

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light to moderate with isolated heavy rainfall reported from upper agricultural plains of the country during the last decade.
- ❖ Highest maximum temperature recorded as 43.5°C at Dalbandin during the last decade.
- ❖ Highest amount of rainfall recorded as 156.0mm at Islamabad during the last decade.
- ❖ Lower values of relative humidity reported from Quetta region and higher values reported from Northeastern parts of Punjab & Kashmir during the last decade.
- ❖ Higher values of ETo reported from Sindh, central and southern agricultural plains of Punjab & adjoining areas of the Balochistan during the last decade.
- ❖ Normal temperatures are expected in most of the agricultural plains of the country during the current decade.
- ❖ Normal wind pattern may prevail in most parts of the country during the current decade.
- ❖ Light to moderate with isolated heavy rainfall is expected in upper parts of the country during the current decade.
- ❖ Mostly dry & humid weather is expected in central and southern agricultural plains of the country.

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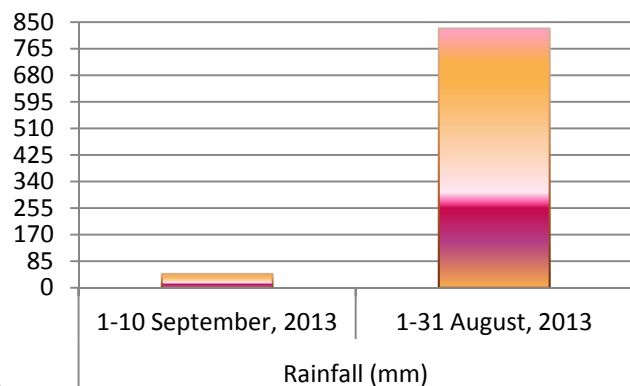
Meteorological conditions during 1st decade of September, 2013

Sr. No.	Station	Precipitation (mm)			Air Temperature (°C)			Soil Temperatures (°C)						Sunshine Duration (hours)	Wind Speed (km/hr)	R.H (%)	ET _o (mm/day)
		Normal	Actual	Dep	Tmin Dep	Tmax Dep	Mean	5cm	10cm	20cm	30cm	50cm	100cm				
1	TANDOJAM	2.2	0.0	-2.2	0.0	-0.8	29.7	40.6	39.2	34.9	33.1	33.1	***	102.1	4.8	63	5.5
2	SAKRAND ☆	1.0	0.0	-1.0	-3.3	-0.2	28.8	42.7	40.8	43.3	***	36.9	35.0	110.7	9.2	62	6.6
3	ROHRI	0.1	0.0	-0.1	-1.6	0.5	32.5	44.1	40.4	36.6	35.8	34.6	35.2	110.0	3.9	54	5.9
4	USTA MUHAMMAD	0.6	0.0	-0.6	-1.9	-3.6	30.0	31.3	31.4	31.1	30.5	***	29.2	***	***	64	3.7
5	QUETTA	0.0	0.0	0.0	-2.3	-0.7	21.8	34.5	32.2	27.6	26.0	25.7	27.4	110.2	5.4	26	5.6
6	KHANPUR	0.7	0.0	-0.7	-1.3	-9.7	25.9	36.0	35.7	35.8	36.1	36.4	35.0	104.9	5.4	62	4.9
7	MULTAN	1.1	0.0	-1.1	0.3	0.1	31.7	***	***	***	***	***	***	86.3	9.0	58	6.2
8	LAHORE	3.8	12.9	9.1	-0.8	1.0	30.2	33.3	32.9	31.4	30.6	***	30.2	73.4	2.6	69	4.3
9	FAISALABAD	1.6	0.0	-1.6	2.1	1.3	31.6	40.4	38.7	36.4	34.9	34.2	32.9	93.0	6.5	56	5.9
10	SARGODHA	1.5	8.7	7.2	0.6	1.1	31.8	38.0	36.3	33.9	33.2	33.1	31.6	96.6	3.5	61	5.2
11	JHELMUM	3.4	54.0	50.6	-0.4	0.2	29.4	32.9	31.9	30.8	30.2	30.5	***	73.5	4.3	68	4.5
12	RAWALPINDI	5.4	44.5	39.1	5.0	-0.9	29.8	31.5	30.4	29.1	28.9	29.4	29.1	44.4	7.1	71	4.1
13	DI KHAN	1.1	26.0	24.9	-0.5	1.4	30.8	***	***	***	***	***	***	100.4	2.5	57	4.8
14	PESHAWAR	1.1	2.3	1.2	-0.1	0.1	29.8	33.4	31.5	31.5	31.9	***	29.9	57.1	1.7	63	3.7
15	SKARDU	0.8	0.1	-0.7	-0.6	6.7	20.4	***	***	***	***	***	***	63.4	3.4	37	3.7
16	GILGIT	0.5	0.4	-0.1	2.3	0.8	23.6	***	***	***	***	***	***	87.6	2.0	54	4.3

