Pakistan Meteorological Department

Monthly Drought Bulletin For the Month of June, 2025

Highlights

- In June 2025, During the month, most parts of the country received rainfall, whereas, western Balochistan remained dry.
- During the month, temperatures across the country were 1 to 4°C above the normal range. This rise in temperature led to reduced soil moisture due to increased evapotranspiration.
- For July 2025, overall, a tendency for normal to slightly above normal rainfall is anticipated across the northeastern Punjab, Islamabad, Potohar, and adjoining Kashmir. In contrast, the northern regions, including northern Khyber Pakhtunkhwa, Gilgit-Baltistan and upper areas of Kashmir are likely to experience normal to slightly below-normal rainfall.
- During July, 2025, mean temperatures are expected to remain above normal nationwide, with maximum departure over Kashmir, Gilgit Baltistan and northern Khyber Pakhtunkhwa.
- The forecast of normal to slightly above normal rainfall in the drought-affected southern regions is expected to bring some relief.
- Keeping in view the weather forecast for the month of July 2025, disaster management authorities are requested to plan DRM activities accordingly in the drought effected areas of Balochistan and Sindh.

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1. Monthly Rainfall and Temperature Analysis for the Month of June, 2025

During the month, most parts of the country received rainfall, whereas, western Balochistan remained dry. The spatial distribution of this rainfall is illustrated in Figure 1. The major amounts were recorded in upper KPK, Potohar, Sindh and AJK as detailed in Table 1.

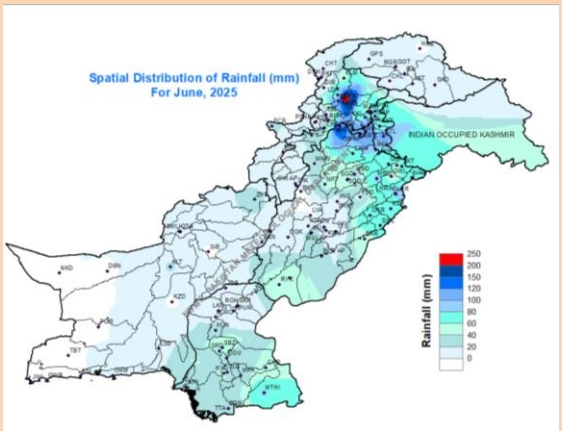

Figure 1: Spatial Distribution of rainfall

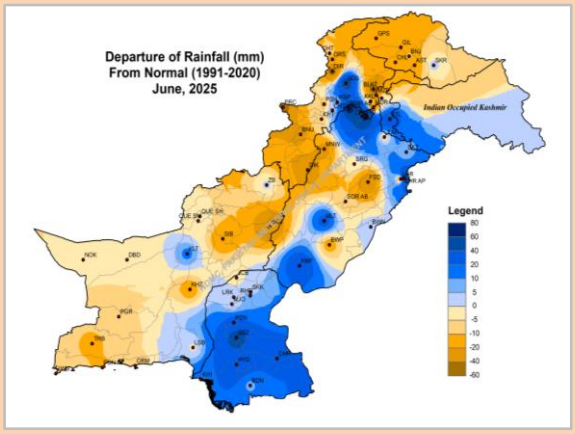

Figure 2: Departure of rainfall from Normal

Figure 2 illustrates the deviation of rainfall from the normal (1991-2020) levels. Above-normal rainfall was recorded in potohar region, Sindh and some parts of KP, whereas, in central Punjab, western Baluchistan, southern & upper KP and GB, below normal rainfall was recorded.

Table-1: Chief amount of rainfall recorded across Pakistan during the month of June, 2025

Sr.No.	Station	Rainfall(mm)	Sr.No.	Station	Rainfall(mm)
1	MALAMJABBA	249.0	11	G.DOPATTA	111.5
2	ATTOCK	186.8	12	HAFIZABAD	101.0
3	ISLAMABAD,ZEROPOINT	167.1	13	KAKUL	99.0
4	LAHORE, AIRPORT	155.0	14	MITHI	98.0
5	KOTLI	132.0	15	OKARA	93.5
6	SAIDU SHARIF	126.0	16	GUJRAT	91.2
7	KAMRA AIRBASE	123.6	17	SHEIKHUPURA	88.8
8	MURREE	123.0	18	NAROWAL	83.2
9	CHAKLALA AIRBASE	121.1	19	MUZAFFARABAD AIRPORT	80.9
10	MANGLA	113.6	20	CHAKWAL	80.4

