

Decadal Agromet Bulletin of Pakistan



Highlights...

- ❖ Light to moderate rainfall was reported from all over the country.
- ❖ However, heavy showers were reported from scattered areas of the Potohar region, northeastern Punjab and upper KP.
- ❖ Highest precipitation recorded as 104 mm at Lahore during the last decade.
- ❖ Lowest minimum temperature recorded as 1.8°C at Kalam during the last decade.
- ❖ Mainly dry weather is expected over most parts of the country. However, rain-thunderstorm is expected at isolated places in Kashmir and Gilgit-Baltistan.
- ❖ Farmers are advised to plan their activities in accordance with the expected weather conditions.

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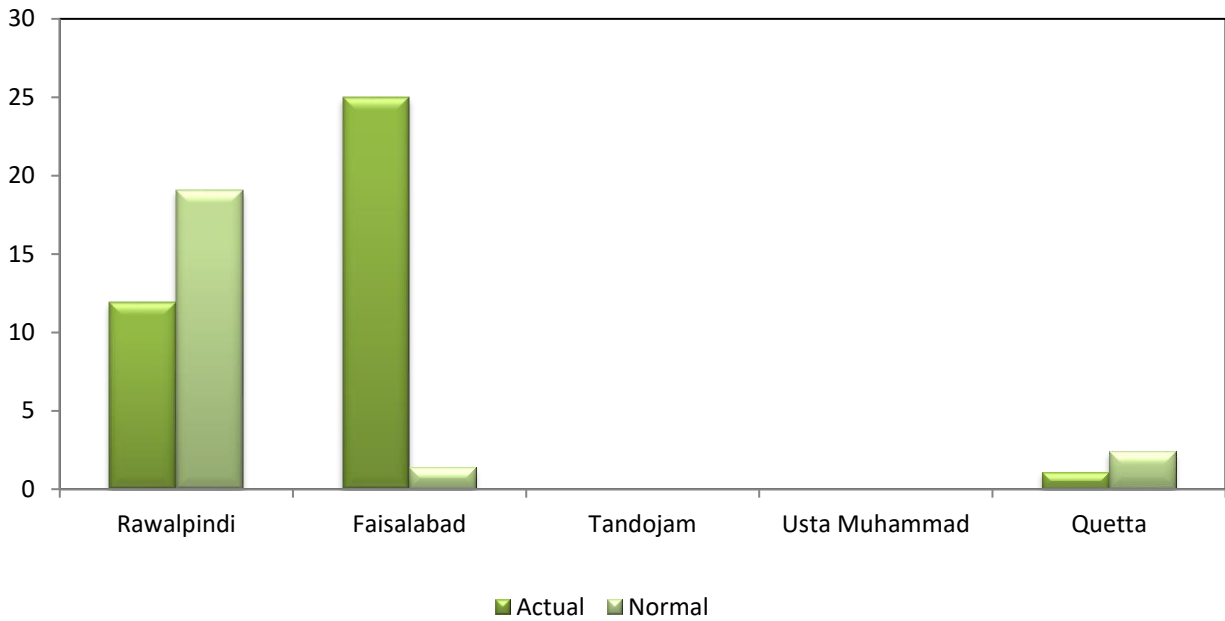
Meteorological Conditions during 2nd Decade of October, 2023

