

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Trace rainfall reported in the agricultural plains of Punjab and Baluchistan, however light in KPK, G.B & Kashmir and dry weather reported in Sindh during the last decade.
- ❖ Highest amount of rainfall reported as 14.2mm at Parachinar during the last decade.
- ❖ Lowest Minimum temperature recorded -8.0°C at Kalat during the last decade.
- ❖ Light to moderate rainfall is expected in different parts of country excluding Sindh from 7th to 10th of this decade.
- ❖ Farmers are advised to cultivate winter vegetables in time so that present soil moisture may fully be utilized.
- ❖ Farmers are advised to take in time precautionary measures to protect livestock from expected dry/cold weather during the decade.
- ❖ Farmers of cotton crop areas are advised to prepare their field for incoming rabi crops and complete sowing in time.
- ❖ Farmers are advised to cultivate late varieties in December.
- ❖ Farmers of rainfed areas of K.P & Punjab are advised to complete cultivation of Rabi crops as soon as possible. The status of soil moisture is very suitable after rains during the season.

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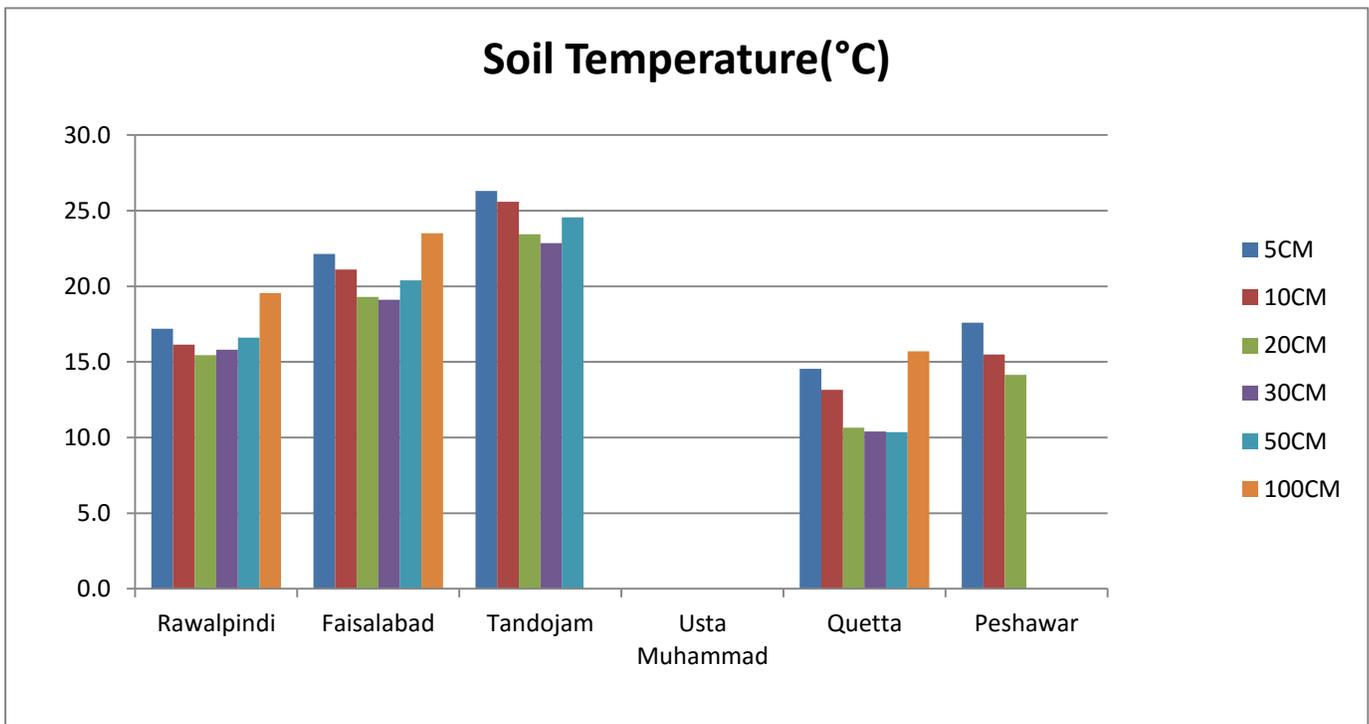
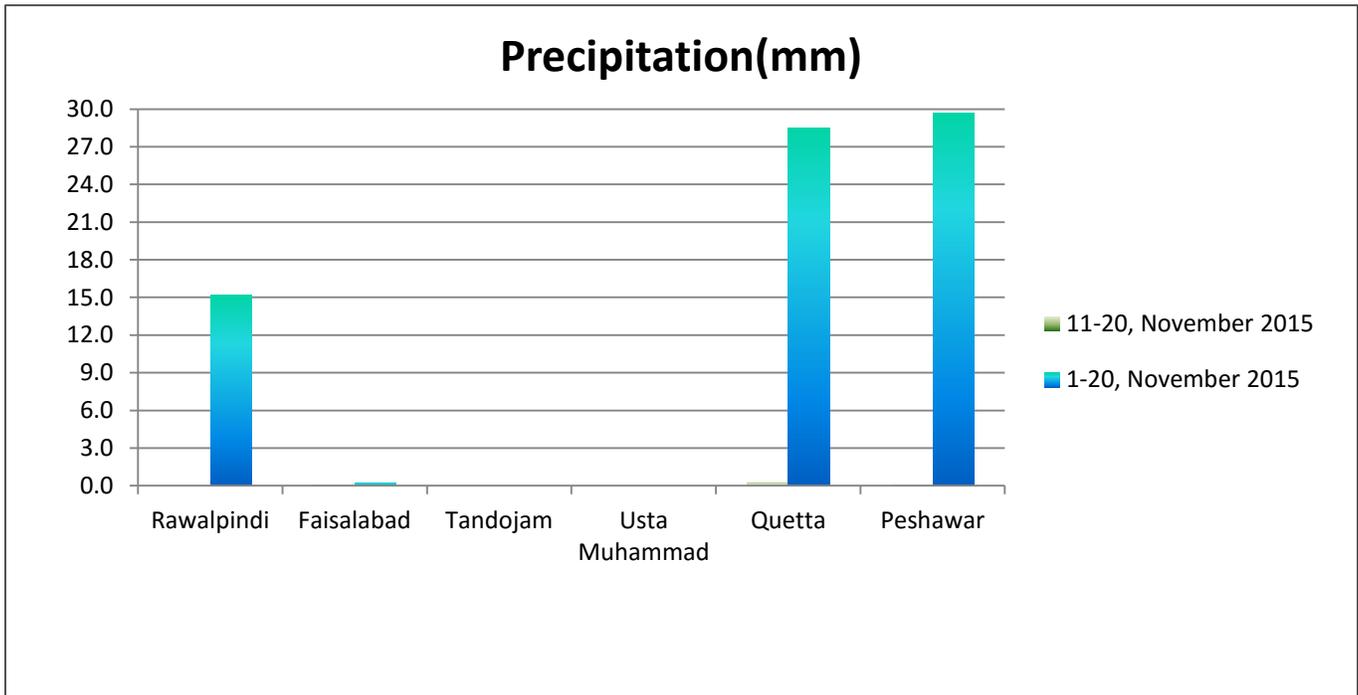
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Meteorological conditions during 3rd decade of November, 2015