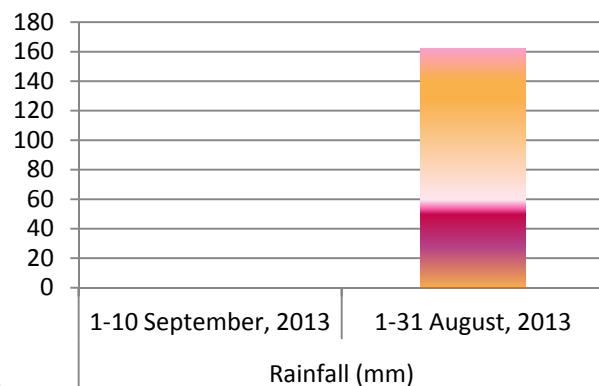
Table-1: Meteorological parameters for selected station of Pakistan. "Dep" in the table stands for difference from climatic normal, i.e. actual value minus normal. And "% Dep" is calculated by the formula; **Dep divided by Normal multiplied by 100**. Tmin & Tmax stands for minimum and maximum temperatures 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 for Rainfall (mm) during August/September

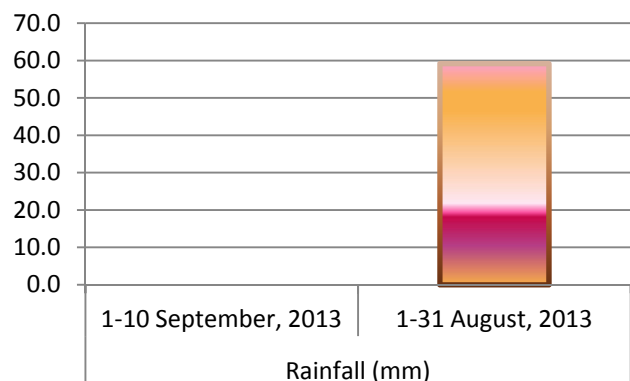
RAMC RAWALPINDI



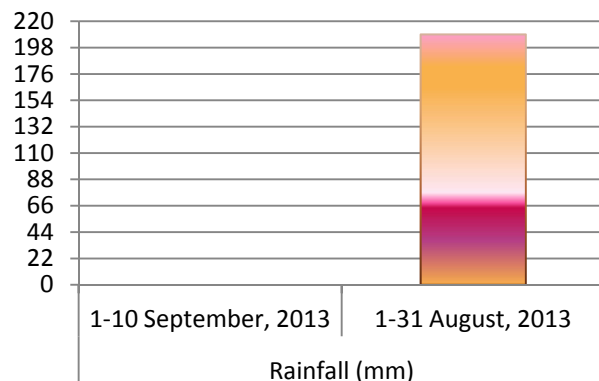
RAMC FAISALABAD



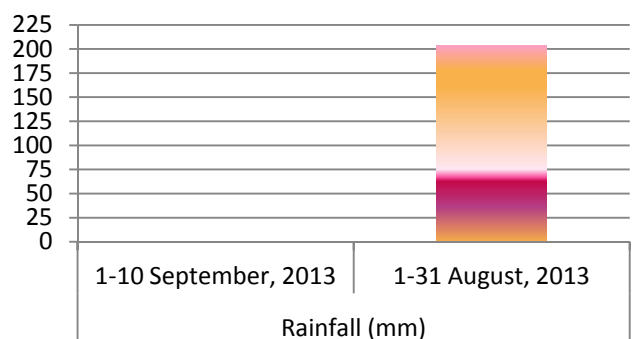
RAMC QUETTA



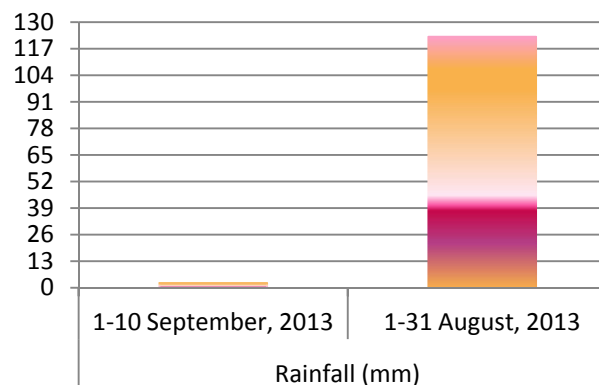
RAMC TANDOJAM



RAMC USTA MUHAMMAD



RMC PESHAWAR



Past Weather (1st to 10th September, 2013):

Light to moderate with isolated heavy rainfall reported from Upper Punjab, Upper KP, GB & Kashmir, while dry/humid weather reported from rest parts of country.

1.1 Punjab

Light to moderate with isolated heavy rainfall reported at few places in the agricultural plains of Punjab; chief amount received at Islamabad, Murree & Sialkot etc. Decadal maximum dropped below normal by 1.0°C & minimum temperature raised above normal by 0.8°C in the province. Mean values of wind speed, relative humidity and ETo were recorded as 5.5km/hr, 64% and 5.0mm/day respectively.

