

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Heavy rainfall reported from Punjab, KP, G.B & Kashmir however light to moderate rainfall reported from Sindh & Balochistan during the last decade.
- ❖ Highest amount of rainfall recorded as 557mm at Lahore during the last decade.
- ❖ Highest maximum temperature recorded 43°C at Dalbandin during the last decade.
- ❖ Light to moderate rainfall are expected in Kashmir, K.P, G.B different parts of Punjab, coastal areas of Sindh and at few in Balochistan.
- ❖ Day time temperatures are expected normal in most of the agricultural plains of the country during the decade.
- ❖ Normal to gusty wind pattern may prevail in most of the agricultural plains of the country during the decade.
- ❖ Farmers should take precautionary measures well in time to protect their property, livestock and standing from the expected rains during the decade.
- ❖ Due to recent and expected post monsoon rains in upper half may accelerate pest/viral attacks and more weeds growth in cotton, sugarcane and other standing crops. Viral/pests attacks on cotton and sugarcane crops have been reported in agricultural plains of the country. Farmers should take in time precautionary measures through manual methods or chemical spraying to control weeds on time.
- ❖ Farmers of the worst hit rain/flash flooding areas are advised to manage evacuation of stagnant water from standing crops like cotton and rice.

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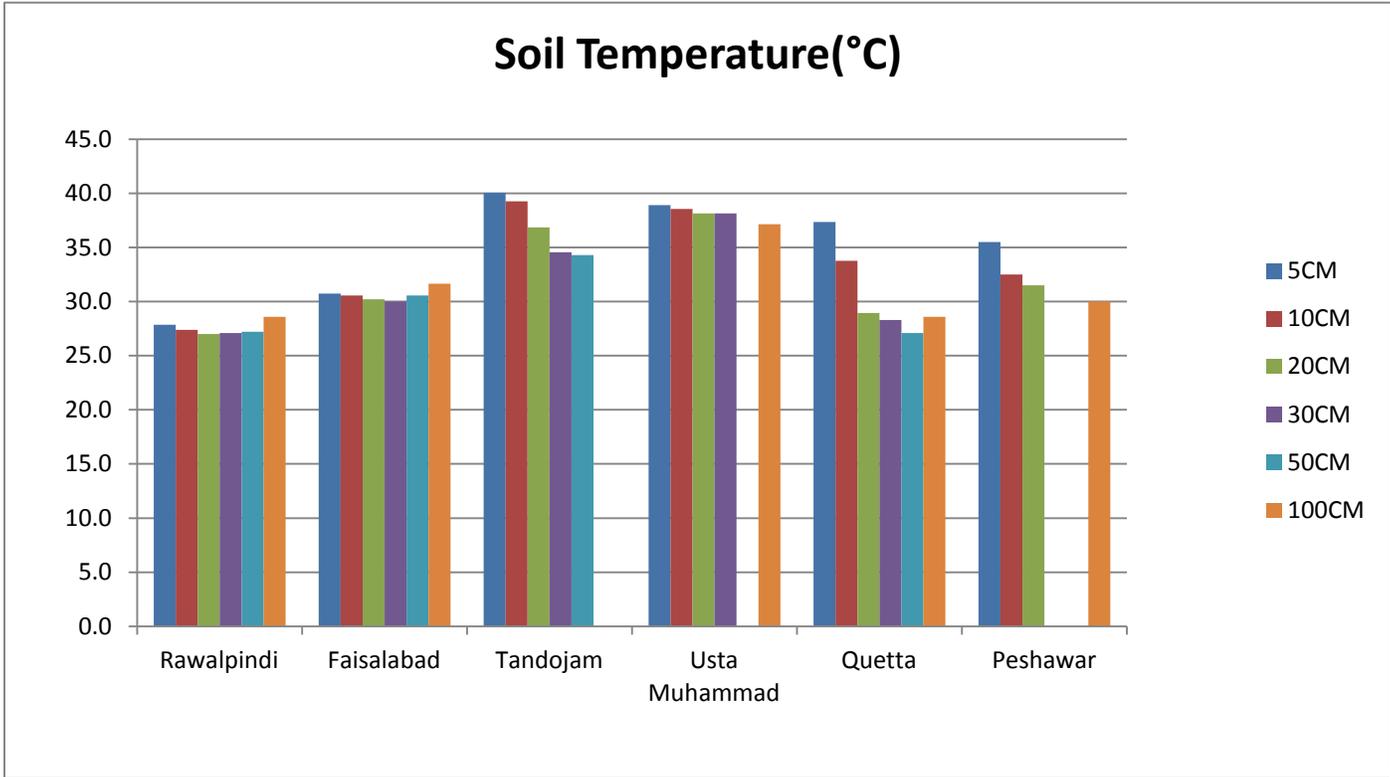
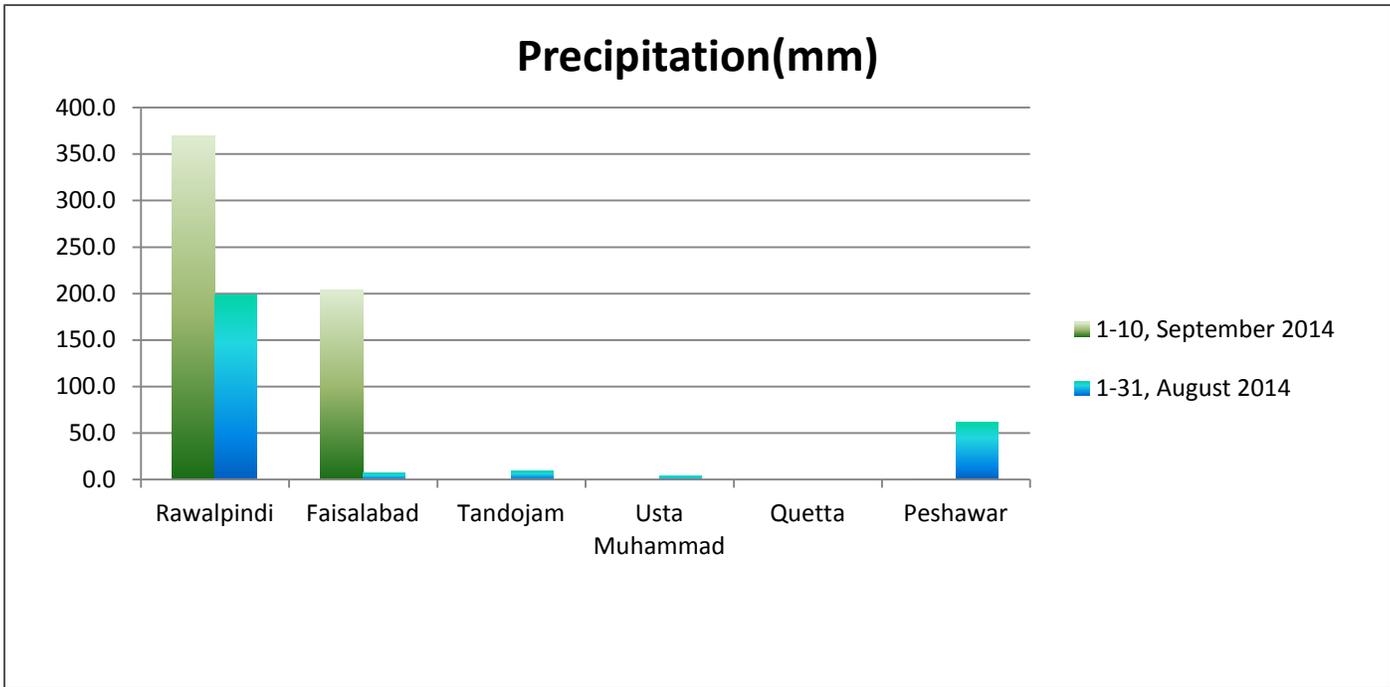
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Meteorological conditions during 1stdecade of September, 2014

