FORTNIGHTLY DROUGHT WATCH BULLETIN

(1-15 May, 2023)

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

During the first fortnight of May 2023, Light to very moderate amount of 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 May, 2023 are shown in Table-1 below;

Table:1

Sr.No.	Station	Rainfall(mm)	Sr.No.	Station	Rainfall(mm)
1	HAFIZABAD	145.2	6	KAKUL	99
2	MALAMJABBA	129	7	Pashat-Bajaur	91.6
3	Haraman	103.3	8	Ghalanai	91.2
4	SAIDU SHARIF	101	9	MUZAFFARABAD AIRPORT	86.1
5	Chattar Kalas	99.9	10	LOWER DIR	77

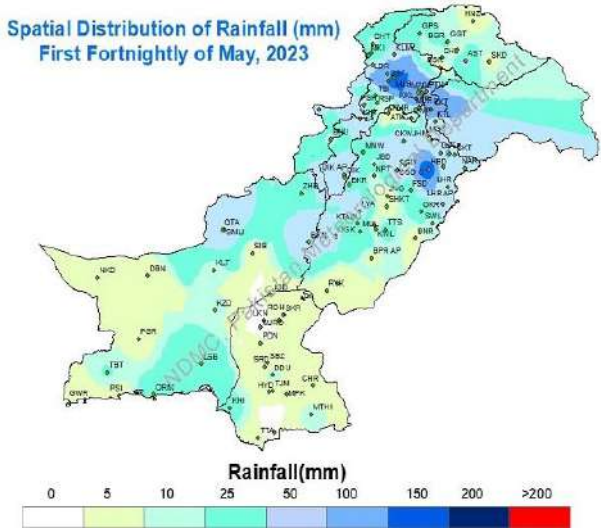


Figure 1: Rainfall distribution of Pakistan during First fortnight of May-2023

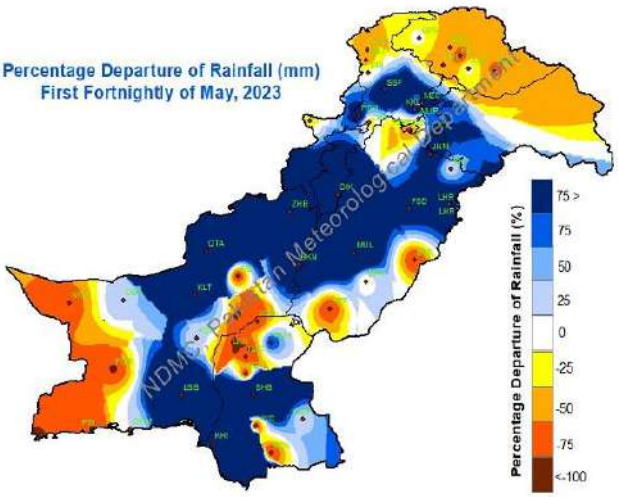
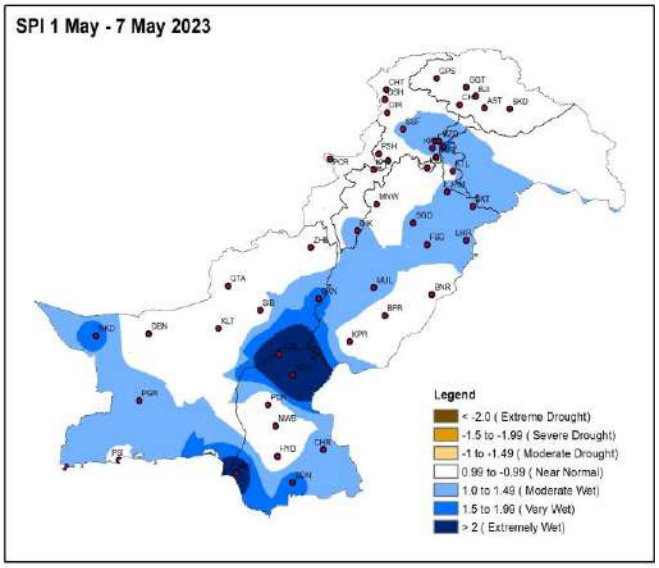


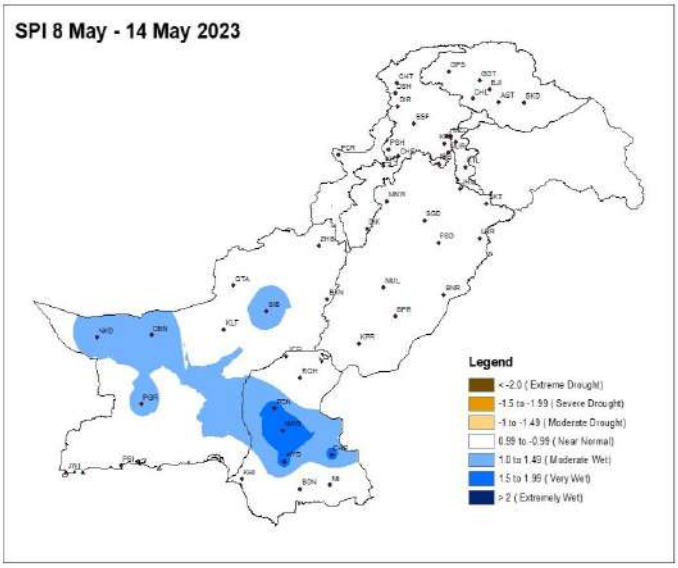
Figure 2: Rainfall Departure from Normal during First fortnight of May-2023

Figure 2 depicts the Percentage Departure of rainfall from normal during first fortnight. Some parts of Sindh, Gilgit Baltistan and AJK receive well below normal rainfall during the fortnight while rest of the areas receive Normal to above Normal rainfall in Punjab and Balochistan as well as shown in blue colour. 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 change occurred in the Drought situation areas 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 less wetter conditions compared to the previous week.





