

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light rainfall reported in the agricultural plains of Punjab, KPK, Balochistan & G.B and dry weather reported in Sindh during the last decade.
- ❖ Highest amount of rainfall reported as 13.0mm at MirKhani during the last decade.
- ❖ Highest maximum temperature recorded 45.0°C at Turbat during the last decade.
- ❖ Light to moderate rainfall is expected in different parts of country excluding Sindh from 14th to 16th and 18th to 20th of the decade.
- ❖ 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.
- ❖ 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 their crops, livestock and other property from any expected rain.
- ❖ Farmers of cotton crop areas are advised to prepare their field for incoming Rabi crops and complete sowing in time
- ❖ Farmers of rainfed areas are advised to sow their rabi crops during the period 15th October to 15th November. After this time yield of wheat crop decreases gradually.

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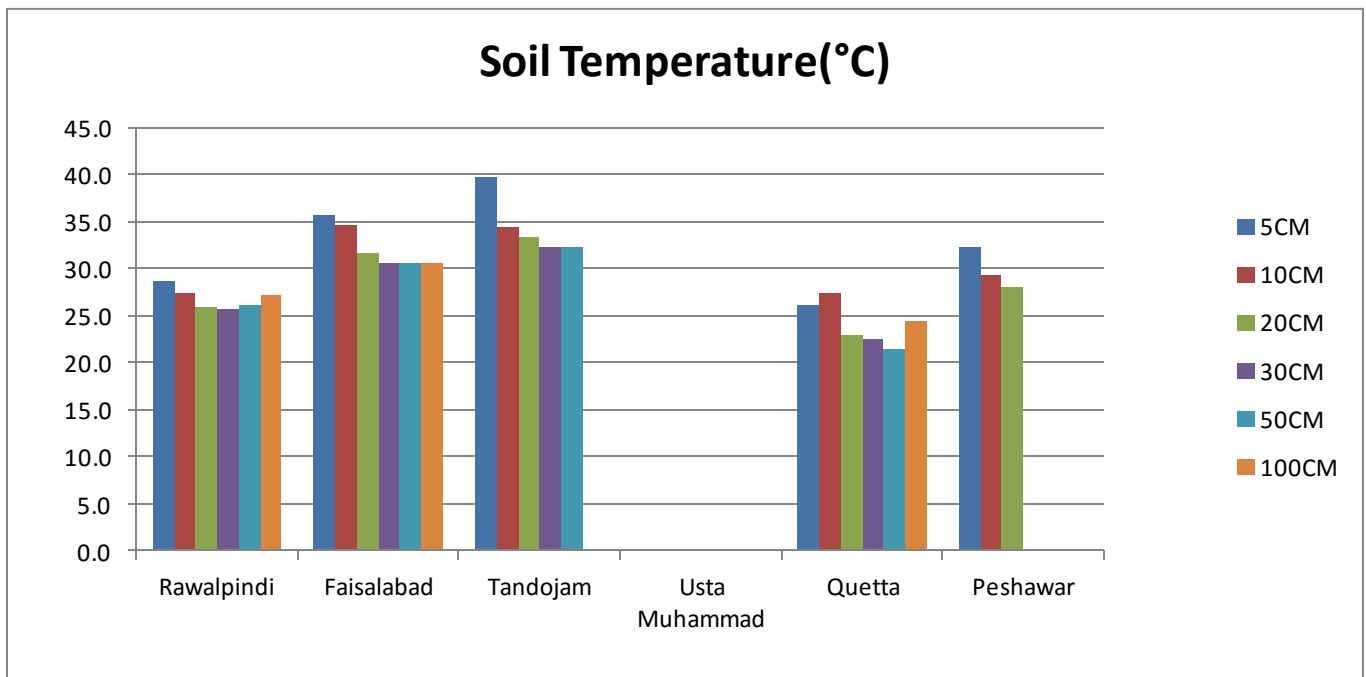
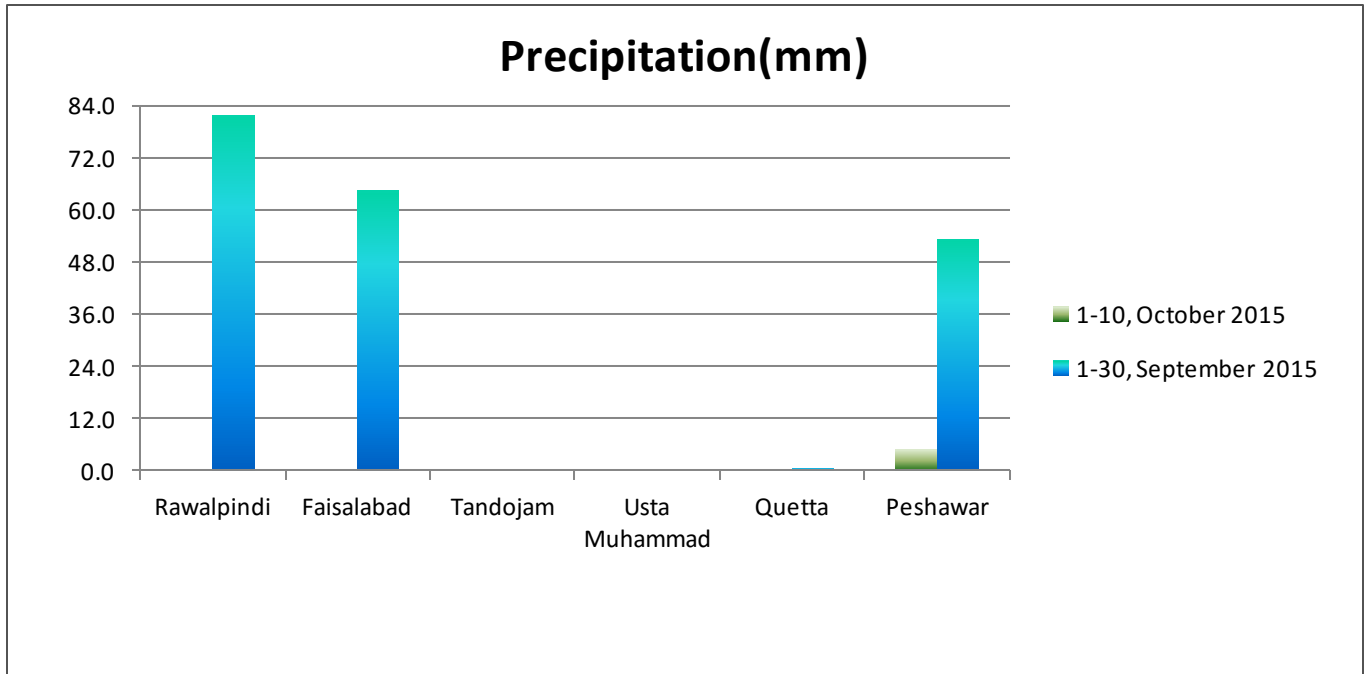
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Meteorological conditions during 1st decade of October, 2015