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	Tmin Dep	Tmax Dep	Mean	5cm	10cm	20cm	30cm	50cm	100cm				
1	RAWALPINDI	5.4	370.1	364.7	-2.2	-2.5	25.4	27.9	27.4	27.0	27.1	27.2	28.6	76	46.2	0.9	3.0
2	FAISALABAD	1.6	203.6	202.0	-0.1	-4.1	27.8	30.8	30.6	30.2	30.0	30.6	31.7	78	50.4	2.5	3.4
3	JHELUM	3.4	221.4	218.0	-0.9	-4.2	26.9	29.7	29.0	28.4	27.9	28.5	***	80	45.4	5.1	3.4
4	LAHORE	3.8	437.1	433.3	-1.8	-4.3	27.1	28.7	28.6	27.7	27.9	***	28.9	86	30.3	3.9	2.9
5	SARGODHA	1.5	62.4	60.9	-1.3	-3.8	28.4	31.5	30.5	29.7	29.4	29.9	29.9	81	60.5	2.7	3.7
6	MULTAN	1.1	3.0	1.9	-0.1	-1.6	30.6	***	***	***	***	***	***	65	70.0	6.1	4.9
7	KHANPUR	0.7	0.1	-0.6	0.5	-0.1	31.6	***	36.8	36.7	36.7	36.8	35.4	62	84.3	5.2	5.3
8	TANDOJAM	2.2	0.0	-2.2	0.7	1.8	31.3	40.1	39.3	36.9	34.6	34.3	***	61	73.6	3.4	4.8
9	SAKRAND ☆	1.0	0.0	-1.0	-2.7	0.7	29.6	43.1	40.6	***	***	***	35.9	60	95.8	2.6	5.0
10	ROHRI	0.1	0.0	-0.1	0.6	-0.2	33.2	46.8	43.3	37.7	36.8	35.1	36.6	53	97.0	4.2	5.8
11	DI KHAN	1.1	4.2	3.1	-1.2	-0.3	29.6	***	***	***	***	***	***	61	69.7	***	5.2
12	PESHAWAR	1.1	1.0	-0.1	-0.6	1.0	30.0	35.5	32.5	31.5	***	***	30.0	57	77.9	4.3	4.8
13	USTA MUHAMMAD	0.6	0.0	-0.6	0.4	-1.1	32.4	38.9	38.6	38.2	38.2	***	37.2	54	***	***	5.8
14	QUETTA	0.0	0.0	0.0	2.7	-0.9	24.2	37.4	33.8	29.0	28.3	27.1	28.6	26	97.7	5.4	5.5
15	SKARDU	0.8	123.0	122.2	-2.5	-2.3	14.9	***	***	***	***	***	***	70	26.3	1.3	2.3
16	GILGIT	0.5	21.9	21.4	2.5	-5.3	20.6	***	***	***	***	***	***	65	37.8	2.3	3.1

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.

Precipitation at RAMC's during Sep/Aug, 2014



Past Weather (1st to 10th September, 2014)

Heavy rainfall reported from Punjab, KP, G.B & Kashmir however light to moderate rainfall reported from Sindh & Balochistan during the last decade.

1.1 Punjab

Heavy rainfall reported in the agricultural plains of Punjab. Chief amount of rainfall received in Lahore, Sialkot & Islamabad. Decadal minimum & maximum temperature both dropped below normal by 0.8°C & 2.9°C respectively, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity & ETo were recorded as 55.3hrs, 3.8km/hr, 75% and 3.8mm/day respectively.

1.2 Sindh

Light to moderate rainfall reported in the agricultural plains of Sindh. Chief amount of rainfall received in Mithi, Chorr & Badin. Decadal minimum dropped below normal by 0.5°C & maximum temperature raised above normal by 0.8°C, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity & ETo were recorded as 88.8hrs, 3.4km/hr, 58% and 5.2mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

