FORTNIGHTLY DROUGHT WATCH BULLETIN

(1-15 Nov, 2023)

1. Weather Summary for the 1st fortnight of Nov 2023

During the first fortnight of Nov 2023, Light to moderate rainfall reported from isolated stations across Pakistan. Spatial distribution of the rainfall is shown in Figure No.1. The chief amounts of rainfall recorded across Pakistan during the period 1-15 Nov, 2023 are shown in Table-1 below;

Table-1

Sr.No.	Station	Rainfall(mm)	Sr.No.	Station	Rainfall(mm)
1	CHAKLALA AIRBASE	83.01	6	MURREE	56
2	ATTOCK	75	7	MIANWALI AIRBASE	47
3	BALAKOT	71	8	KAMRA AIRBASE	46.71
4	ISB.SH.ABAD	71	9	MANGLA	45
5	KAKUL	68	10	ISLAMABAD, AIRPORT	44.4

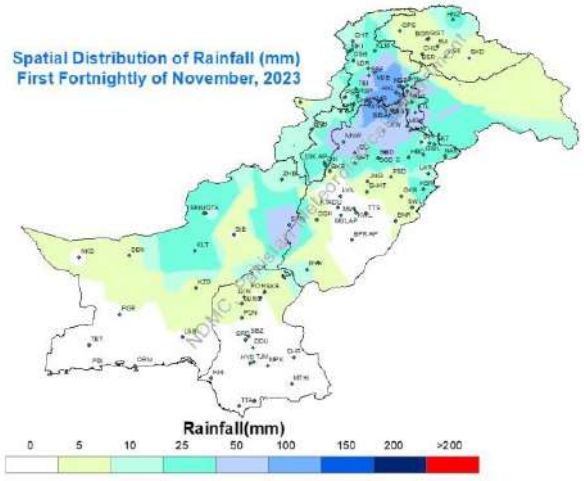


Figure 1: Rainfall distribution of Pakistan during First fortnight of Nov-2023

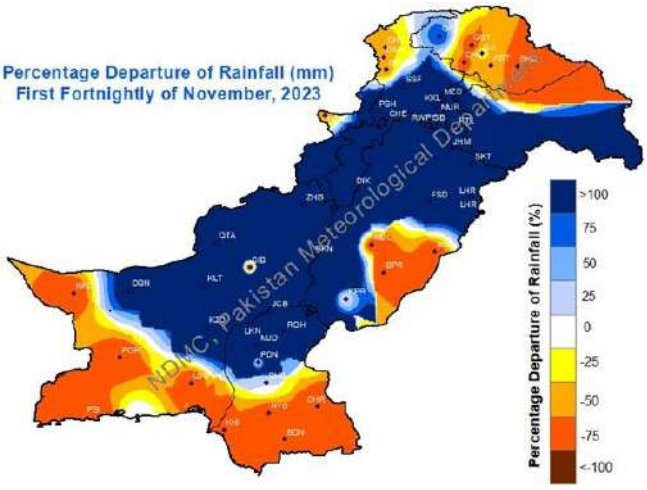
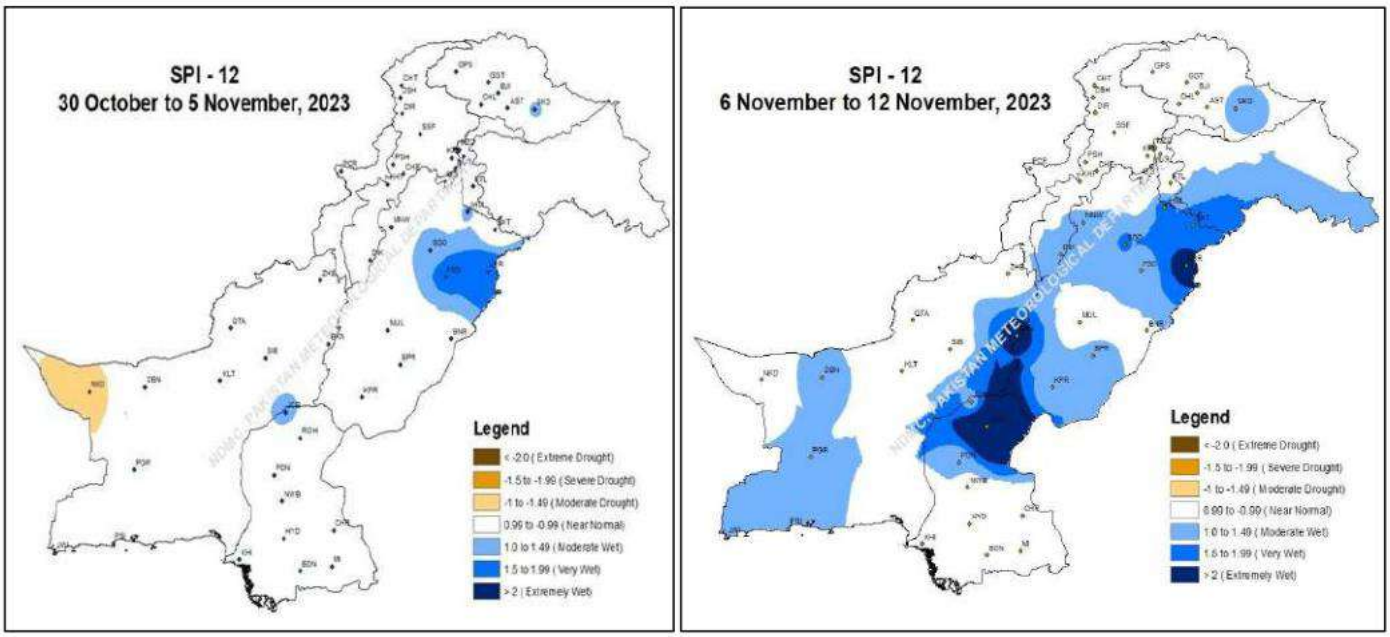