Sr. No.	Station	Precipitation (mm)			Air Temperature (°C)			Soil Temperatures (°C)						R.H (%)	Sunshine Duration(hours)	Wind Speed (km/hr)	ET ₀ (mm/day)
		Normal	Actual	Dep	Tmax Dep	Tmin Dep	Mean	5cm	10cm	20cm	30cm	50cm	100cm				
1	RAWALPINDI	1.0	0.0	-1.0	0.9	1.8	26.6	28.6	27.5	25.9	25.8	26.1	27.1	52	97.8	2.7	3.7
2	FAISALABAD	0.2	0.0	-0.2	0.9	1.8	29.1	35.8	34.7	31.7	30.5	30.5	30.7	50	95.3	1.8	3.8
3	JHELUM	0.4	0.1	-0.3	0.7	-0.8	27.8	30.5	29.0	28.4	27.6	27.0	27.9	60	95.7	0.4	3.3
4	LAHORE	0.1	0.0	-0.1	0.8	-0.8	28.9	31.7	30.9	28.9	28.0	***	28.7	58	93.4	1.3	3.6
5	SARGODHA	0.1	0.0	-0.1	-1.5	1.0	29.6	33.0	31.3	28.9	28.3	28.7	28.9	63	91.1	1.3	3.7
6	MULTAN	0.2	0.0	-0.2	1.1	1.5	30.5	***	***	***	***	***	***	46	84.9	3.4	4.3
7	KHANPUR	0.0	0.0	0.0	0.7	0.2	29.7	***	31.5	31.8	32.2	32.2	31.9	54	97.3	5.1	5.0
8	TANDOJAM	0.8	0.0	-0.8	1.6	0.7	30.3	39.8	34.4	33.5	32.3	32.4	***	60	96.5	7.6	5.8
9	SAKRAND ☆	0.0	0.0	0.0	1.4	-3.0	28.5	45.0	38.6	***	***	***	34.9	52	99.2	4.3	5.0
11	DI KHAN	0.3	0.0	-0.3	1.4	-0.8	28.6	***	***	***	***	***	***	53	96.4	***	5.4
12	PESHAWAR	1.1	5.0	3.9	0.8	-1.3	26.5	32.4	29.3	28.0	***	***	***	58	77.4	1.3	3.1
13	USTA MUHAMMAD	0.0	0.0	0.0	0.7	-0.7	30.0	***	***	***	***	***	***	54	***	***	5.3
14	QUETTA	0.0	0.0	0.0	0.5	3.4	21.3	26.1	27.5	23.1	22.6	21.5	24.5	21	102.0	6.0	4.8
15	SKARDU	0.1	0.0	-0.1	0.0	-1.3	14.5	***	***	***	***	***	***	53	86.1	1.1	2.5
16	GILGIT	0.2	0.1	-0.1	1.3	-4.1	16.5	***	***	***	***	***	***	47	93.7	1.3	2.8