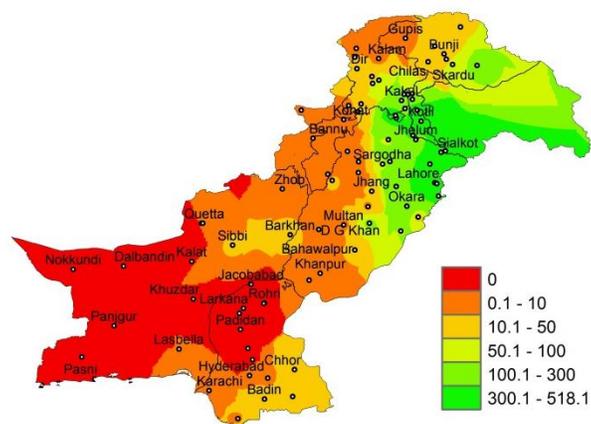
Light to moderate rainfall reported in the agricultural plains of KP. Chief amount of rainfall received in Kakul, Balakot & MalamJabba. Decadal minimum dropped below normal 0.9°C & maximum temperature raised above normal by 0.4°C, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity & ETo were recorded as 73.8hrs, 4.3km/hr, 59% and 5.0mm/day respectively.

1.4 Balochistan

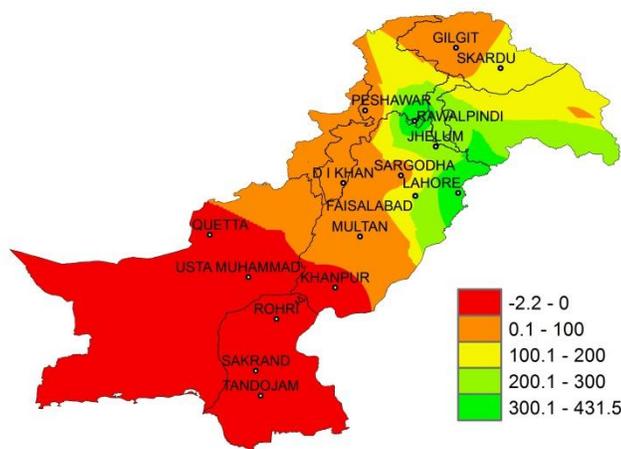
Light to moderate rainfall reported in the agricultural plains of Balochistan. Chief amount of rainfall received in Barkhan & Sibbi. Decadal minimum raised above normal by 1.6°C & maximum temperature dropped below normal by 1.0°C, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity & ETo were recorded as 97.7hrs, 5.4km/hr, 40% and 5.7mm/day respectively.

1.5 Gilgit-Baltistan and Azad Jammu & Kashmir

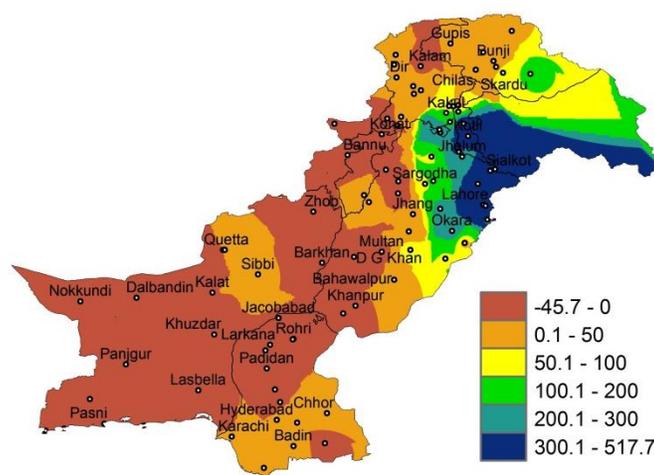
Heavy rainfall reported in the agricultural plains of GB & Kashmir. Chief amount of rainfall received in Rawalakot, Kotli & Muzaffarabad. Decadal minimum remains normal & maximum temperature dropped below normal by 3.8°C, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity and ETo were recorded 32.1hrs, 1.8km/hr, 68% and 2.7mm/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 in "mm"

2(a) **Past Weather for Major Agricultural Plains**
(1st to 10th September, 2014)

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

Rainfall reported as 370mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 76%. Mean night temperature was 20°C while day temperature recorded as 31°C with 46.2hours bright sunshine duration. Wind speed recorded as 0.9km/h with mean wind direction *easterly*.