Figure 2: Rainfall Departure from Normal during First fortnight of Nov-2023

Figure 2 depicts the Percentage Departure of rainfall from normal during first fortnight. Some parts of Northern Punjab, Khyber Paktunkhawa, Rawalpindi/Islamabad, AJK and Balochistan receive above normal rainfall as shown in blue colour during the fortnight while rest of the areas receive below Normal rainfall. Farmers are advised to keep themselves abreast of weather updates and plan field activities accordingly to minimize weather induced losses to matured/cultivated crops.

2. Drought Situation Analysis

During last week, rain was reported in most parts of the country. The significant change was occurred during last week with respect to the previous week as shown in the figure. Overall conditions are normal to wet in Pakistan. The situation in the coastal and adjacent areas of Sindh and Balochistan is looking wet than before.



Forecast Duration of forecast: 13 November, 2023 to 19 November, 2023.

On 13 November, mainly dry weather is expected in most parts of the country, while cold in upper parts. On 14 November, mainly dry weather is expected in most parts of the country, while cold in upper parts. Fog is likely to occur at a few places in plain areas of Punjab, upper Sindh and Khyber Pakhtunkhwa during morning hours. During 15 to 16 November, mainly dry weather is expected in most parts of the country, while cold in upper parts. Fog/smog is likely to occur in plain areas of Punjab, upper Sindh and Khyber Pakhtunkhwa during morning and night hours. On 17 November, mainly dry weather is expected in most parts of the country, while cold in upper parts. However, rain-thunderstorm is expected at isolated places in western Balochistan. Fog/smog is likely to occur in plain areas of Punjab, upper Sindh and Khyber Pakhtunkhwa during morning and night hours. During 18 to 19 November, mainly dry weather is expected in most parts of the country, while cold in upper parts. Fog/smog is likely to occur in plain areas of Punjab, upper Sindh and Khyber Pakhtunkhwa during morning and night hours.

3. Normalized Difference Vegetation Index (NDVI)

Normalized Difference Vegetation Index values during first fortnight of Nov 2023 are shown in Fig.4. NDVI values are good in north Punjab and along the Indus belt depicting the good vegetation over there. Low NDVI values are observed in Sindh and Balochistan areas.