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. And "% Dep" is calculated by the formula; $\text{Dep} \div \text{Normal} \times 100$. Tmin & Tmax stands for minimum and maximum temperatures respectively. ET₀ 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 October, 2015



Past Weather (1st to 10th October, 2015)

Light rainfall reported in the agricultural plains of Punjab, KPK, Balochistan & G.B and dry weather reported in Sindh during the last decade.

1.1 Punjab

Light rainfall reported in the agricultural plains of Punjab. Chief amount of rainfall received in Chakwal, Bhakkar & Jhelum. Decadal maximum raised & minimum temperature both raised above normal by 0.5°C & 0.7°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETO were recorded as 55%, 93.6hrs, 2.3km/hr and 3.9mm/day respectively.

1.2 Sindh

Dry weather reported in the agricultural plains of Sindh. Decadal maximum raised above normal by 1.0°C & minimum temperature dropped below normal by 0.8°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETO were recorded as 37%, 65.2hrs, 4.0km/hr and 5.4mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

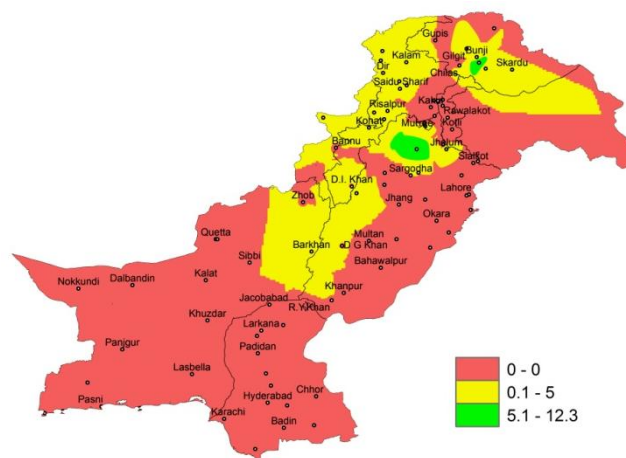
Light rainfall reported in the agricultural plains of KP. Chief amount of rainfall received in Mirkhani, Peshawar & Cherat. Decadal maximum raised above normal by 1.1°C & minimum temperature dropped below normal by 1.1°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETO were recorded as 56%, 86.9hrs, 1.3km/hr and 4.3mm/day respectively.

