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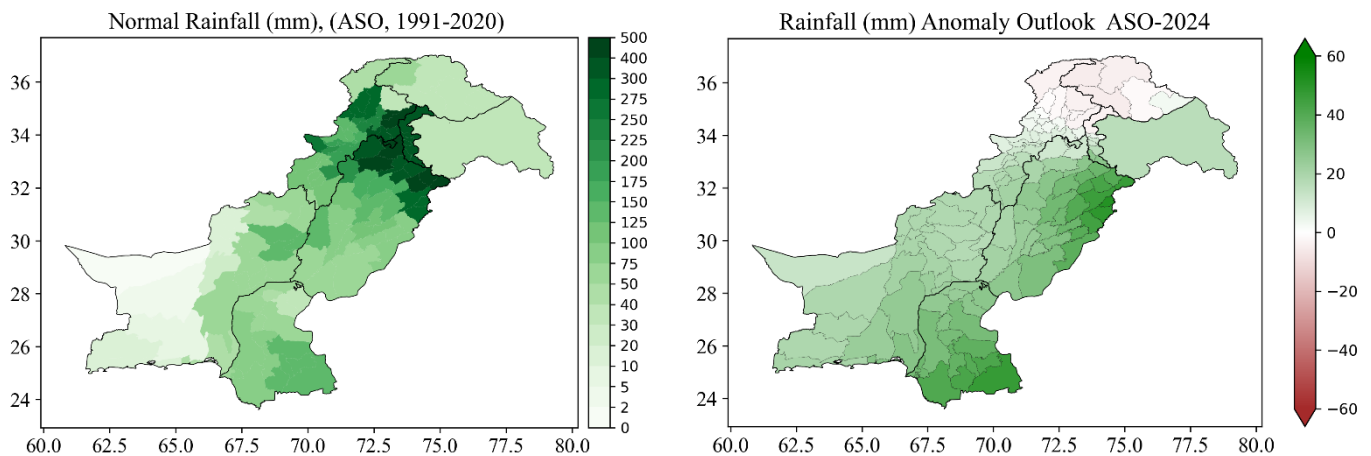
## **Outlook for August to October (ASO), 2024**

### **1. Synoptic Situation:**

During the season ASO 2024, it is anticipated that the prevailing neutral phase of the El Niño Southern Oscillation (ENSO) will shift to a weak negative phase (La Niña) during the second half of the season. Concurrently, the Indian Ocean Dipole (IOD) is forecasted to persist in a neutral phase throughout the season. Given the prevailing atmospheric conditions, the climatic outlook for Pakistan is as follows:

### **2. Seasonal Outlook (Rainfall):**

As per seasonal outlook **normal\* to above normal** rainfall is expected in most parts of the country, with maximum departure over northeast Punjab and southeast Sindh. On the other hand, northern Khyber Pakhtunkhwa and Gilgit Baltistan may get nearly normal rainfall, whereas, most parts of Balochistan may receive slightly above normal rainfall during the season. Moreover, the first half of the season is expected to be wetter than the second half.

