

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light rainfall reported in the agricultural plains of Punjab, K.P, G.B & Kashmir and dry weather reported from Sindh & Balochistan during the last decade.
- ❖ Highest amount of rainfall recorded as 1.0mm at Rawalakot during the last decade.
- ❖ Lowest minimum temperature recorded -10.8°C at Skardu during the last decade.
- ❖ Mainly cold and dry weather is expected in most parts of the country however, partly cloudy weather conditions with light to moderate rain (with light snowfall over the hills) is expected at K.P, G.B & Kashmir.
- ❖ Farmers are advised to cultivate winter vegetables in time so that present soil moisture may fully be utilized.
- ❖ Wheat cultivation is in progress in most of the irrigated areas. Farmers of irrigated areas should irrigate the crop as per requirement due to dry weather prevailing in most of the irrigated agricultural plains of the country. Normally first irrigation is given 20-25 days after sowing.
- ❖ Wheat cultivation has been completed in most of the barani areas of the country. Farmers of barani areas are advised to remove weeds from the fields, so that the present soil moisture may fully be utilized.
- ❖ Farmers of cotton crop areas are advised to prepare their field for incoming rabi crops and complete sowing in time.

NATIONAL AGROMET CENTRE (NAMC) PAKISTAN METEOROLOGICAL DEPARTMENT SECTOR H-8/2, ISLAMABAD

Patron-in-Chief: *Hazrat Mir, Director General*

Editor-in-Chief: *Dr. Khalid M. Malik, Director*

Editor: *Khalida Noureen, Meteorologist*

Phone: [+92-51-9250592](tel:+92-51-9250592) Email: info@namc.pmd.gov.pk

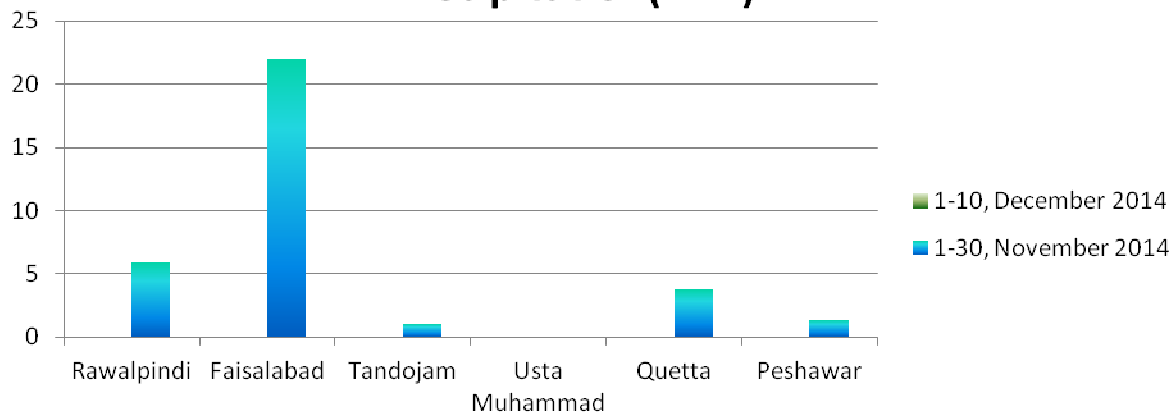
Meteorological conditions during 2nd decade of December, 2014