1.4 Balochistan

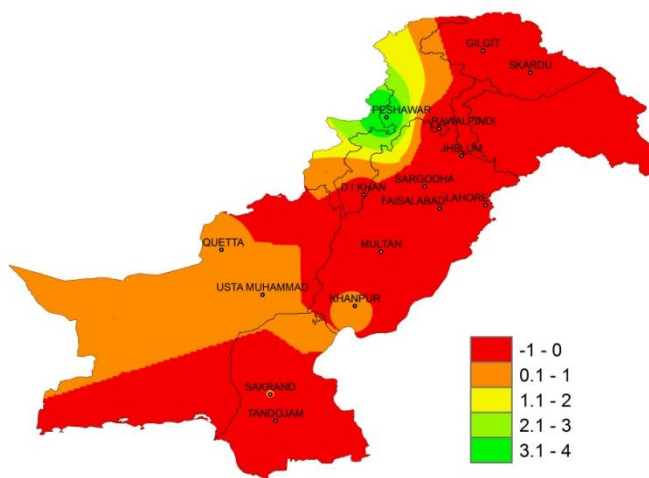
Light rainfall reported at one place of Balochistan i.e Barkhan. Decadal maximum & minimum temperature both raised above normal by 0.6°C & 1.4°C respectively, in the province. Whereas mean values relative humidity, sunshine hour, wind speed & ETO were recorded as 38%, 102.0hrs, 6.0km/hr and 5.1mm/day respectively.

1.5 Gilgit-Baltistan and Azad Jammu & Kashmir

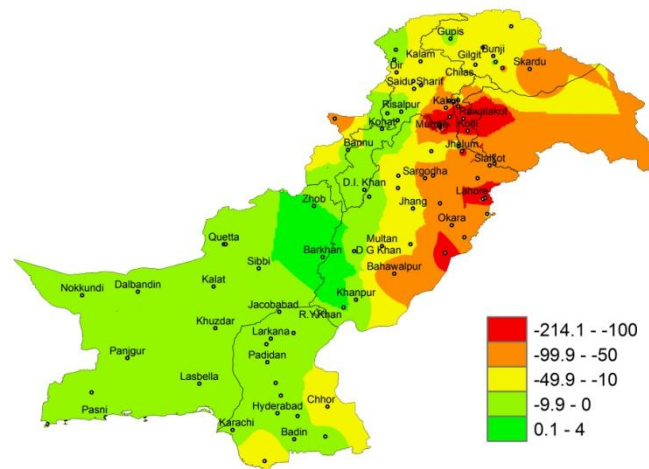
Light rainfall reported at one place of GB & Kashmir i.e Gilgit. Decadal maximum raised above normal by 0.7°C & minimum temperature dropped below normal by 2.7°C, in the province. Relative humidity, sunshine hour, wind speed & ETO were recorded as 50%, 89.9hrs, 1.2km/hr and 2.7mm/day respectively.



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 October, 2015)**

2.1 RAMC, Rawalpindi (Potohar region)

Dry weather reported during the decade however weather remained cloudy for 01day. Average relative humidity recorded as 52%. Mean day temperature was 33.8°C while night temperature recorded as 19.3°C with 97.8hours bright sunshine duration. Wind speed recorded as 2.7km/hr with mean wind direction *south easterly*.

2.2 RAMC, Faisalabad (Central Punjab)

Dry weather reported during the decade however weather remained cloudy for 01day. Average relative humidity recorded as 50%. Mean day temperature was 36.1°C while night temperature recorded as 22.0°C with 92.3hours bright sunshine duration. Wind speed recorded as 1.8km/hr with mean wind direction *south easterly*.
Cotton: Very good condition, Full maturity stage.

