

# Decadal Agromet Bulletin of Pakistan



## Highlights...

- ❖ Light to moderate rainfall was observed from Punjab (with heavy showers in the northeastern part of Punjab and Potohar), Khyber Pakhtunkhwa and Kashmir.
- ❖ Light precipitation was observed in Gilgit-Baltistan while dry weather was reported from most parts of Sindh and Baluchistan.
- ❖ Highest precipitation recorded as 93.0 mm at Lahore during the last decade.
- ❖ Highest maximum temperature recorded as 45.5°C at Turbat during the last decade.
- ❖ Mainly dry weather is expected over most parts of the country. However, light rain is expected at isolated places in upper Khyber Pakhtunkhwa, Kashmir, and Gilgit-Baltistan during evening/night.
- ❖ Farmers are advised to plan their activities in accordance with the expected weather conditions.

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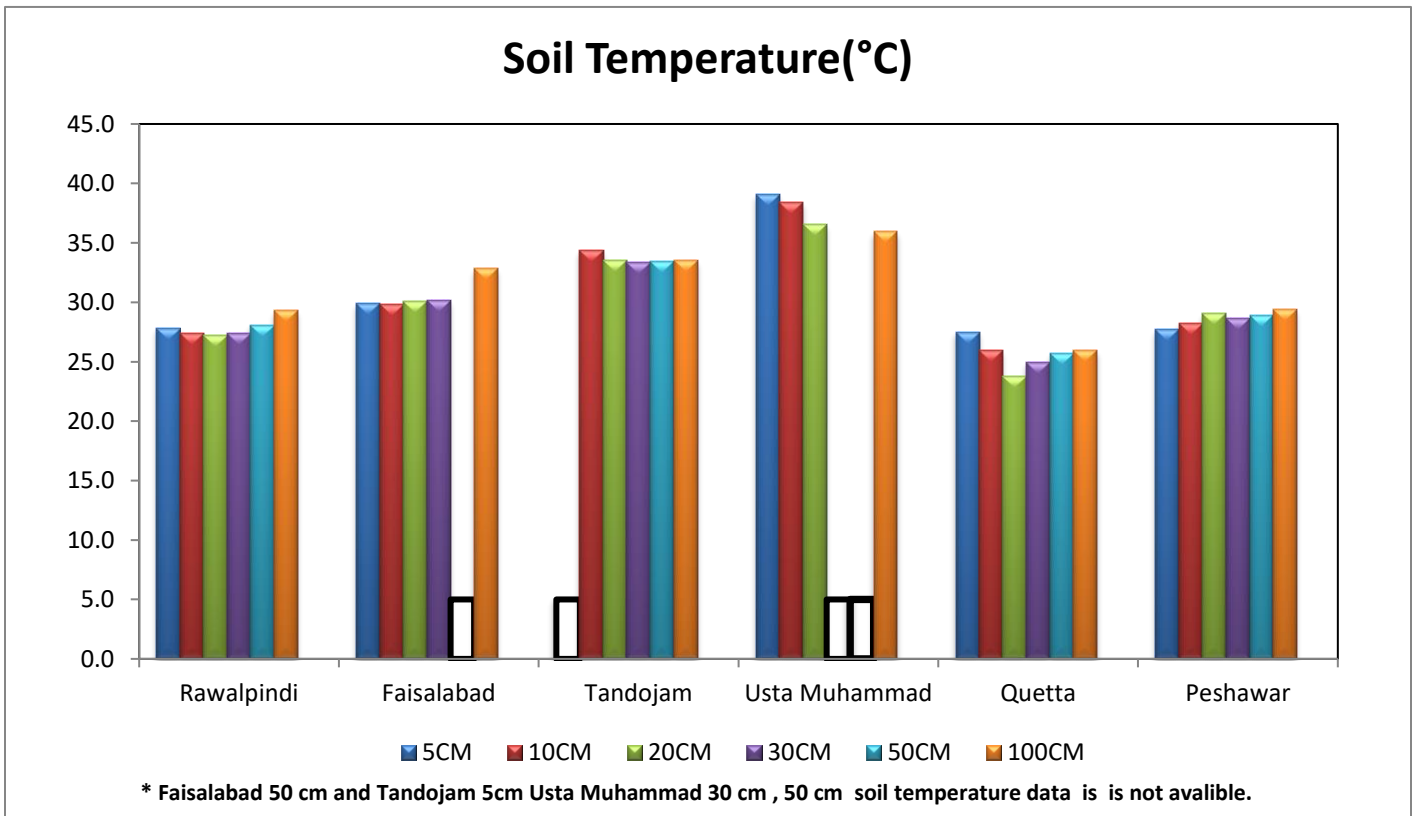
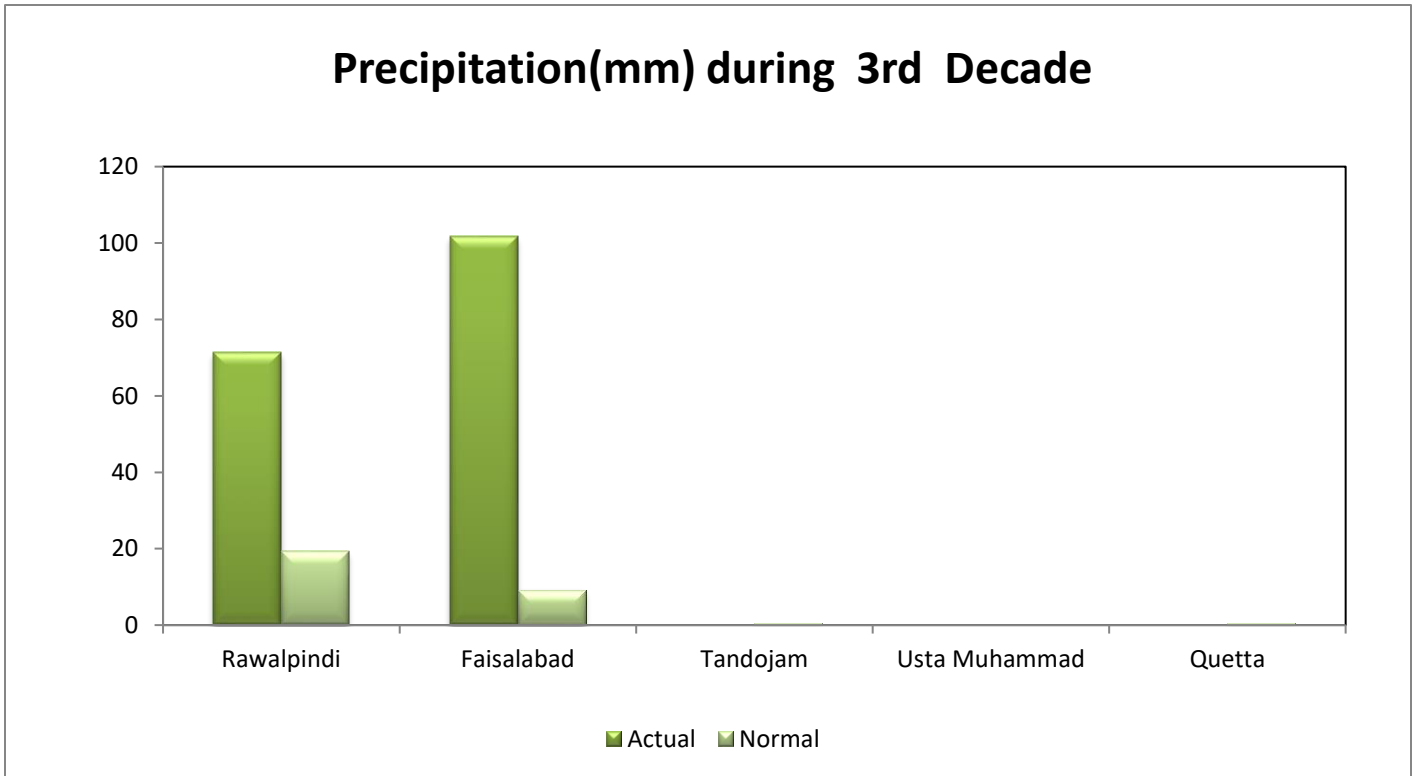
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**Meteorological Conditions during 3<sup>rd</sup> Decade of September, 2023**

