

Decadal Agromet Bulletin of Pakistan



Highlights...

- ❖ Mostly dry weather is reported from the country.
- ❖ However, trace amount of rainfall reported from Upper reaches of KPK and Gilgit Baltistan.
- ❖ Highest amount of rainfall recorded as 5.0 mm at Kalat during the last decade.
- ❖ Lowest minimum temperature recorded as -7.8°C at Skardu during the last decade.
- ❖ Mainly cold and dry weather is expected in most parts of the country including Baluchistan, Sindh, and southern parts of Punjab and KP. However partly cloudy to cloudy weather with light rain is expected at isolated places in the upper KPK, Potohar region, central, northeast, and south Punjab and Kashmir on the 22nd and 23rd (Friday and Saturday) of December during the decade.
- ❖ Farmers are advised to view the weather forecast before any field activity.

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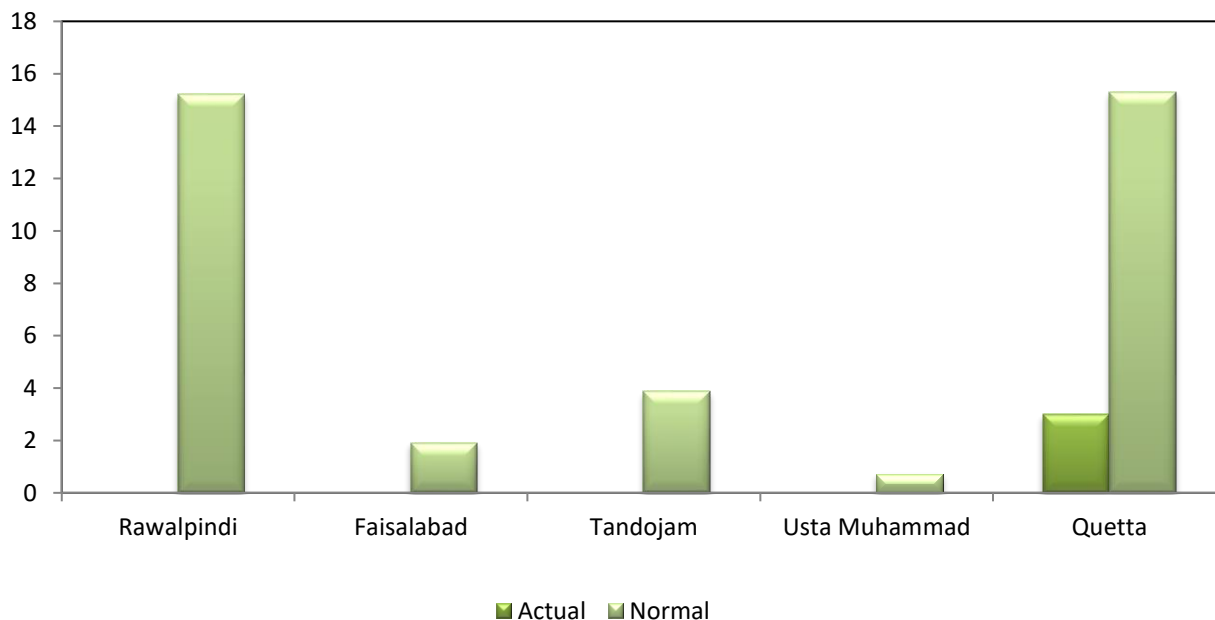
Meteorological Conditions during 2nd Decade of December, 2023