2.3 RAMC, Tandojam (Lower Sindh)

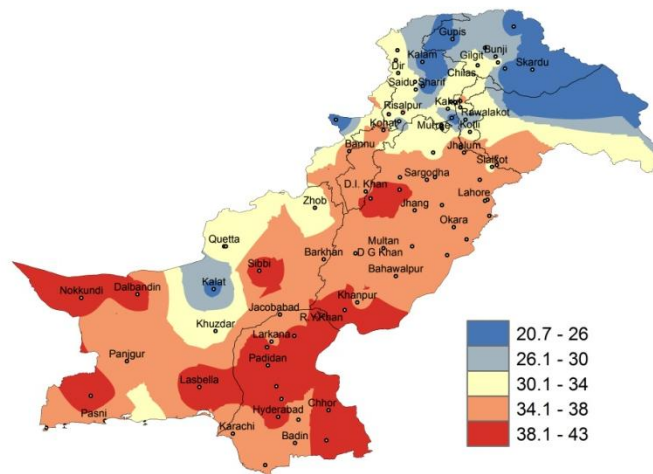
Dry weather reported during the decade however weather remained cloudy for 01day. Average relative humidity recorded as 60%. Mean day temperature was 38.6°C while night temperature recorded as 21.9°C with 96.5hours bright sunshine duration. Wind speed recorded as 7.6km/hr with mean wind direction *southerly*.
Cotton (Sindh-I): Good condition, Full maturity Stage.

2.4 RAMC, Usta Muhammad (Eastern Balochistan)

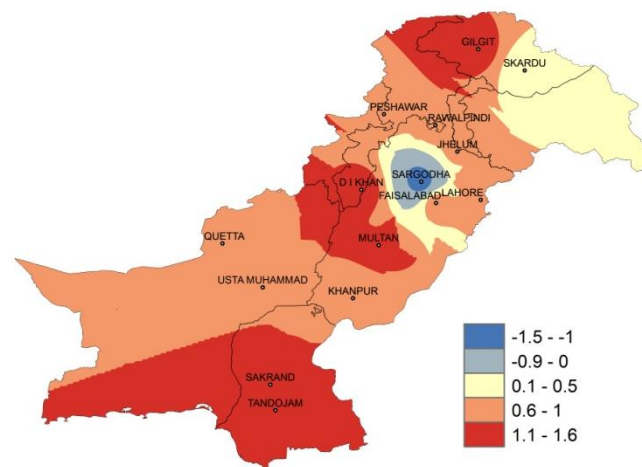
Dry weather reported during the decade however weather remained cloudy for 01day. Average relative humidity recorded as 54%. Mean day temperature was 37.1°C while night temperature recorded as 22.8°C.
Rice (Paniri): Good Condition, wax maturity stage.

2.5 RAMC, Quetta (Northern Balochistan)

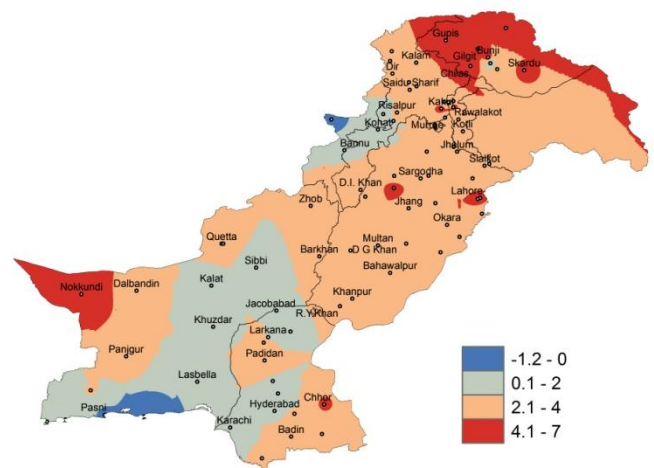
Dry weather reported during the decade, however weather remained cloudy for 01day. Average relative humidity recorded as 21%. Mean day temperature was 29.3°C while night temperature recorded as 13.3°C with 102.0hours bright sunshine duration and wind speed recorded as 6.0km/hr with mean wind direction *north westerly*.



