

Decadal Agromet Bulletin of Pakistan



Highlights...

- ❖ Cold and dry weather prevailed over most parts of the country, while very cold in hilly areas. However, light rain was reported from Gilgit Baltistan. Smog/fog persisted at few plain areas of Punjab, Khyber Pakhtunkhwa and upper Sindh during night/morning hours.
- ❖ Highest amount of rainfall recorded was 10.7 mm at Astore during the last decade.
- ❖ Lowest minimum temperature recorded was -8.1 °C at Skardu during the last decade.
- ❖ Mainly cold and dry weather is expected in most parts of the country, while very cold in hilly areas during morning/night. However, rain-wind/thunderstorm (snowfall over mountains) is expected in eastern Punjab, Gilgit Baltistan and Kashmir. Smog/ fog is likely in plain areas of Punjab, Khyber Pakhtunkhwa and upper Sindh during morning/night hours.
- ❖ Farmers are advised to view the weather forecast before any field activity.

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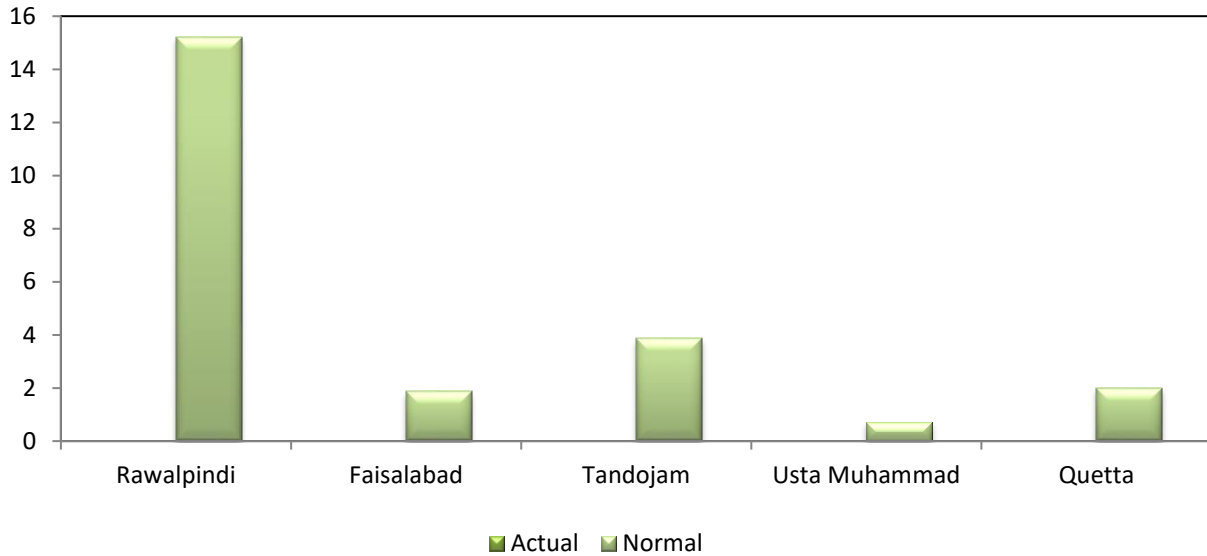
Meteorological Conditions during 2nd Decade of December 2024