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	15.2	0.0	-15.2	1.6	-2.1	12.1	12.7	12.3	12.3	12.6	14.5	17.6	64	65.8	0.8	1.0
2	Faisalabad	1.9	0.0	-1.9	0.0	0.7	14.0	14.7	14.4	14.7	15.2	***	20.8	69	53.5	1.2	1.1
3	Jhelum	5.8	0.0	-5.8	6.8	-1.1	16.9	13.3	13.1	13.7	14.6	16.2	***	69	57.6	0.9	1.2
4	Lahore	3.9	0.0	-3.9	-0.6	-0.2	14.8	14.1	14.4	14.9	15.5	***	20.0	71	52.6	0.6	1.1
5	Sargodha	3.2	0.0	-3.2	0.6	0.0	14.6	16.2	15.8	16.4	17.2	***	***	69	52.8	0.3	1.0
6	Multan	3.5	0.0	-3.5	-0.8	1.1	15.0	***	***	***	***	***	***	65	43.6	1.6	1.3
7	Khanpur	0.3	0.0	-0.3	1.0	2.7	16.6	***	18.0	18.8	19.7	20.8	23.1	65	54.0	***	2.5
8	Tandojam	3.9	0.0	-3.9	-0.4	0.3	17.7	***	19.8	20.7	20.5	22.1	24.4	64	66.8	3.5	2.2
9	Sakrand	10.1	0.0	-10.1	1.8	2.6	17.5	23.0	***	***	***	***	***	60	69.4	2.8	2.0
11	Rohri	2.1	0.0	-2.1	0.0	0.0	16.9	***	***	***	***	***	***	60	96.5	2.3	1.9
12	D.I Khan	2.2	0.0	-2.2	0.1	1.9	15.0	16.1	15.1	13.1	***	7.5	***	70	39.6	1.8	1.2
13	Peshawar	6.1	0.0	-6.1	1.2	-1.8	12.6	12.5	12.7	13.0	14.7	16.3	19.2	63	29.4	0.3	0.8
14	Usta M.	0.7	0.0	-0.7	0.0	0.0	15.4	20.0	19.8	20.2	***	***	25.5	64	***	1.3	2.3
15	Quetta	15.3	3.0	-12.3	0.9	3.0	8.4	10.6	9.9	8.7	9.4	10.8	13.5	47	71.6	4.3	1.8
16	Skardu	6.6	0.0	-6.6	0.9	-1.3	0.8	***	***	***	***	***	***	46	42.6	0.0	0.5
17	Gilgit	1.3	0.0	-1.3	1.6	-1.6	5.2	***	***	***	***	***	***	50	31.3	1.0	0.8

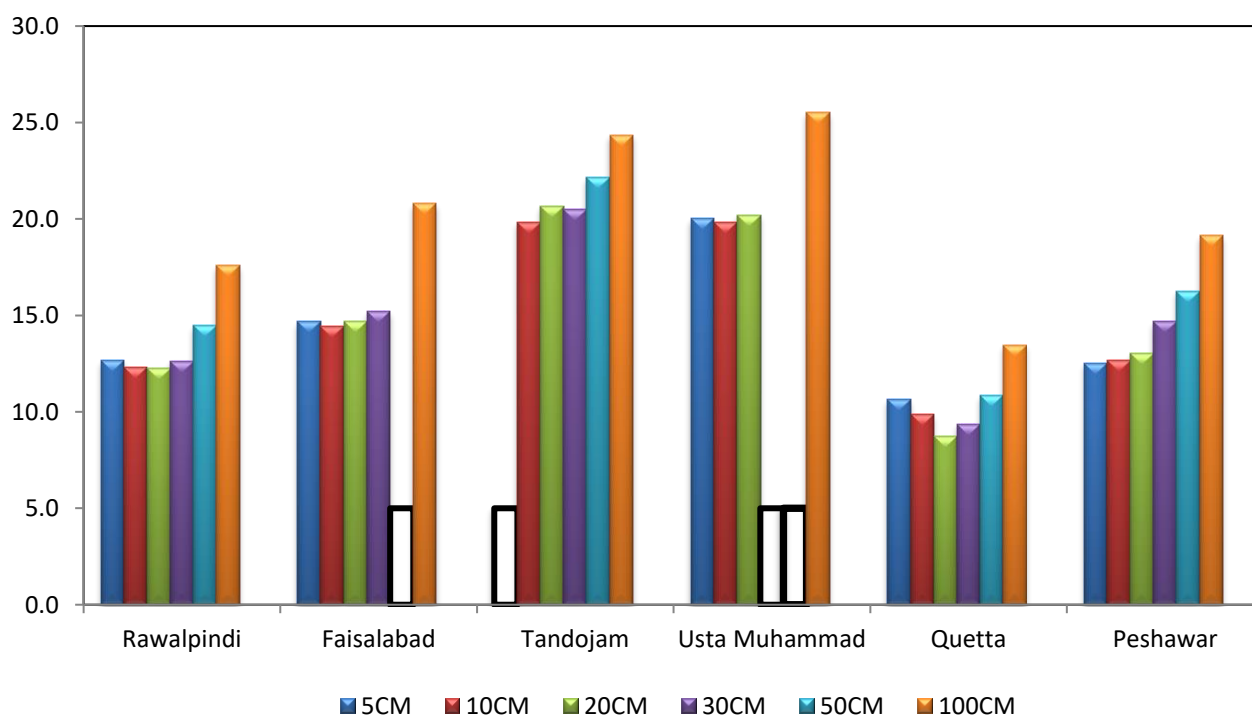
Table-1: Meteorological parameters for selected station of Pakistan. “Dep” in the table stands for difference from climatic normal, i.e. actual value minus normal. The climatic normal used in the Bulletin is extracted from the 2007 - 2016 observed data. ‘ETo’ stands for reference crop Evapotranspiration***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

