

FORTNIGHTLY DROUGHT WATCH BULLETIN

(1-15 Oct, 2023)

1. Weather Summary for the 1st Fortnight of October 2023

During the first fortnight of Oct 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 Oct, 2023 are shown in Table-1 below;

Table:1					
Sr.No.	Station	Rainfall(mm)	Sr.No.	Station	Rainfall(mm)
1	LAHORE, AIRPORT	122	6	CHERAT	60
2	LAHORE,CITY	86	7	HAFIZABAD	56.2
3	RISALPUR	85	8	GUJRANWALA	53.5
4	NAROWAL	80.4	9	MANGLA	43.1
5	CHAKWAL	74.5	10	MALAMJABBA	40

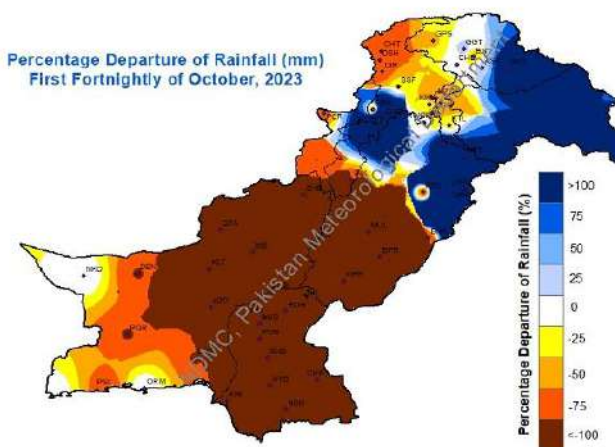
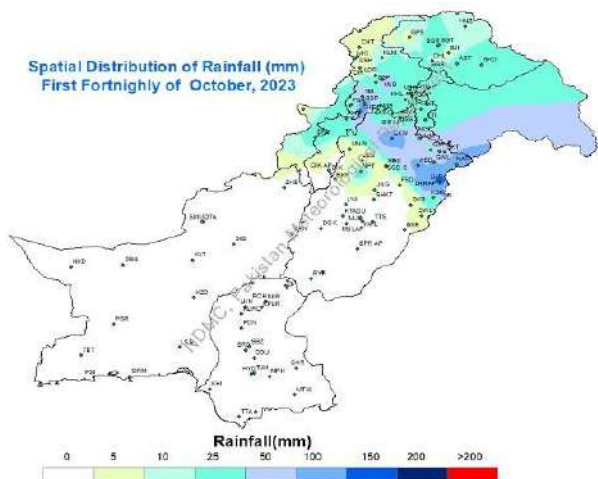


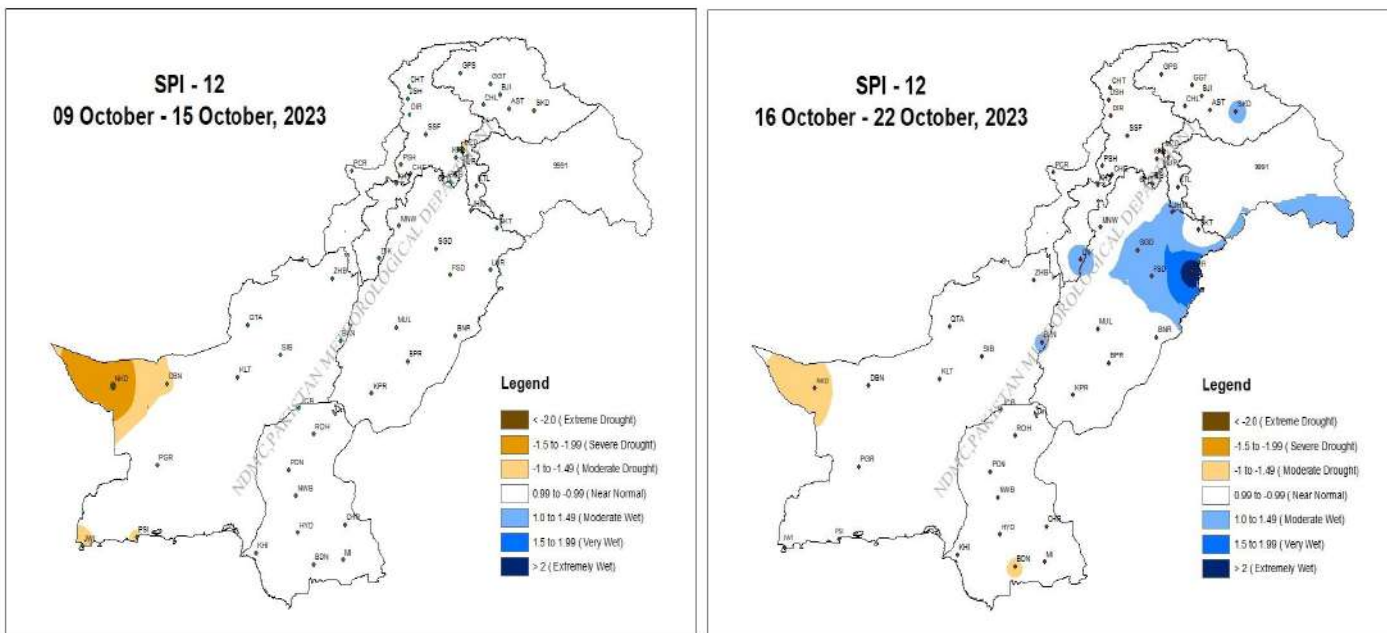
Figure 1: Rainfall distribution of Pakistan during First fortnight of Oct-2023

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

Figure 2 depicts the Percentage Departure of rainfall from normal during first fortnight. Some parts of Northern Punjab, Khyber Pakhtunkhwa, Rawalpindi/Islamabad and AJK receive above normal rainfall as shown in below colour during the fortnight while rest of the areas receive Normal to 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 country. The significant change was occurred in the drought areas with respect to the previous week as shown in the figure below. Overall conditions are normal to wet in Pakistan. However, the situation in the coastal and adjacent areas of Sindh and Balochistan is looking better than before.