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	19.1	11.9	-7.2	-2.4	-2.2	21.0	23.0	22.8	22.8	23.4	24.5	26.5	66	64.8	1.5	3.3
2	Faisalabad	1.4	25.0	23.6	-2.7	1.0	24.3	26.2	26.1	26.7	27.0	***	30.3	69	79.3	2.4	3.8
3	Jhelum	9.5	54.9	45.4	-5.0	-0.2	22.1	24.0	23.7	24.2	24.7	25.9	***	75	58.5	3.2	3.2
4	Lahore	8.4	85.7	77.3	-6.4	-0.8	22.2	24.8	24.7	25.2	25.6	***	27.1	64	69.0	2.5	3.6
5	Sargodha	6.4	48.8	42.4	-5.6	-2.6	21.9	27.6	27.2	27.6	28.0	***	29.8	66	70.2	1.7	3.5
6	Multan	1.5	0.2	-1.3	-2.4	2.2	26.2	***	***	***	***	***	***	54	63.2	4.9	4.7
7	Khanpur	1.5	0.0	-1.5	0.0	3.6	27.4	***	31.7	32.2	32.5	33.0	32.9	58	78.9	***	5.6
8	Tandojam	0.0	0.0	0.0	-0.9	2.7	29.1	***	31.6	31.6	32.1	31.9	32.4	60	83.8	8.1	6.1
9	Sakrand	0.0	0.0	0.0	0.3	3.9	29.8	39.4	***	***	***	***	***	55	88.8	4.9	5.3
11	Rohri	1.7	0.0	-1.7	-0.3	5.1	29.9	***	***	***	***	***	***	53	94.3	3.9	4.7
12	D.I Khan	2.7	22.0	19.3	-0.4	2.3	25.2	27.1	26.8	13.1	***	18.0	***	62	68.9	8.9	5.3
13	Peshawar	8.5	13.0	4.5	-1.7	-0.2	22.6	23.2	23.8	23.9	24.6	25.4	26.8	64	53.2	2.1	3.2
14	Usta M.	0.0	0.0	0.0	0.0	0.0	26.5	31.7	33.5	33.5	***	***	34.7	64	0.0	2.9	2.4
15	Quetta	2.4	1.1	-1.3	0.2	4.6	18.4	24.0	22.6	20.6	20.9	21.9	22.9	31	88.9	5.2	4.5
16	Skardu	3.9	5.3	1.4	-3.4	1.3	11.1	***	***	***	***	***	***	55	35.5	1.3	2.1
17	Gilgit	3.2	6.5	3.3	-1.6	2.5	16.2	***	***	***	***	***	***	56	46.2	1.9	2.8

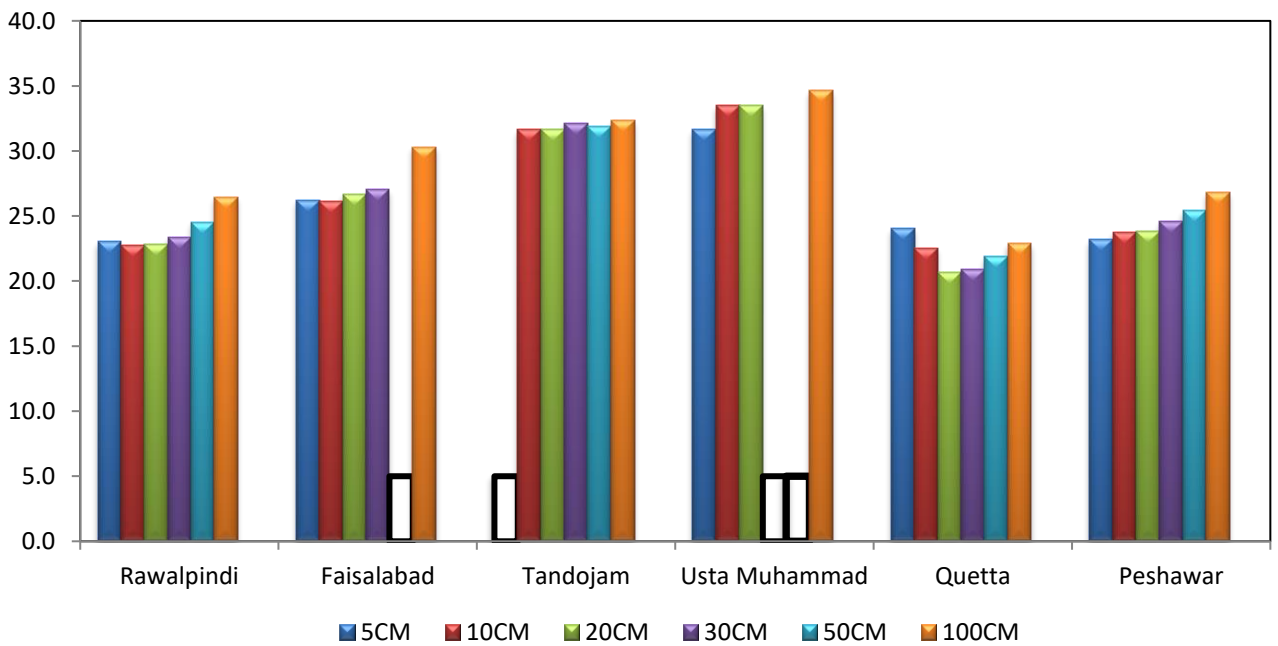
Table-1: Meteorological parameters for selected stations of Pakistan. "Dep" in the table stands for the difference from climatic normal, i.e. actual value minus normal. The climatic normally used in the Bulletin is extracted from the 2007 - 2016 observed data. 'ETo' stands for reference crop Evapotranspiration***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

Graph at RAMCs during October, 2023

Precipitation(mm) during 2nd Decade



Soil Temperature(°C)



* Faisalabad 50 cm and Tandojam 5cm Usta Muhammad 30 cm , 50 cm soil temperature data is is not available.