1.2 Sindh

Rainfall reported as Trace (not measureable) at one place in Sindh; i.e. Karachi. Decadal maximum & minimum temperature both dropped below normal by 0.2°C & 1.6°C respectively, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 6.0km/hr, 60% and 6.0 mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

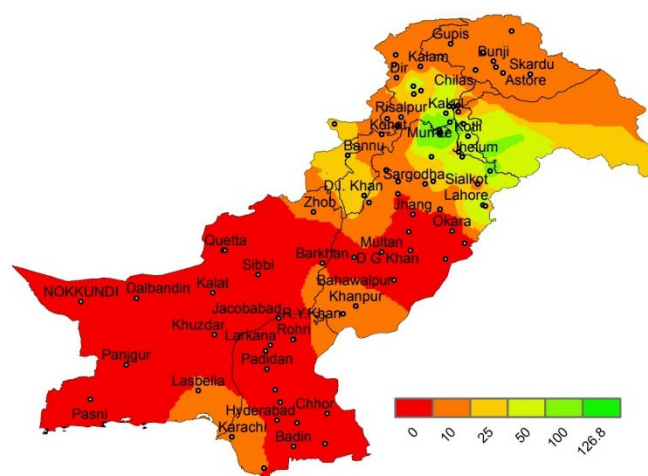
Light to moderate with isolated heavy rainfall reported at few places in the agricultural plains of KP; chief amount received at Balakot, Lower Dir & Kakul etc. Decadal maximum raised above normal by 0.8°C & decadal minimum dropped below normal by 0.3°C in the province. Mean values of wind speed, relative humidity and ETo were recorded as 2.1km/hr, 60% and 4.3mm/day respectively.

1.4 Balochistan

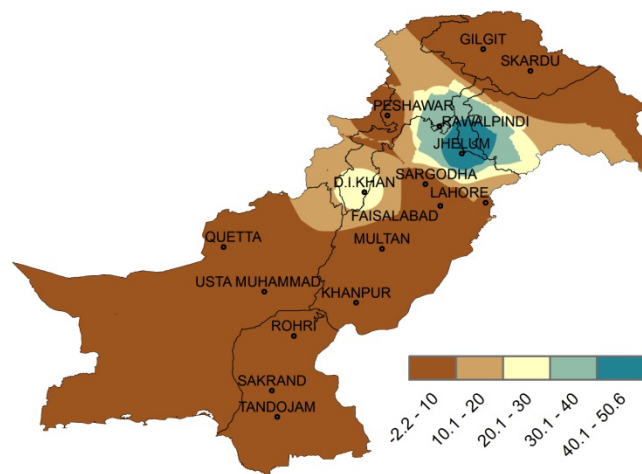
No rainfall reported at the agricultural plains of Balochistan; Decadal maximum & minimum temperature both dropped below normal by 2.2°C & 2.1°C respectively, in the province. Whereas mean values of wind speed, relative humidity and ETo were 5.4km/hr, 45% and 4.7mm/day respectively.