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 October, 2015)**

2.6 **Jhelum**

Rainfall reported as Trace (not measurable) during the decade however weather remained cloudy for 02days. Average relative humidity recorded as 60%. Mean day temperature was 35.4°C while night temperature recorded as 20.1°C with 95.7hours bright sunshine duration and wind speed recorded as 0.4km/hr with mean wind direction *variable*.

2.7 **Lahore**

Dry weather reported during the decade however weather remained cloudy for 01day. Average relative humidity recorded as 58%. Mean day temperature was 34.9°C while night temperature recorded as 22.8°C with 93.4hours bright sunshine duration. Wind speed recorded as 1.3km/hr with mean wind direction *north westerly*.

2.8 **Sargodha**

Dry weather reported during the decade however weather remained cloudy for 02days. Average relative humidity recorded as 63%. Mean day temperature was 36.0°C while night temperature recorded as 23.1°C with 91.1hours bright sunshine duration. Wind speed recorded as 1.3km/h with mean wind direction *easterly*.

2.9 **Multan**

Dry weather reported during the decade however weather remained cloudy for 01day. Average relative humidity recorded as 46%. Mean day temperature was 37.3°C while night temperature recorded as 23.6°C with 84.9hours bright sunshine duration. Wind speed recorded 3.4km/hr with mean wind direction *southerly*.

2.10 **Khanpur**

Dry weather reported during the decade however weather remained cloudy for 01day. Average relative humidity recorded as 54%. Mean day temperature was 37.6°C while night temperature recorded as 21.7°C with 97.3hours bright sunshine duration. Wind speed recorded 5.1km/hr with mean wind direction *south westerly*.

2.11 **Sakrand**

Dry weather reported during the decade however weather remains cloudy for 01day. Average relative humidity recorded as 52%. Mean day temperature was 38.6°C while night temperature recorded as 18.3°C with 99.2hours bright sunshine duration. Wind speed recorded 4.3km/hr with wind direction *southerly*.

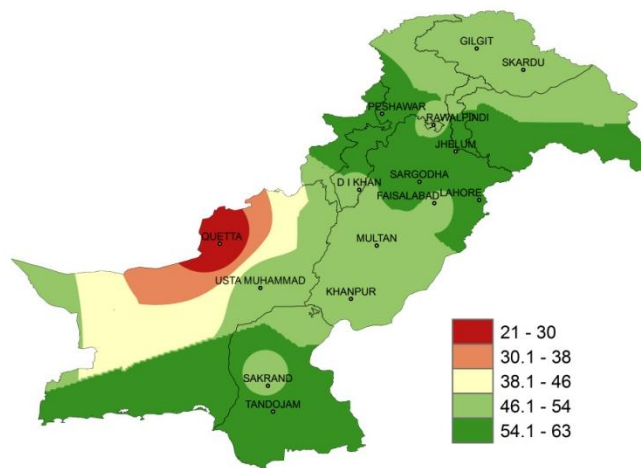


Figure.3: Relative Humidity in percentage (%)

