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Monthly Climate Outlook for Nov 2024

1. Synoptic Situation:

In November, Sea Surface Temperatures in the Niño 3.4 region are expected to decrease, suggesting weak La Niña conditions. The Indian Ocean Dipole (IOD) is forecasted to stay above average. Considering these climate drivers and General Circulation Model (GCM) predictions, Pakistan's climate outlook for the month of November 2024 is as follows:

2. Monthly Rainfall Outlook:

A **below-normal*** rainfall across the country is expected. However, near-normal rainfall is specifically anticipated in Sindh, Balochistan, and southern Punjab during the forecast month.

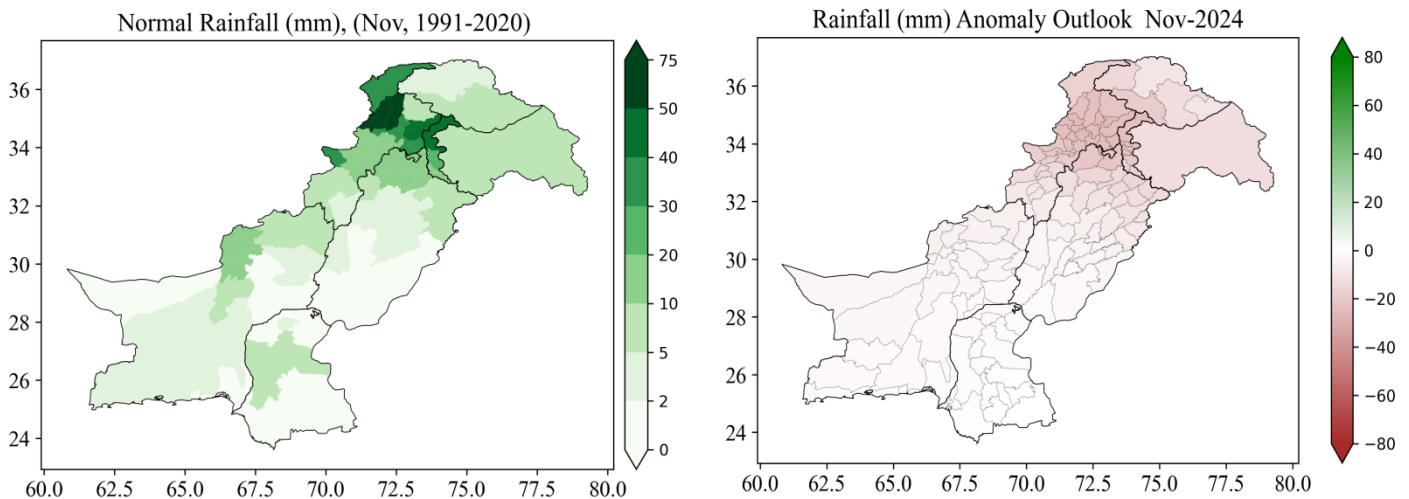


Figure 1: Normal (1991-2020) rainfall and monthly anomaly outlook for November 2024.

3. Monthly Temperature Outlook:

Temperatures are forecasted to remain slightly **above normal*** nationwide, with maximum departure over Gilgit Baltistan and western Balochistan. Whereas eastern Sindh is expected to experience near-normal temperatures.

*Normal = 30-years (period) average climatology

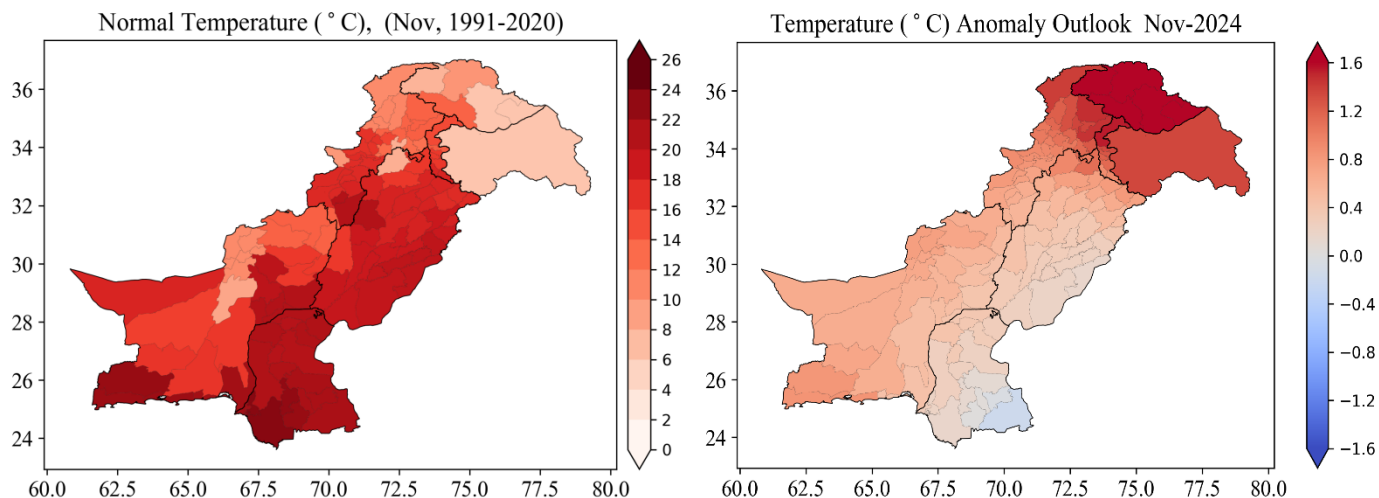


Figure 2: Normal (1991-2020) temperature and monthly anomaly outlook for November 2024

4. Impacts:

Agriculture

- **Rice Harvesting:** The dry conditions with slightly above-normal temperatures will generally favor for Basmati rice harvesting, minimizing the risk of crop damage from rain.
- **Water Availability:** Below-normal rainfall may reduce water availability for irrigation in rain-fed agricultural regions, potentially impacting early Rabi season crop sowing, especially for wheat and barley.
- **Soil Moisture:** With relatively low rainfall, soil moisture levels may decline, which could hinder seed germination and early crop development for newly sown Rabi crops.

Health

- **Smog and Air Quality:** Warmer and drier weather may contribute to stagnant air conditions, the smog will intensify during first week of the month, especially in Punjab and major urban areas. This can exacerbate respiratory illnesses, particularly affecting those with asthma or other chronic respiratory conditions.
- **Dengue:** Slightly warmer-than-normal temperatures may extend the dengue season, particularly in areas where mosquito breeding is more prevalent, such as southern Punjab, Sindh, and Balochistan. A potential decline in cases is anticipated following the first half of November. Health authorities may need to remain vigilant for vector control efforts.

Fog/Smog conditions in plains and Highways

- **Fog Formation:** Although the weather is warmer than average, nevertheless ambient conditions are conducive for fog formation, especially in plain and low lying areas of Punjab, KP and Sindh.

*Normal = 30-years (period) average climatology

Reduced visibility due to fog/smog could **disrupt highway travel and cause delays at major roadways and airports, particularly during night and early morning.**

Water Resources

- **Reservoirs and Dams:** The **below-normal rainfall** may affect reservoir replenishment levels, particularly in **areas that rely on November rainfall** for early water storage. Water management authorities are recommended to monitor reservoir levels and **prepare for potential shortages** if dry conditions persist.

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