1.5.1 Gilgit Baltistan and Azad Jammu & Kashmir

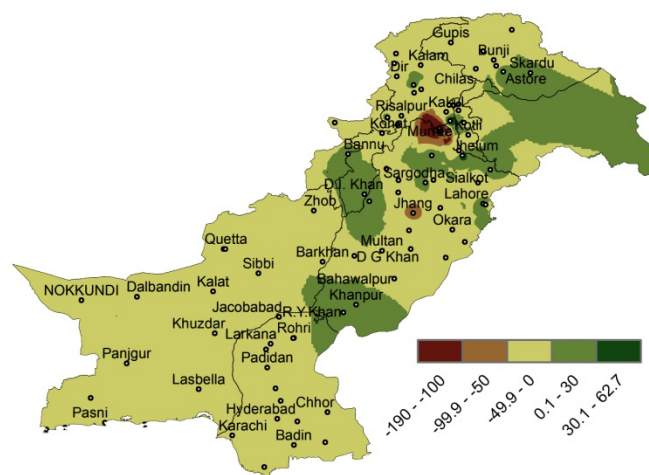
Light to moderate with isolated heavy rainfall reported at a number of places in the agricultural plains of GB & Kashmir; chief amount received at Kotli, Rawalakot & Muzaffarabad etc. Decadal maximum & minimum temperature both raised above normal by 3.8°C & 0.9°C in the province. Whereas mean values of wind speed, relative humidity and ETo were recorded 2.7km/hr, 46% and 4.0 mm/day respectively.



a) Actual rainfall



b) Departure of rainfall from Normal



c) Departure of rainfall from Previous Decade

Figure.1: Rainfall distribution during previous decade in “mm”

2 (a) Past Weather for Major Agricultural Plains (1st to 10th September, 2013):

2.1 RAMC, Rawalpindi (Potohar region)

Rainfall reported as 44.5mm during the decade, weather remained cloudy for 09days, average relative humidity recorded as 71%. Mean night temperature was 27.1°C while day temperature recorded as 32.5°C with 44.4 hours bright sunshine duration. Wind speed recorded as 7.1km/h with mean wind direction *easterly*.

Maize Agati 2002: Good condition, Ninth Leaf stage.

2.2 RAMC, Faisalabad (Central Punjab)

No rainfall reported during the decade, weather remained cloudy for 09days, average relative humidity recorded as 56%. Mean night temperature was 26.1°C while day temperature recorded as 37.0°C with 93.0hours bright sunshine duration. Wind speed recorded as 6.5km/hr with mean wind direction *south westerly*.

Sugarcane: Very Good condition, Tillering completed.

Cotton: Good condition, Boll Opening completed.

2.3 RAMC, Tandojam (Lower Sindh)

No rainfall & cloudy day reported during the decade, average relative humidity recorded as 63%. Mean night temperature was 24.6°C while day temperature recorded as 34.7°C with 102.1 hours bright sunshine duration. Wind speed recorded as 4.8km/hr with mean wind direction *south westerly*.

Cotton: BT 3701, Good condition, Maturity stage.

