

FORTNIGHTLY DROUGHT WATCH BULLETIN

(1-15 December, 2021)

1. Weather Summary for the 1st fortnight of December 2021

During the first fortnight of December 2021, Rain bearing systems produced Light to moderate rainfall at most of the places in the KP and AJK, while rest of the country received very little or no rainfall during the period. Spatial distribution of the rainfall is shown in Figure No.1. The chief amounts of rainfall recorded across Pakistan during the period 1-15 December, 2021 are shown in Table-1 below;

Table:1					
Sr. No.	Station	Rainfall (mm)	Sr. No.	Station	Rainfall (mm)
1	Deolian (AJK)	50.2	6	Malam Jabba	32.0
2	Tandali (AJK)	36.5	7	Muzaffarabad	32.0
3	Garhi Dupatta	33.0	8	Balakot	30.0
4	Pashat-Bajaur (KP)	32.8	9	Haraman (AJK)	21.4
5	Chattar Kalas (AJK)	32.0	10	Dir	21.0

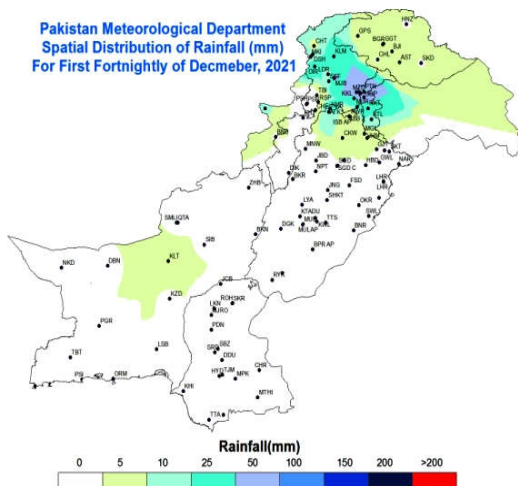


Figure 1: Rainfall distribution of Pakistan during the 1st fortnight of December-2021

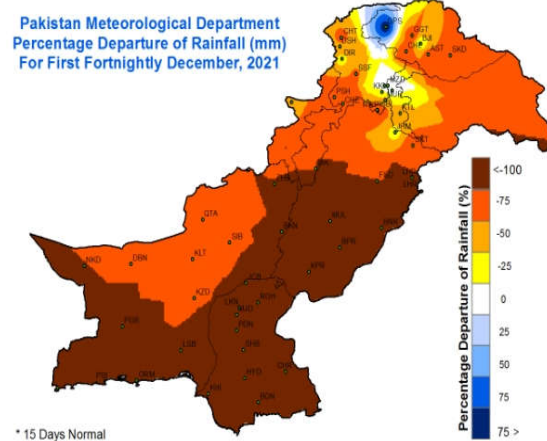


Figure 2: Rainfall Departure from Normal during The 1st fortnight of December-2021

Figure 1 shows Spatial distribution of the recorded rainfall across Pakistan during the period. The Figure 2 depicts the Percentage Departure of Rainfall from the normal. Below normal rainfall was received over most of the places in the country during the first fortnight of December while some pockets in KP and AJK received 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

Spatial drought analysis results using different indices are represented in Fig. 3. In Balochistan, Districts Chagi, Kharan, Panjgur, Washuk and Kech are facing Moderate while Kalat, Awaran and Quetta are facing Mild Drought Conditions.

In Sindh, Drought conditions are almost normal, including Karachi, Tharparkar, Badin, Chhor and adjoining areas till mid December.