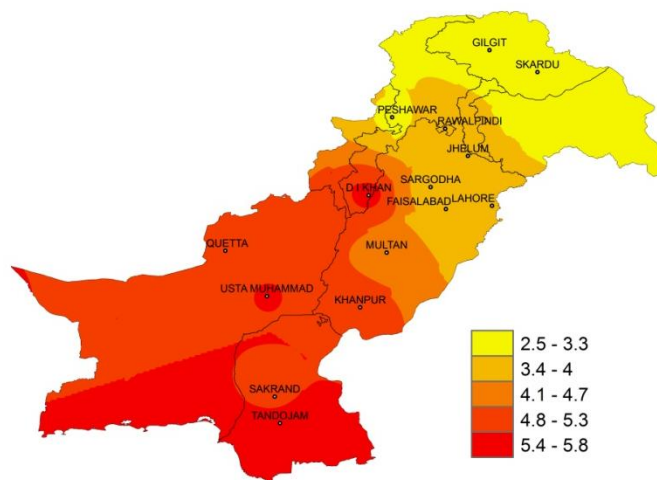


Figure.4: Reference Crop Evapotranspiration “ETo” in mm/day

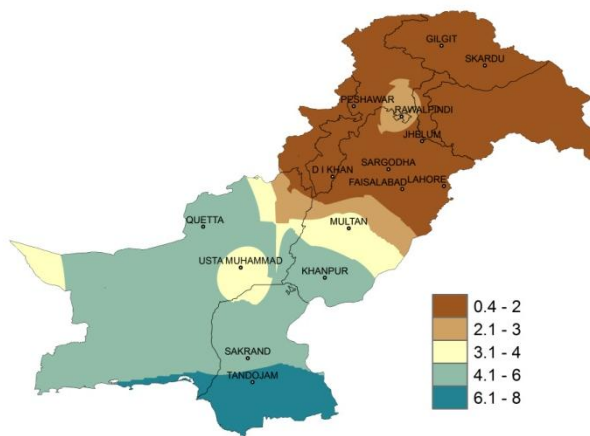


Figure 5: Wind Speed in kilometer per hour (km/h)

2.12 D.I Khan

Dry weather reported during the decade; however weather remained cloudy for 01day. Average relative humidity recorded as 53%. Mean day temperature was 37.2°C while night temperature recorded as 20.0°C with 96.4hours bright sunshine duration.

2.13 Peshawar

Rainfall reported as 5.0mm during the decade however weather remained cloudy for 03days. Average relative humidity recorded as 58%. Mean day temperature was 34.2°C while night temperature recorded as 18.8°C with 77.1hours bright sunshine duration. Wind speed recorded as 1.3km/hr with mean wind direction *north easterly*.

2.14 Skardu

Dry weather reported during the decade however weather remained cloudy for 01day. Average relative humidity recorded as 53%. Mean day temperature was 24.0°C while night temperature recorded as 4.9°C with 86.1hours bright sunshine duration. Wind speed recorded as 1.1km/hr with mean wind direction *south easterly*.

2.15 Gilgit

Rainfall reported as Trace (not measureable) during the decade however weather remained cloudy for 03days. Average relative humidity recorded as 47%. Mean day temperature was 29.1°C while night temperature recorded as 3.9°C with 93.7hours bright sunshine duration. Wind speed recorded as 1.3km/hr with mean wind direction *easterly*.

**3. Ten Days Weather Advisory for Farmers
(11th to 20th October, 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 Bahawalpur, Lahore, Gujranwala divisions from 17th to 20th of this decade.

❖ **Khyber Pakhtunkhwa:** Mainly dry weather is expected in the province. However scattered light to moderate

rainfall is expected in Bannu, Kohat and Hazara from 14th to 16th and from 18th to 20th of this decade.

❖ **Sindh:** Dry weather is expected in most parts of the Sindh during this decade.

❖ **Balochistan:** Mainly hot and dry weather is expected in most parts of the Balochistan however light to moderate rain is expected at north-west Balochistan including Sibbiu, Zhob from 14th to 16th of this decade.

❖ **Gilgit Baltistan:** Mainly dry weather is expected in most parts of the Gilgit Baltistan however light to moderate rain is expected at Gilgit, Skardu on 17th to 20th of this decade

❖ **Kashmir:** Mainly dry weather is expected in most of the parts of the Kashmir however rain-thunderstorm is expected at Muzaffarabad, Kotli & Rawalakot from 16th to 18th of this decade.

3.4 Advisory for Farmers

❖ 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.

❖ 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 their crops, livestock and other property from any expected rain.

❖ Farmers of cotton crop areas are advised to prepare their field for incoming rabi crops and complete sowing in time

❖ Farmers of rainfed areas are advised to sow their rabi crops during the period 15th October to 15th November. After this time yield of wheat crop decreases gradually.