Graph at RAMCs during December, 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 (10th to 20th December, 2023)

Light to moderate amount of rainfall reported from the upper half of the country during the decade. While light rainfall reported from Baluchistan, and Sindh remained dry.

1.1 Punjab

Rainfall 5.0mm reported from the few stations of province. Decadal maximum rose by 1.2 degree centigrade while minimum rose by 0.2 from normal in the province. Whereas values of relative humidity, sunshine hour, wind speed & ETo were recorded as 67%, 54.3 hrs, 0.9 km/hr and 1.3 mm/day respectively.

1.2 Sindh

Dry weather reported from the agricultural plains of the province. Decadal maximum rose by 0.5 degree centigrade while minimum rose by 1.0 degree centigrade from normal in the province. Whereas values of relative humidity, sunshine hour, wind speed & ETo were recorded as 61%, 77.6 hrs, 2.9 km/hr and 2.0 mm/day respectively.

1.3 Khyber Pakhtunkhwa

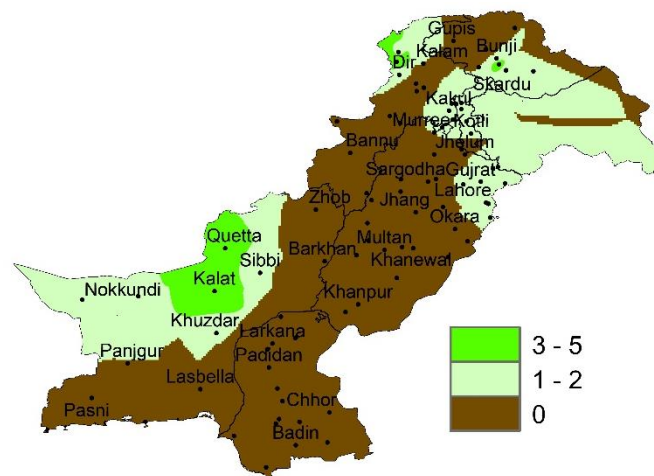
Mostly dry weather reported from the province, however, light rain reported from Drosh Mirkhani & Pattan. Decadal maximum rose by 0.6 degree centigrade while minimum rose by 0.1 degree centigrade from normal in the province. Whereas values of relative humidity, sunshine hour, wind speed & ETo were recorded as 67%, 34.5 hrs, 1.1 km/hr and 1.0 mm/day respectively.