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	Tmax Dep	Tmin Dep	Mean	5cm	10cm	20cm	30cm	50cm	100cm				
1	RAWALPINDI	0.4	0.0	-0.4	-1.0	2.8	15.6	17.2	16.2	15.5	15.8	16.6	19.6	64	69.6	0.8	1.2
2	FAISALABAD	0.1	0.1	0.0	0.4	1.2	17.9	22.2	21.1	19.3	19.1	20.4	23.5	58	60.2	1.0	1.5
3	JHELUM	0.2	0.1	-0.1	-0.5	0.5	17.2	17.6	16.6	16.5	17.0	18.3	***	62	62.1	1.0	1.3
4	LAHORE	0.2	0.1	-0.1	0.4	-0.5	18.7	18.9	18.9	18.5	18.6	***	22.5	62	62.5	1.7	1.6
5	SARGODHA	0.0	0.1	0.1	0.0	1.2	18.3	20.5	19.4	18.9	19.3	21.5	22.6	64	54.4	0.9	1.4
6	MULTAN	0.0	0.0	0.0	-0.5	1.9	18.8	***	***	***	***	***	***	50	80.9	1.5	1.7
7	KHANPUR	0.0	0.0	0.0	2.8	-0.5	19.6	***	20.7	20.9	21.2	22.0	23.7	54	69.1	2.6	2.3
8	TANDOJAM	0.0	0.0	0.0	-1.3	0.5	20.5	26.3	25.6	23.5	22.9	24.6	***	43	85.5	2.9	2.7
9	SAKRAND ☆	0.0	0.0	0.0	0.1	-4.1	17.1	28.4	24.1	***	***	***	28.9	51	87.1	3.5	2.7
11	D I KHAN	0.0	0.0	0.0	0.8	3.3	19.1	***	***	***	***	***	***	54	71.2	1.1	1.5
12	PESHAWAR	0.5	0.1	-0.4	-0.2	-0.1	15.7	17.6	15.5	14.2	***	***	***	60	42.0	0.6	1.1
13	USTA MUHAMMAD	0.0	0.0	0.0	2.1	-5.0	19.9	***	***	***	***	***	***	46	***	14.1	3.7
14	QUETTA	0.2	0.2	0.0	-2.4	2.8	9.1	14.6	13.2	10.7	10.4	10.4	15.7	35	89.5	4.6	2.1
15	SKARDU	0.0	0.0	0.0	0.1	3.9	5.6	***	***	***	***	***	***	63	41.5	0.5	0.8
16	GILGIT	0.0	0.6	0.6	-2.1	1.9	7.7	***	***	***	***	***	***	62	39.5	1.6	1.1

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; $\text{Dep} \div \text{Normal} \times 100$. Tmin & Tmax stands for minimum and maximum temperatures respectively. ETo stands for reference crop evapotranspiration. *** stands for no data and (☆) indicates the station with five years climatic (normal) data for computing departures.

Graphs of RAMC's during November, 2015



Past Weather (21st to 30th November, 2015)

Trace rainfall reported in the agricultural plains of Punjab and Baluchistan, however light in KPK, G.B & Kashmir and dry weather reported in Sindh during the last decade.

1.1 Punjab

Trace (not measureable) rainfall reported in the agricultural plains of Punjab. Trace received in Faisalabad, Jhelum & Layyah. Decadal maximum raised above normal by 0.2°C & minimum temperature dropped below normal by 0.9°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETO were recorded as 59%, 65.5hrs, 1.4km/hr and 1.6mm/day respectively.

1.2 Sindh

Dry weather reported in the agricultural plains of Sindh. Decadal maximum raised & minimum temperature both dropped below normal by 0.4°C & 1.2°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETO were recorded as 31%, 57.5hrs, 2.1km/hr and 2.7mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

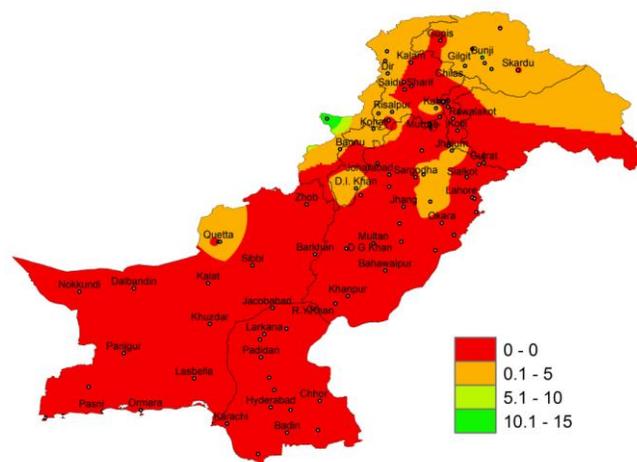
Light rainfall reported in the agricultural plains of KP. Chief amount of rainfall received in Parachinar, Dir & Chotral. Decadal maximum & minimum temperature both raised above normal by 0.3°C & 1.6°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETO were recorded as 57%, 56.6hrs, 0.9km/hr and 1.3mm/day respectively.

