

Decadal Agromet Bulletin of Pakistan



Highlights...

- ❖ Moderate to heavy rainfall was reported from the GB and Kashmir whereas light to moderate rainfall was reported rest parts of the country.
- ❖ Highest amount of rainfall recorded was 47.0 mm at Garhi Dupatta during the last decade.
- ❖ Lowest minimum temperature recorded as -0.7 °C at Kalam during the last decade.
- ❖ Rain (light snow over mountains) is expected in most parts of the during the decade.
- ❖ Farmers are advised to view the weather forecast before any field activity.

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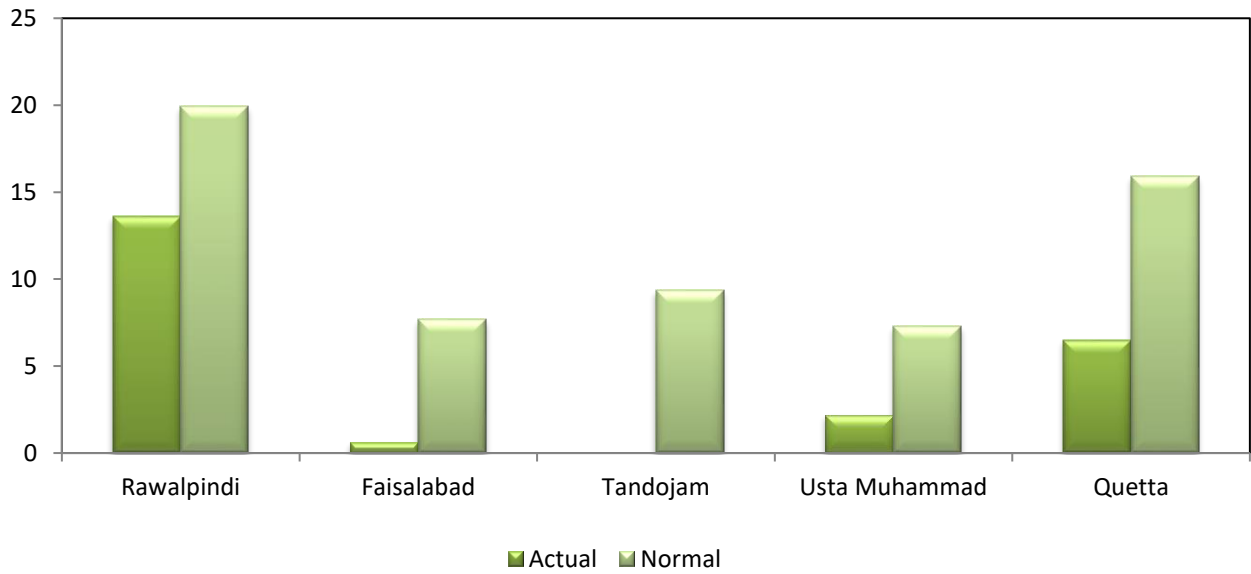
Meteorological Conditions during 2nd Decade of March 2024