Figure 3 shows the spatial distribution of mean temperatures recorded at PMD stations during June 2025 indicating variations across the country. Most parts of the country experienced mean temperatures ranging between 30°C and 36°C. In contrast, upper Khyber Pakhtunkhwa (KP) and Gilgit-Baltistan (GB) recorded relatively lower mean temperatures, ranging from 18°C to 30°C. Higher temperature zones were observed in upper Sindh, Turbat, and Sibi, where mean temperatures ranged between 36°C and 40°C.

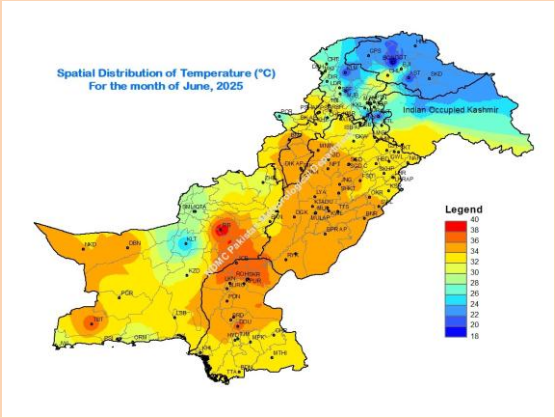

***Figure 3**: Monthly Mean Temperature (°C)*

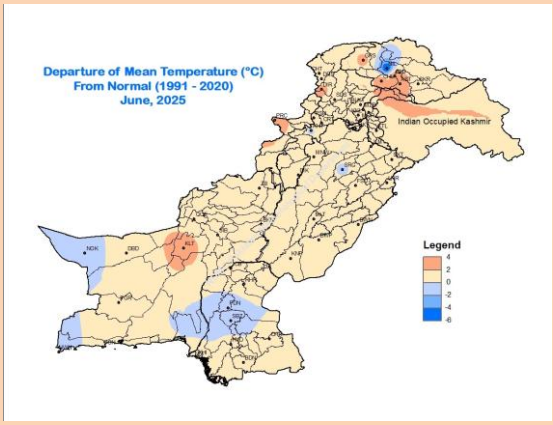

***Figure 4**: Monthly Departure from Normal Temperature*

Figure 4 illustrates the deviation of mean temperatures from the normal (1991-2020), indicating that most parts of the country experienced temperatures of 1 to 4°C above than the normal range. Figures 5 and 6 display the monthly normal rainfall and mean temperatures for June, based on data from 1991 to 2020.

