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Outlook for August-September-October (ASO), 2025

1. Current meteorological conditions

During the May–June–July (MJJ) season, the first two months remained mostly dry, with minimal rainfall across much of the country. However, an early onset of the monsoon in the last week of June brought about five rainfall spells so far, including isolated heavy to very heavy events. These rains eased the prevailing dry conditions nationwide, although some isolated heavy downpours caused severe urban and flash flooding, particularly in the northern and eastern regions. The widespread rainfall during July; the first month of the monsoon season, also brought an end to the prolonged heatwave conditions, reducing temperatures from above-normal levels to near-normal by the end of the season (Table 1).

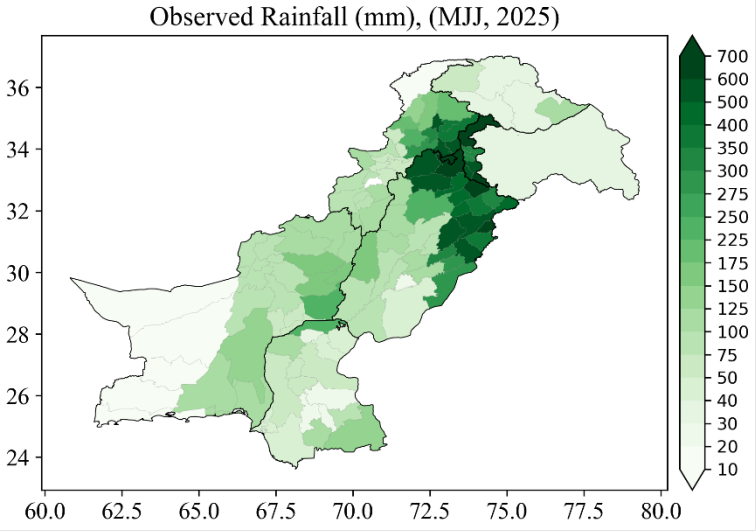

Figure 1: Observed rainfall (mm), MJJ 2025

Table 1: MJJ 2025 Rainfall and Temperature - Observed Averages and Anomalies

Region	Total Rainfall (mm)	Normal Rainfall (mm)	Rainfall Departure (%)	Mean Temp (°C)	Anomaly (°C)
Pakistan	183.9	152.9	20.3	30.9	0.8
AJK	537.2	442.4	21.4	28.6	0.4
Balochistan	47.0	46.7	2.5	31.8	0.9
Gilgit-Baltistan	40.9	64.4	-36.6	25.4	2.6
Khyber Pakhtunkhwa	174.4	213.3	-18.5	28.7	1.3
Punjab	379.2	249.7	51.8	31.6	0.01
Sindh	79.4	55.1	44.0	34.4	0.2

2. Seasonal Rainfall Outlook:

The seasonal outlook is based on the outputs of eight global seasonal prediction models with optimal skill. The models' outputs are combined using the Multi-Model Ensemble (MME) technique to generate operational outlooks for seasonal rainfall and temperature. Currently, the Indian Ocean Dipole (IOD) is in a negative phase and is expected to remain negative during the season. Meanwhile, the El Niño Southern Oscillation (ENSO) is projected to stay in a neutral state but likely to transition to a negative phase towards the end of the season.

Given these conditions, the forecast indicates a general tendency for **normal*** **to slightly above-normal** rainfall across the central to southern parts of the country, with the highest departures expected in the northeastern parts of Punjab and southeastern Sindh. In contrast, the northern regions, including northern Khyber Pakhtunkhwa, Gilgit-Baltistan and upper parts of Kashmir are likely to experience **normal to slightly below-normal** rainfall during the forecast period (Figure 2, 3). The first half of the season is expected to be wetter than the second half.