| 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 | 19.9 | 13.6 | -6.3 | 0.2 | -2.5 | 18.1 | 18.7 | 17.8 | 16.7 | 16.5 | 16.3 | 16.3 | 50 | 74.0 | 2.6 | 3.0 |
| 2 | Faisalabad | 7.7 | 0.6 | -7.1 | 1.8 | 0.1 | 21.1 | 23.3 | 22.4 | 21.2 | 20.7 | *** | 19.9 | 50 | 77.4 | 2.4 | 3.3 |
| 3 | Jhelum | 22.4 | 5.6 | -16.8 | 1.4 | -1.4 | 20.2 | 20.3 | 19.5 | 18.7 | 18.2 | 18.4 | *** | 60 | 22.6 | 2.7 | 2.4 |
| 4 | Lahore | 14.1 | 0.0 | -14.1 | -8.6 | -6.0 | 14.1 | 20.9 | 19.8 | 19.3 | 18.6 | *** | 19.0 | 30 | 78.0 | 0.8 | 2.3 |
| 5 | Sargodha | 11.5 | 0.2 | -11.3 | 2.1 | -0.1 | 22.1 | 24.3 | 22.8 | 21.6 | 21.2 | *** | *** | 40 | 74.5 | 1.3 | 3.0 |
| 6 | Multan | 5.1 | 1.0 | -4.1 | 0.5 | 0.9 | 22.3 | *** | *** | *** | *** | *** | *** | 50 | 69.1 | 4.1 | 3.7 |
| 7 | Khanpur | 1.6 | 0.0 | -1.6 | 1.9 | 0.7 | 23.2 | *** | 22.3 | 22.4 | 22.4 | 22.3 | 21.7 | 50 | 93.9 | *** | 5.2 |
| 8 | Tandojam | 9.4 | 0.0 | -9.4 | -0.8 | -2.0 | 24.1 | *** | 26.6 | 25.0 | 24.6 | 24.0 | 24.4 | 40 | *** | 3.4 | 4.7 |
| 9 | Sakrand | 8.3 | 0.0 | -8.3 | 1.0 | 1.3 | 24.9 | 35.2 | *** | *** | *** | *** | *** | 40 | 97.8 | 3.9 | 4.7 |
| 11 | Rohri | *** | *** | *** | *** | *** | *** | *** | *** | *** | *** | *** | *** | *** | *** | *** | *** |
| 12 | D.I Khan | 13.9 | 0.0 | -13.9 | 2.9 | 2.0 | 22.6 | 22.3 | 21.0 | 13.1 | *** | 9.2 | *** | 50 | 78.4 | 2.5 | 3.4 |
| 13 | Peshawar | 26.7 | 5.2 | -21.5 | 3.5 | -0.9 | 19.4 | 18.7 | 18.5 | 17.4 | 17.3 | 17.1 | 16.9 | 50 | 68.5 | 2.7 | 3.0 |
| 14 | Usta M. | 7.3 | 2.2 | -5.1 | 0.0 | 0.0 | 20.2 | 25.7 | 24.6 | 24.3 | *** | *** | 23.5 | 50 | *** | *** | 4.9 |
| 15 | Quetta | 15.9 | 6.5 | -9.4 | -0.9 | 0.7 | 12.0 | 14.5 | 13.3 | 10.6 | 9.9 | 10.1 | 10.3 | 50 | 85.1 | 4.4 | 3.1 |
| 16 | Skardu | 14.8 | 0.0 | -14.8 | 0.3 | -1.0 | 6.8 | *** | *** | *** | *** | *** | *** | 40 | 58.6 | 1.5 | 2.0 |
| 17 | Gilgit | 5.1 | 0.0 | -5.1 | 2.9 | -0.1 | 13.4 | *** | *** | *** | *** | *** | *** | 40 | 61.3 | 3.0 | 2.7 |

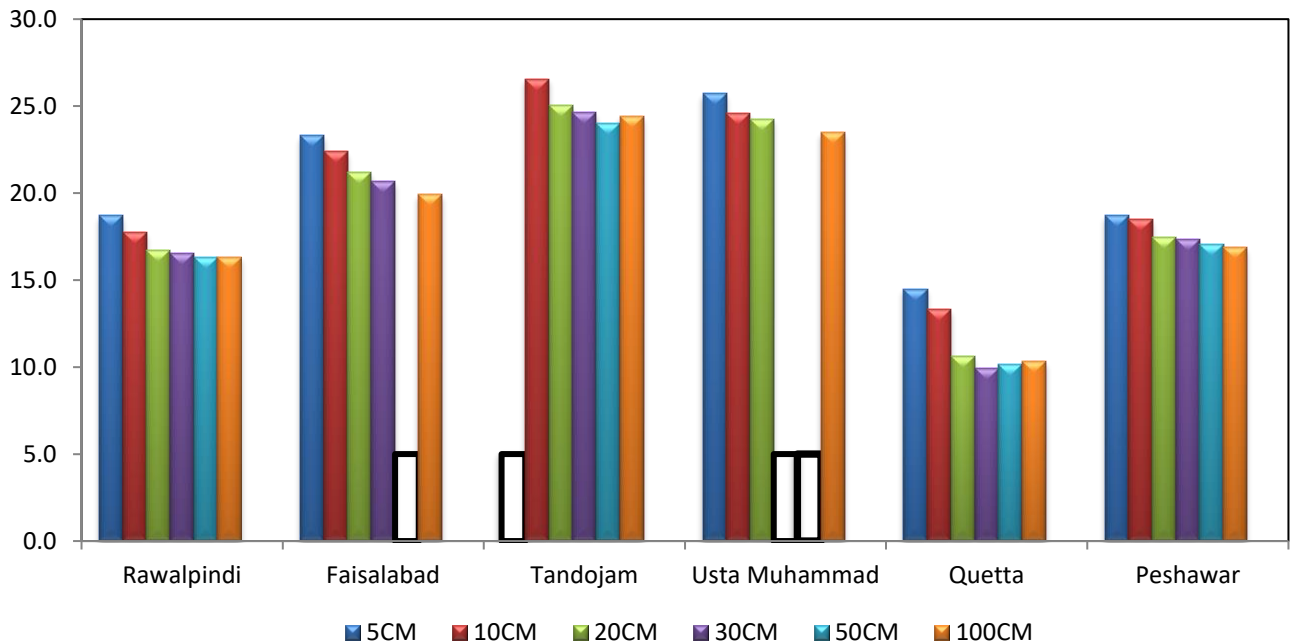
Table-1: Meteorological parameters for selected station of Pakistan. "Dep" in the table stands for difference from climatic normal, i.e. actual value minus normal. The climatic normally used in the Bulletin is extracted from the 2007 - 2016 observed data. 'ETo' stands for reference crop Evapotranspiration***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