Maize: Good condition, 9th Leaf Stage

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

Rainfall reported as 204mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 78%. Mean night temperature was 24°C while day temperature recorded as 32°C with 50.4hours bright sunshine duration. Wind speed recorded as 2.5km/hr with mean wind direction *north easterly*.

Cotton: Normal condition, Boll opening completed.

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

Dry weather reported during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 61%. Mean night temperature was 25°C while day temperature recorded as 37°C with 73.6hours bright sunshine duration. Wind speed recorded as 3.4km/hr with mean wind direction *south westerly*.

Cotton (BT-3701): Good condition, boll opening stage.

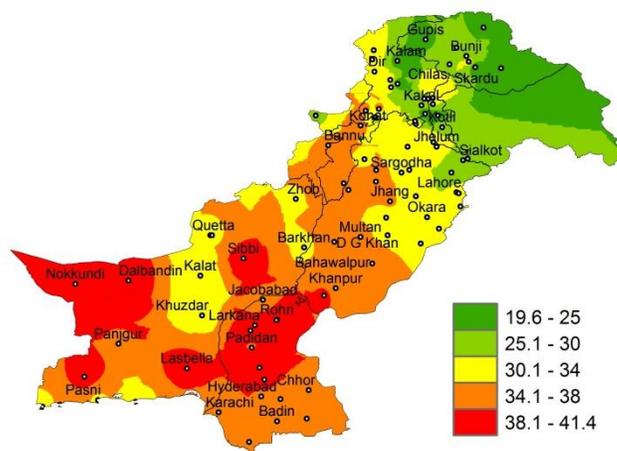
2.4 **RAMC, Usta Muhammad (Eastern Balochistan)**

Dry weather reported during the decade however weather remained cloudy for 03days. Average relative humidity recorded as 54%. Mean night temperature was 27°C, while day temperature recorded as 38°C.

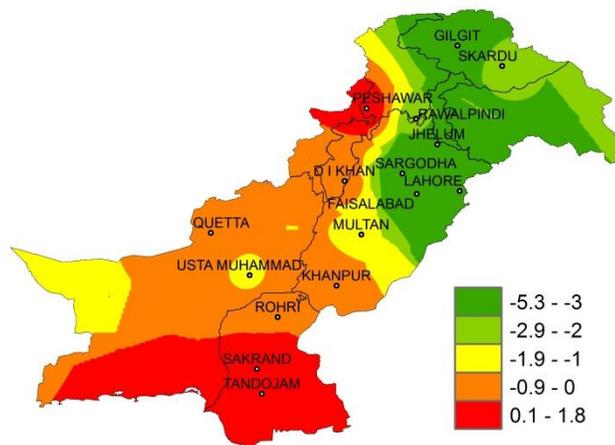
Rice: Good condition, shooting stage.

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

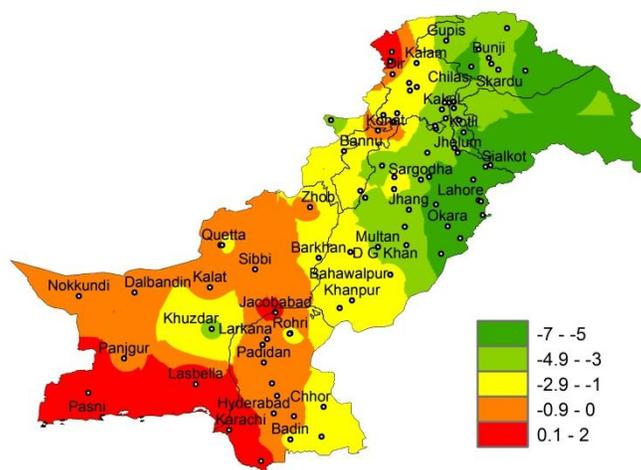
Dry weather reported during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 26%. Mean night temperature was 16°C while day temperature recorded as 32°C with 97.7hours bright sunshine duration and wind speed recorded as 5.4km/hr with mean wind direction *southerly*.