2.4 RAMC, Quetta (Northern Balochistan)

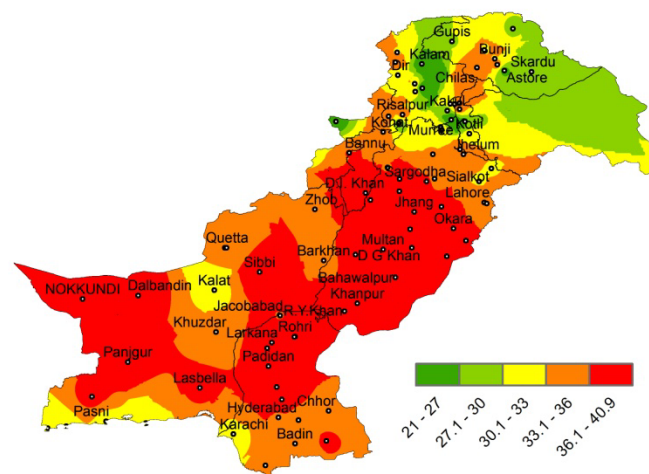
No rainfall reported during the decade, weather remained cloudy for 03 days, average relative humidity recorded as 26%. Mean night temperature was 11.4°C while day temperature recorded as 32.1°C with 110.2 hours bright sunshine duration and wind speed recorded as 5.4km/hr with mean wind direction *westerly*.

Note: No crop is grown at the station.

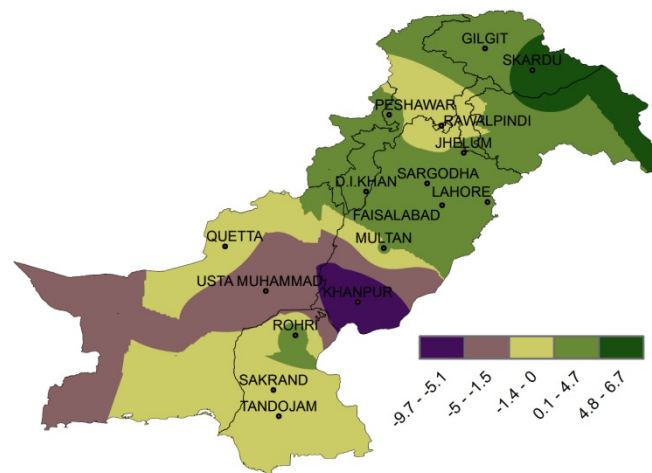
2.5 RAMC, Usta Muhammad (Eastern Balochistan)

No rainfall reported during the decade, weather remained cloudy for 02 days, average relative humidity recorded as 64%. Mean night temperature was 24.7°C, while day temperature recorded as 35.2°C. The data of bright sunshine hour and wind speed was not available, while mean wind direction was *southerly*.

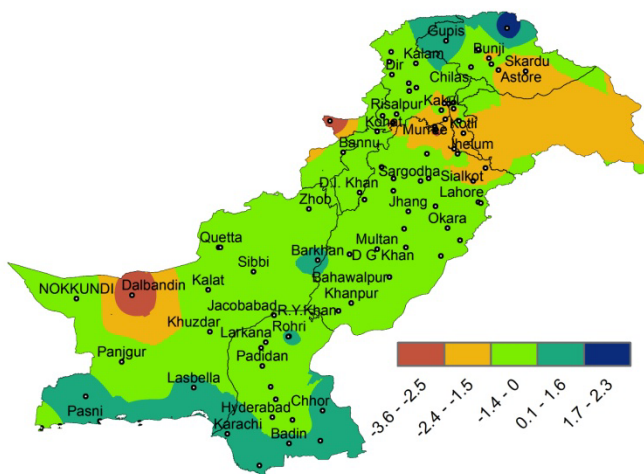
Rice: Good condition, flowering almost completed.



(a) Actual max-temp



(b) Departure of max-temp from Normal



(c) Departure of max-temp from Previous Decade

Figure.2: Maximum Temperature distribution during previous decade in "°C"

2(b) **Past Weather for sub regional Agricultural Plains (1st to 10th September, 2013):**

2.6 **Jhelum**

Rainfall reported as 54.0mm during the decade, weather remained cloudy for 10days and average relative humidity recorded as 68%. Mean night temperature was 24.0°C while day temperature recorded as 34.7°C with 73.5 hours bright sunshine duration. Wind speed recorded 4.3Km/hr with mean wind direction *south westerly*.

