

FORTNIGHTLY DROUGHT WATCH BULLETIN

(1-15 March, 2021)

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

During the first fortnight of March 2021, Rain bearing systems produced light to moderate rainfall at isolated places in the Upper parts of the country. Spatial distribution is shown in Figure No.1. The chief amounts of rainfall recorded across Pakistan during the period 1-15 March, 2021 are shown in Table-1 below;

| Table:1 | | | | | |
|---------|-----------|---------------|---------|-------------------|---------------|
| Sr. No. | Station | Rainfall (mm) | Sr. No. | Station | Rainfall (mm) |
| 1 | Kalam | 116.1 | 6 | Malam Jabba | 76.0 |
| 2 | Dir | 107.0 | 7 | Chakothi | 73.7 |
| 3 | Pattan | 95.0 | 8 | Haraman | 65.7 |
| 4 | Kakul | 77.0 | 9 | Chitral | 64.6 |
| 5 | Rawalakot | 76.4 | 10 | Muzaffarabad City | 59.0 |

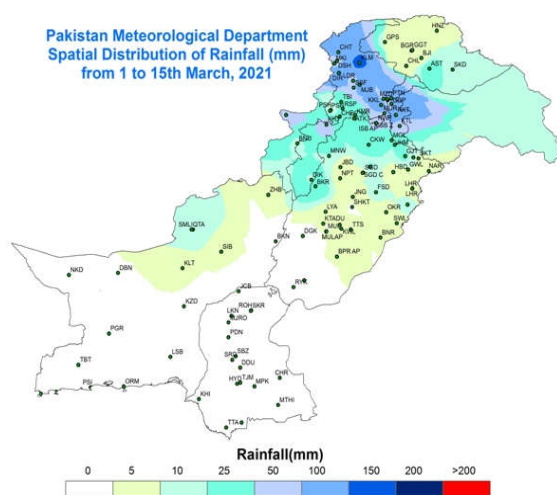


Figure 1: Rainfall distribution of Pakistan during 1st fortnight of March-2021

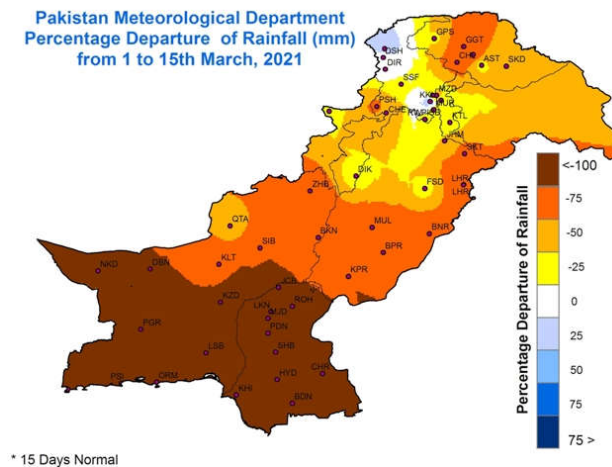


Figure 2: Rainfall Departure from Normal during 1st fortnight of March -2021

Figure 1 shows the spatial distribution of recorded rainfall during the period. The Figure 2 depicts the Percentage Departure of Rainfall from the normal. Generally, below normal rainfall was received across whole of Pakistan. Farmers are advised to keep themselves abreast of weather updates and plan their field activities accordingly to minimize weather induced losses to matured/cultivated crops.

2. Drought Situation Analysis

Drought analysis results using different indices are represented in Fig.3. Normal conditions prevailed over most of the places in all parts of the country. During the first fortnight of March 2021, few good rains were reported from the agricultural plains of Upper Khyber Pakhtunkhawa and AJK and upper Punjab.

