortnight of May, 2025

Figure 6 illustrates the spatial distribution of mean temperature anomalies (°C) across Pakistan during the second half of May 2025, relative to the 1991–2020 climatological baseline. The analysis reveals that the country experienced widespread positive temperature anomalies, with average temperatures ranging from 1°C to 8°C above the long-term normal.

5. Maximum Length of Consecutive Dry Days (CCD)

The length of dry spells is measured by Consecutive Dry Days (CDD), defined as periods receiving less than one millimeter of rainfall. Figure 7 illustrates the spatial distribution of CDD across various regions. Turbat remained at the highest number of consecutive dry days as 298, while coastal areas and Shaheed Benazirabad experienced between 200 and 260 consecutive dry days, indicating increased water demand in these regions.

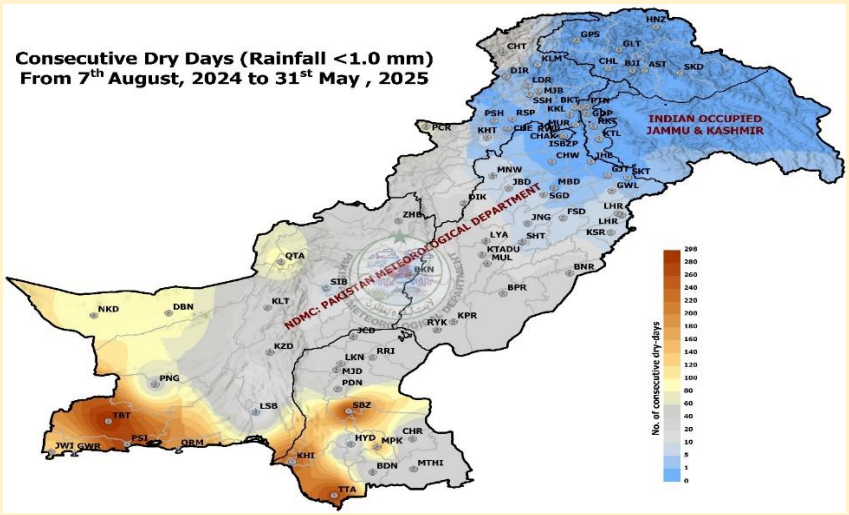

Figure 7: Spatial Distribution of Dry Days Spell

6. Water availability

During the latter half of May, water levels at the Mangla and Tarbela reservoirs showed a modest rise, reaching 1,478 feet and 1,162 feet, respectively. This increase is mainly due to enhanced inflows from glacial melt and rainfall in the upper catchment regions. In contrast, a slight decline in water levels was observed in smaller reservoirs, including Rawal, Khanpur, and Simly. This reduction is attributed to climatic fluctuations typically observed in the region prior to the onset of the monsoon season.

7. Weather Forecast

Weather forecasts for the first half of June 2025 suggest predominantly hot and dry conditions across much of Pakistan, with exceptionally high temperatures expected in the plains of Punjab and

Sindh. Nonetheless, isolated rain-wind/thunderstorms are anticipated in parts of upper Khyber Pakhtunkhwa, Gilgit-Baltistan, Kashmir, northeastern Punjab, and the Potohar region, particularly between June 2 and 5. Overall, mean temperatures are likely to remain above average, with the most significant deviations from normal over Kashmir, Gilgit-Baltistan, and northern Khyber Pakhtunkhwa.

8. Drought Situation Summary

Between May 16 and 31, 2025, light to moderate rainfall was recorded across various parts of the country, with notable precipitation in the Potohar region, Hazara Division, and Kashmir. The mean surface air temperatures across Pakistan were observed to be 1–8°C above the 1991–2020 climatological average. This anomaly was particularly pronounced in western and upper regions of the country where temperatures soared 1–8°C above normal. These elevated temperatures exacerbate drought conditions intensifying soil moisture deficits and water stress.

Water levels at the Mangla and Tarbella reservoirs have started to rise, currently measuring 1,478 feet and 1,162 feet, respectively. This increase is mainly due to enhanced inflows from glacial melt and precipitation in the upper catchment areas. Whereas, water levels in the smaller reservoirs—Rawal, Khanpur, and Simly have experienced a slight decline, likely resulting from regional climatic variability ahead of the monsoon season.

Weather Forecasts indicate that rainfall across the central to southern parts of the country is expected to be near-normal to slightly above normal. In contrast, the northern regions including northern Khyber Pakhtunkhwa, Gilgit-Baltistan, and adjoining areas of Kashmir are likely to experience normal to slightly below-normal rainfall.

Residents and businesses are advised to implement water conservation practices such as increasing water storage capacity, fixing leaks, using water-efficient appliances, and scheduling irrigation during early morning or late evening to minimize evaporation. These actions contribute to responsible water usage.

All relevant stakeholders in the drought affected regions should remain updated with weather advisories and adjust their disaster risk management plans accordingly to effectively reduce the impacts of the prevailing hot climatic conditions.

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