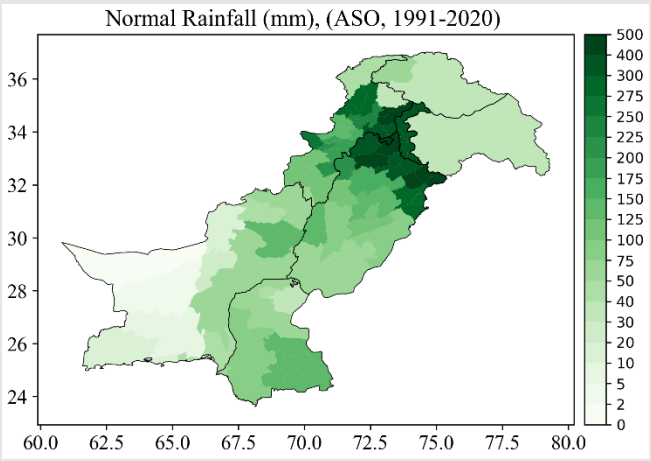

Figure 2: Normal (1991-2020) rainfall (mm) for ASO

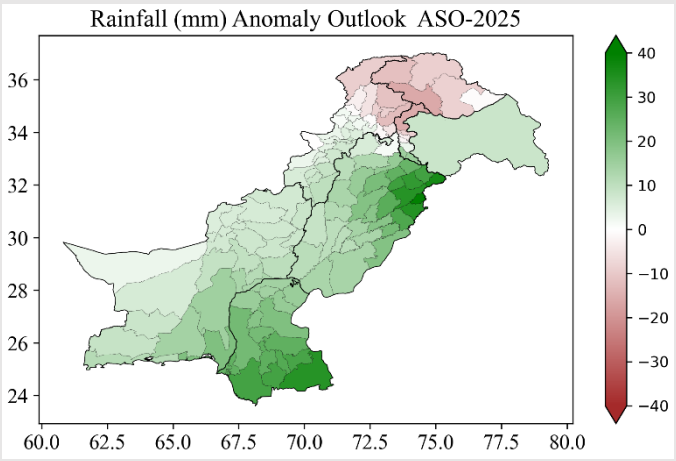

Figure 3: Monthly rainfall (mm) anomaly for ASO 2025

The probabilistic rainfall outlook reflects a consensus among all models used in the ensembles. The tercile probability output (Figure 4) indicates that most ensemble members predict the likelihood of near normal rainfall in most parts of the country including southern Punjab, Sindh, Balochistan and Khyber Pakhtunkhwa, while Gilgit-Baltistan and northern Khyber Pakhtunkhwa are likely to receive below-normal rainfall during the forecast season. Northeastern Punjab and southeastern Sindh are likely to get above normal rainfall during the season ASO 2025.

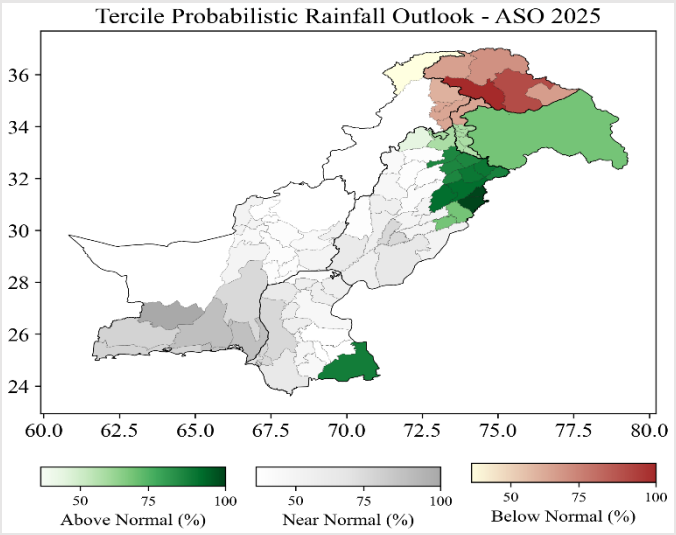

Figure 4: Probabilistic (%) rainfall outlook for ASO 2025

* Normal = 30-years average climatology

3. Seasonal Temperature Outlook:

Mean temperatures are expected to remain **above normal*** across the mountainous regions of the north and west, with the largest anomalies likely over eastern Gilgit-Baltistan. In contrast, central to southern Punjab and eastern Sindh are expected to experience **near-normal** temperatures during the outlook season. (Figure 6).