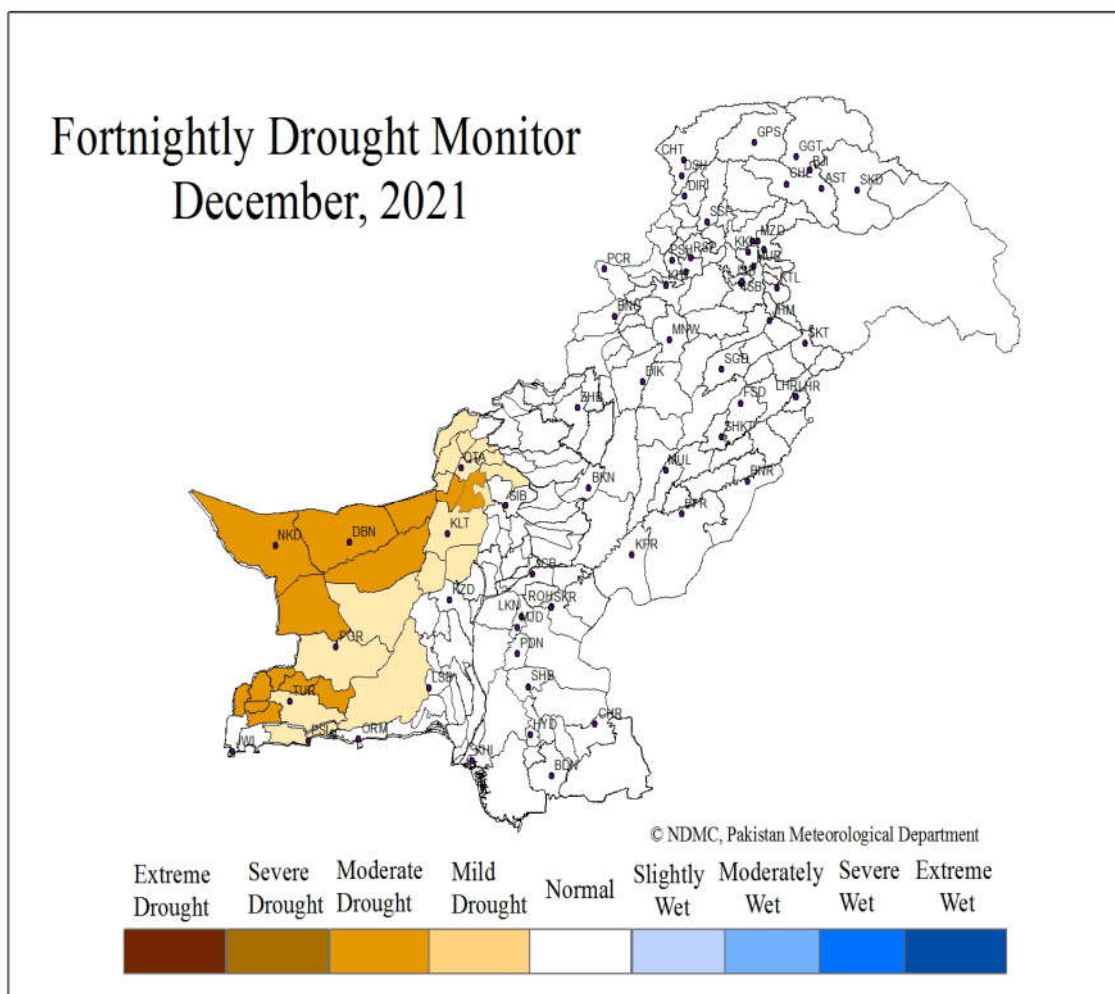


Figure 3: Drought Outlook during the 1st fortnight of December 2021

3. Normalized Difference Vegetation Index (NDVI)

Normalized Difference Vegetation Index values during first fortnight of December, 2021 are shown in Fig.4. NDVI values are good in North Punjab and along the Indus belt depicting a good vegetation over there, whereas low NDVI values are observed in the lower half of the country, depicting less vegetation over the area.

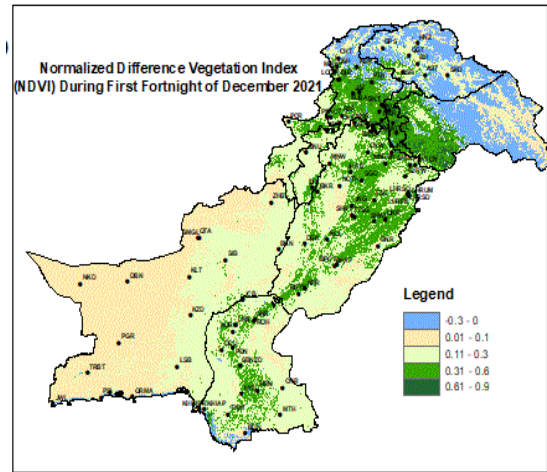


Figure 4: NDVI First Fortnight of December, 2021

4. Land Surface Temperature (LST)

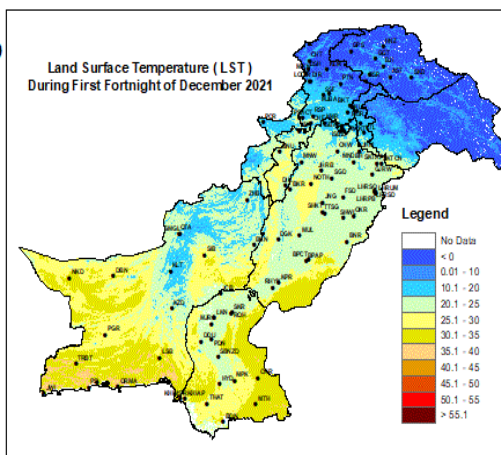


Figure 5: LST First Fortnight of December, 2021

Land surface Temperatures (LST) during first fortnight of December 2021 are represented in Fig.5. In northern, eastern and central parts of the country, temperatures are low as compared with southern and western parts which are showing higher values of Temp. Most of the central areas are experiencing temperatures below 25°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 indicates that mild to moderate dry conditions prevailing across South and Western Balochistan in Nokkundi, Dalbandin, Pasni and Turbat areas whereas moisture stress conditions are prevailing at isolated places in Sindh.

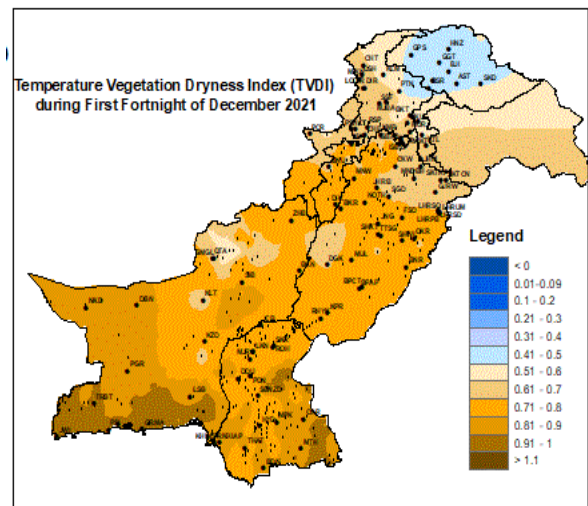


Figure 6: TVDI during the First Fortnight of December 2021