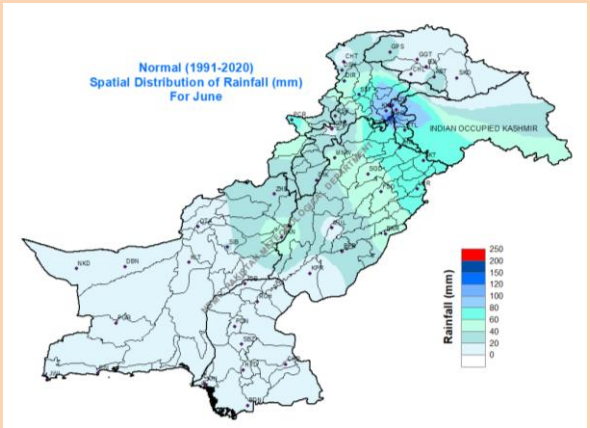

***Figure 5**: Monthly Normal Rainfall (mm)*

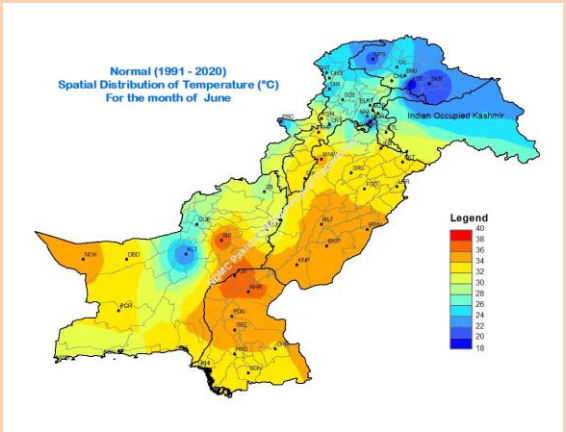

***Figure 6**: Monthly Normal Mean Temperature (°C)*

2. Comparison of Actual to Normal Monthly Rainfall for June, 2025

Figure 7 compares actual rainfall to the historical normal (1991-2020) for June, 2025. This comparison is detailed separately for different regions: Khyber Pakhtunkhwa 7(a), Sindh in Figure 7(b), Punjab in Figure 7(c), Balochistan in Figure 7(d), Gilgit Baltistan, and Azad Jammu & Kashmir in Figure 7(e). The graphs indicate that rainfall during the month was above normal in all provinces except Baluchistan.