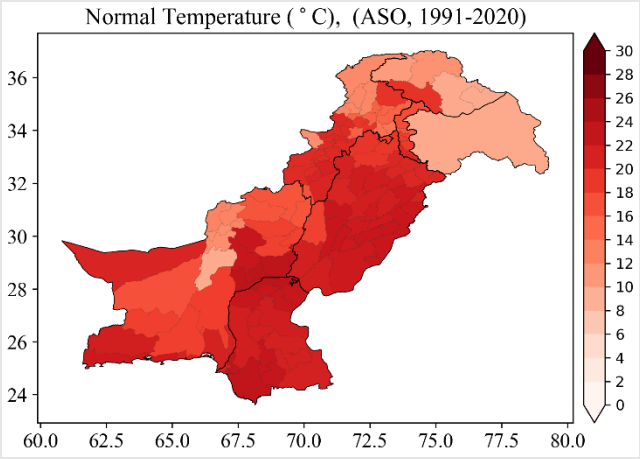

Figure 5: Normal (1991 - 2020) temperature for ASO

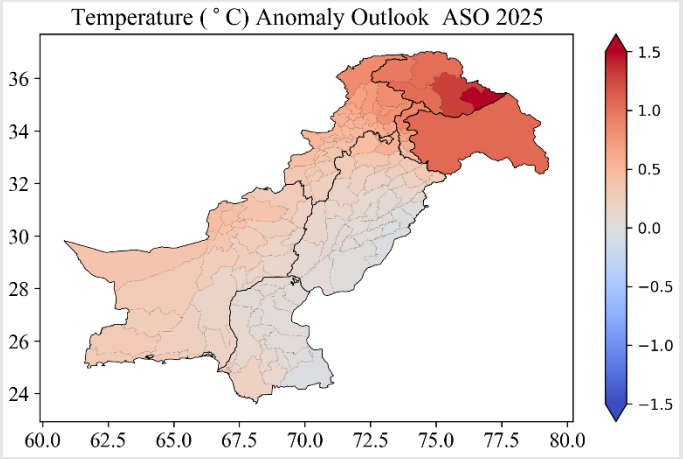

Figure 6: Monthly temperature anomaly outlook for ASO 2025

The tercile probabilistic temperature outlook (Figure 7) shows that most models predict above-normal temperatures across the country, with the highest likelihood over the northern and western mountainous regions.

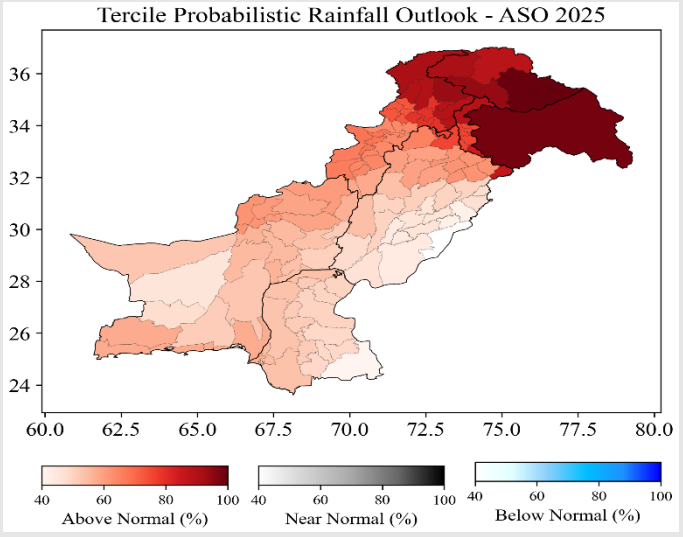

Figure 7: Probabilistic (%) temperature outlook for ASO 2025

4. **Impacts:**
    - Although the general outlook for the rainfall is normal to slightly above normal but the possibility of isolated extreme rainfall events cannot be ruled out.
    - Due to the occurrence of isolated heavy to very heavy rainfall events, hill torrents are anticipated in areas of Koh-e-Suleman, whereas urban/flash flooding is expected in major cities of Sindh, Punjab, Azad Jammu and Kashmir, and Khyber Pakhtunkhwa during the season.
    - This rainfall is also expected to contribute to replenishment of water reservoirs and ground water resources.
    - High temperatures in Upper Khyber Pakhtunkhwa, Gilgit-Baltistan, and Kashmir may accelerate snowmelt, increasing river inflow. Moreover, such high temperature may contribute to chances of Glacial Lake Outburst Floods (GLOFs) in these areas.
    - Intermittent hot and dry conditions between rainfall spells may lead to heat stress in the country's plains.
    - Based on recent weather conditions, a considerable amount of soil moisture is currently available in the fields. Therefore, farmers are advised to irrigate as per crop requirements.
    - Hike in dengue outbreak due to stagnant flood water is likely in inundated areas.
    - Given the recent increase in windstorm events, it is advisable that billboards in major urban areas be either removed or securely reinstalled with enhanced protection to withstand severe wind conditions. Similarly, proactive measures should be taken to protect solar energy structures to minimize the risk of damage during such events.
    - Dry conditions toward the end of the outlook season may contribute to an early onset of fog events.

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.