Sr. No.	Station	Precipitation (mm)			Air Temperature (°C)			Soil Temperatures (°C)						R.H (%)	Sunshine Duration(hours)	Wind Speed (km/hr)	ET _o (mm/day)
		Normal	Actual	Dep	T _{max} Dep	T _{min} Dep	Mean	5cm	10cm	20cm	30cm	50cm	100cm				
1	RAWALPINDI	1.5	0.0	-1.5	-0.4	-0.6	11.9	12.9	12.0	11.3	11.8	13.2	16.8	65	55.0	2.6	1.3
2	FAISALABAD	0.2	0.0	-0.2	-4.8	-1.0	11.4	15.9	15.4	14.4	14.9	16.4	20.3	76	13.5	1.7	1.0
3	JHELUM	0.4	0.0	-0.4	-3.6	-3.0	11.5	13.3	12.7	12.3	13.0	14.7	***	69	39.6	2.5	1.3
4	LAHORE	0.4	0.0	-0.4	-5.3	-2.9	11.9	14.5	14.4	14.3	14.5	***	19.2	73	34.0	2.0	1.1
5	SARGODHA	0.6	0.0	-0.6	-6.4	-1.3	11.1	15.3	14.6	15.0	15.9	17.7	20.3	77	37.4	0.2	0.9
6	MULTAN	0.6	0.0	-0.6	-5.2	-0.5	12.0	***	***	***	***	***	***	72	40.1	1.9	1.2
7	KHANPUR	1.6	0.0	-1.6	-3.1	-1.8	12.5	***	16.1	17.0	18.0	18.3	22.3	70	49.0	2.5	1.4
8	TANDOJAM	0.4	0.0	-0.4	-1.6	-3.5	15.2	21.1	21.4	20.2	20.2	22.1	***	51	73.1	1.0	1.7
9	SAKRAND ☆	1.0	0.0	-1.0	0.2	-3.7	13.6	***	***	***	***	***	***	61	17.0	2.8	1.6
10	ROHRI	1.2	0.0	-1.2	-1.7	-0.9	15.6	22.2	20.6	19.6	22.0	21.5	27.4	55	76.9	5.0	2.3
11	D I KHAN	0.1	0.0	-0.1	-6.5	-2.9	9.2	***	***	***	***	***	***	77	30.6	***	0.9
12	PESHAWAR	0.6	0.0	-0.6	-1.9	-4.1	10.4	13.1	11.6	10.8	***	***	17.5	62	38.9	0.1	0.7
13	USTA MUHAMMAD	0.1	0.0	-0.1	-0.5	-3.4	13.8	20.1	20.5	21.2	21.8	***	23.0	56	***	***	2.6
14	QUETTA	0.2	0.0	-0.2	-0.4	-1.5	5.9	12.8	10.3	6.9	7.3	7.5	13.2	27	83.6	4.2	1.9
15	SKARDU	1.2	0.0	-1.2	0.2	-2.4	-0.2	***	***	***	***	***	***	52	34.4	0.3	0.6
16	GILGIT	0.3	0.0	-0.3	0.2	-2.8	3.9	***	***	***	***	***	***	51	31.8	1.8	1.0

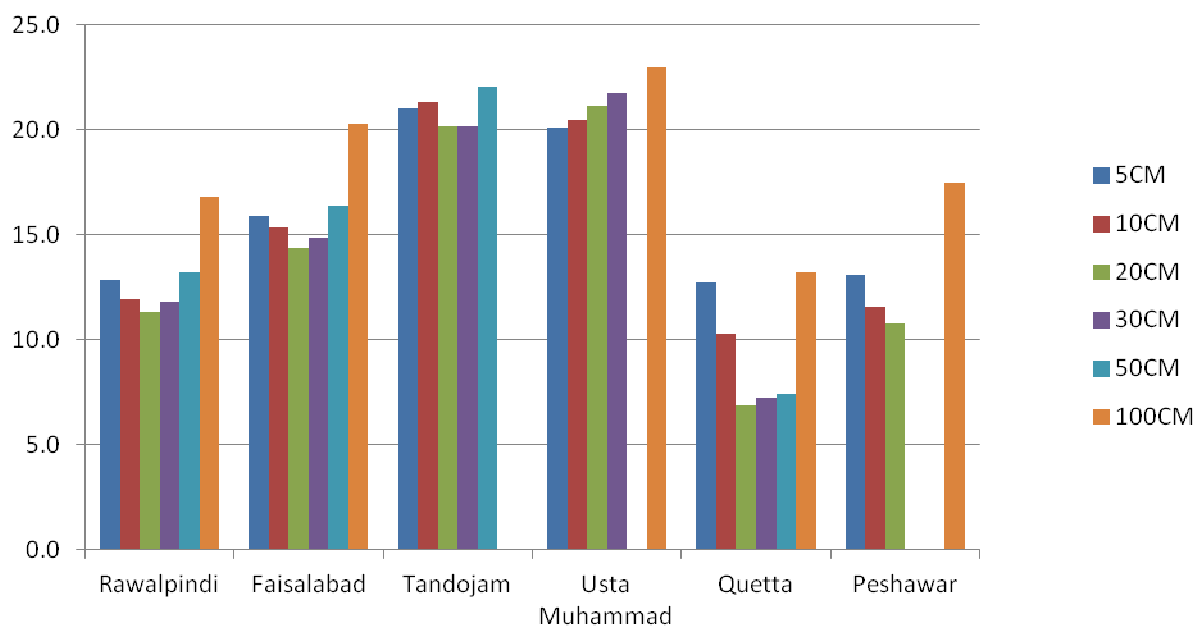
Table-1: Meteorological parameters for selected station of Pakistan. "Dep" in the table stands for difference from climatic normal, i.e. actual value minus normal. And "% Dep" is calculated by the formula; $\text{Dep} \div \text{Normal} \times 100$. T_{min} & T_{max} stands for minimum and maximum temperatures respectively. ET_o stands for reference crop evapotranspiration. *** stands for no data and (☆) indicates the station with five years climatic (normal) data for computing departures.