Graph at RAMCs during March, 2024

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 March 2024)

Light to moderate amount of rainfall was reported from most parts of the country whereas dry weather reported from some isolated places of southern Sindh and Baluchistan.

1.1 Punjab

Light to moderate rainfall was reported in the province. The decadal maximum temperature rose above normal by -0.1 °C and minimum temperature by -1.2°C in the province. Values of relative humidity, sunshine hour, wind speed & ETo were recorded 47 %,69.9hrs, 2.3 km/hr and 3.3mm/day respectively.

1.2 Sindh

Light rainfall was reported from upper parts of the province. The decadal maximum and minimum temperatures rose above normal by 0.1 and -0.4 degree in the province. Whereas values of relative humidity, sunshine hour, wind speed & ETo were recorded as 40%, 97.8hrs, 3.7 km/hr and 4.7 mm/day respectively.

1.3 Khyber Pakhtunkhwa

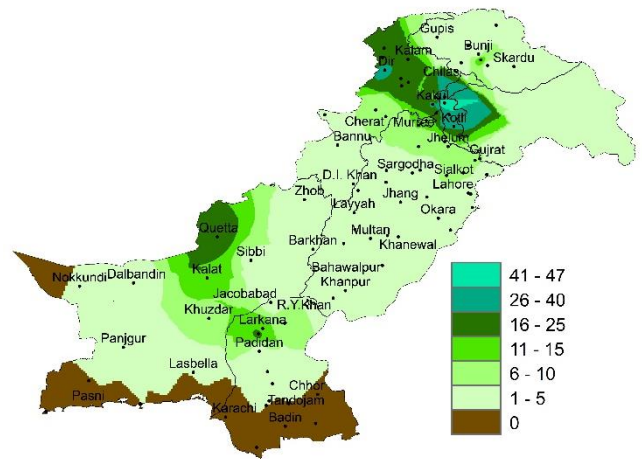
Light to moderate rainfall was reported from the province. The decadal maximum and minimum temperatures were observed above normal by 3.2 °C and 0.5 °C respectively in the province. Whereas values of relative humidity, sunshine hour, wind speed & ETo were recorded as 50%,73.5.0 hrs, 2.6 km/hr and 3.2 mm/day respectively.

1.4 Baluchistan

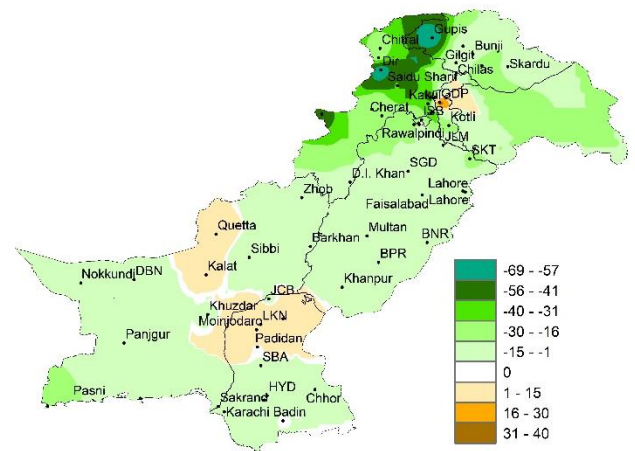
Light rain reported north western part of the province. Decadal maximum temperature was observed below normal by 0.5 °C whereas above normal minimum temperature by 0.3 degree in the province. Values of relative humidity, sunshine hour, wind speed & ETo were recorded as 50%, 85.1 hrs, 4.4 km/hr and 4.0 mm/day respectively.