Past Weather (11th to 20th October, 2023)

Light to moderate rainfall was reported from all over the country. However, heavy showers were reported from scattered areas of the Potohar region, northeastern Punjab and upper KP.

1.1 Punjab

Light to moderate rainfall (with heavy showers in northeastern Punjab and Potohar region) is reported from the agricultural plains of Punjab during the previous decade. The decadal maximum dropped below normal by 3.5°C and minimum temperatures remained near normal. Whereas, relative humidity, sunshine hour, wind speed & ETO were recorded as 65%, 69.1 hrs, 2.7 km/hr and 4.0 mm/day respectively.

1.2 Sindh

Light to moderate rainfall reported from most part of the agriculture plain of Sindh during the decade. The decadal maximum remained near normal and minimum rose above normal by 3.9°C respectively. Besides, relative humidity, sunshine hour, wind speed & ETO were recorded as 56%, 89.0 hrs, 5.6 km/hr and 5.4 mm/day respectively.

1.3 Khyber Pakhtunkhwa

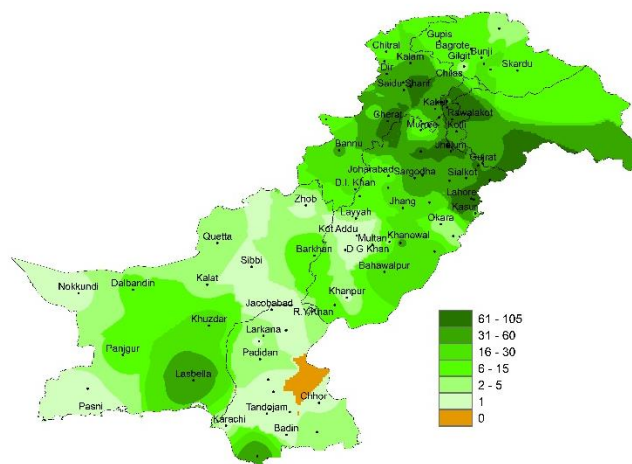
Light to moderate rainfall (with heavy showers in Upper KP) was reported in the province during the previous decade. The decadal maximum and minimum remained near normal. Besides, relative humidity, sunshine hour, wind speed & ETO were recorded as 63%, 61.1 hrs, 5.5 km/hr and 5.4 mm/day respectively.

1.4 Baluchistan

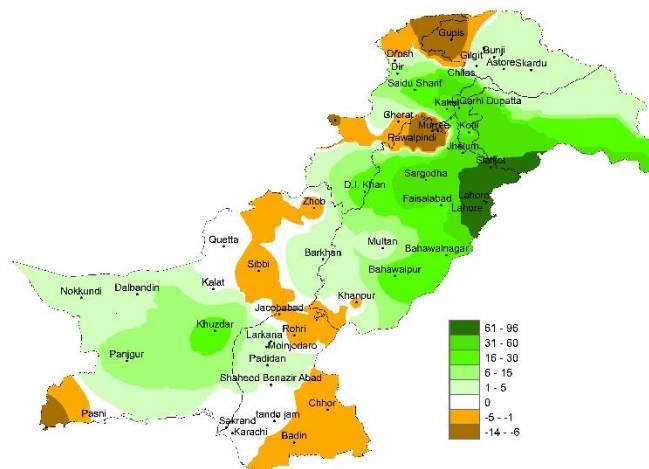
Light to moderate rainfall reported from province during the decade. Decadal maximum remained near normal and minimum temperatures raised above normal by 2.3°C. Besides, relative humidity, sunshine hour, wind speed & ETO were recorded as 48 %, 44.5 hrs, 4.1 km/hr and 3.5 mm/day respectively