Graph at RAMC's during December, 2014

Precipitation(mm)



Soil Temperature(°C)



Past Weather (11th to 20th December, 2014)

Dry weather reported in the agricultural plains of Punjab, K.P, G.B, Kashmir, Sindh & Balochistan during the last decade.

1.1 Punjab

Dry weather reported in the agricultural plains of Punjab. Decadal maximum & minimum temperature both dropped below normal by 4.1°C & 1.6°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 72%, 38.4hrs, 1.9km/hr and 1.2mm/day respectively.

1.2 Sindh

Dry weather reported in the agricultural plains of Sindh. Decadal maximum & minimum temperature both dropped below normal by 1.0°C & 2.7°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 56%, 55.7hrs, 2.9km/hr and 1.9mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

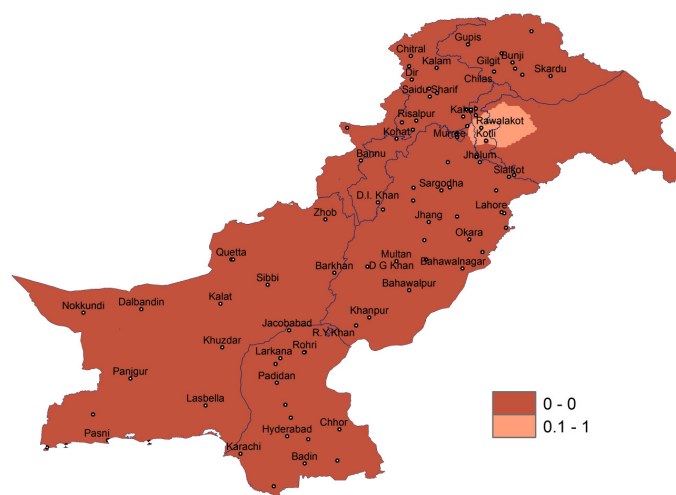
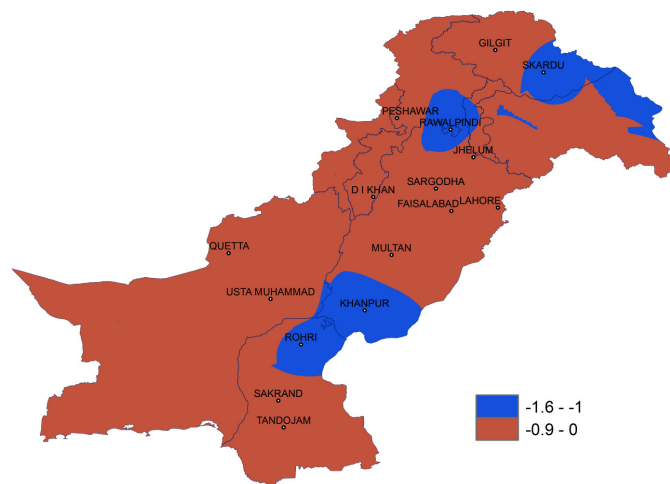
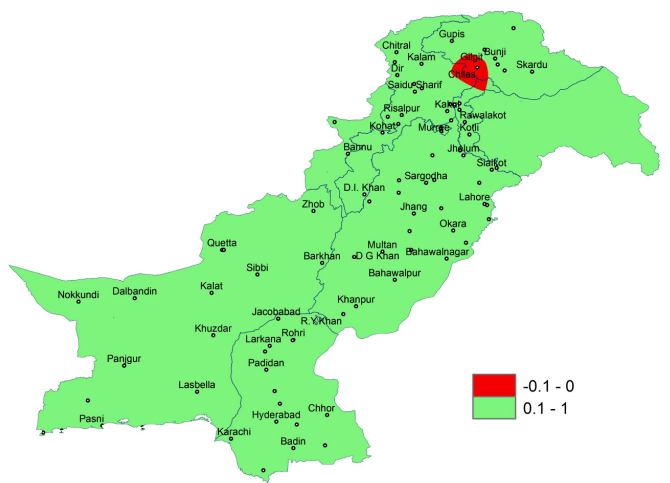
Dry weather reported in the agricultural plains of KP. Decadal maximum & minimum temperature both dropped below normal by 4.2°C & 3.5°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 70%, 34.8hrs, 0.1km/hr and 0.8mm/day respectively.