1.5 Gilgit-Baltistan and Azad Jammu & Kashmir.

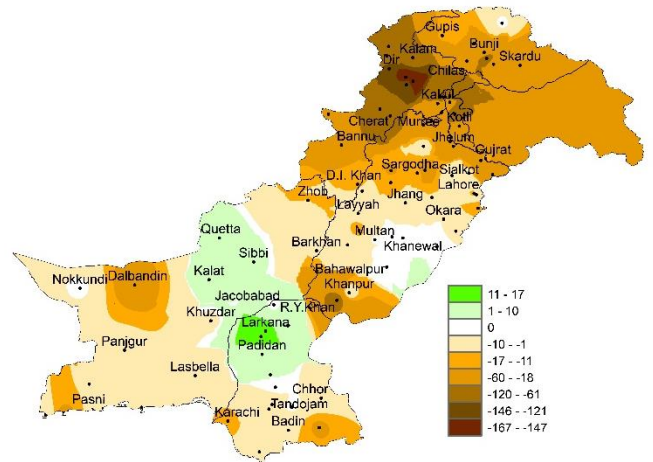
Moderate to heavy rain was reported from the province. Decadal maximum temperature was observed above normal by 1.6 degree and the minimum temperature below normal by -0.6 degree in the province. Whereas values of relative humidity, sunshine hour, wind speed & ETo were recorded as 40%, 60.0hrs, 2.3 km/hr and 2.4mm/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 March 2024)**

2.1 RAMC, Rawalpindi (Potohar region)

Rainfall reported as 13.6 mm during the decade; however, weather remained cloudy for 7 days. Average relative humidity recorded as 50%. Mean day temperature was 27.3°C while night temperature recorded as 8.8°C with 57.1 hours bright sunshine duration. Wind speed recorded as 2.6 km/hr with mean wind direction *north westerly*.

2.2 RAMC, Faisalabad (Central Punjab)

Rainfall reported as 0.6 mm during the decade; however, weather remained cloudy for 08 days. Average relative humidity recorded as 50.0%. Mean day temperature was 29.0°C while night temperature recorded as 13.1°C. Wind speed recorded as 2.4 km/hr with mean wind direction *westerly*

Wheat: *Very good, flowering completed.*

2.3 RAMC, Tandojam (Lower Sindh)

Dry weather reported during the decade; however, weather remained cloudy for 04 days. Average relative humidity recorded as 40%. Mean day temperature was 34.1°C while night temperature recorded as 14.0°C. Wind speed recorded as 3.4 km/hr with mean wind direction *north easterly*.

Wheat: *good, milk maturity.*

2.4 RAMC, Usta Muhammad (Eastern Baluchistan)

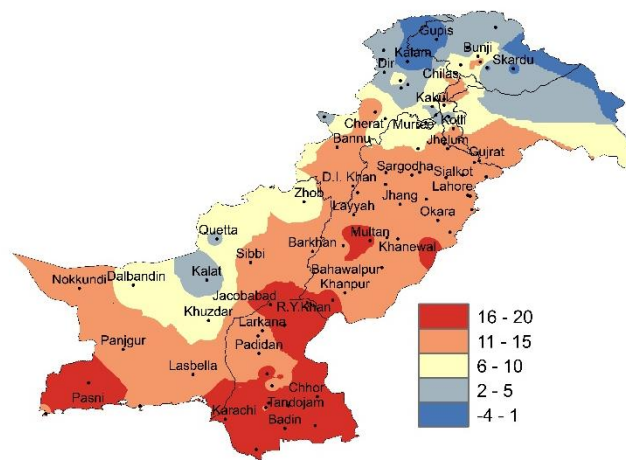
Rainfall reported as 2.20 mm during the decade; however, weather remained cloudy for 04 days. Average relative humidity recorded as 50%. Mean day temperature was 29.6. °C while night temperature recorded as 10.8°C. Mean wind direction *variable*.

Wheat: *good, milk maturity.*

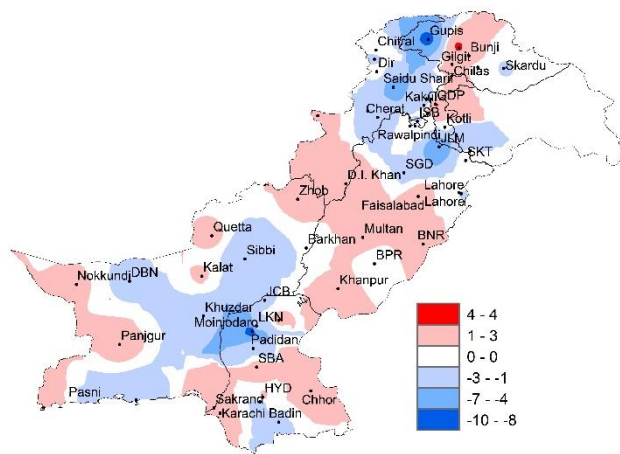
2.5 RAMC, Quetta (Northern Baluchistan)