2.7 **Lahore**

Rainfall reported as 12.9mm during the decade, weather remained cloudy for 10days, average relative humidity recorded as 69%. Mean night temperature was 25.2°C while day temperature recorded as 35.2°C with 73.4 hours bright sunshine duration. Wind speed recorded as 2.6Km/hr with mean direction *south westerly*.

2.8 **Sargodha**

Rainfall reported as 8.7 mm during the decade, weather remained cloudy for 09days during the decade, average relative humidity recorded as 61%. Mean night temperature was 26.3°C while day temperature recorded as 37.2°C with 96.6 hours bright sunshine duration. Wind speed recorded as 3.5Km/hr with mean direction *variable*.

2.9 **Multan**

No rainfall reported during the decade, weather remained cloudy for 02days, average relative humidity recorded as 58%. Mean night temperature was 26.6°C while day temperature recorded as 36.7°C with 86.3 hours bright sunshine duration. Wind speed recorded as 9.0Km/hr with mean wind direction *southerly*.

2.10 **Khanpur**

No rainfall reported during the decade, weather remained cloudy for 01day during the decade, average relative humidity recorded as 62%. Mean night temperature was 24.7°C while day temperature recorded as 27.0°C with 104.9 hours bright sunshine duration. Wind speed recorded as 5.4 Km/hr with mean wind direction *south westerly*.

2.11 **Rohri**

No rainfall & cloudy day reported during the decade, average relative humidity recorded as 54%. Mean night temperature was 26.4°C while day temperature recorded as 38.5°C with 110.0 hours bright sunshine duration. Wind speed recorded as 3.9Km/hr with mean wind direction *southerly*.