1.4 Balochistan

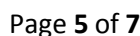
Dry weather reported in the agricultural plains of Balochistan. Decadal maximum & minimum temperature both dropped below normal by 0.5°C & 2.5°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 42%, 83.6hrs, 4.2km/hr and 2.3mm/day respectively.

1.5 Gilgit-Baltistan and Azad Jammu & Kashmir

Dry weather reported in the agricultural plains of GB & Kashmir. Decadal maximum raised above normal by 0.2°C & minimum temperature dropped below normal by 2.6°C, in the province.. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 52%, 33.1hrs, 1.1km/hr and 0.8mm/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 in "mm"**

Dry weather reported during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 27%. Mean day temperature was 14°C while night temperature recorded as -2.3°C with 83.6 hours bright sunshine duration and wind speed recorded as 4.2km/hr with mean wind direction *northerly*.



2(b) Past Weather for Sub-Regional Agricultural Plains (11th to 20th December, 2014)

2.6 Jhelum

Dry weather reported during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 69%. Mean day temperature was 18.6°C while night temperature recorded as 4.3°C with 39.6hours bright sunshine duration. Wind speed recorded 2.5km/hr with wind direction *south westerly*.

2.7 Lahore

Dry weather reported during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 73%. Mean day temperature was 16.6°C while night temperature recorded as 7.1°C with 34hours bright sunshine duration. Wind speed recorded as 2.0 km/hr with mean wind direction *north westerly*.

2.8 Sargodha

Dry weather reported during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 77%. Mean day temperature was 16.2°C while night temperature recorded as 5.9°C with 37.4hours bright sunshine duration. Wind speed recorded as 0.2km/h with mean wind direction as *north easterly*.

2.9 Multan

Dry weather reported during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 72%. Mean day temperature was 18.0°C while night temperature recorded as 5.9°C with 40.1hours bright sunshine duration. Wind speed recorded 1.9km/hr with mean wind direction *northerly*.

2.10 Khanpur

Dry weather reported during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 70%. Mean day temperature was 19.9°C while night temperature recorded as 5.1°C with 49hours bright sunshine duration. Wind speed recorded 2.5 km/hr with mean wind direction *north easterly*.

2.11 Sakrand

Dry weather reported during the decade however weather remained cloudy for 03days. Average relative humidity recorded as 61%. Mean day temperature was 22.8°C while night temperature recorded as 4.3°C with 71hours bright sunshine duration. Wind speed recorded 2.8km/hr with wind direction *northerly*.

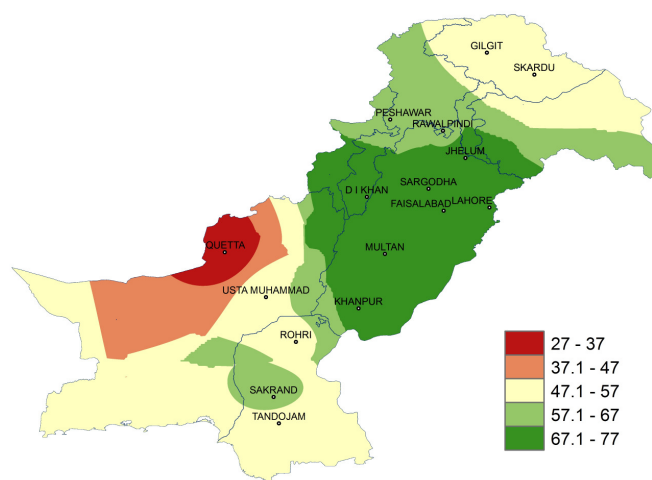


Figure.3: Relative Humidity in percentage (%)