I. Actual max-temp



II. Departure of max-temp from Normal



III. 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, 2014)**

2.6 **Jhelum**

Rainfall reported as 221mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 80%. Mean night temperature was 24°C while day temperature recorded as 30°C with 45.4hours bright sunshine duration. Wind speed recorded 5.1km/hr with mean wind direction *easterly*.

2.7 **Lahore**

Rainfall reported as 437mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 86%. Mean night temperature was 24°C while day temperature recorded as 30°C with 30.3hours bright sunshine duration. Wind speed recorded as 3.9km/hr with mean wind direction *north westerly*.

2.8 **Sargodha**

Rainfall reported as 62mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 81%. Mean night temperature was 24°C while day temperature recorded as 32°C with 60.5hours bright sunshine duration. Wind speed recorded as 2.7km/hr with mean wind direction *variable*.

2.9 **Multan**

Rainfall reported as 3mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 65%. Mean night temperature was 26°C while day temperature recorded as 35°C with 70.0hours bright sunshine duration. Wind speed recorded as 6.1km/hr with mean wind direction *north easterly*.

2.10 **Khanpur**

Rainfall reported as Trace (not measureable) during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 62%. Mean night temperature was 27°C while day temperature recorded as 37°C with 84.3hours bright sunshine duration. Wind speed recorded 5.2km/hr with mean wind direction *north easterly*.

2.11 **Sakrand**

Dry weather reported during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 60%. Mean night temperature was 22°C while day temperature recorded as 37°C with 95.8hours bright sunshine duration. Wind speed recorded 2.6km/hr with mean wind direction *south easterly*

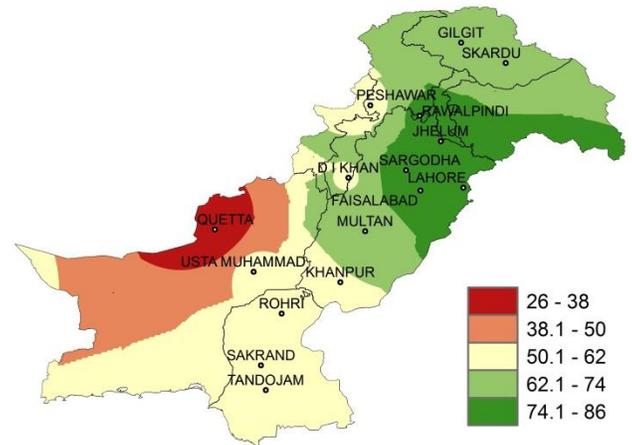


Figure.3: Relative Humidity in percentage (%)

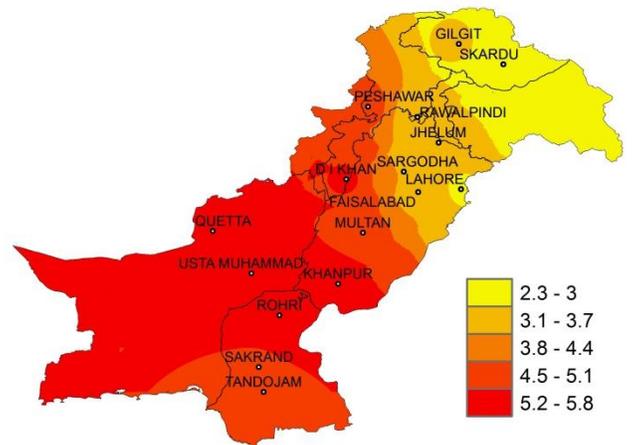


Figure.4: Reference Crop Evapotranspiration “ETo” in mm/day

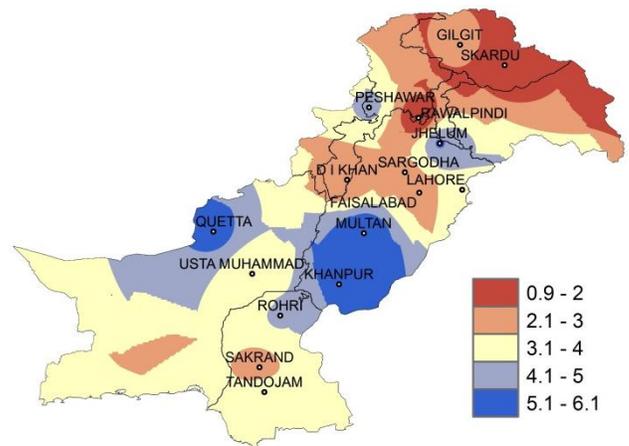


Figure 5: Wind Speed in kilometer per hour (km/h)