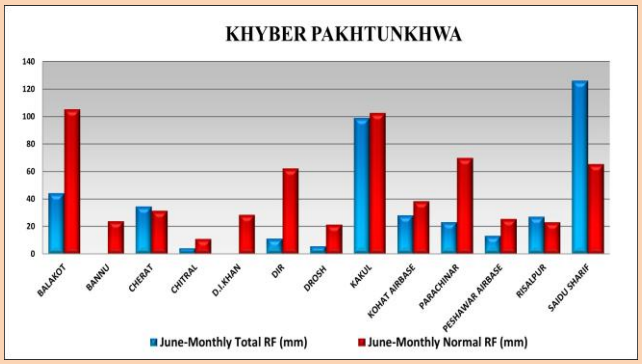

Figure 7a

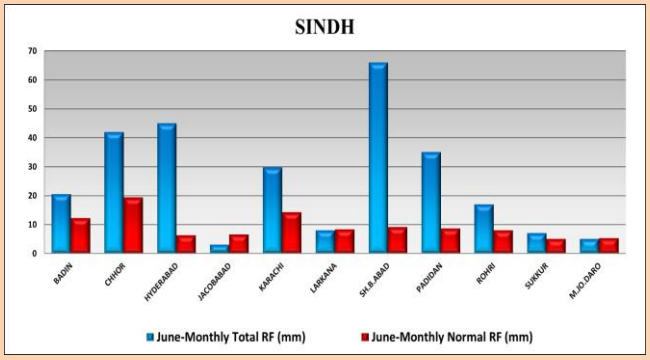

Figure 7b

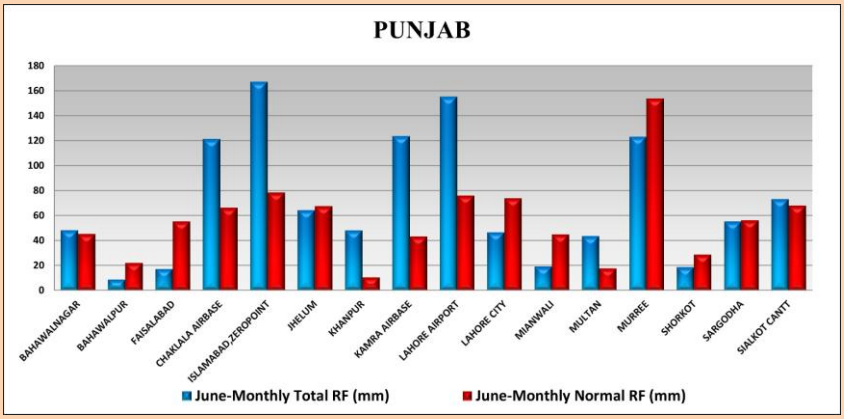

Figure 7c

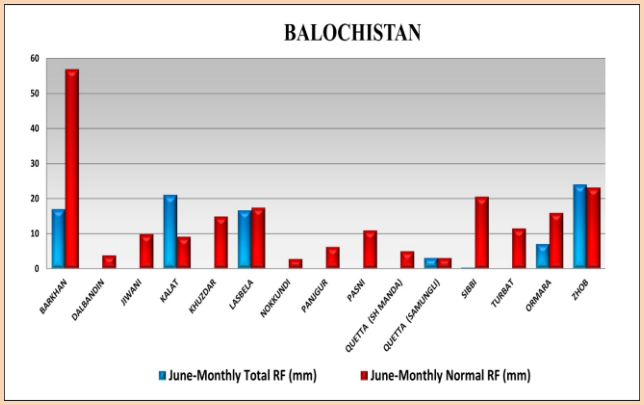

Figure 7d

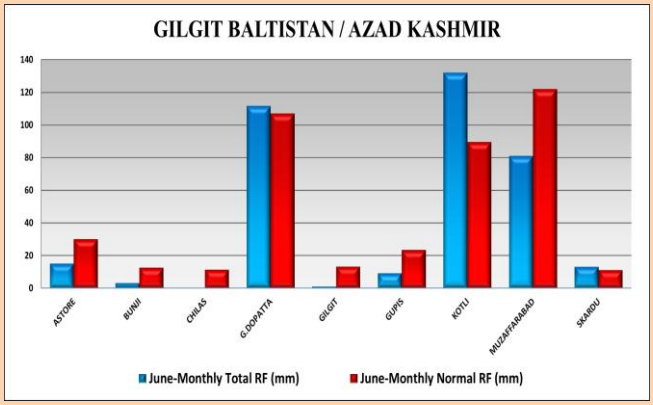

Figure 7e

3. Normalized Difference Vegetation Index (NDVI)

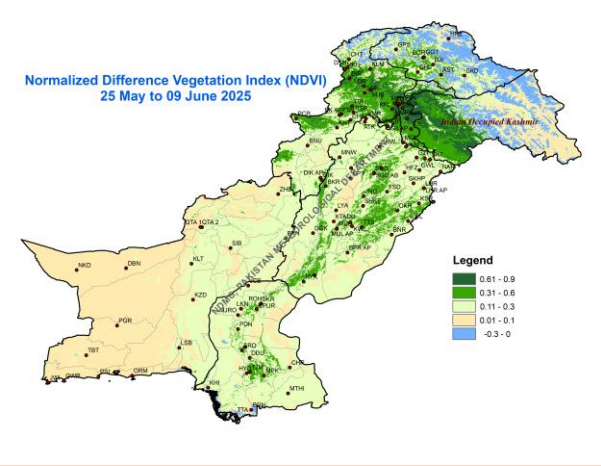

Figure 8: NDVI

Figure 8 presents the Normalized Difference Vegetation Index (NDVI) values for June, 2025. High NDVI values are observed in AJK, Punjab, Khyber Pakhtunkhwa, and along the Indus basin, indicating extensive vegetation in these areas. These conditions support the accumulation of chlorophyll in plants, thereby enhancing vegetation cover. Conversely, low rainfall has resulted in low or deficient NDVI values in the regions of Baluchistan.

4. Land Surface Temperature (LST)

Figure 9 depicts the Land Surface Temperatures (LST) from 25 May to 01 June, 2025. During this period, south Punjab, Sindh, and Baluchistan experienced average daytime temperatures ranging from 30-50°C.

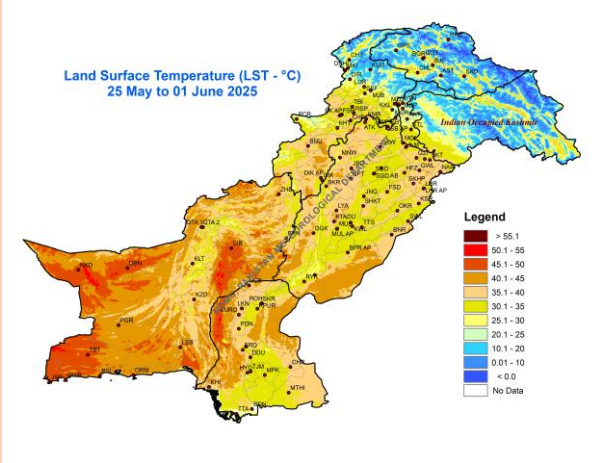

Figure 9: Land Surface Temperature (°C)