Sr. No.	Station	Precipitation (mm)			Air Temperature (°C)			Soil Temperatures (°C)						R.H (%)	Sunshine Duration(hours)	Wind Speed (km/hr)	ETo (mm/day)
		Normal	Actual	Dep	Tmx Dep	Tmin Dep	Mean	5cm	10cm	20cm	30cm	50cm	100cm				
1	Rawalpindi	19.3	71.4	52.1	0.0	-1.2	25.5	27.9	27.4	27.2	27.4	28.1	29.3	60	82.3	1.9	3.5
2	Faisalabad	9.2	101.8	92.6	-1.0	0.7	28.7	29.9	29.8	30.1	30.1	***	32.8	70	77.6	2.4	3.8
3	Jhelum	12.3	75.4	63.1	-0.6	2.3	28.3	28.7	28.7	27.0	28.5	29.1	***	63	88.2	3.8	4.2
4	Lahore	13.8	72.6	58.8	-0.8	-0.1	28.8	29.0	29.1	28.8	28.2	***	29.6	65	66.1	1.5	3.4
5	Sargodha	10.8	43.6	32.8	-1.3	-0.8	28.8	31.0	30.6	30.4	30.6	***	31.6	62	73.2	1.7	3.6
6	Multan	3.0	0.0	-3.0	-0.4	2.6	31.3	***	***	***	***	***	***	55	68.8	6.3	4.9
7	Khanpur	1.2	0.0	-1.2	2.1	3.8	32.1	***	35.9	36.0	36.2	36.3	35.2	60	90.2	***	5.7
8	Tandojam	0.4	0.0	-0.4	-0.3	1.5	30.5	***	34.3	33.5	33.4	33.4	33.5	62	28.1	4.8	4.7
9	Sakrand	0.1	0.0	-0.1	0.8	2.9	31.5	42.5	***	***	***	***	***	56	95.6	3.8	5.2
11	Rohri	0.0	0.0	0.0	0.3	3.0	32.3	***	***	***	***	***	***	53	101.0	4.2	5.4
12	D.I Khan	5.3	6.0	0.7	-0.5	2.0	30.0	32.6	32.0	13.1	***	21.7	***	59	82.5	10.8	5.9
13	Peshawar	8.1	18.0	9.9	-0.8	0.1	27.3	27.7	28.3	29.0	28.7	28.9	29.4	59	57.0	2.1	3.2
14	Usta M.	0.0	0.0	0.0	0.0	0.0	31.5	39.1	38.4	36.6	***	***	36.0	63	***	2.2	3.9
15	Quetta	0.4	0.0	-0.4	-2.6	1.4	19.5	27.5	25.9	23.7	25.0	25.7	25.9	20	99.1	5.2	4.5
16	Skardu	2.5	3.8	1.3	-3.6	0.8	15.8	***	***	***	***	***	***	46	48.8	1.4	2.4
17	Gilgit	1.4	1.9	0.5	-1.7	3.6	21.1	***	***	***	***	***	***	42	59.0	3.4	3.2

**Table-1:** Meteorological parameters for selected stations of Pakistan. "Dep" in the table stands for the difference from climatic normal, i.e. actual value minus normal. The climatic normally used in the Bulletin is extracted from the 2007 - 2016 observed data. 'ETo' stands for reference crop Evapotranspiration\*\*\* stands for data non-availability.

# Graph at RAMCs during September, 2023



**Past Weather (20<sup>th</sup> to 30<sup>th</sup> September, 2023)**

Light to moderate rainfall was observed from Punjab(with heavy showers in northeastern part of Punjab and Potohar), Khyber Pakhtunkhwa and Kashmir. Light precipitation was observed in Gilgit-Baltistan while dry weather reported from most parts of Sindh and Baluchistan.

**1.1 Punjab**

Light to moderate rainfall was observed from Punjab(with heavy showers in northeastern part of Punjab and Potohar) during the previous decade. The decadal maximum dropped below normal by 0.3°C and minimum raised above normal by 1.0°C respectively. Whereas, relative humidity, sunshine hour, wind speed & ETO were recorded as 62%, 78.1 hrs, 2.9 km/hr and 4.2 mm/day respectively.

**1.2 Sindh**

Mostly dry weather reported from most part of the agriculture plain of Sindh while light rainfall reported from a single station during the decade. The decadal maximum and minimum both raised above normal by 0.2°C and 2.5°C respectively. Besides, relative humidity, sunshine hour, wind speed & ETO were recorded as 57%, 74.9 hrs, 4.3 km/hr and 5.1 mm/day respectively.

