

# FORTNIGHTLY DROUGHT WATCH BULLETIN

(1-15 November, 2022)

## 1. Weather Summary for the 1<sup>st</sup> fortnight of November 2022

During the first fortnight of November 2022, Light to Moderate rainfall reported from Islamabad, AJK, Some parts of Punjab, Khyber Paktunkawa and Panjgur station in Balochistan. Spatial distribution of the rainfall is shown in Fig. 1. The chief amounts of rainfall recorded across Pakistan during the period 1-15 November, 2022 are shown in Table-1 below:

Table:1					
Sr. No.	Station	Rainfall (mm)	Sr. No.	Station	Rainfall (mm)
1	Kalam	126.4	6	Murree	91.5
2	Pattan (KP)	121.5	7	Dir	90.0
3	Muzaffarabad Airport	100.8	8	Haraman (AJK)	89.1
4	Balakot	100.0	9	Tirah (KP)	87.6
5	Rawalakot	97.1	10	Bandi Abbaspur	87.1

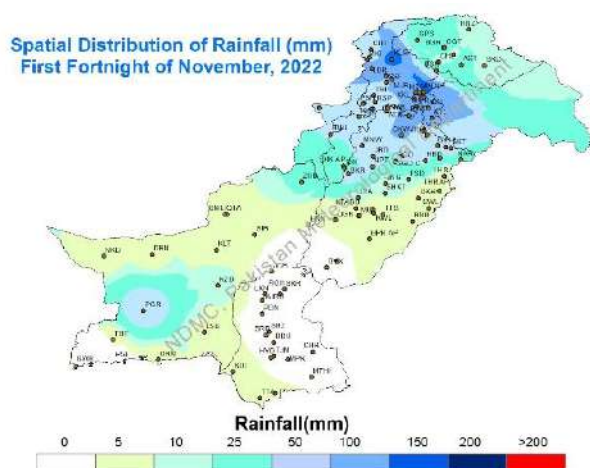


Fig. 1: Rainfall distribution of Pakistan during First fortnight of Nov-2022

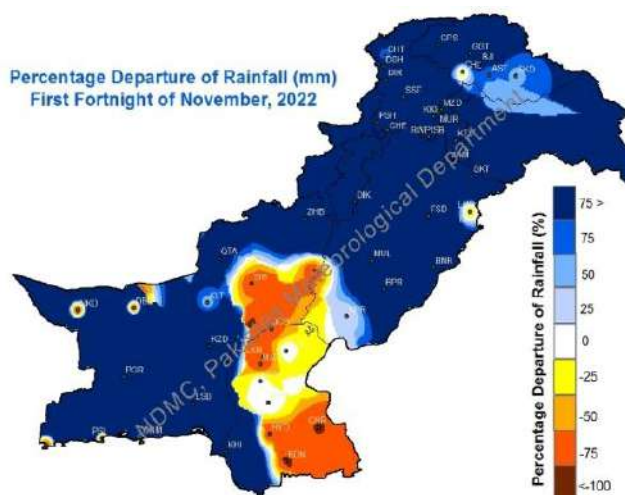


Fig. 2: Rainfall Departure from Normal during First fortnight of Nov-2022

Fig. 2 depicts the Percentage Departure of rainfall from normal. Most parts of Sindh and its adjacent areas received below normal rainfall during the fortnight while rest of the areas received normal to above rainfall. Most of the flooded areas received below normal rainfall during the first fortnight of November-2022. 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 the last week, light rainfall was reported from both Sindh and Balochistan. Night-time temperatures are decreasing more as compared to the Day-time temperatures in different cities. The change occurred in the Drought situation during last week with respect to the previous week is updated using Standardized Precipitation Index (SPI).

The change is shown in map form which is appended below. Currently normal conditions are prevailing in most of the districts in Balochistan and Sindh but coastal and its adjoining areas are showing wetter conditions compared to the previous week.

According to meteorological conditions, in the next week no specific rain is expected in both Balochistan and Sindh provinces. While cold weather is expected in north Balochistan. Drought-like situation has been terminated from Sindh and Balochistan due to previous rains.