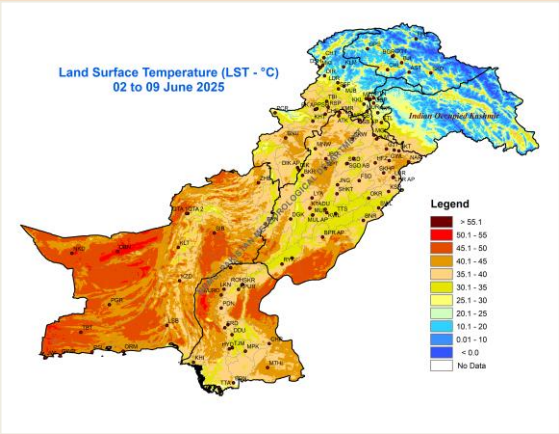

Figure 10: Land Surface Temperature (°C)

Figure 10 illustrates the Land Surface Temperatures from June 02 to 09. During this period, there was an increase in temperature compared to the previous week in western Baluchistan, parts of Sindh, and south Punjab.

5. Temperature Vegetation Dryness Index (TVDI)

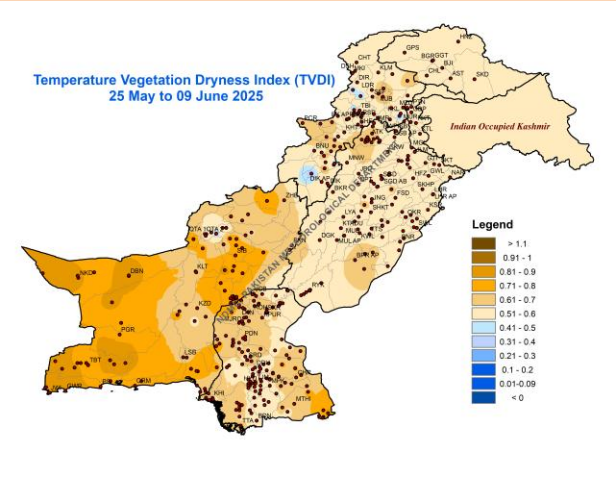

Figure 11: TVDI

Figure 11 illustrates the Temperature Vegetation Dryness Index (TVDI), derived from MODIS datasets MOD13A2 (NDVI) and MOD11A2 (LST). The TVDI Index highlights moderate dry-like conditions in Balochistan and few parts of Sindh. These conditions indicate the onset of dryness and soil moisture deficiency in the region.

6. Length of Consecutive Dry Days up to June 31, 2025

Figure 12 presents the maximum length of consecutive dry days (CDD). The number of consecutive dry days has increased from 298 to 328 days across Turbat and Pasni. However, significant precipitation has mitigated the intensity of the consecutive dry days (CDD) in most parts of the country

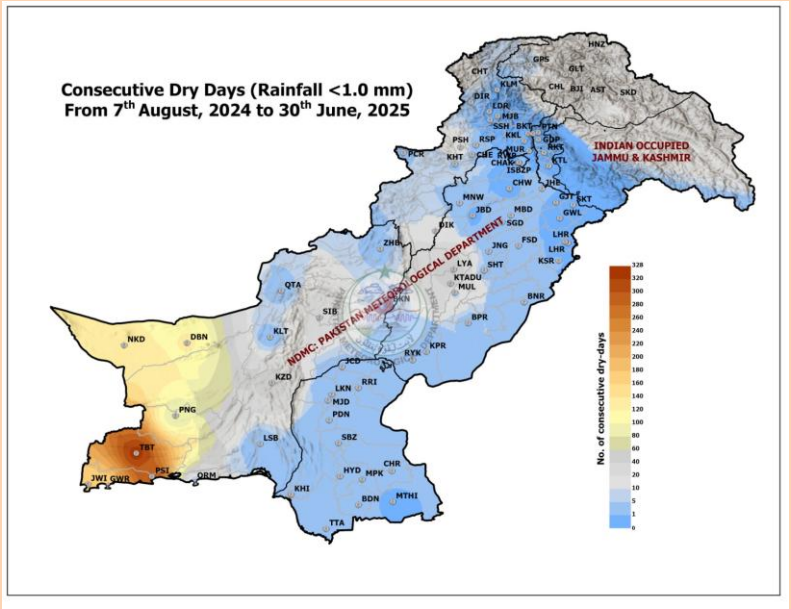

Figure 12: No. of consecutive dry days

7. Drought Monitor for the Month of June, 2025

Based on the different drought monitoring indices, as narrated above and ground station data observed across the country, the spatial drought monitor map is represented in Figure 13 below.