Rainfall reported as 6.5 mm during the decade; however, weather remained cloudy for 09 days. Average relative humidity recorded as 50%. Mean day temperature was 18.5°C while night temperature recorded as 5.4°C with 42.2 hours bright sunshine duration. Wind speed recorded as 4.4 km/hr with mean wind direction *north easterly*.

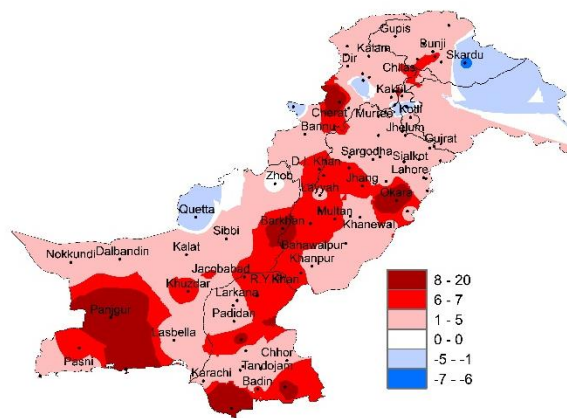
Wheat: *good, Tillering stage.*



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 (°)

2(b) Past Weather or Sub-Regional Agricultural Plains (11th to 20th March 2024)

2.6 Jhelum

Rainfall reported as 5.60 mm during the decade; however, weather remained cloudy for 07 days. Average relative humidity recorded as 60%. Mean day temperature was 28.5°C while night temperature recorded as 11.9°C with 64.1 hours bright sunshine duration. Wind speed recorded as 2.7 km/hr with mean wind direction *variable*.

2.7 Lahore

Rainfall reported as 0.01 mm during the decade; however, weather remained cloudy for 00 days. Average relative humidity recorded as 30%. Mean day temperature was 18.7°C while night temperature recorded as 9.5°C. Wind speed recorded as 0.8 km/hr with mean wind direction *north westerly*.

2.8 Sargodha

Rainfall reported as 0.2 mm during the decade; however, weather remained cloudy for 08 days. Average relative humidity recorded as 50%. Mean day temperature was 30.1°C while night temperature recorded as 14.0°C with 53.6 hours bright sunshine duration. Wind speed recorded as 1.3 km/hr with mean wind direction *north easterly*.

2.9 Multan

Rainfall reported as 1.0 mm during the decade; however, weather remained cloudy for 09 days. Average relative humidity recorded as 50%. Mean day temperature was 29.4°C while night temperature recorded as 15.1°C with 52.6 hours bright sunshine duration. Wind speed recorded as 4.1km/hr with mean wind direction *southerly*.

2.10 Khanpur

Dry weather reported during the decade; however, weather remained cloudy for 03 days. Average relative humidity recorded as 50%. Mean day temperature was 32.1°C while night temperature recorded as 14.3°C with 68.2 hours bright sunshine duration. Mean wind direction *south westerly*

2.11 Sakrand

Dry weather reported during the decade; however, weather remained cloudy for 02 days. Average relative humidity recorded as 40%. Mean day temperature was 33.6°C while night temperature recorded as 16.2°C with 79 hours bright sunshine duration. Wind speed recorded as 3.9km/hr with mean direction as *north westerly*.

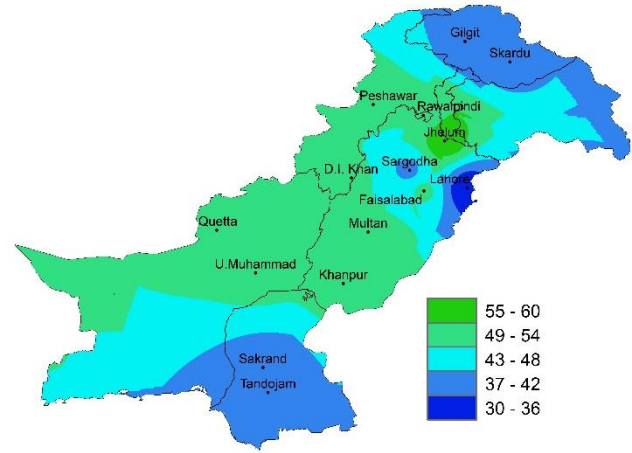


Figure.3: Relative Humidity in Percentage (%)