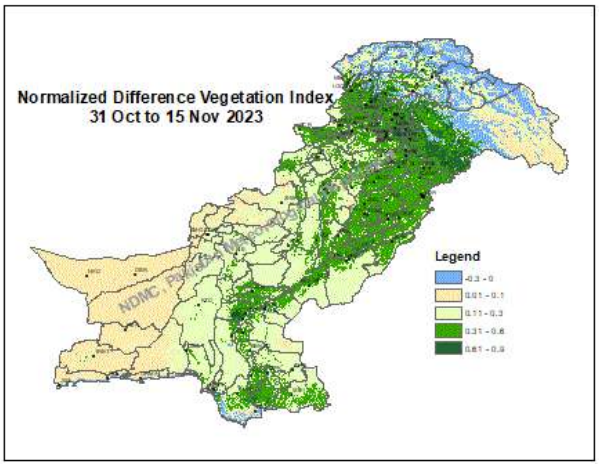


Figure.4: NDVI First Fortnight of NDVI, 2023

4. Land Surface Temperature (LST)

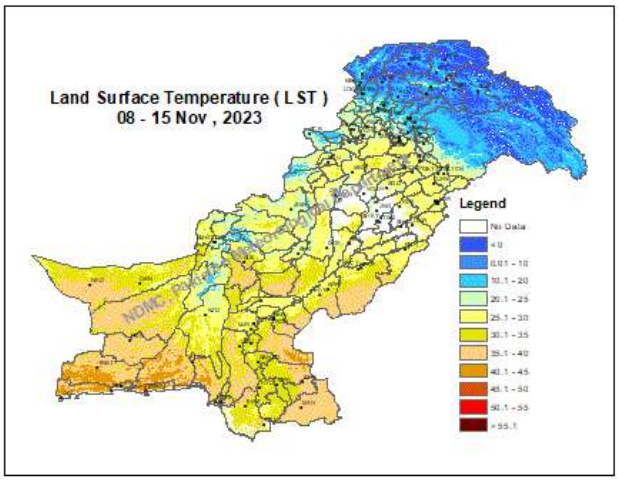


Figure5: LST First Fortnight of LST, 2023

Land surface Temperatures (LST) during first fortnight of Nov 2023 represented in Fig.5. Temperatures in most of the areas in Northern, western and central Pakistan areas are facing temperatures above 25°C. While Southern and western parts of the country are showing values of Temperature above 30°C. Some areas of Nokundi, kharan in Balochistan and Tharparkar in Sindh and Coastal Areas are even showing LST Higher than 35°C.

5. Temperature Vegetation Dryness Index (TVDI)

Temperature Vegetation Dryness Index (TVDI) derived from MODIS product MOD13A2 (NDVI) and MOD11A2 (LST) is shown in Fig. 6, which depicts Moisture stress consitions in Nokundi, Kharan and coastal areas of Balochistan are showing moisture stress conditions over there.

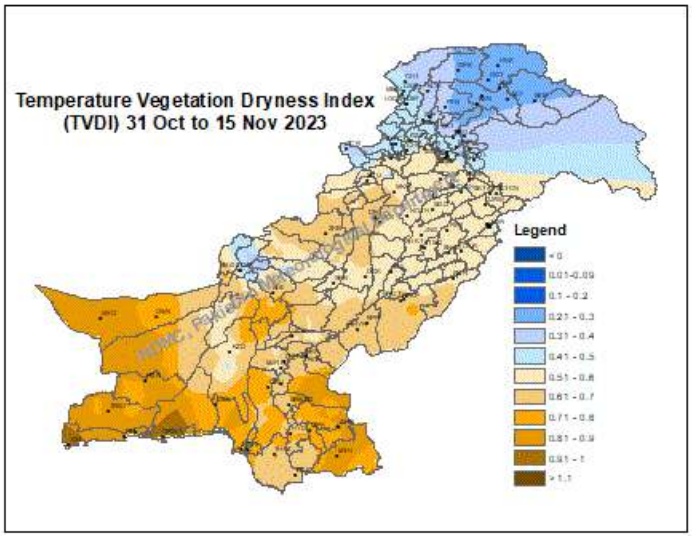


Figure 6: TVDI First Fortnight of TVDI, 2023