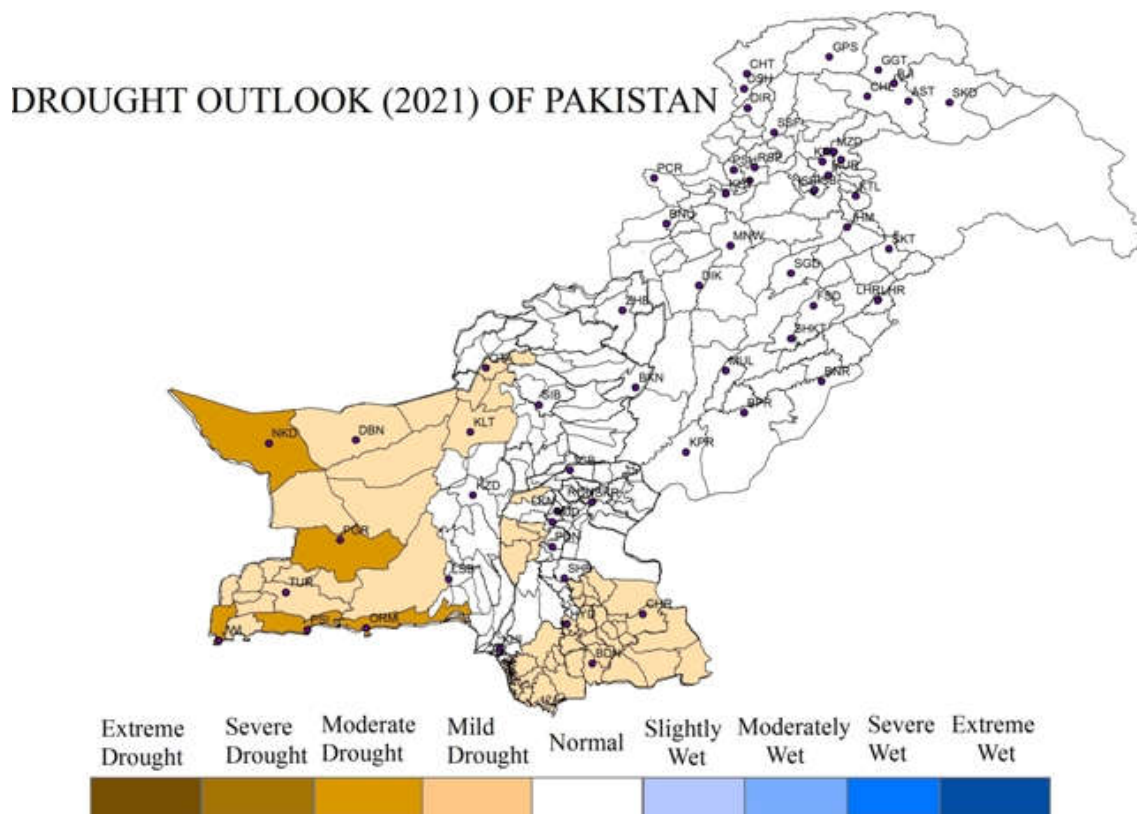


Figure 3: Drought Outlook during 1st fortnight of March 2021

3. Normalized Difference Vegetation Index (NDVI)

Normalized Difference Vegetation Index values for the period 01 – 16 March 2021 are shown in Fig.4. NDVI values are good, depicting the impacts of wet conditions over the areas of upper KP, Punjab and along the Indus belt, whereas low NDVI values are observed in the southern parts of the country.

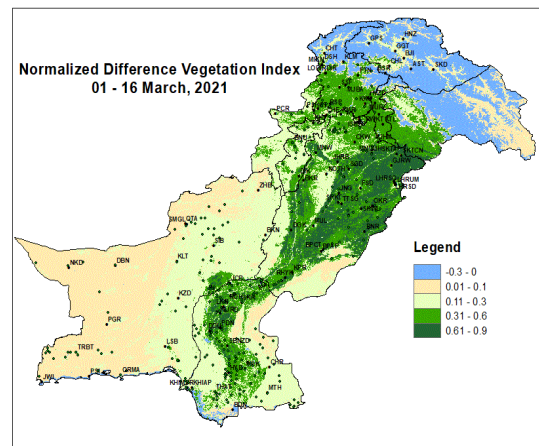


Figure.4: NDVI 01 – 16 March, 2021

4. Land Surface Temperature (LST)

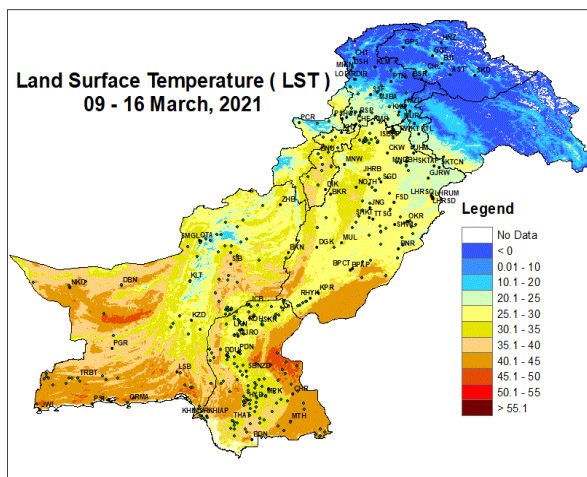


Figure5: LST 09 – 16 March, 2021

Land surface Temperatures (LST) for the period 09 – 16 March, 2021 are represented in Fig. 5. In northern and central parts of the country, temperatures are low as compared with southern parts which are showing higher values. Most of the central areas are observing temperatures between 10°C to 20°C, while some areas in western Balochistan experienced temperatures around below 20°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, dry conditions are prevailing across southwestern Balochistan. Areas around Nokkundi, Pasni and Ormara are under moisture stress conditions. Few areas in Sindh are also under water stress conditions.

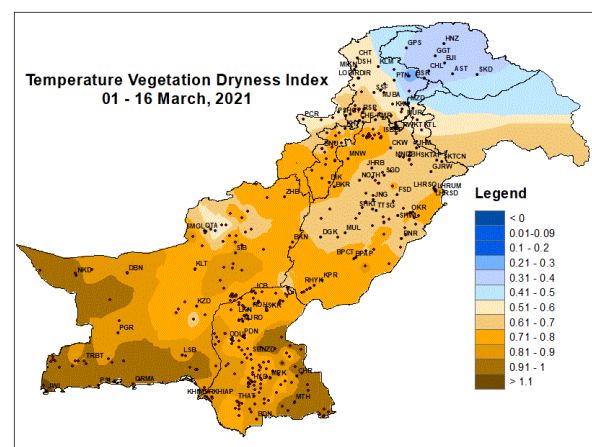


Figure 6: TVDI 01 – 16 March, 2021