**1.3 Khyber Pakhtunkhwa**

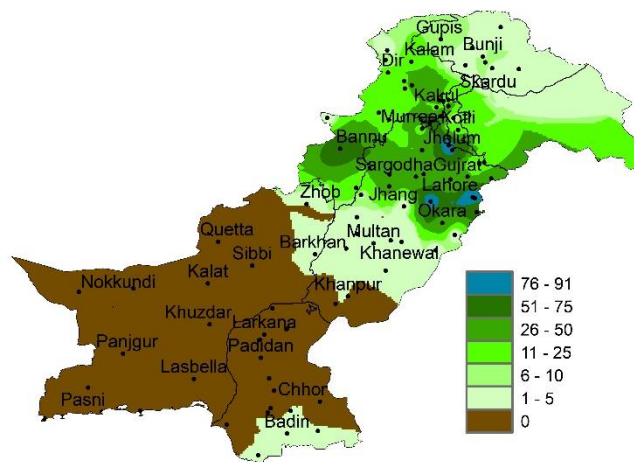
Light to moderate rainfall is reported in the province during the previous decade. The decadal maximum dropped below normal by 0.6°C and minimum raised above normal by 1.0°C and 59°C respectively. Besides, relative humidity, sunshine hour, wind speed & ETO were recorded as 59%, 69.8 hrs, 6.5 km/hr and 4.6 mm/day respectively.

**1.4 Baluchistan**

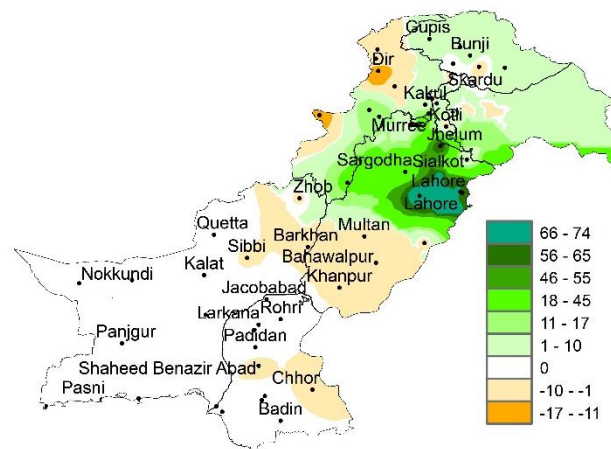
Light rainfall reported a single station whereas rest parts observed dry weather during the decade. Decadal maximum dropped below normal by 1.3°C and minimum temperatures raised above normal by 0.7°C. Besides, relative humidity, sunshine hour, wind speed & ETO were recorded as 42 %, 99.1 hrs, 3.7 km/hr and 4.2 mm/day respectively

**1.5 Gilgit-Baltistan and Azad Jammu & Kashmir**

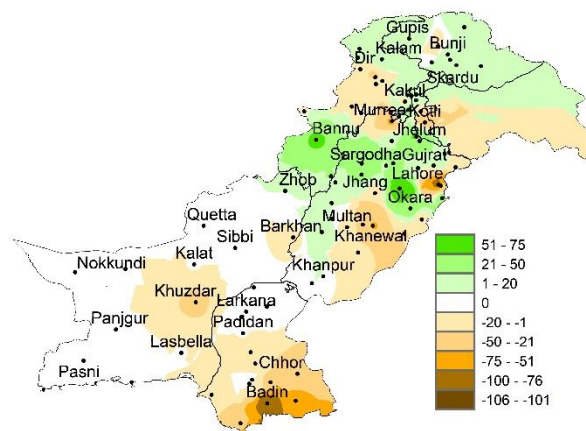
Light precipitation was reported from Gilgit-Baltistan while moderate rainfall reported from Azad Jammu & Kashmir during the decade. Decadal maximum temperature dropped below normal by 2.6°C centigrade whereas minimum temperature raised above normal by 2.2°C. Whereas, relative humidity, sunshine hour, wind speed & ETO recorded as 44%, 53.9 hrs, 2.4 km/hr and 2.8 mm/day respectively.