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	15.2	0.0	-15.2	0.0	-1.8	11.5	10.9	10.6	10.8	11.7	13.5	17.2	62.0	52.8	0.5	0.8
2	Faisalabad	1.9	0.0	-1.9	-0.5	-2.0	13.1	14.2	13.8	13.9	14.5	***	20.9	53.0	71.2	1.2	1.2
3	Jhelum	4.2	0.0	-4.2	-2.3	-4.5	11.4	11.0	10.8	0.0	11.8	12.6	***	60.0	54.3	1.0	1.1
4	Lahore	4.5	0.0	-4.5	-0.9	-4.3	13.4	***	***	***	***	***	***	53.0	53.3	0.2	0.9
5	Sargodha	6.1	0.0	-6.1	-1.1	-2.3	13.2	15.1	15.0	15.9	17.0	***	***	53.0	57.1	1.3	1.2
6	Multan	6.2	0.0	-6.2	-1.3	1.2	14.8	***	***	***	***	***	***	46.0	86.7	1.2	1.3
7	Khanpur	15.6	0.0	-15.6	0.5	-2.3	14.1	***	16.1	17.0	17.8	19.0	21.9	56.0	69.7	0.8	1.3
8	Tandojam	3.9	0.0	-3.9	-1.7	-1.7	16.0	***	17.3	18.8	20.6	25.2	24.9	52.0	74.0	3.8	2.4
9	Sakrand	10.1	0.0	-10.1	0.6	-0.4	15.4	20.6	18.4	18.7	20.5	22.9	***	46.0	86.7	3.2	2.2
11	Rohri	12.1	0.0	-12.1	-1.1	-2.3	15.2	***	***	***	***	***	***	47.5	86.7	2.9	2.0
12	D.I Khan	1.2	0.0	-1.2	0.0	0.5	14.2	14.4	14.7	15.4	***	8.1	***	55.0	63.8	2.4	1.5
13	Peshawar	6.1	0.0	-6.1	-0.4	-4.7	10.9	10.7	11.5	12.4	14.0	16.0	19.6	58.0	56.8	1.6	1.0
14	Usta M.	0.7	0.0	-0.7	0.5	-3.7	14.1	20.4	18.7	19.0	***	***	25.0	49.0	**	1.1	1.4
15	Quetta	2.0	0.0	-2.0	-1.8	-0.8	5.5	8.9	8.3	7.2	7.8	38.8	13.0	33.0	80.2	4.8	1.8
16	Skardu	12.0	3.3	-8.7	-3.0	-3.3	-2.3	***	***	***	***	***	***	60.0	21.7	0.1	0.5
17	Gilgit	2.7	0.0	-2.7	-1.2	-3.6	2.8	***	***	***	***	***	***	55.4	24.9	1.7	0.8

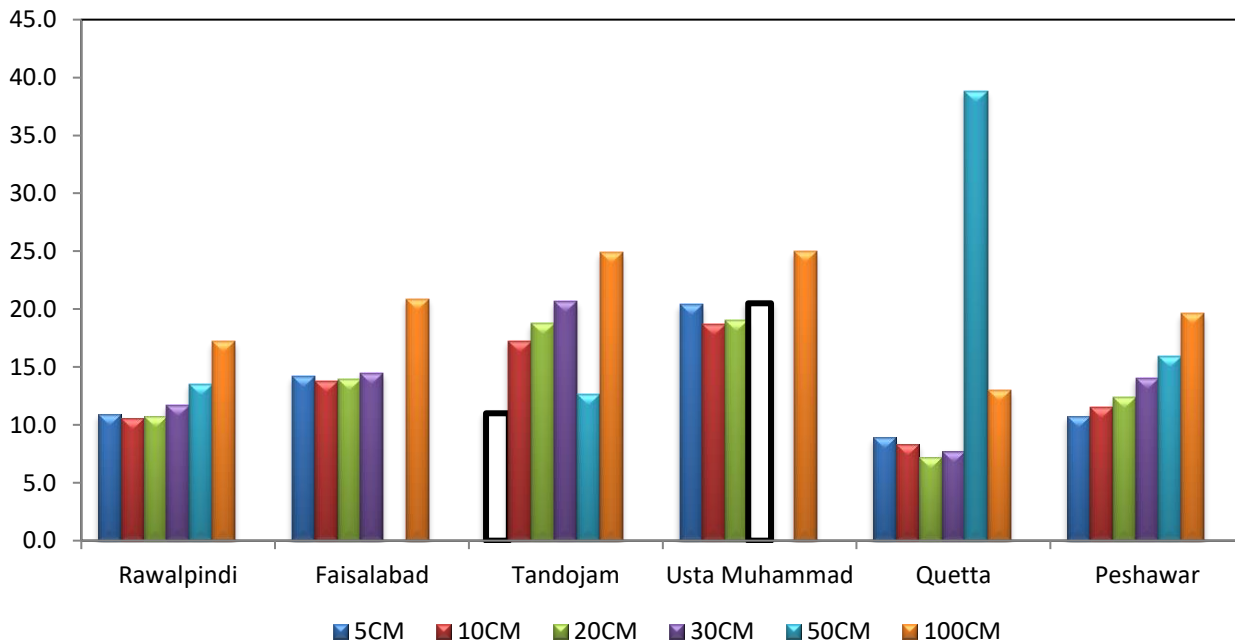
Table-1: Meteorological parameters for selected station of Pakistan. "Dep" in the table stands for difference from climatic normal, i.e. actual value minus normal. The climatic normally used in the Bulletin is extracted from the 2007 - 2016 observed data. 'ETO' stands for reference crop Evapotranspiration***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