1.5 Gilgit-Baltistan and Azad Jammu & Kashmir

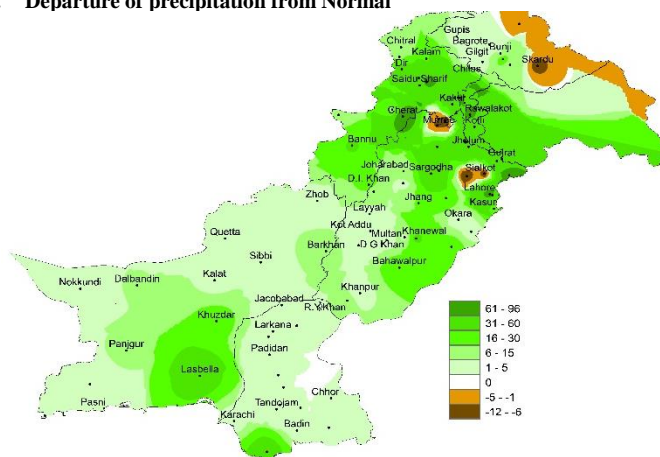
Light to moderate precipitation was reported from Gilgit-Baltistan, Azad Jammu & Kashmir during the decade. Decadal maximum temperature dropped below normal by 2.5°C centigrade whereas minimum temperature raised above normal by 1.9°C. Whereas, relative humidity, sunshine hour, wind speed & ETO recorded as 56%, 40.9 hrs, 1.6 km/hr and 2.5 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
(11th to 20th October, 2023)**

2.1 RAMC, Rawalpindi (Potohar region)

Rainfall reported as 11.9 mm during the decade; however, weather remained cloudy for 03 days. Average relative humidity recorded as 66% mean day temperature was 28.2°C while night temperature recorded as 13.7°C with 64.8 hours bright sunshine duration. Besides, wind speed recorded as 1.5 km/hr with *south easterly* mean direction.

No crop is available in the fields at present.

2.2 RAMC, Faisalabad (Central Punjab)

Rainfall reported as 25.0 mm during the decade; however, weather remained partially cloudy for 04 days. Average relative humidity recorded as 69% mean day temperature was 30.1°C while night temperature recorded as 18.5°C with 79.3 hours bright sunshine duration. Also, wind speed recorded as 2.4km/hr with *south westerly* mean direction.

2.3 RAMC, Tandojam (Lower Sindh)

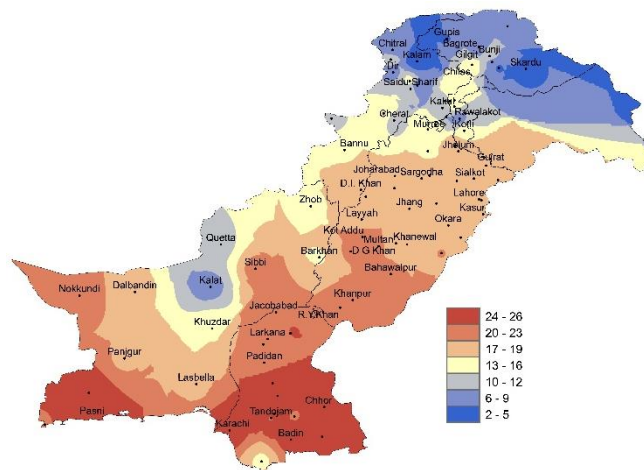
Dry weather reported during the decade; however, weather remained partially cloudy for 03 days. Average relative humidity recorded as 60%, mean day temperature was 35.5°C while night temperature recorded as 22.6°C with 83.8 hours bright sunshine duration. Also, wind speed recorded as 8.1 km/hr with *south westerly* mean direction.

2.4 RAMC, Usta Muhammad (Eastern Baluchistan)

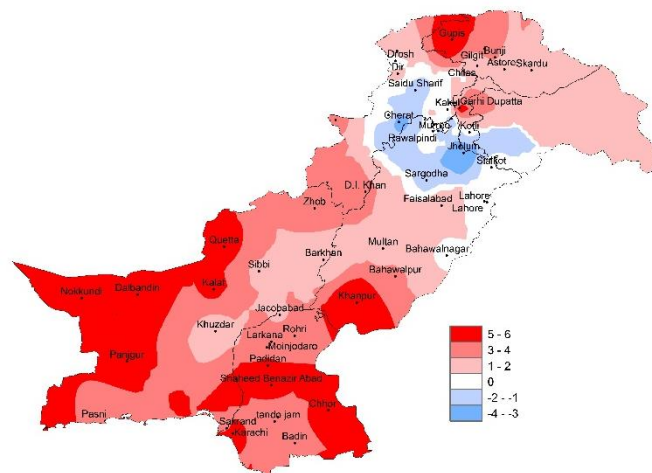
Dry weather reported during the decade; however, weather remained partially cloudy for 02 days. Average relative humidity recorded as 64%, mean day temperature was 32.9°C while night temperature recorded as 20.0°. Also, wind speed recorded as 2.9 km/hr with *south easterly* mean direction.