Western parts of Balochistan are facing drought like situation due to longer dry spell specilly Turbat where Severe drought like situation is prevailing. Other parts of western Balochistan are facing Mild drought situation. The situation of drought has greatly improved due to monsoon rainfall in Sindh, South and upper Punjab.

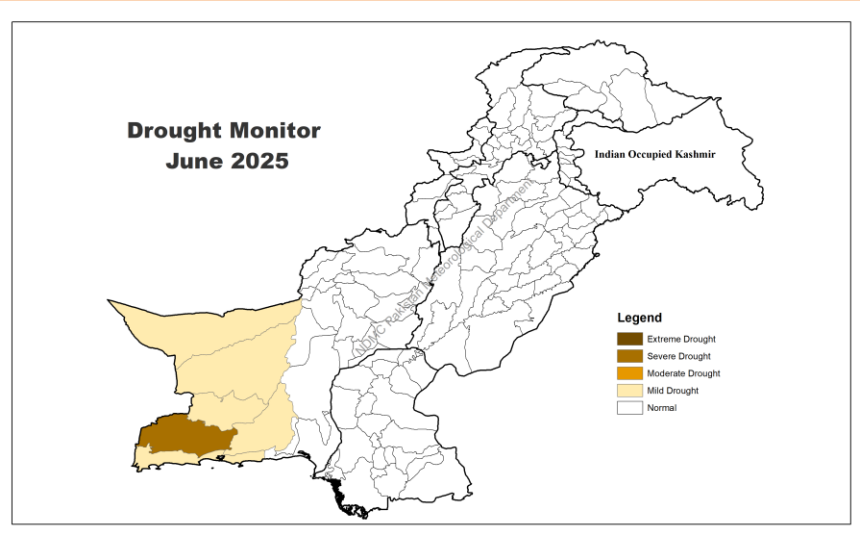

Figure 13: Drought Monitor of Pakistan for the month of June, 2025

8. Water availability/ Dams flow data:

During the month, water inflow, outflow and levels of the Rawal, Khanpur, Tarbela , Simly and Mangla dams are shown in Figure 14. The water level at Mangla and Tarbela has increased due to glacial melt and recent rainfall during the month. Rawal and Khanpur reservoirs have significantly increased due to moonsoon rainfall. The water levels at the major reservoirs, Tarbela and Mangla, stand at 1,504 feet and 1,176 feet respectively.