Graph at RAMCs during December 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

Past Weather (11th to 20th December 2024)

Cold and dry weather prevailed over most parts of the country, while very cold in hilly areas. However, light rain was reported from Gilgit Baltistan. Smog/fog persisted at few plain areas of Punjab, Khyber Pakhtunkhwa and upper Sindh during night/morning hours.

1.1 Punjab

Mainly cold and dry weather prevailed in most parts, while smog/fog persisted at few plain areas of the province during night/morning hours. The decadal maximum and minimum temperatures were observed below normal by -0.8°C and -2.3°C in the province. Whereas values of relative humidity, sunshine hour, wind speed & ETo were recorded 54.7%, 63.6hrs, 0.9km/hr and 1.1mm/day respectively.

1.2 Sindh

Mainly cold and dry weather prevailed in most parts, while smog/fog during night/morning hours persisted in some upper areas of the province. The decadal maximum and minimum temperatures were observed below normal by -0.7°C and -1.5°C in the province. Whereas values of relative humidity, sunshine hour, wind speed & ETo were recorded as 48.5%, 82.5hrs, 3.3km/hr and 2.2mm/day respectively.

1.3 Khyber Pakhtunkhwa

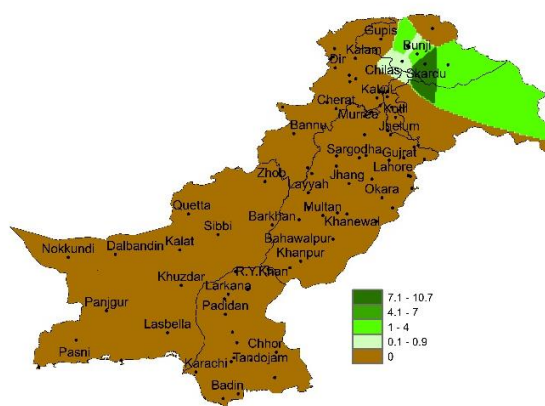
Mainly cold and dry weather prevailed, with very cold conditions in the upper parts. However, Smog/fog persisted in some plain areas of the province during the night and morning hours. The decadal maximum and minimum temperatures were observed below normal by -0.2°C and -2.1°C in the province. Whereas values of relative humidity, sunshine hour, wind speed & ETo were recorded as 56.5%, 60.3hrs, 2.0km/hr and 1.3mm/day respectively.

1.4 Baluchistan

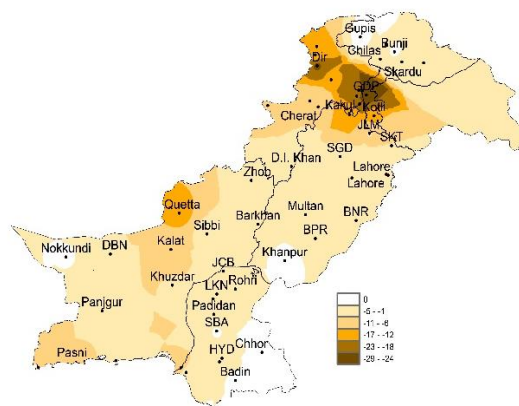
Mainly very cold and dry weather prevailed in most parts of the province. The decadal maximum and minimum temperatures were observed below normal by -0.6°C and -2.3°C in the province. Whereas values of relative humidity, sunshine hour, wind speed & ETo were recorded as 41.0%, 80.2hrs, 3.0km/hr and 1.6mm/day respectively.