Duration of forecast: 14th May - 21st May, 2023

According to latest meteorological conditions, a westerly wave is likely to enter in upper parts of the country on 16th (evening/night) and likely to persist in upper and central parts till 18th May. Wind-dust/thunderstorm rain is expected in Balochistan (Quetta, Zhob, Barkhan, Qila Saifullah, Qillah Abdullah, Chamman, Pishin, Noshki, Naseerabad, Sibbi), south Punjab (Layyah, Kot Addu, Multan, D.G. Khan, Rajanpur, Bahawalnagar, Khanewal, Pakpattan, Sahiwal) and upper Sindh (Sukkur, Jacobabad & Larkana) on 16th (evening/night) & 17th May. Wind-dust/thunderstorm rain with isolated hailstorm is expected in Kashmir, Gilgit-Baltistan ,Chitral, Dir, Swat, Kohistan, Mansehra, Abbotabad, Haripur, Peshawar, Charsadda, Nowshera, Swabi, Mardan, Bajaur, Kurram, Waziristan, Kohat, Bannu, Tank, Karak, Dera Ismail Khan, Islamabad, Murree, Galliyat, Rawalpindi, Attock, Chakwal, Jhelum, Sargodha, Mianwali, Khushab, Bhakkar, Faisalabad, Jhang, Toba Tek Singh, Sheikhupura, Nankana, Gujranwala, Sialkot, Kasur, Okara and Lahore on 17th & 18th May. Mainly hot and dry weather is expected in most parts of the country from 19th-21st May.

3. Normalized Difference Vegetation Index (NDVI)

Normalized Difference Vegetation Index values during first fortnight of May 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 depecting harvesting of crops over there.

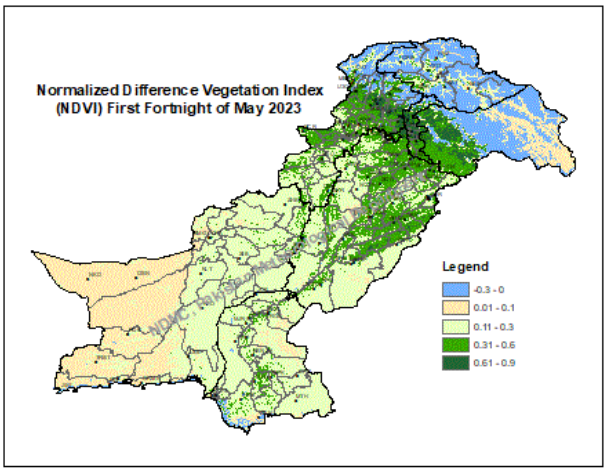


Figure.4: NDVI First Fortnight of May, 2023

4. Land Surface Temperature (LST)

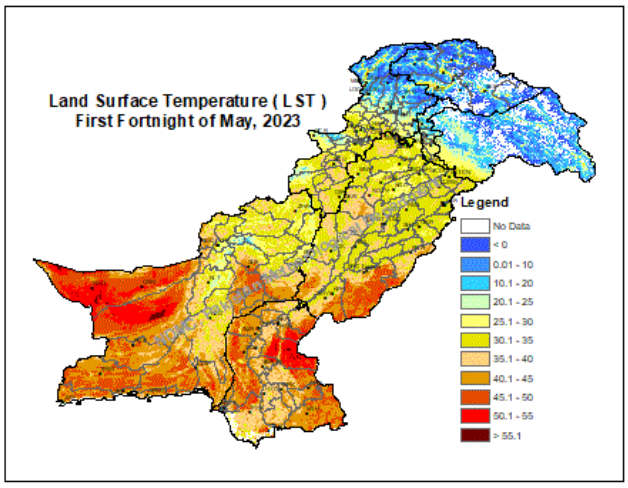


Figure5: LST First Fortnight of May, 2023

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

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 and coastal areas of Balochistan and Mithi, Chor, Tharparkar areas of Sindh are showing moisture stress conditions.

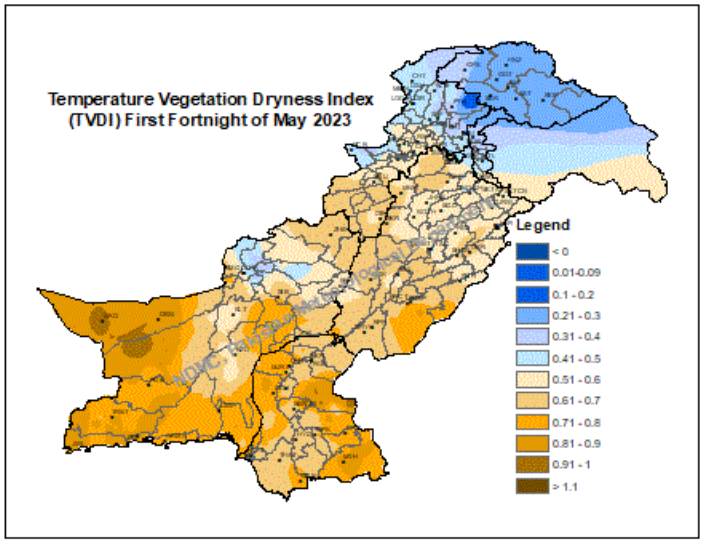


Figure 6: TVDI First Fortnight of May, 2023