2.12 Rohri

Dry weather reported during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 53%. Mean night temperature was 29°C while day temperature recorded as 38°C with 97.0hours bright sunshine duration. Wind speed recorded as 4.2km/hr with mean wind direction *north easterly*.

2.13 D.I. Khan

Rainfall reported as 4mm during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 61%. Mean night temperature was 23°C while day temperature recorded as 36°C with 69.7hours bright sunshine duration.

2.14 Peshawar

Rainfall reported as 1mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 57%. Mean night temperature was 24°C while day temperature recorded as 36°C with 77.9hours bright sunshine duration. Wind speed recorded as 4.3km/hr with mean wind direction *north easterly*.

2.15 Skardu

Rainfall reported as 123mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 70%. Mean night temperature was 9°C while day temperature recorded as 20°C with 26.3hours bright sunshine duration. Wind speed recorded as 1.3km/hr with mean wind direction *east south-easterly*.

2.16 Gilgit

Rainfall reported as 22mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 65%. Mean night temperature was 15°C while day temperature recorded as 27°C with 37.8bright sunshine duration. Wind speed recorded as 2.3km/hr with mean wind direction *easterly*.

3. Ten Days Weather Advisory for Farmers (11th to 20th September, 2014)

3.1 Temperature Forecast

Day time temperatures are expected normal in most of the agricultural plains of the country during the decade.

3.2 Wind Forecast

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

3.3 Rain Forecast

- ❖ **Punjab:** Rain thunder showers at isolated places are expected over most of the agricultural plains of the province during 1st half of the decade.
- ❖ **Khyber Pakhtunkhwa:** Rain thunder showers at isolated places expected over most of the agricultural plains of the province during the 1st half of the decade.
- ❖ **Sindh:** Light rainfall expected at isolated places of lower Sindh during the 1st half of decade of the decade.
- ❖ **Balochistan:** Mainly dry weather is expected in the province. However light rainfall expected in North western parts of Balochistan during the 1st half of decade.
- ❖ **Gilgit Baltistan:** Mostly cloudy weather with light to moderate rainfall over hills is expected in most parts of GB during 1st half of decade.
- ❖ **Kashmir:** Mainly cloudy weather with light to moderate rainfall over hills is expected in isolated parts of Kashmir during the 1st half of decade.

3.4 Advisory for Farmers

- ❖ Farmers should take precautionary measures well in time to protect their property, livestock and standing from the expected rains during the decade.
- ❖ Due to recent and expected post monsoon rains in upper half may accelerate pest/viral attacks and more weeds growth in cotton, sugarcane and other standing crops. Viral/pests attacks on cotton and sugarcane crops have been reported in agricultural plains of the country. Farmers should take in time precautionary measures through manual methods or chemical spraying to control weeds on time.
- ❖ Farmers of the worst hit rain/flash flooding areas are advised to manage evacuation of stagnant water from standing crops like cotton and rice.
- ❖ Farmers of rainfed areas obtaining water through tube wells and irrigated areas in upper parts are advised to schedule the irrigation according to the expected weather mentioned during the decade. Rainfall/gusty winds after irrigation cause water logging of standing crops like maize, sugarcane and cotton. Farmers should be very careful in this regard.
- ❖ Due to expected post monsoon rains during the decade farmers are advised to take in time precautionary measures to protect their crops, livestock and other property to keep in mind the current situation of weather.
- ❖ Farmers of cotton belt are advised to be aware of the adverse effects of stagnant water in the fields during monsoon. Mechanism for drainage of stagnant water from fields should be evolved on priority basis and necessary requirements in this regard should be taken.