1.4 Balochistan

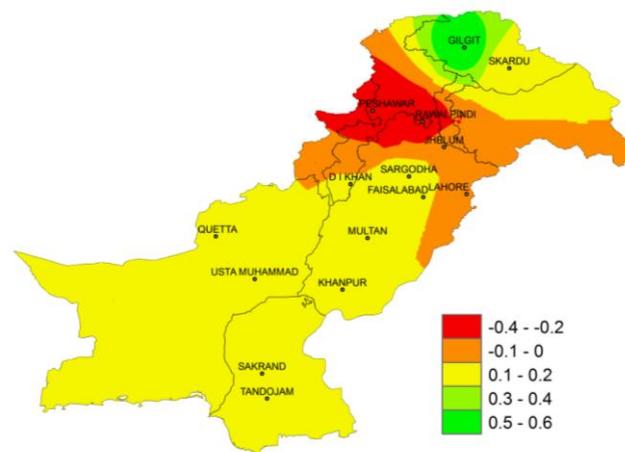
Trace (not measureable) rainfall reported in the agricultural plains of Balochistan. Trace rainfall received at one place i.e Quetta. Decadal maximum & minimum both dropped below normal by 0.2°C & 1.1°C respectively, in the province. Whereas mean values relative humidity, sunshine hour, wind speed & ETO were recorded as 41%, 89.5hrs, 9.4km/hr and 2.9mm/day respectively.

1.5 Gilgit-Baltistan and Azad Jammu & Kashmir

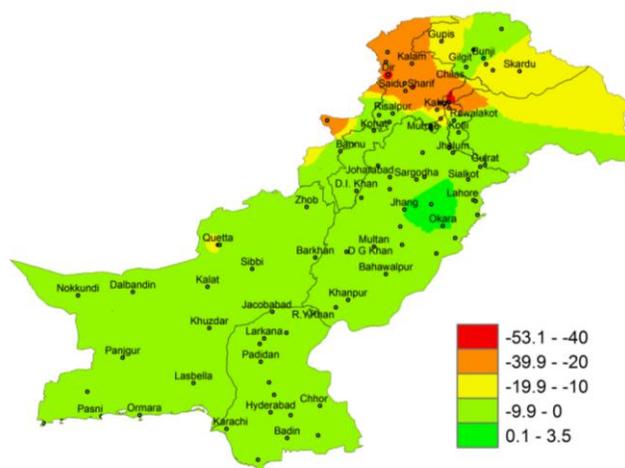
Light rainfall reported in the agricultural plains of GB & Kashmir. Chief amount of rainfall received in Bunji, Atore & Gilgit. Decadal maximum dropped below normal by 1.0°C & minimum temperature raised above normal by 2.9C, in the province. Relative humidity, sunshine hour, wind speed & ETO were recorded as 63%, 40.5hrs, 1.1km/hr and 1.0mm/day respectively.



❖ Actual rainfall



❖ Departure of rainfall from Normal



❖ Departure of rainfall from Previous Decade

Figure.1: Rainfall distribution during previous decade in "mm"

2(a) **Past Weather for Major Agricultural Plains**
(21st to 30th November, 2015)

2.1 **RAMC, Rawalpindi (Potohar region)**

Dry weather reported during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 64%. Mean day temperature was 22.6°C while night temperature recorded as 8.5°C with 69.6hours bright sunshine duration. Wind speed recorded as 0.8km/hr with mean wind direction *westerly*.