Forecast Duration: 23 October, 2023 to 29 October, 2023.

On 23 October, 2023 mainly dry weather is expected in most parts of country while, partly cloudy weather with chance of light rain at isolated places in Gilgit-Baltistan and upper Khyber Pakhtunkhwa during evening/night. On 24 October, 2023 mainly dry weather is expected in most parts of the country, while cold in northern parts during night and morning hours. However, partly cloudy weather with light rain is likely at isolated places in upper Khyber Pakhtunkhwa, Gilgit-Baltistan and Kashmir. During 25 October to 26 October, 2023 mainly dry weather is expected in most parts of the country, while cold in northern parts during night and morning hours. On 27 October, 2023 mainly dry weather is expected in most parts of the country, while cold in northern parts during night and morning hours. However, partly cloudy weather with rain is likely at isolated places in northwest Balochistan. During 28 October to 29 October 2023 mainly dry weather is expected in most parts of the country. However, partly cloudy weather with chances of rain at isolated places in north Balochistan and western parts of Khyber Pakhtunkhwa.

3. Normalized Difference Vegetation Index (NDVI)

Normalized Difference Vegetation Index values during first fortnight of Oct 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.

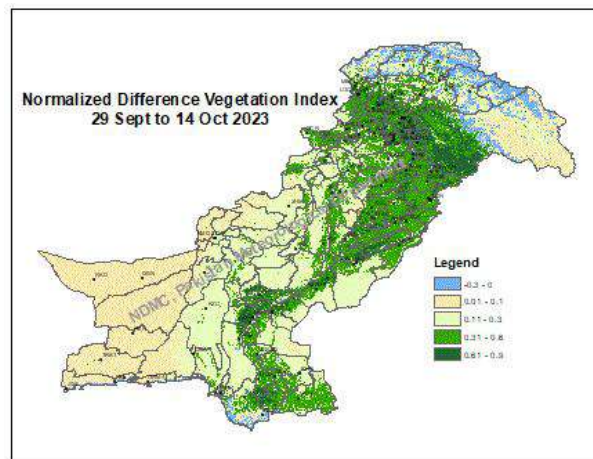


Figure.4: NDVI First Fortnight of NDVI, 2023

4. Land Surface Temperature (LST)

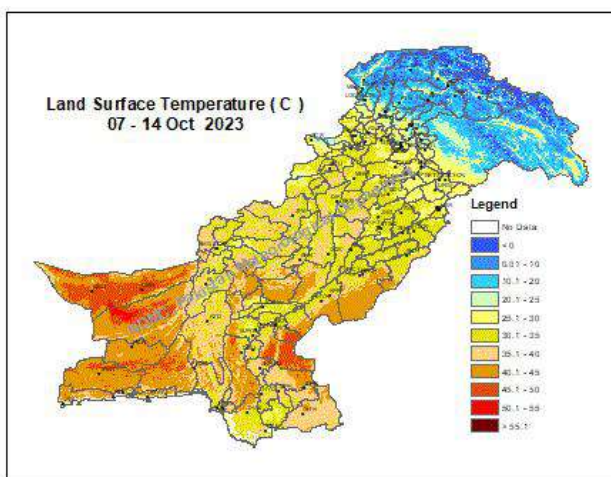


Figure5: LST First Fortnight of LST, 2023

Land surface Temperatures (LST) during first fortnight of Oct 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 Nokkundi, Kharan in Balochistan and Tharparkar in Sindh and Coastal Areas are even showing LST Higher than 40°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 conditions in Nokkundi, Kharan and coastal areas of Balochistan are showing moisture stress conditions over there.

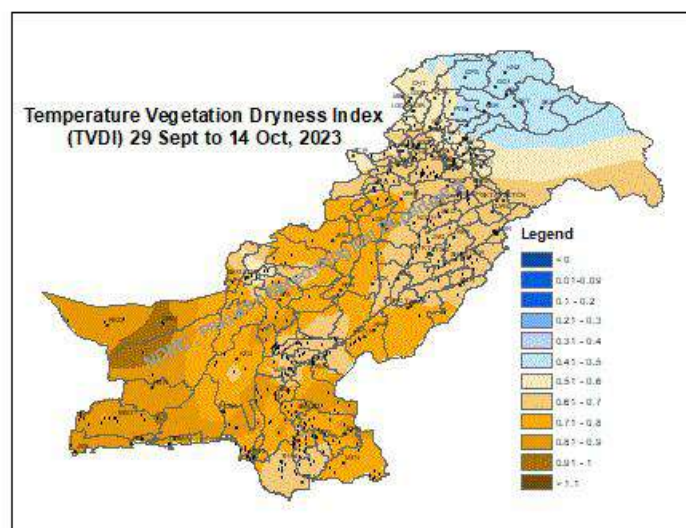


Figure 6: TVDI First Fortnight of TVDI, 2023