1.4 Baluchistan

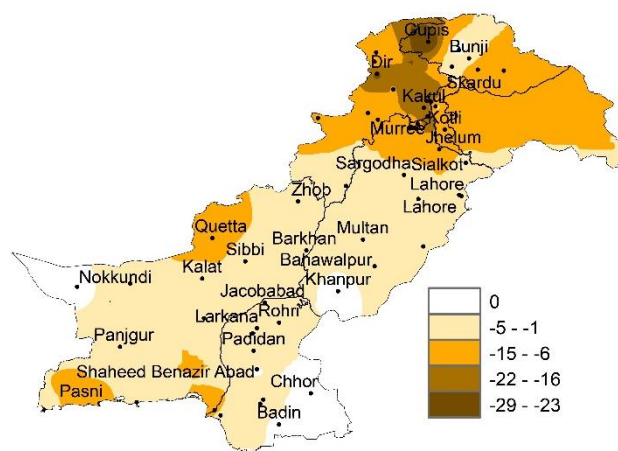
Mostly dry weather reported from the province, however, Light amount of rain reported from Kalat & Quetta. Decadal maximum rose by 0.5 degree centigrade while minimum rose by 1.5 degree centigrade from normal in the province. Whereas values of relative humidity, sunshine hour, wind speed & ETo were recorded as 56%, 71.6 hrs, 2.8 km/hr and 2.1 mm/day respectively.

1.5 Gilgit-Baltistan and Azad Jammu & Kashmir.

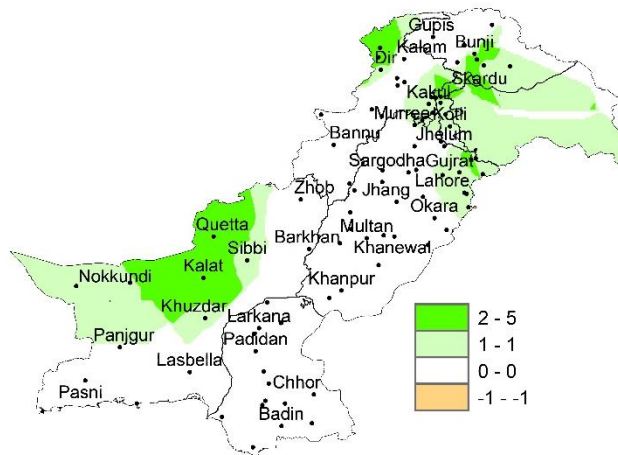
Mostly dry weather reported from the province, however, Light amount of rain reported from Muzaffarabad and Rawalakot. Decadal maximum rose by 1.2 and minimum drop by 1.4 below normal in the province. Whereas values of relative humidity, sunshine hour, wind speed & ETo were recorded as 48%, 37.0 hrs, 0.5 km/hr and 0.7 mm/day respectively.



I. Actual rainfall



II. Departure of rainfall from Normal



III. Departure of rainfall from Previous Decade

Figure.1: Rainfall distribution during previous decade (mm)

(a) **Past Weather for Major Agricultural Plains**
(11th to 20th December, 2023)

2.1 RAMC, Rawalpindi (Potohar region)

Dry weather reported during the decade; however weather remained cloudy for 07 days. Average relative humidity recorded as 64%. Mean day temperature was 21.9°C while night temperature recorded as 2.3°C with 65.8 hours bright sunshine duration. Wind speed recorded as 0.8 km/hr with mean wind direction *Westerly*.

2.2 RAMC, Faisalabad (Central Punjab)

Dry weather reported during the decade; however weather remained cloudy for 04 days. Average relative humidity recorded as 62%. Mean day temperature was 21.5°C while night temperature recorded as 5.2°C with 53.5 hours bright sunshine duration. Wind speed recorded as 1.2 km/hr with mean wind direction *Westerly*.

Cotton: Very good, emergence.