2.2 **RAMC, Faisalabad (Central Punjab)**

Rainfall reported as Trace (not measureable) during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 58%. Mean day temperature was 26.1°C while night temperature recorded as 9.6°C with 60.15hours bright sunshine duration. Wind speed recorded as 1.0km/hr with mean wind direction *north westerly*.

Wheat: Very good at emergence stage.

2.3 **RAMC, Tandojam (Lower Sindh)**

Dry weather reported during the decade however weather remained cloudy for 01day. Average relative humidity recorded as 43%. Mean day temperature was 28.2°C while night temperature recorded as 12.7°C with 85.5hours bright sunshine duration. Wind speed recorded as 2.9km/hr with mean wind direction *northerly*.

Note: Field preparing for new crop.

2.4 **RAMC, Usta Muhammad (Eastern Balochistan)**

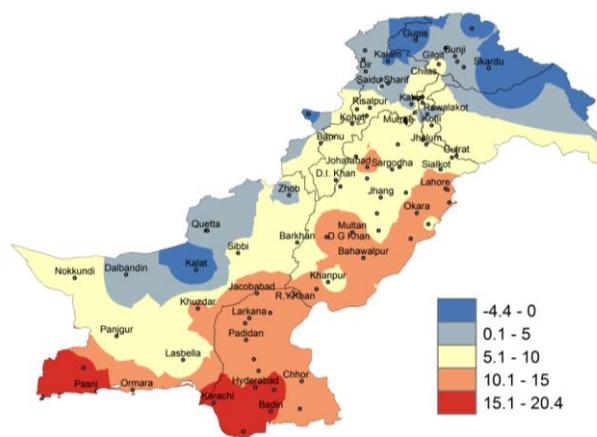
Dry weather reported during the decade however weather remained clear throughout the decade. Average relative humidity recorded as 46%. Mean day temperature was 29. °C while night temperature recorded as 10.7°C and wind speed recorded as 14.1km/hr with mean wind direction *northerly*.

Rice: Harvested

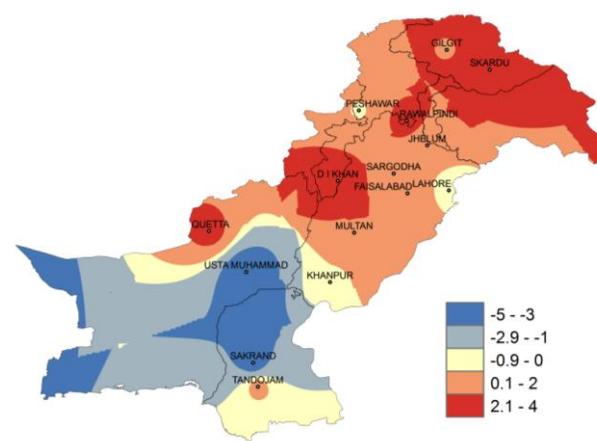
Note: Field preparing for new crop

2.5 **RAMC, Quetta (Northern Balochistan)**

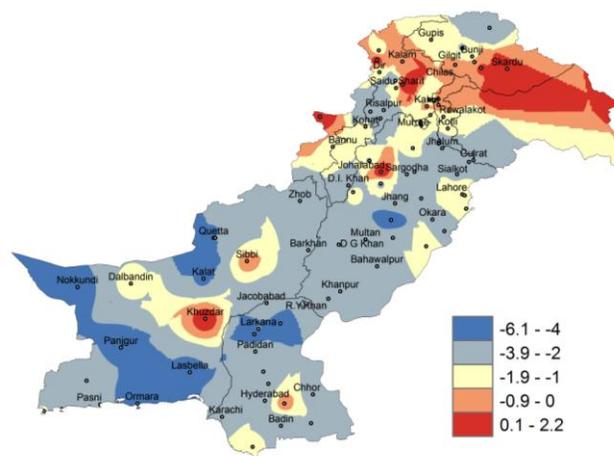
Rainfall reported as 0.2mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 35%. Mean day temperature was 15.2°C while night temperature recorded as 2.9°C with 89.6hours bright sunshine duration and wind speed recorded as 4.6km/hr with mean wind direction *northerly*.