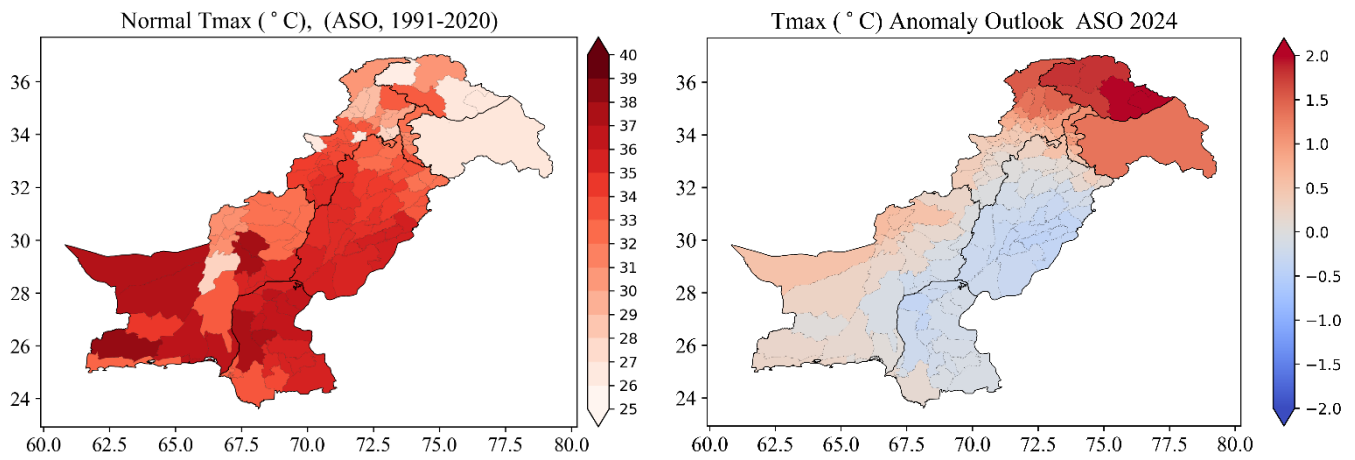


**Figure 1:** Normal (1991-2020) rainfall and monthly anomaly outlook for monsoon 2024.

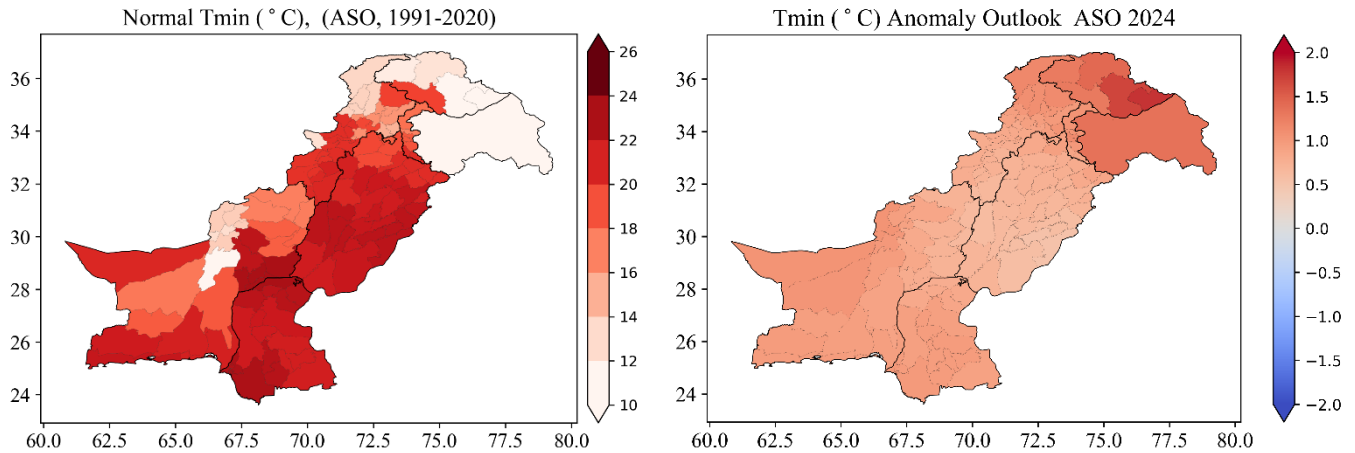
### **3. Seasonal Temperature Outlook:**

Nationwide, the daytime maximum temperature is expected to be **normal\* to below normal** however, northern Khyber Pakhtunkhwa and Gilgit-Baltistan may experience warmer than normal maximum temperature during the season. Nighttime temperatures are likely to exceed normal levels across most parts of the country, with marked positive deviation anticipated over northern Khyber Pakhtunkhwa, Gilgit-Baltistan and southwestern Balochistan.

\*Normal = 30-years (period) average climatology



**Figure 2:** Normal (1991-2020) maximum temperature and monthly anomaly outlook for monsoon 2024



**Figure 3:** Normal (1991-2020) minimum temperature and monthly anomaly outlook for monsoon 2024

#### 4. Impacts:

- Due to expected normal to slightly above-normal rainfall in northeast Punjab, Azad Jammu and Kashmir and Khyber Pakhtunkhwa, there is a risk of localized flooding (urban & flash flooding) in these areas. 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.
- 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.
- Strong winds, dust storms, and gusts are highly likely in the season.
- The extreme hydro-meteorological events over catchment areas of the major rivers of the country are likely to generate riverine floods.
- 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 due to heavy rainfall events during the season.
- Hike in dengue outbreak due to stagnant flood water is likely in inundated areas.

**Note:** Considering the dynamic nature of the climate system the outlook is updated monthly during the last week of each month.

\*Normal = 30-years (period) average climatology