2.3 RAMC, Tandojam (Lower Sindh)

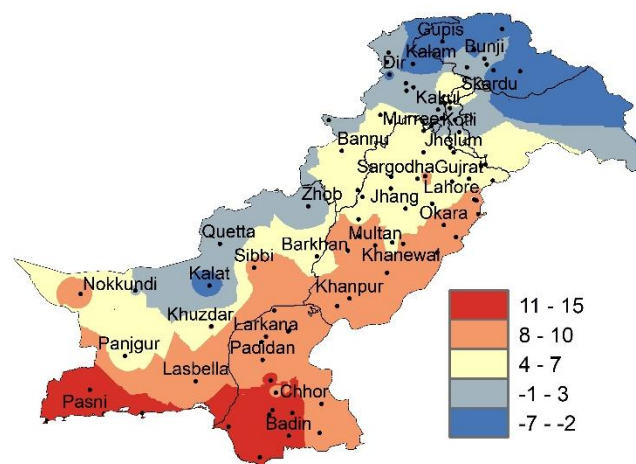
Dry weather prevailed during the decade; however, however weather remained cloudy for 03 days. Average relative humidity recorded as 64%. Mean day temperature was 25.1°C while night temperature recorded as 10.2°C with 66.8 hours bright sunshine duration. Wind speed recorded as 3.5 km/hr with mean wind direction *North*
good, germination.

2.4 RAMC, Usta Muhammad (Eastern Baluchistan)

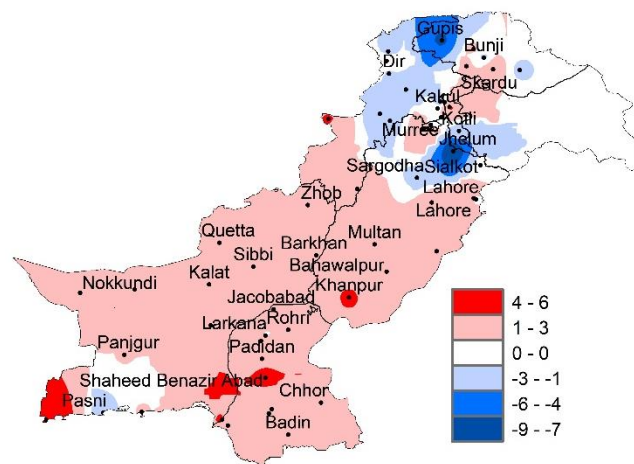
Dry weather prevailed during the decade; however, however weather remained cloudy for 02 days. Average relative humidity recorded as 64%. Mean day temperature was 23.8°C while night temperature recorded as 7.0°C Wind speed recorded as 1.3 km/hr with mean wind direction *North*.

2.5 RAMC, Quetta (Northern Baluchistan)

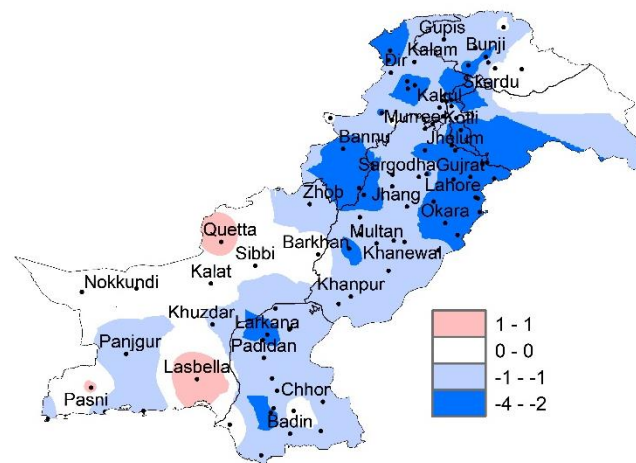
Rainfall reported as 3.0mm during the decade; however weather remained cloudy for 08 day. Average relative humidity recorded as 47%. Mean day temperature was 15.2°C while night temperature recorded as 1.5°C with 71.6 hours bright sunshine duration. Wind speed recorded as 4.3 km/hr with mean wind direction *north easterly*.



I. Actual min-temp



II. Departure of min-temp from Normal



III. Departure of min-temp from Previous Decade

Figure.2: Minimum Temperature distribution during previous decade (°C)

2(b) Past Weather or Sub-Regional Agricultural Plains (10th to 20th December, 2023)

2.6 Jhelum

Dry weather prevailed during the decade; however, weather remained cloudy for 06 days. Average relative humidity recorded as 69%. Mean day temperature was 28.4°C while night temperature recorded as 5.4°C with 57.6 hours bright sunshine duration. Wind speed recorded as 0.9 km/hr with mean wind direction North westerly.