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 in “C”

2(b) Past Weather for Sub-Regional Agricultural Plains (21st to 30th November, 2015)

2.6 Jhelum

Rainfall reported as Trace (not measureable) during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 62%. Mean day temperature was 25.2°C while night temperature recorded as 9.2°C with 62.1hours bright sunshine duration and wind speed recorded as 1.0km/hr with mean wind direction *north westerly*.

2.7 Lahore

Dry weather reported during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 62%. Mean day temperature was 25.6°C while night temperature recorded as 11.8°C with 62.5hours bright sunshine duration. Wind speed recorded as 1.7km/hr with mean wind direction *north westerly*.

2.8 Sargodha

Rainfall reported as Trace (Non measurable) during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 64%. Mean day temperature was 25.5°C while night temperature recorded as 11.0°C with 54.4hours bright sunshine duration. Wind speed recorded as 0.9km/h with mean wind direction *north easterly*.

2.9 Multan

Dry weather reported during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 50%. Mean day temperature was 26.1°C while night temperature recorded as 11.4°C with 80.9hours bright sunshine duration. Wind speed recorded 1.5km/hr with mean wind direction *northerly*.

2.10 Khanpur

Dry weather reported during the decade however weather remained cloudy for 03days. Average relative humidity recorded as 54%. Mean day temperature was 29.9°C while night temperature recorded as 9.2°C with 69.1hours bright sunshine duration. Wind speed recorded 2.6km/hr with mean wind direction *northerly*.

2.11 Sakrand

Dry weather reported during the decade however weather remained cloudy for 03days. Average relative humidity recorded as 51%. Mean day temperature was 27.6°C while night temperature recorded as 6.6°C with 87.1hours bright sunshine duration. Wind speed recorded 3.5km/hr with mean wind direction *northerly*.

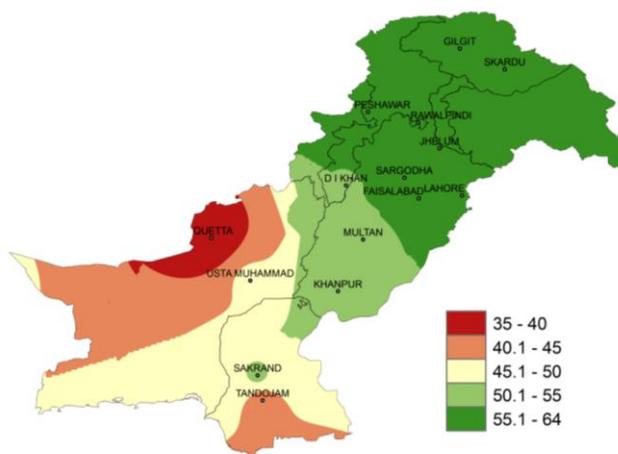


Figure.3: Relative Humidity in percentage (%)