1.5 Gilgit-Baltistan and Azad Jammu & Kashmir.

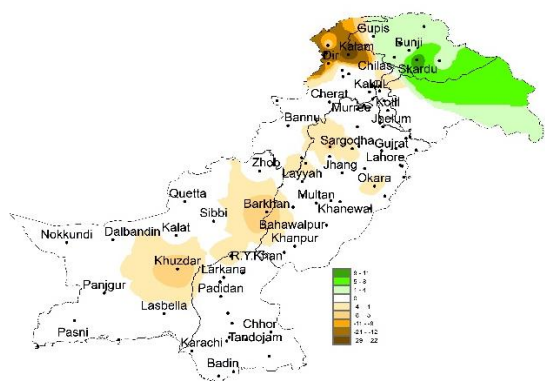
Mainly very cold and dry weather prevailed in Kashmir and Gilgit Baltistan, while light rain reported from Gilgit Baltistan. The decadal maximum and minimum temperatures were observed below normal by -2.1°C and -3.4°C in the province. Whereas values of relative humidity, sunshine hour, wind speed & ETo were recorded as 58.0%, 23.3hrs, 0.9km/hr and 0.7mm/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 2024)

2.1 RAMC, Rawalpindi (Potohar region)

Dry weather was observed during the decade; however, weather remained partially cloudy for 07 days. Average relative humidity recorded as 62%. Mean day temperature was 20.3°C while night temperature recorded as 2.6°C with 52.8 hours bright sunshine duration. Wind speed recorded as 0.5km/hr with mean wind direction *south westerly*.

2.2 RAMC, Faisalabad (Central Punjab)

Dry weather was observed during the decade; however, weather remained partially cloudy for 07 days. Average relative humidity recorded as 53%. Mean day temperature was 21.8°C while night temperature recorded as 4.3°C with 71.2 hours bright sunshine duration. Wind speed recorded as 1.2km/hr with mean wind direction westerly.

Wheat: Very good, tillering.

2.3 RAMC, Tandojam (Lower Sindh)

Dry weather was observed during the decade; however, weather remained partially cloudy for 01 day. Average relative humidity recorded as 52%. Mean day temperature was 23.8°C while night temperature recorded as 8.2°C with 74.0hours bright sunshine duration. Wind speed recorded as 3.8km/hr with mean wind direction *north northerly*.

Wheat: Very good, tillering.

2.4 RAMC, Usta Muhammad (Eastern Baluchistan)

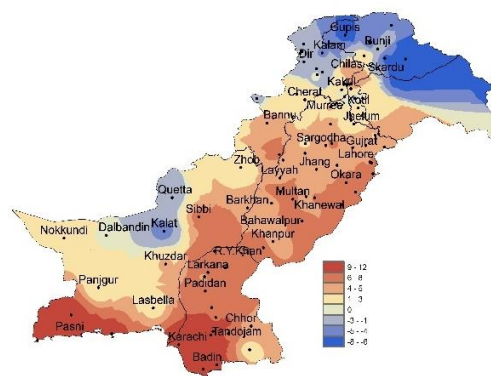
Dry weather was observed during the decade; however, weather remained partially cloudy for 02 days. Average relative humidity recorded as 49%. Mean day temperature was 23.2°C while night temperature recorded as 5.0°C. Wind speed recorded as 1.1 km/hr with mean wind direction *north easterly*.

Rice: Good, harvesting.