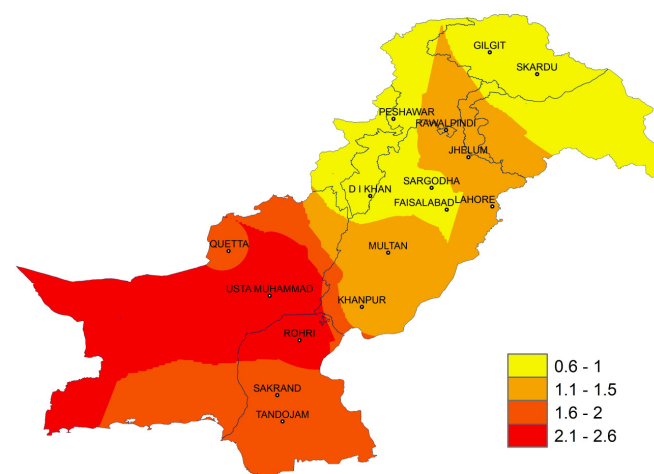


Figure.4: Reference Crop Evapotranspiration "ETo" in mm/day

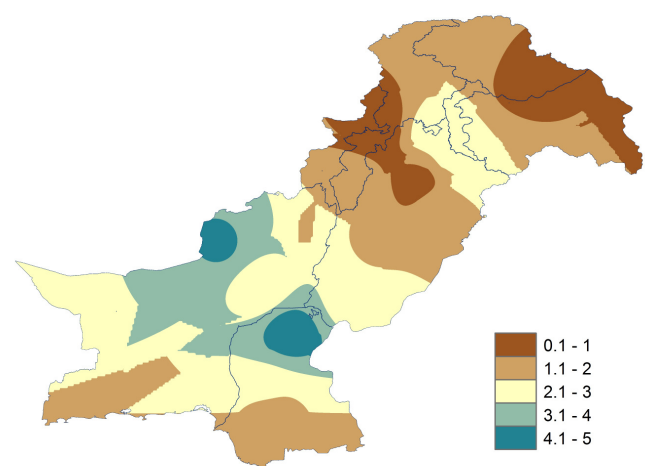


Figure 5: Wind Speed in kilometer per hour (km/h)

2.12 Rohri

Dry weather reported during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 55%. Mean day temperature was 21.6°C while night temperature recorded as 9.6°C with 76.9hours bright sunshine duration. Wind speed recorded as 5.0 km/hr with mean wind direction *north easterly*.

2.13 D.I. Khan

Dry weather reported during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 77%. Mean day temperature was 16.0°C while night temperature recorded as 2.4°C with 30.6hours bright sunshine duration.

2.14 Peshawar

Dry weather reported during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 62%. Mean day temperature was 18.7°C while night temperature recorded as 2.1°C with 38.9hours bright sunshine duration. Wind speed recorded as 0.1km/hr with mean wind direction *westerly*.

2.15 Skardu

Dry weather reported during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 52%. Mean day temperature was 6.9°C while night temperature recorded as -7.3°C with 34.4hours bright sunshine duration. Wind speed recorded as 0.3km/hr with mean wind direction *easterly*.

2.16 Gilgit

Dry weather reported during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 51%. Mean day temperature was 12.2°C while night temperature recorded as -4.4°C with 31.8hours bright sunshine duration. Wind speed recorded as 1.8km/hr with mean wind direction *variable*.

3. Ten Days Weather Advisory for Farmers (21st to 31st December, 2014)

3.1 Temperature Forecast

Day/night temperatures are expected to be normal in most of the agricultural plains of the country during the decade.

3.2 Wind Forecast

Normal wind pattern may prevail in most of the agricultural plains of the country during the decade.

3.3 Rain Forecast

Continental air is prevailing over most parts of the country. A shallow trough of westerly wave is prevailing over northern parts of the country.

- ❖ **Punjab:** Mostly very cold and dry weather is expected during the decade. Dense foggy conditions would continue in Gujranwala, Lahore, Faisalabad and Sahiwal divisions, while foggy in Sargodha, Rawalpindi, Multan, Bahawalpur and D.G Khan during night & morning hours.
- ❖ **Khyber Pakhtunkhwa:** Mainly cold and dry weather is expected in the province. However light rainfall (with light snowfall over the hills) is expected over isolated places in Malakand and Hazara divisions mid of this decade. Dense foggy conditions would continue in Peshawar and D.I Khan during night & morning hours.
- ❖ **Sindh:** Dry weather expected in most of the parts of Sindh during the decade. Dense foggy conditions would continue in Gujranwala, Lahore, Faisalabad and Sahiwal divisions, while foggy in Sukkur divisions during night & morning hours.
- ❖ **Balochistan:** Mainly cold and dry weather is expected in the province.
- ❖ **Gilgit Baltistan:** Mainly cold and cloudy weather is expected in most parts of the G.B however light to moderate rain (with light snowfall over the hills) is expected in 2nd half of decade.
- ❖ **Kashmir:** Mainly cold and dry weather is expected in most parts of the Kashmir however partly cloudy weather conditions with light to moderate rain (with light snowfall over the hills) is expected in end of 2nd half of decade.

3.4 Advisory for Farmers

- ❖ Removing weeds from the standing crops is very important as weeds utilize moisture and food which may be utilized by the crop. As a result considerable loss in yield occurs every year. However operations against weeds should be started using weedicides or manually when the crop completely covers the fields.
- ❖ Due to expected dry weather in most parts of the country, farmers are advised to irrigate the crops as per requirement during the decade.
- ❖ Frost is expected in several plain areas of the country during the decade. Farmers are advised to take in time precautionary measures in this regard to protect standing crops and orchards.