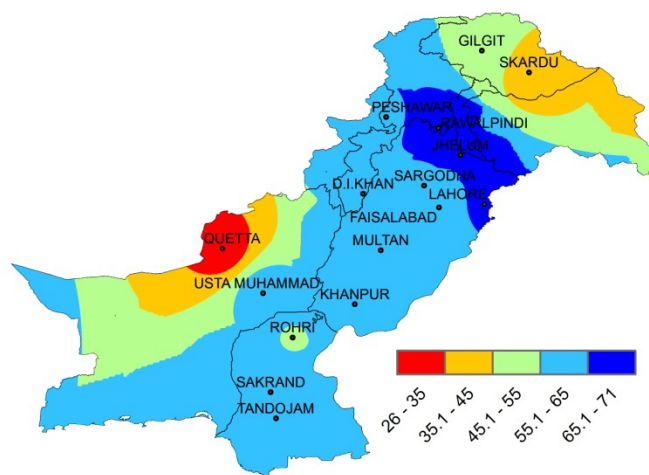


Figure.3: Relative Humidity in percentage

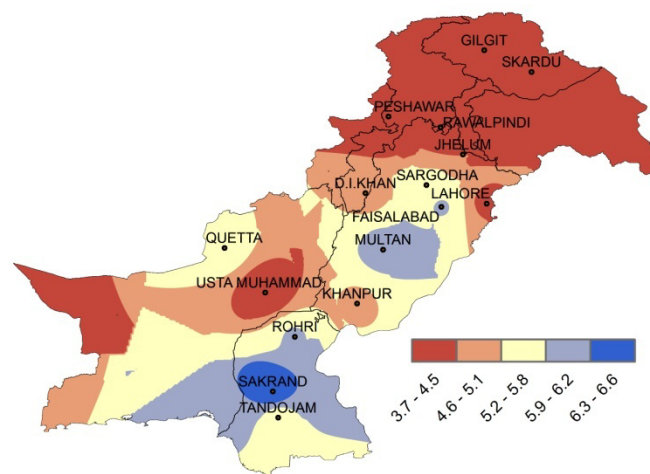


Figure.4: Reference Crop Evapotranspiration "ETo" in mm/day

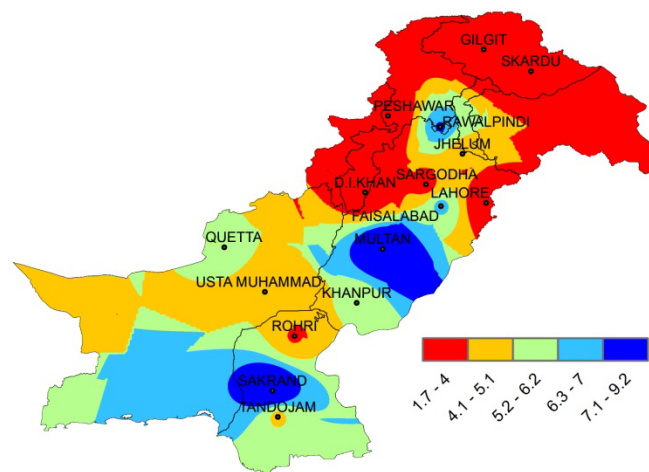


Figure 5: Wind Speed in kilometer per hour

2.12 Sakrand

No rainfall & cloudy day reported during the decade, average relative humidity recorded as 62%. Mean night temperature was 21.4°C while day temperature recorded as 36.2°C with 110.7 hours bright sunshine duration. Wind speed recorded as 9.2Km/hr with mean wind direction *southerly*.

2.13 Peshawar

Rainfall reported as 2.3mm during the decade, weather remained cloudy for 09days, average relative humidity recorded as 63%. Mean night temperature was 24.5°C while day temperature recorded as 35.1°C with 57.1 hours bright sunshine duration. Wind speed recorded as 1.7Km/hr with mean wind direction *north westerly*.

2.14 D.I. Khan

Rainfall reported as 26.0 mm during the decade, weather remained cloudy for 01 day, average relative humidity recorded as 57%. Mean night temperature was 23.7°C while day temperature recorded as 37.8°C with 100.4 hours bright sunshine duration. Wind speed recorded as 2.5Km/hr with mean direction *north easterly*.

2.15 Gilgit

Rainfall reported as 0.4mm during the decade, weather remained cloudy for 10days and average relative humidity recorded as 54%. Mean night temperature was 14.3°C while day temperature recorded as 32.8°C with 87.6 hours bright sunshine duration. Wind speed recorded as 2.0Km/hr with mean wind direction *easterly*.

2.16 Skardu

Rainfall reported as Trace (not measureable) during the decade, weather remained cloudy for 03days, average relative humidity recorded as 37%. Mean night temperature was 11.3°C while day temperature recorded as 29.4°C with 63.4 hours bright sunshine duration with mean speed 3.4Km/hr with mean direction *variable*.

3. Ten days Weather advisory for Farmers
(11th to 20th September, 2013):

3.1 Temperature Forecast:

Normal temperatures are expected in most of the agricultural plains of the country during the decade.

3.2 Rain Forecast:

- ❖ **Punjab:** Mainly hot and humid weather is expected in most parts of the province; however rain-thundershower is expected at isolated places in upper parts during the decade.
- ❖ **Khyber Pakhtunkhwa:** Mainly hot and humid weather is expected in most parts of the province; however rain-thundershower is expected at isolated places in upper parts during the decade.
- ❖ **Sindh:** Mainly humid & windy weather is expected in most part of the province during the decade.
- ❖ **Balochistan:** Mainly hot and humid weather is expected in most parts of the province during the decade.
- ❖ **Gilgit-Baltistan & Kashmir:** Mainly dry/partly cloudy weather with isolated rain is expected in Gilgit-Baltistan, while rain-thundershower is expected at isolated places in Kashmir during the decade.

3.3 Wind Forecast:

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

3.4 Advisory for Farmers:

- ❖ Monsoon rains are expected in upper parts of the country during the decade. Farmers are advised to take in time precautionary measures to protect their crops, livestock and other property.
- ❖ Due to humid weather in most parts of the country, farmers should be careful about weeds & pest attacks as the present soil & atmospheric conditions are suitable for rapid weeds growth & pest attacks.
- ❖ Due to dry weather in central & southern parts of the country during the decade, farmers of cotton and sugarcane crops are advised to irrigate the crops as per requirement.
- ❖ Farmers of cotton belt are advised to be aware of the adverse affects of stagnant water in the fields. Mechanism for drainage of stagnant water from fields should be evolved on priority basis and necessary requirements in this regard should be taken.