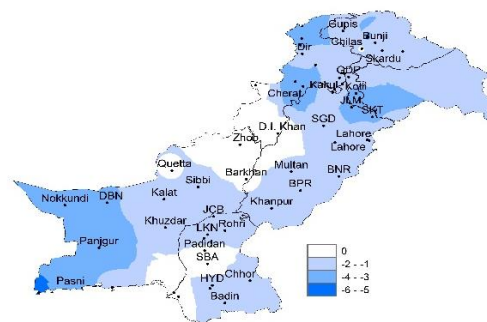
2.5 RAMC, Quetta (Northern Baluchistan)

Dry weather was observed during the decade; however, weather remained partially cloudy for 07 days. Average relative humidity recorded as 33.0%. Mean day temperature was 12.6°C while night temperature recorded as -1.6°C with 80.2 hours bright sunshine duration. Wind speed recorded as 4.8 km/hr with mean wind direction *north westerly*.

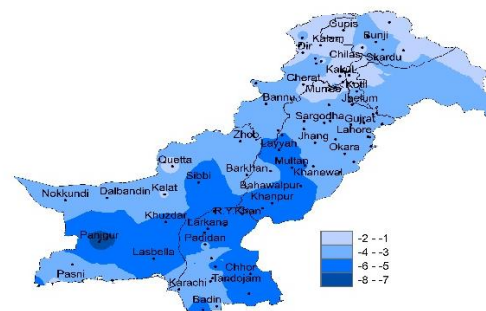
Wheat: Good, third leaf.



IV. Actual min-temperature



V. Departure of min-temperature from Normal



VI. Departure of min-temperature from Previous Decade

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

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

2.6 Jhelum

Dry weather was observed during the decade; however, weather remained partially cloudy for 06 days. Average relative humidity recorded as 60%. Mean day temperature was 19.9°C while night temperature recorded as 2.8°C with 54.3 hours bright sunshine duration. Wind speed recorded as .10km/hr with mean wind direction *westerly*.

2.7 Lahore

Dry weather was observed during the decade; however, weather remained partially cloudy for 05 days. Average relative humidity recorded as 53%. Mean day temperature was 21.0°C while night temperature recorded as 5.7°C with 53.3 hours bright sunshine duration. Wind speed recorded as 0.2 km/hr with mean wind direction *westerly*.

2.8 Sargodha

Dry weather was observed during the decade; however, weather remained partially cloudy for 05 days. Average relative humidity recorded as 53%. Mean day temperature was 21.5°C while night temperature recorded as 4.9°C with 57.1 hours bright sunshine duration. Wind speed recorded as .13km/hr with mean wind direction *variable*.

2.9 Multan

Dry weather was observed during the decade; however, weather remained partially cloudy for 05 days. Average relative humidity recorded as 52%. Mean day temperature was 21.9°C while night temperature recorded as 5.7°C with 67.1 hours bright sunshine duration. Wind speed recorded as 1.2 km/hr with mean wind direction *northerly*.

2.10 Khanpur

Dry weather with clear skies was reported during the decade. Average relative humidity recorded as 56%. Mean day temperature was 23.5°C while night temperature recorded as 4.6°C with 69.7 hours bright sunshine duration. Wind speed recorded as 0.8 km/hr with mean wind direction *north easterly*.

2.11 Sakrand

Dry weather with clear skies was reported during the decade. Average relative humidity recorded as 46%. Mean day temperature was 23.2°C while night temperature recorded as 7.6 °C with 86.7 hours bright sunshine duration. Wind speed recorded as 3.2 km/hr with mean direction *north westerly*

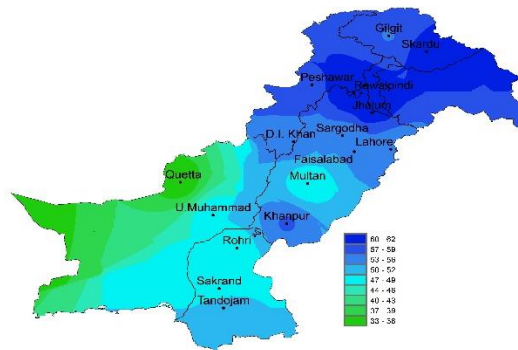


Figure.3: Relative Humidity in Percentage (%)