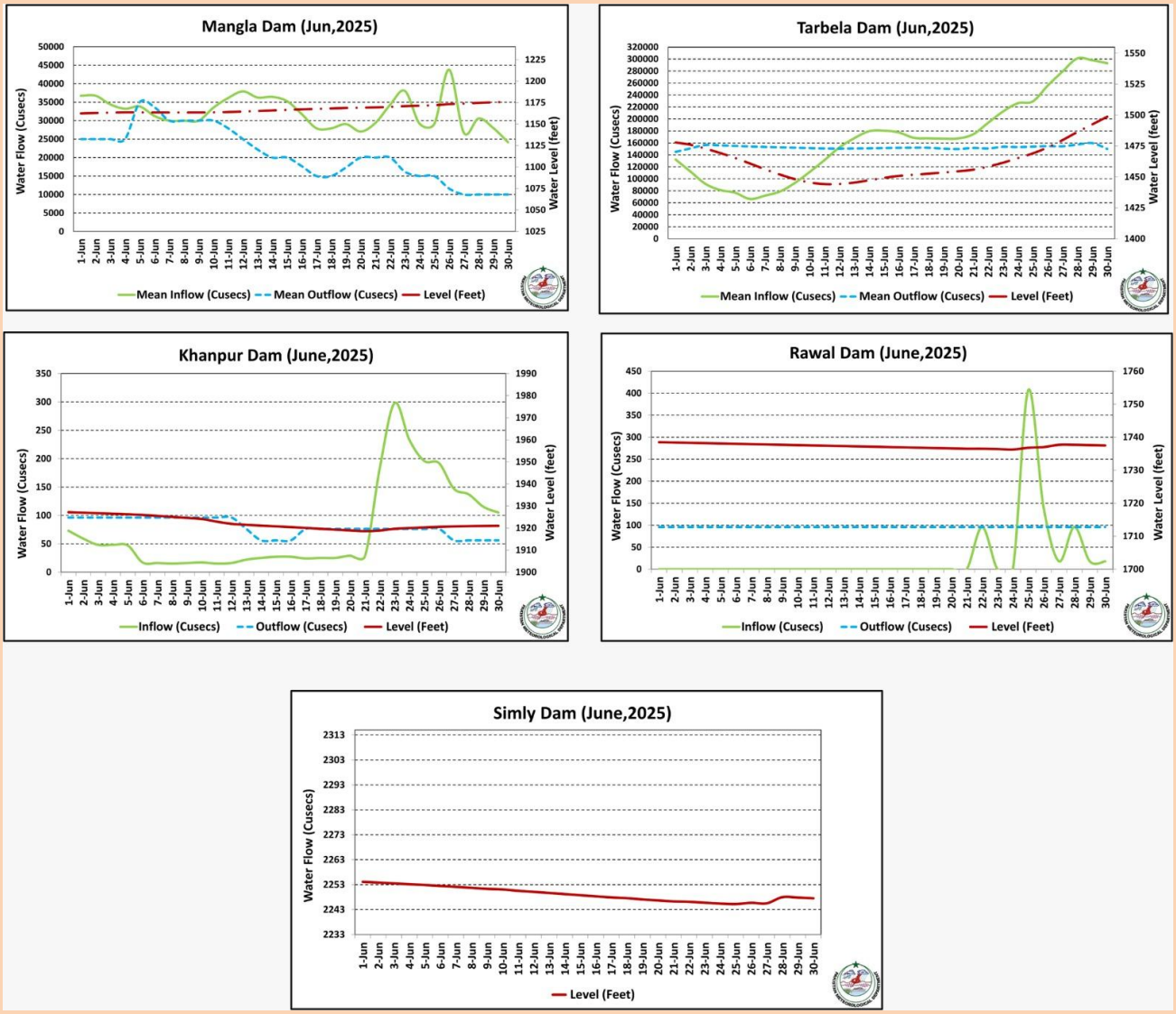

***Figure 14**: Water inflow, outflow and level of Rawal, Khanpur, Tarbela, Simly and Mangla Dams, June, 2025*

9. Weather Outlook for July, 2025

For July 2025, overall, a tendency for normal to slightly above normal rainfall is anticipated across the northeastern Punjab, Islamabad, Potohar, adjoing areas of Kashmir and KP. In contrast, the northern regions, including northern Khyber Pakhtunkhwa, Gilgit-Baltistan and adjoining areas of upper Kashmir are likely to experience normal to slightly below-normal rainfall.

Mean temperatures are expected to remain above normal nationwide, with maximum departure over Kashmir, Gilgit Baltistan and northern Khyber Pakhtunkhwa.

10. Drought Outlook for July, 2025

The July forecast predicts near-normal to above normal rainfall in most parts, which is expected to bring relief in drought Risk areas. Western Parts of Balochistan are under stress as the summer monsoon rains do not reach farther in those regions.

All stakeholders across the countrty are advised to make efforts to save water and promote its judicious use to mitigate any adverse impacts of drought.

11. Crop Condition

- Soil moisture condition has slightly improved in upper Punjab and parts of Sindh due to recent rainfall.
- The wheat crop has been harvested, and farmers are now preparing their fields for the next Kharif season. Rainfall in the region would help in cultivating the crops.
- The month of July is known for heavy rainfall and higher humidity with possible extreme rainfall events specially in sub-mountainous region. PMD weather forecasts should be regularly watched for any changing weather situation for preparatory measures.
- Weather forecasts should be regularly checked for managing crop irrigation and harvesting process.
- Judicious use of available water is recommended in agricultural areas

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