I. Actual precipitation



II. Departure of precipitation from Normal



III. Departure of precipitation from the previous Decade

*Figure.1: precipitation distribution during the previous decade (mm)*

(a) **Past Weather for Major Agricultural Plains**  
**(20<sup>th</sup> to 30<sup>th</sup> September, 2023)**

**2.1 RAMC, Rawalpindi (Potohar region)**

Rainfall reported as 71.4 mm during the decade; however, weather remained cloudy for 06 days. Average relative humidity recorded as 60% mean day temperature was 32.9°C while night temperature recorded as 18.0°C with 82.3 hours bright sunshine duration. Besides, wind speed recorded as 1.9 km/hr with *variable* mean direction.

*No crop is available in the fields at present.*

**2.2 RAMC, Faisalabad (Central Punjab)**

Rain reported as 101.8 mm during the decade; however, weather remained partially cloudy for 05 days. Average relative humidity recorded as 70% mean day temperature was 34.2°C while night temperature recorded as 23.2°C with 77.6 hours bright sunshine duration. Also, wind speed recorded as 2.4 km/hr with *south easterly* mean direction.

*Boll opening stage completed in the fields of RAMC Faisalabad Cotton crop.*

**2.3 RAMC, Tandojam (Lower Sindh)**

Dry weather reported during the decade; however, weather remained partially cloudy for 03 days. Average relative humidity recorded as 62%, mean day temperature was 36.1°C while night temperature recorded as 24.8°C with 28.1 hours bright sunshine duration. Also, wind speed recorded as 4.8 km/hr with *south westerly* mean direction.

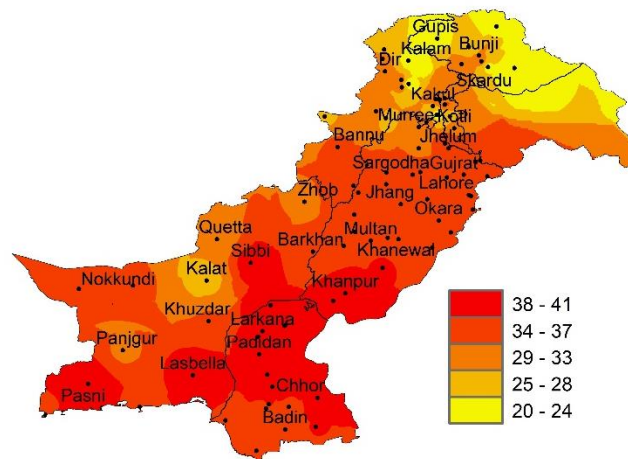
*Third picking was done in the fields of RAMC Tandojam Cotton crop.*

**2.4 RAMC, Usta Muhammad (Eastern Baluchistan)**

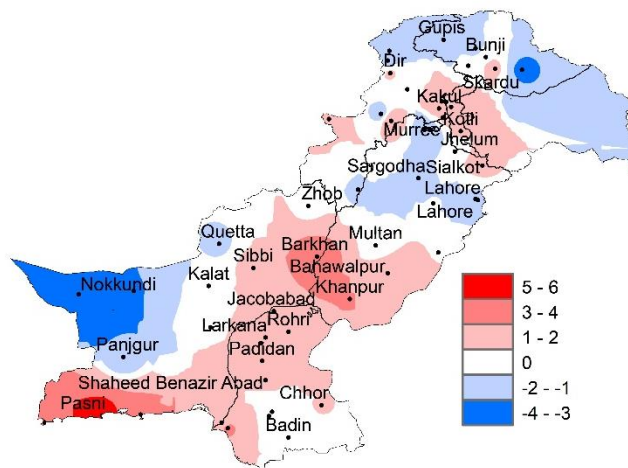
Dry weather reported during the decade; however, weather remained partially cloudy for 02 days. Average relative humidity recorded as 63%, mean day temperature was 37.0°C while night temperature recorded as 25.9°. Also, wind speed recorded as 2.2 km/hr with *south easterly* mean direction.

**2.5 RAMC, Quetta (Northern Baluchistan)**

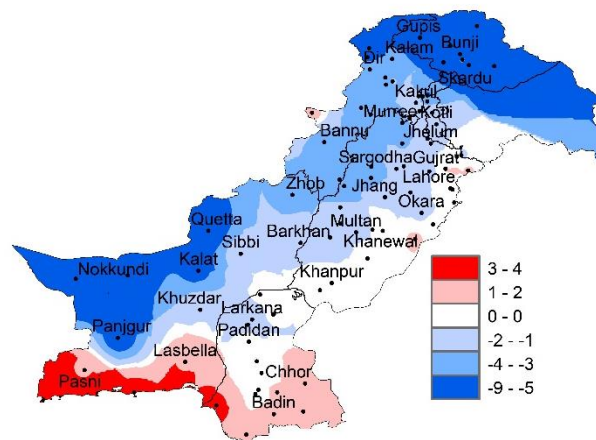
Dry weather reported during the decade. Average relative humidity recorded as 20%, mean day temperature was 27.6 °C while night temperature recorded as 11.4°C with 99.1 hours bright sunshine duration. Also, wind speed recorded as 5.2 km/hr with *north westerly* mean direction.