2.5 RAMC, Quetta (Northern Baluchistan)

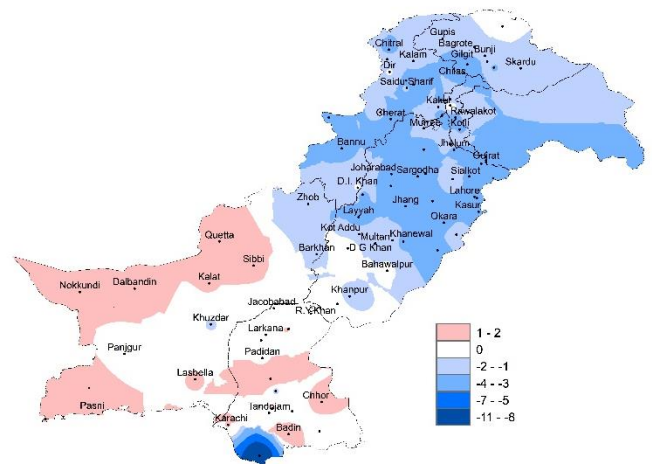
Rainfall reported as 1.1 mm during the decade. Average relative humidity recorded as 31.2%, mean day temperature was 26.2 °C while night temperature recorded as 10.8°C with 88.9 hours bright sunshine duration. Also, wind speed recorded as 5.2 km/hr with *north westerly* mean direction.



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 (10th to 20th October, 2023)

2.6 Jhelum

Rain reported as 54.9 mm during the decade; however, weather remained partially cloudy for 06 days. Average relative humidity recorded as 75%, mean day temperature was 27.4°C while night temperature recorded as 16.8°C with 58.5 hours bright sunshine duration. Wind speed recorded as 3.2 km/hr with *south westerly mean* direction.

2.7 Lahore

Rain reported as 85.7 mm during the decade; however, weather remained partially cloudy for 04 days. Average relative humidity recorded as 64%, mean day temperature was 26.0°C while night temperature recorded as 18.4°C with 69.0 hours bright sunshine duration. Wind speed recorded as 2.5 km/hr with *north-westerly* wind direction.

2.8 Sargodha

Rain reported as 48.8 mm during the decade; however, weather remained partially cloudy for 04 days. Average relative humidity recorded as 66%, mean day temperature was 27.4°C while night temperature recorded as 16.3°C with 70.2 hours bright sunshine duration. Wind speed recorded as 1.7km/hr with *north easterly* wind direction.

2.9 Multan

Rain reported trace as 0.20 mm during the decade; however, weather remained partially cloudy for 07 days. Average relative humidity recorded as 54%, mean day temperature was 31.6°C while night temperature recorded as 20.8°C. Wind speed recorded as 4.9 km/hr with *southerly* mean wind direction.

2.10 Khanpur

Rain reported trace as 0.01 mm trace during the decade; however, weather remained partially cloudy for 01 days. Average relative humidity recorded as 58%, mean day temperature was 34.5°C while night temperature recorded as 20.3°C. Mean wind direction reported in *north easterly* direction.

2.11 Sakrand

Dry weather reported during the decade; however, weather remained partially cloudy for 03 days during the decade. Average relative humidity recorded as 55%, mean day temperature was 36.3 °C while night temperature recorded as 23.2°C with 88.8 hours bright sunshine duration. Wind speed recorded as 4.9 km/hr with *variable* mean direction.

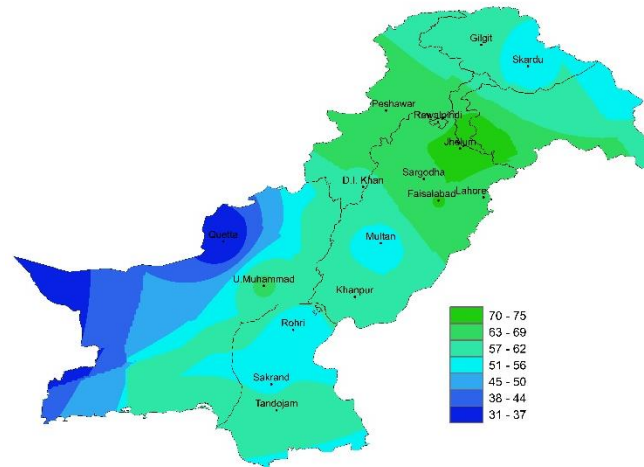


Figure.3: Relative Humidity (%)