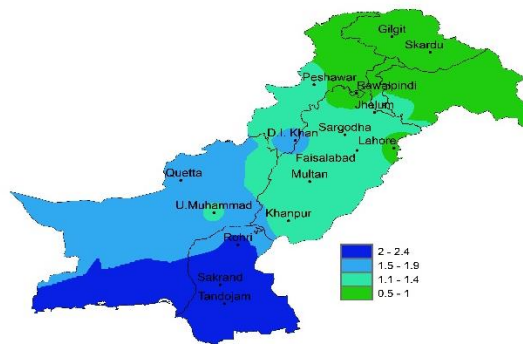


Figure.4: Reference Crop Evapotranspiration ETO (mm/day)

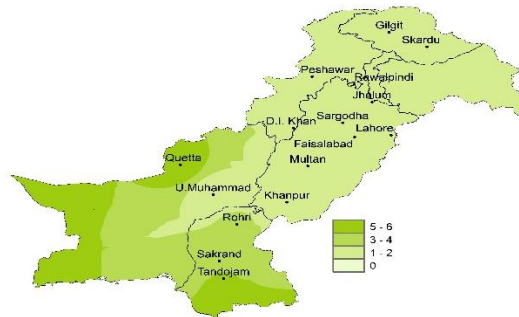


Figure 5: Wind Speed in kilometer per hour (km/h)

2.12 Rohri

Dry weather with clear skies was reported weather during the decade. Average relative humidity recorded as 48%. Mean day temperature was 22.2°C while night temperature recorded as 8.2°C with 86.7 hours bright sunshine duration. Wind speed recorded as 2.9km/hr with mean wind direction as *north easterly*.

2.13 D.I. Khan

Dry weather was observed during the decade; however, weather remained partially cloudy for 04 days. Average relative humidity recorded as 55%. Mean day temperature was 22.5°C while night temperature recorded as 5.8°C with 63.8 hours bright sunshine duration. Wind speed recorded as 2.4km/hr with mean wind direction as south *easterly*.

2.14 Peshawar

Dry weather was observed during the decade; however, weather remained partially cloudy for 08 days. Average relative humidity recorded as 58%. Mean day temperature was 20.2°C while night temperature recorded as 1.5°C with 56.8 hours bright sunshine duration. Wind speed recorded as 1.6km/hr with mean wind direction as north *westerly*.

2.15 Skardu

Rain was reported 3.3mm during the decade; however, weather remained partially cloudy for 07 days. Average relative humidity recorded as 60%. Mean day temperature was 3.7°C while night temperature recorded as -8.2°C with 21.7 hours bright sunshine duration. Wind speed recorded as 0.1km/hr with mean wind direction as south *easterly*.

2.16 Gilgit

Rain was reported 0.01mm during the decade; however, weather remained partially cloudy for 09 days. Average relative humidity recorded as 55%. Mean day temperature was 10.8°C while night temperature recorded as -5.2°C with 24.9 hours bright sunshine duration. Wind speed recorded as 1.7km/hr with mean wind direction as *south easterly*.

Eleven Days Weather Advisory for Farmers (21st to 31st December 2024)**3.1 Temperature Forecast**

Normal mean temperature is likely 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 cold and dry weather is likely in most parts, while rain-wind/thunderstorm is expected in eastern parts on 23rd December. Smog/ fog is also likely in plain areas of province during morning/night hours throughout the decade.

❖ Khyber Pakhtunkhwa:

Mainly cold and dry weather is expected in most parts. Smog/ fog is likely in plain areas of province during morning/night hours throughout the decade.

❖ Sindh:

Mainly cold and dry weather is expected in most parts. Fog is likely in upper areas of province during morning/night hours throughout the decade.

❖ Baluchistan:

Mainly very cold and dry weather is expected in most parts of the province during the decade.

❖ Gilgit-Baltistan:

Mainly very cold and dry weather is expected in most parts, while rain-wind/thunderstorm (with snow over the mountains) is likely in Gilgit Baltistan on 23rd, 24th, 30th and 31st December during the decade.

❖ Kashmir:

Mainly very cold and dry weather is expected in most parts, while rain-wind/thunderstorm (with snow over the mountains) is likely in Kashmir on 23rd, 24th, 30th and 31st December during the decade.

3.4 Advisory for Farmers

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