I. Actual max-temp



II. Departure of max-temp from Normal



III. Departure of max-temp from the previous Decade

**Figure.2: Maximum Temperature distribution during the previous decade (°C)**

**2(b) Past Weather for Sub-Regional Agricultural Plains (20<sup>th</sup> to 30<sup>th</sup> September, 2023)**

**2.6 Jhelum**

Rain reported as 75.4 mm during the decade; however, weather remained partially cloudy for 06 days. Average relative humidity recorded as 63%, mean day temperature was 33.9°C while night temperature recorded as 22.6°C with 88.2 hours bright sunshine duration. Wind speed recorded as 3.8 km/hr with *southerly mean* direction.

**2.7 Lahore**

Rain reported as 72.6 mm during the decade; however, weather remained partially cloudy for 07 days. Average relative humidity recorded as 65%, mean day temperature was 33.8°C while night temperature recorded as 23.7°C with 66.1 hours bright sunshine duration. Wind speed recorded as 1.5 km/hr with *north easterly* wind direction.

**2.8 Sargodha**

Rain reported as 43.6 mm during the decade; however, weather remained partially cloudy for 06 days. Average relative humidity recorded as 62%, mean day temperature was 34.3°C while night temperature recorded as 23.2°C with 73.2 hours bright sunshine duration. Wind speed recorded as 1.7km/hr with *north easterly* wind direction.

**2.9 Multan**

Trace amount of rainfall (0.01 mm) reported during the decade; however, weather remained partially cloudy for 07 days. Average relative humidity recorded as 55%, mean day temperature was 36.2°C while night temperature recorded as 26.3°C. Wind speed recorded as 6.3 km/hr with *southerly* mean wind direction.

**2.10 Khanpur**

Dry weather reported during the decade; however, weather remained partially cloudy for 07 days. Average relative humidity recorded as 60%, mean day temperature was 38.6°C while night temperature recorded as 25.6°C. Mean wind direction reported in *southerly* direction.

**2.11 Sakrand**

Dry weather reported during the decade; however, weather remained partially cloudy for 02 days during the decade. Average relative humidity recorded as 56%, mean day temperature was 37.6 °C while night temperature recorded as 25.4°C with 95.6 hours bright sunshine duration. Wind speed recorded as 3.8 km/hr with *south easterly* mean direction.

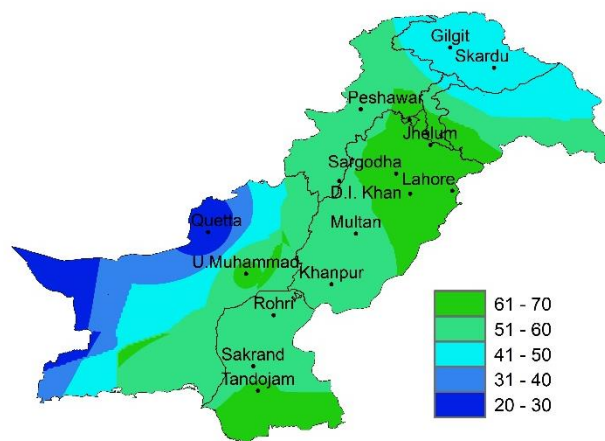


Figure.3: Relative Humidity (%)

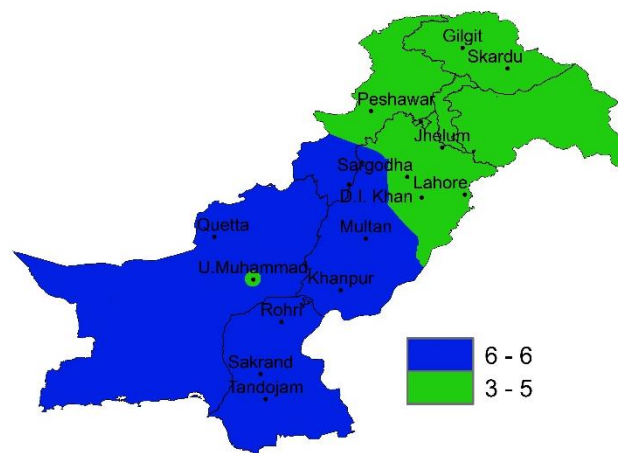


Figure.4: Reference Crop Evapotranspiration ET0 (mm/day)