2.7 Lahore

Rainfall reported as 0.01 (trace) during the decade; however, weather remained cloudy for 03 days. Average relative humidity recorded as 71%. Mean day temperature was 21.2°C while night temperature recorded as 8.4°C with 52.6 hours bright sunshine duration. Wind speed recorded as 0.6 km/hr with mean wind direction north westerly.

2.8 Sargodha

Dry weather prevailed during the decade; however, weather remained cloudy for 04 days. Average relative humidity recorded as 69%. Mean day temperature was 22.2°C while night temperature recorded as 6.9°C with 52.8 hours bright sunshine duration. Wind speed recorded as 0.3 km/hr with mean wind direction south westerly.

2.9 Multan

Dry weather prevailed during the decade; however, weather remained cloudy for 06 days. Average relative humidity recorded as 65%. Mean day temperature was 22.2°C while night temperature recorded as 7.8°C with 43.6 hours bright sunshine duration. Wind speed recorded as 1.6 km/hr with mean wind direction north westerly.

2.10 Khanpur

Dry weather prevailed during the decade; however, weather remained cloudy for 03 days. Average relative humidity recorded as 65%. Mean day temperature was 24.6°C while night temperature recorded as 8.6 °C with 54 hours bright sunshine duration. Mean wind direction is North Easterly.

2.11 Sakrand

Dry weather prevailed during the decade; however, weather remained cloudy for 01 days. Average relative humidity recorded as 60%. Mean day temperature was 24.4°C while night temperature recorded as 10.6°C with 69.4 hours bright sunshine duration. Wind speed recorded as 2.8 km/hr with mean wind direction north westerly.

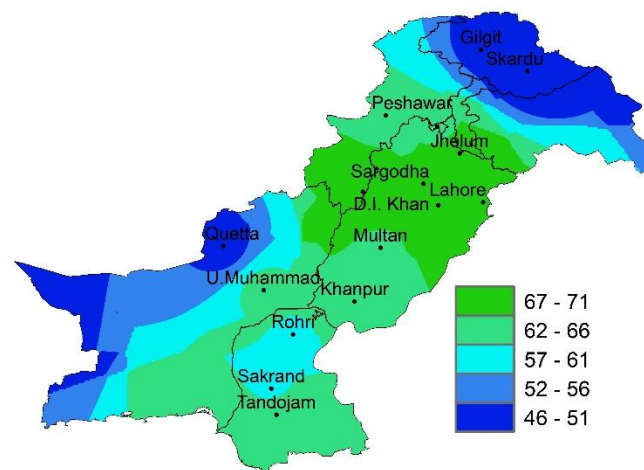


Figure.3: Relative Humidity in Percentage (%)

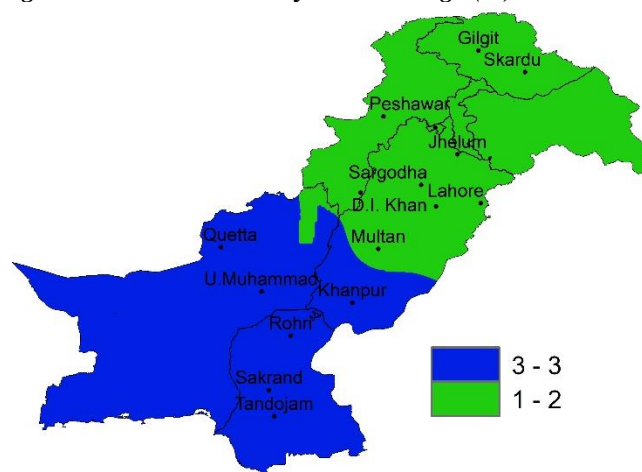


Figure.4: Reference Crop Evapotranspiration ET₀ (mm/day)