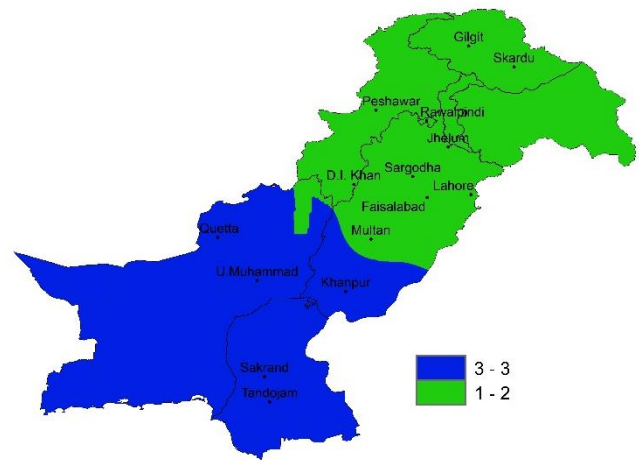


Figure.4: Reference Crop Evapotranspiration ETo (mm/day)

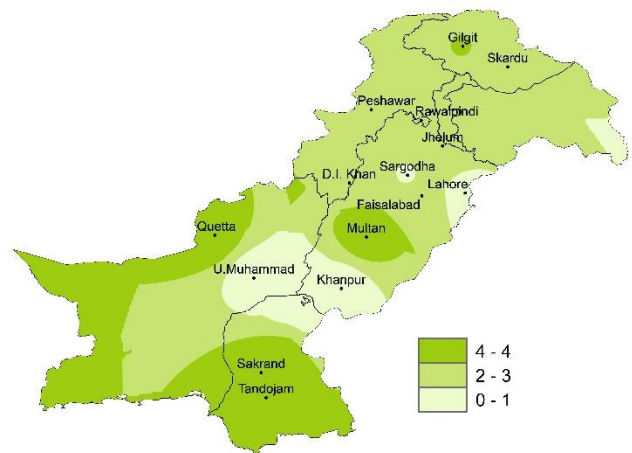


Figure 5: Wind Speed in kilometer per hour (km/h)

2.12 Rohri

Data is not available.

2.13 D.I. Khan

Rainfall reported as 0.01 mm during the decade; however, weather remained cloudy for 04 days. Average relative humidity recorded as 50%. Mean day temperature was 30.1°C while night temperature recorded as 15.1°C with 40.9 hours bright sunshine duration. Mean wind direction is south easterly.

2.14 Peshawar

Rainfall reported as 5.2 mm during the decade; however, weather remained cloudy for 08 days. Average relative humidity recorded as 50%. Mean day temperature was 27.7°C while night temperature recorded as 11.0°C with 37.7 hours bright sunshine duration. Wind speed recorded as 2.7 km/hr with mean wind direction as *north easterly*.

2.15 Skardu

Dry weather reported during the decade however, weather remained cloudy for 04 days during the decade. Average relative humidity recorded as 40%. Mean day temperature was 13.1°C while night temperature recorded as 0.4°C with 39.8 hours bright sunshine duration. Wind was east *south easterly*.

2.16 Gilgit

Rainfall reported as 0.01 mm during the decade; however, weather remained cloudy for 10 days. Average relative humidity recorded as 40%. Mean day temperature was 21.4°C while night temperature recorded as 5.3°C with 35 hours bright sunshine duration. Wind speed recorded as 3 km/hr with mean wind direction as *south westerly*.

Ten Days Weather Advisory for Farmers **(21th to 31st March 2024)**

3.1 Temperature Forecast

Above normal mean temperature is likely over most parts of the country whereas below normal temperature in 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:** Rain/thunderstorm is expected in central/southern Punjab during the decade whereas dry weather is expected in most parts of the province.
- ❖ **Khyber Pakhtunkhwa:** Rain thunderstorm (snow over Mountains) is expected during the decade.
- ❖ **Sindh:** Mainly dry weather is expected in Sindh province during the decade.
- ❖ **Baluchistan:** Mainly dry weather is expected in most parts of the province. However, two spells of light rain are likely in Baluchistan during the first two days and last days of the decade.
- ❖ **Gilgit-Baltistan:** Rain (snow over mountains) is expected during the decade.
- ❖ **Kashmir:** Rain is expected during the decade.

3.4 Advisory for Farmers

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