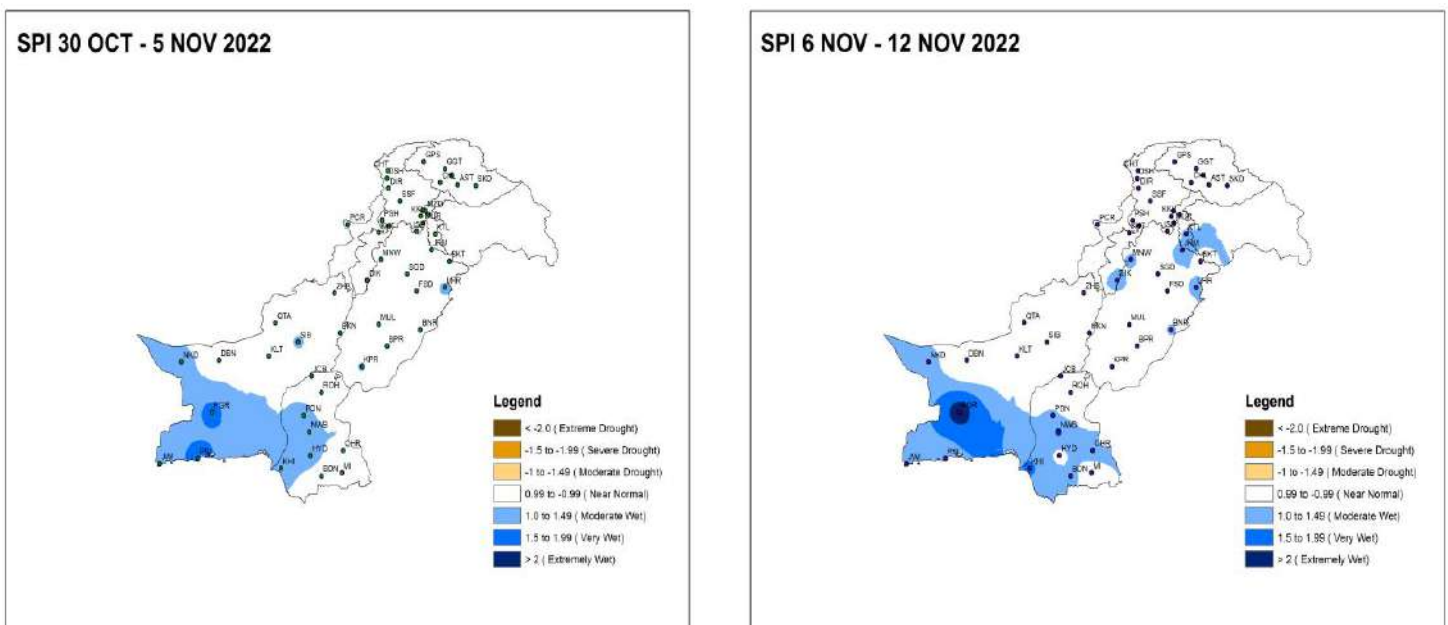


Fig. 3: Drought Outlook during the 1<sup>st</sup> fortnight of November 2022

### 3. Normalized Difference Vegetation Index (NDVI)

Normalized Difference Vegetation Index values during first fortnight of November 2022 are shown in Fig. 4. NDVI values are good in north Punjab and along the Indus belt depicting the good vegetation over there, also low NDVI values are also observed from above normal rainfall areas.

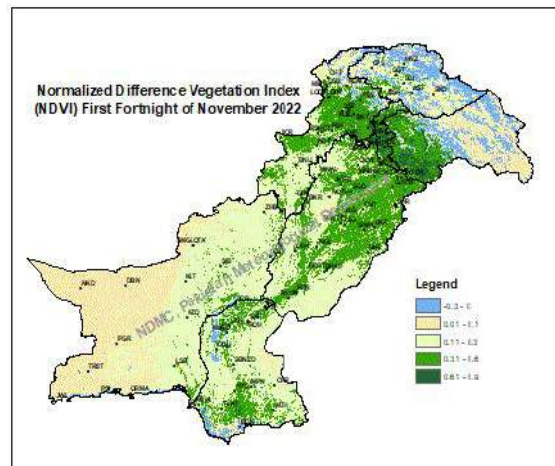


Fig.4: NDVI First Fortnight of Nov, 2022

### 4. Land Surface Temperature (LST)

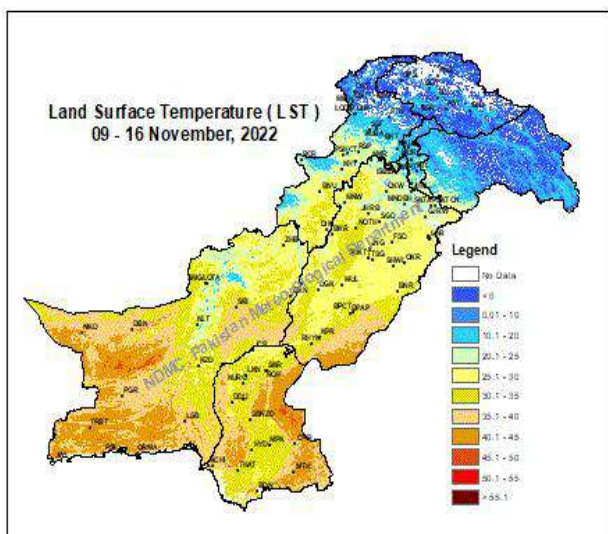


Fig. 5: LST First Fortnight of Nov, 2022

Land

surface Temperatures (LST) during first fortnight of November 2022 represented in Fig. 5. In northern, eastern and central parts of the country, temperatures are decreasing now. Most of the areas in Southern and western parts of the country are also showing values of Temperature below 30°C while central Pakistan areas are facing temperatures below 25°C. Nokundi and Cholistan regions are still receiving high temperature values over there.

### 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 Mild drought conditions in Nokundi and Dalbandin areas of Balochistan while remaining drought areas are still under some relief due to above normal rainfall events during the monsoon months.

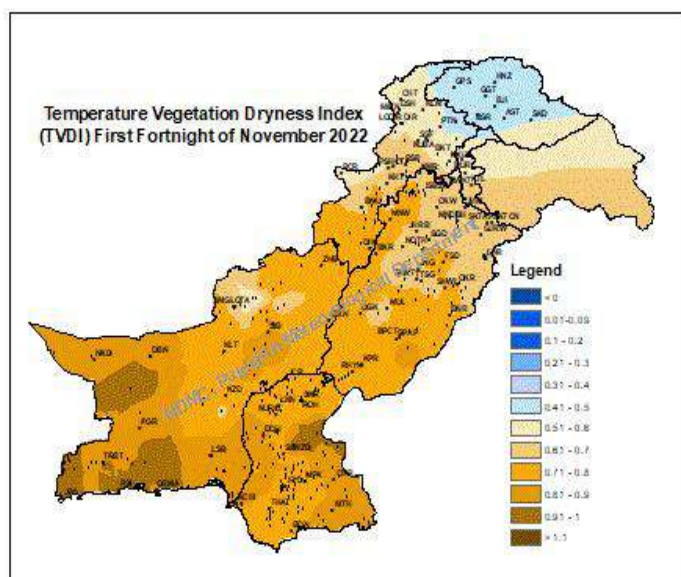


Fig. 6: TVDI First Fortnight of Nov, 2022