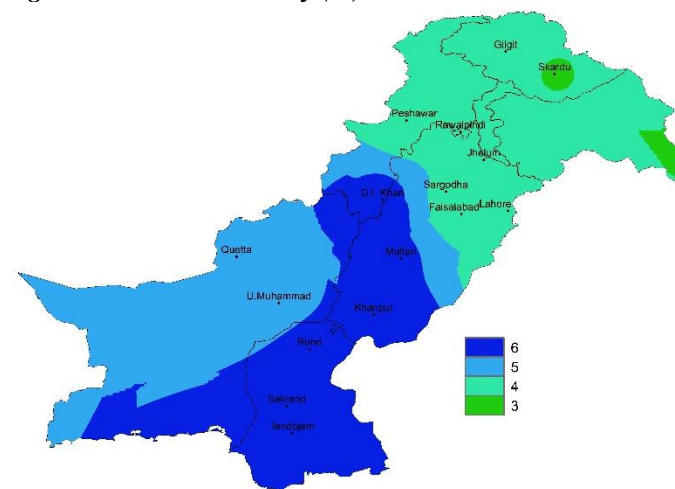


Figure.4: Reference Crop Evapotranspiration ETo (mm/day)

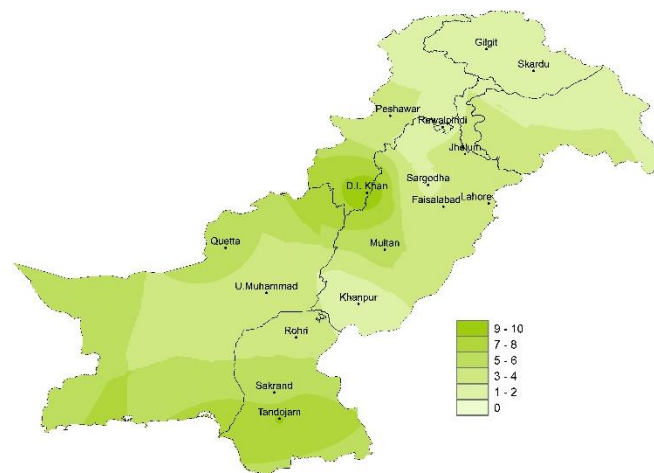


Figure 5: Wind Speed (km/h)

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 34.7°C while night temperature recorded as 25.0°C with 94.3 hours bright sunshine duration. Wind speed recorded as 3.9 km/hr with *north easterly* mean direction.

2.13 D.I. Khan

Rain reported as 22.0 mm during the decade; however, weather remained partially cloudy for 04 days. Average relative humidity recorded as 62 %, mean day temperature was 31.6°C while night temperature recorded as 18.3°C with 68.9 hours bright sunshine duration. Wind speed recorded as 8.9 km/hr with *south easterly* mean direction.

2.14 Peshawar

Rain reported as 13.0 mm during the decade; however, weather remained partially cloudy for 06 days. Average relative humidity recorded as 64%, mean day temperature was 29.2°C while night temperature recorded as 15.9°C with 53.2 hours bright sunshine duration. Wind speed recorded as 2.14 km/hr with *northerly* mean wind direction.

2.15 Skardu

Rain reported as 5.3 mm during the decade; however, average relative humidity recorded as 55%, mean day temperature was 17.1°C while night temperature recorded as 5.1°C with 35.5 hours bright sunshine duration. Wind speed recorded as 1.3 km/hr with *East-north easterly* mean wind direction.

2.16 Gilgit

Precipitation reported as 6.5 mm during the decade; however, weather remained cloudy for 10 days. Average relative humidity recorded as 60%, mean day temperature was 23.6°C while night temperature recorded as 8.8°C with 46.2 hours bright sunshine duration. Wind speed recorded as 1.9 km/hr with *south easterly* mean wind direction.

**Eleven Days Weather Advisory for Farmers
(21st to 31st October, 2023)****3.1 Temperature Forecast**

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

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.
- ❖ **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 in isolated parts during the decade.
- ❖ **Kashmir:** Rain-wind thunderstorm is expected in isolated parts during the decade.

3.4 Advisory for Farmers

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