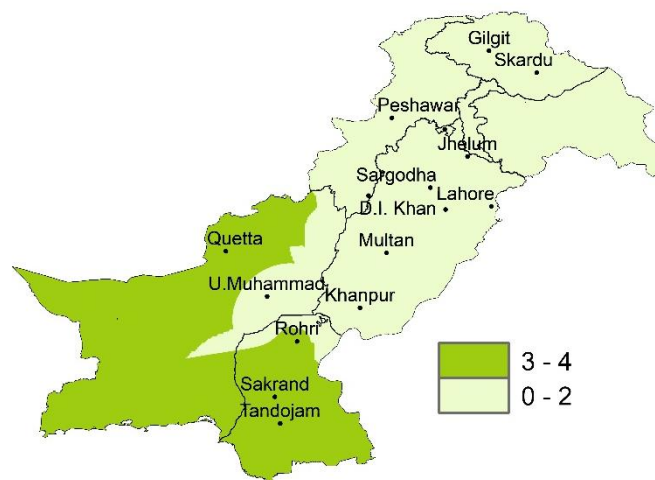


Figure 5: Wind Speed in kilometer per hour (km/h)

2.12 Rohri

Dry weather prevailed during the decade; however, weather remained cloudy for 02 days. Average relative humidity recorded as 60%. Mean day temperature was 24.2°C while night temperature recorded as 9.6°C with 96.5 hours bright sunshine duration. Wind speed recorded as 2.3 km/hr with mean wind direction *Northeasterly*.

2.13 D.I. Khan

Dry weather prevailed during the decade; however, weather remained cloudy for 02 days. Average relative humidity recorded as 70%. Mean day temperature was 22.4°C while night temperature recorded as 7.5°C with 39.6 hours bright sunshine duration. Wind speed recorded as 1.8 km/hr with mean wind direction *Northeasterly*.

2.14 Peshawar

Dry weather prevailed during the decade; however, weather remained cloudy for 07 days. Average relative humidity recorded as 63%. Mean day temperature was 21.7°C while night temperature recorded as 3.5°C with 29.4 hours bright sunshine duration. Wind speed recorded as 0.3 km/hr with mean wind direction *Northwesterly*.

2.15 Skardu

Dry weather prevailed during the decade; however, weather remained cloudy for 05 days during the decade. Average relative humidity recorded as 46%. Mean day temperature was 8.0°C while night temperature recorded as -6.6°C with 42.6 hours bright sunshine duration. Wind was calm.

2.16 Gilgit

Dry weather prevailed during the decade; however, weather remained cloudy for 10 days. Average relative humidity recorded as 50%. Mean day temperature was 13.9°C while night temperature recorded as -3.6°C with 31.3 hours bright sunshine duration. Wind speed recorded as 1.0 km/hr with mean wind direction *southeasterly*.

Ten Days Weather Advisory for Farmers
(21st to 31th December, 2023)
3.1 Temperature Forecast

Above normal mean temperature is likely over most parts of the country particularly over western Baluchistan and northern parts of the country including upper Khyber Pakhtunkhwa, Gilgit Baltistan and Kashmir.

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 cold/dry and foggy weather is expected over most parts of the province. However, light rain is expected at isolated places in Potohar region and other parts of Punjab on 22nd and 23rd December.
- ❖ Khyber Pakhtunkhwa: Mainly cold and cloudy weather with chances of rain (light snow over hills) is likely in Khyber Pakhtunkhwa on 22nd and 23rd of December whereas fog is likely in the plain areas during the decade.
- ❖ Sindh: Mainly cold and dry weather is expected in Sindh province.
- ❖ Baluchistan: Mainly cold and dry weather is expected in most parts of the province.
- ❖ Gilgit-Baltistan: Mainly cold and dry weather is expected in most parts of the province.
- ❖ Kashmir: Partly cloudy to cloudy weather with chances of rain (light snow over hills) is likely in Kashmir on 22nd and 23rd of December.

3.4 Advisory for Farmers

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