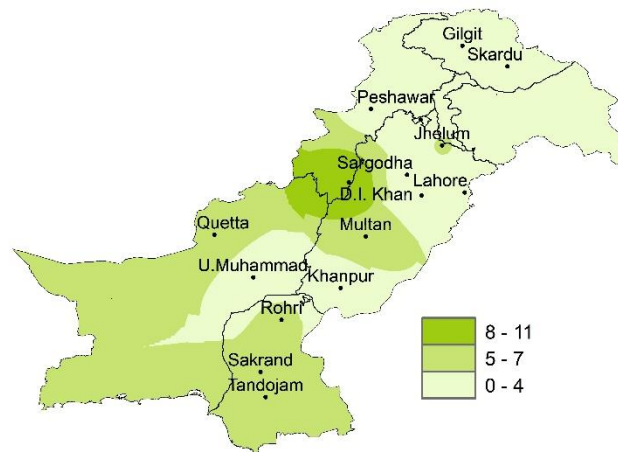


Figure 5: Wind Speed (km/h)

**2.12 Rohri**

Dry weather reported during the decade; however, weather remained partially cloudy for 03 days. Average relative humidity recorded as 53%, mean day temperature was 37.8°C while night temperature recorded as 26.7°C with 101.0 hours bright sunshine duration. Wind speed recorded as 4.2 km/hr with *north easterly* mean direction.

**2.13 D.I. Khan**

Rain reported as 6.0mm during the decade; however, weather remained partially cloudy for 03 days. Average relative humidity recorded as 59 %, mean day temperature was 35.9°C while night temperature recorded as 24.0°C with 82.5 hours bright sunshine duration. Wind speed recorded as 10.8 km/hr with north *easterly* mean direction.

**2.14 Peshawar**

Rain reported as 18.0 mm during the decade; however, weather remained partially cloudy for 07 days. Average relative humidity recorded as 59%, mean day temperature was 33.4°C while night temperature recorded as 21.1°C with 57.0 hours bright sunshine duration. Wind speed recorded as 2.1 km/hr with *variable* mean wind direction.

**2.15 Skardu**

Rain reported as 3.8 mm during the decade; however, average relative humidity recorded as 46%, mean day temperature was 22.2°C while night temperature recorded as 9.4°C with 48.8 hours bright sunshine duration. Wind speed recorded as 1.4 km/hr with *north easterly* mean wind direction.

**2.16 Gilgit**

Precipitation reported as 1.9 mm during the decade; however, weather remained cloudy for 10 days. Average relative humidity recorded as 42%, mean day temperature was 28.5°C while night temperature recorded as 13.7°C with 59 hours bright sunshine duration. Wind speed recorded as 3.4 km/hr with *north westerly* mean wind direction.

**Ten Days Weather Advisory for Farmers**  
**(1<sup>st</sup> to 10<sup>th</sup> October, 2023)**

**3.1 Temperature Forecast**

Slightly above normal day and night time temperatures are expected over most parts of the country.

**3.2 Wind Forecast**

Generally, normal wind patterns may prevail in most of the agricultural plains of the country.

**3.3 Rain Forecast**

- ❖ **Punjab:** Mainly dry weather is expected over most parts of the province.
- ❖ **Khyber Pakhtunkhwa:** Mainly dry weather is expected over most parts of the province. However, light rain is expected at isolated places in upper parts during evening/night.
- ❖ **Sindh:** Mainly dry weather is expected over most parts of the province.
- ❖ **Baluchistan:** Mainly dry weather is expected over most parts of the province.
- ❖ **Gilgit-Baltistan:** Rain-wind thunderstorm is expected at isolated parts during the decade.
- ❖ **Kashmir:** Rain-wind thunderstorm is expected at isolated parts during the decade.

**3.4 Advisory for Farmers**

Farmers are advised to follow weather forecast to proceed for any field activity