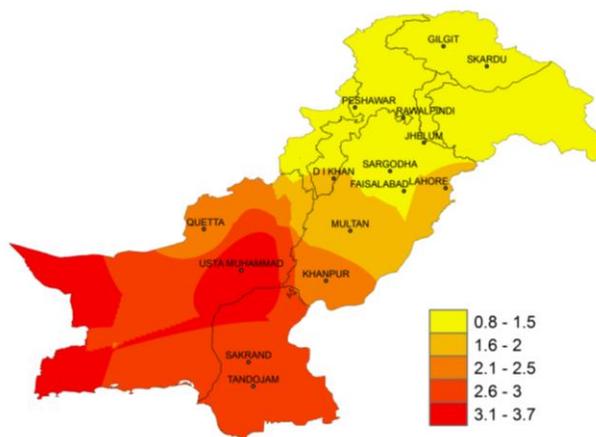


Figure.4: Reference Crop Evapotranspiration “ET₀” in mm/day

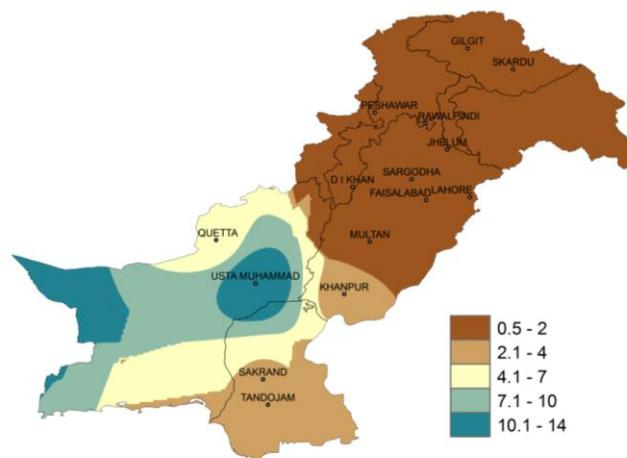


Figure 5: Wind Speed in kilometer per hour (km/h)

2.12 D.I. Khan

Dry weather reported during the decade; however weather remained cloudy for 06days. Average relative humidity recorded as 54%. Mean day temperature was 26.6°C while night temperature recorded as 11.6°C with 71.2hours bright sunshine duration.

2.13 Peshawar

Rainfall reported as Trace (not measureable) during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 60%. Mean day temperature was 23.5°C while night temperature recorded as 7.9°C with 42.0hours bright sunshine duration. Wind speed recorded as 0.6km/hr with mean wind direction *north westerly*.

2.14 Skardu

Dry weather reported during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 63%. Mean day temperature was 11.8°C while night temperature recorded as -0.6°C with 41.5hours bright sunshine duration. Wind speed recorded as 0.5km/hr with mean wind direction *south easterly*.

2.15 Gilgit

Rainfall reported as 0.6mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 63%. Mean day temperature was 14.9°C while night temperature recorded as 0.5°C with 39.5hours bright sunshine duration. Wind speed recorded as 1.6km/hr with mean wind direction *easterly*.

**3. Ten Days Weather Advisory for Farmers
(1st to 10th December, 2015)****3.1 Temperature Forecast**

Night temperatures are expected to drop slightly (1-2°C) and day time temperatures are likely to be slightly 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

- ❖ **Punjab:** Mainly dry weather is expected in the province. However scattered light to moderate rainfall is expected in Faisalabad, Gujranwala, Lahore and Rawalpindi divisions from 7th to 9th of decade.
- ❖ **Khyber Pakhtunkhwa:** Mainly cold and dry weather is expected in the province. However light to moderate

rainfall with snowfall is expected in scattered places including Hazara, Malakand, Mardan, Peshawar & Kohat, divisions from 7th to 10th of decade.

- ❖ **Sindh:** Dry weather is expected in most parts of the Sindh during this decade.
- ❖ **Balochistan:** Mainly cold and dry weather is expected in most parts of the Balochistan however light to moderate rain is expected in Quetta, Sibbi, Gawadar districts on 7th and 8th of decade.
- ❖ **Gilgit Baltistan:** Mainly dry weather is expected in most parts of Gilgit Baltistan. However light to moderate rain with snowfall is expected at Gilgit, Skardu from 7th to 10th of decade.
- ❖ **Kashmir:** Light to moderate rainfall with snowfall is expected in most of the parts of the Kashmir including Rawalakot, Muzzaffarabad & Kotli divisions from 8th to 10th of decade.

3.4 Advisory for Farmers

- ❖ Farmers are advised to cultivate winter vegetables in time so that present soil moisture may fully be utilized.
- ❖ Farmers are advised to take in time precautionary measures to protect livestock from expected dry/cold weather during the decade.
- ❖ Farmers of cotton crop areas are advised to prepare their field for incoming rabi crops and complete sowing in time.
- ❖ Farmers are advised to cultivate late varieties in December.
- ❖ Farmers of rainfed areas of K.P & Punjab are advised to complete cultivation of Rabi crops as soon as possible. The status of soil moisture is very suitable after rains during the season.