

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Heavy rainfall reported in the agricultural plains of the country during the last decade.
- ❖ Highest amount of rainfall reported as 389.0mm at Mithi during the last decade.
- ❖ Highest maximum temperature recorded 45.5°C at Dalbandin during the last decade.
- ❖ Light to moderate rainfall is expected in the agricultural plains of country from 1st to 8th of the decade.
- ❖ Pest/viral attacks and more weeds growth are expected after recent rains on sugarcane crop. Farmers are therefore advised to take in time precautionary measures in this regard.
- ❖ Farmers of upper half and northwest Balochistan should be careful about irrigation and spraying chemicals on the crops during or before expected rains during the decade.
- ❖ Farmers of rainfed areas in upper parts are advised to cultivate maize crop due to recent rains. Farmers obtaining crop water through tube wells are also advised to schedule the irrigation according to the expected weather mentioned during the decade.

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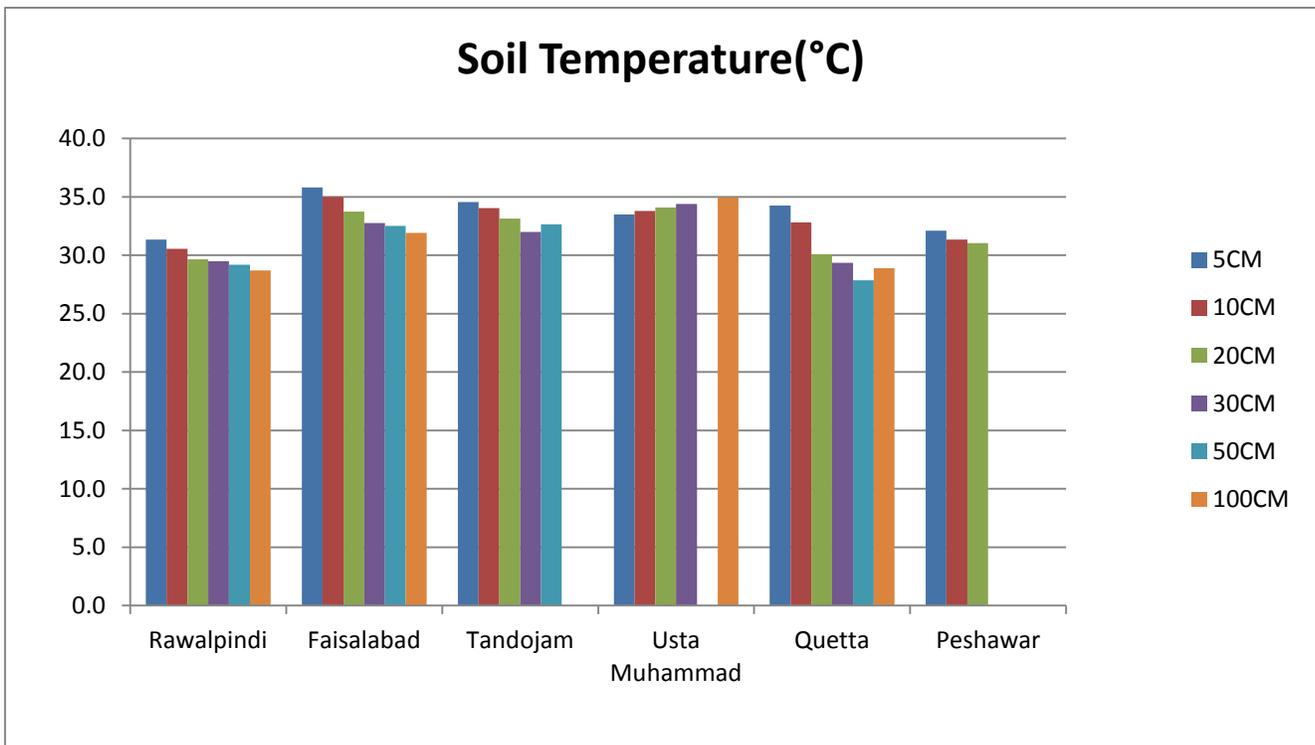
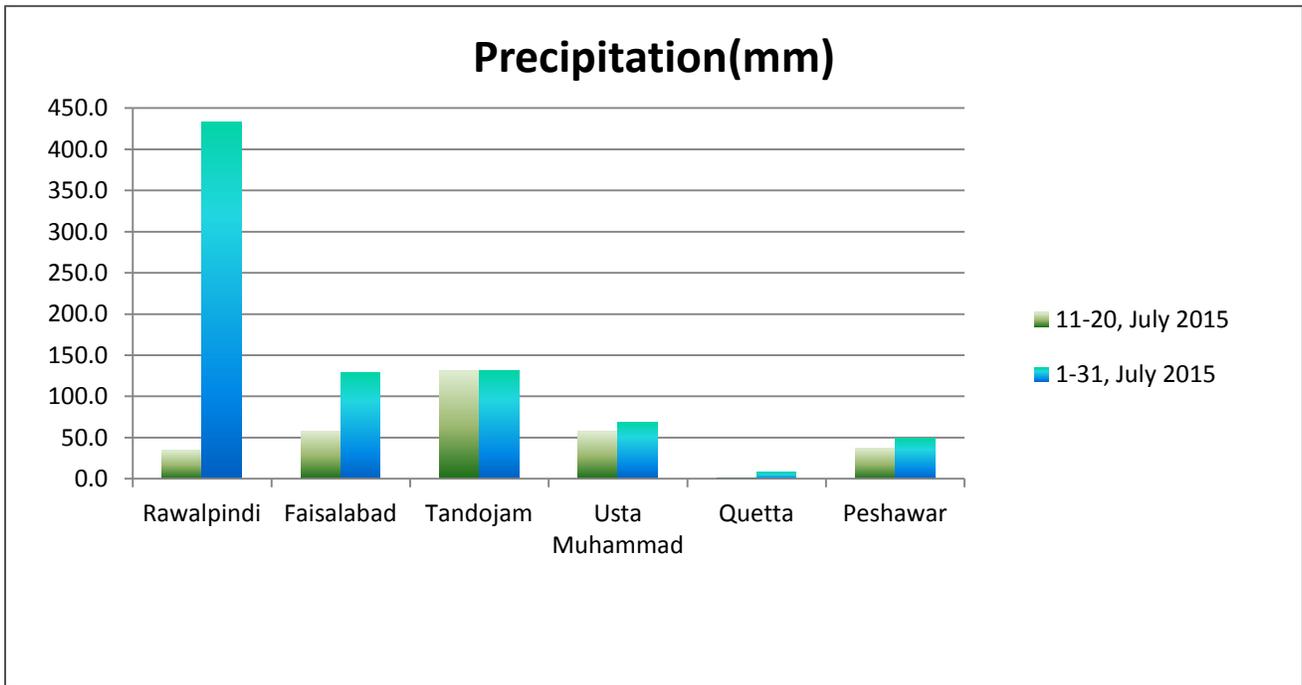
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Meteorological conditions during 3rd decade of July, 2015

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	13.1	35.0	21.9	-0.9	-0.4	28.3	31.4	30.6	29.7	29.5	29.2	28.7	72	50.7	4.8	4.3
2	FAISALABAD	2.7	58.5	55.8	-2.1	-0.6	30.5	35.8	35.0	33.8	32.8	32.5	31.9	75	64.3	5.3	4.8
3	JHELUM	8.3	61.7	53.4	-0.8	0.1	30.3	33.9	32.7	31.3	31.1	31.6	***	74	72.0	4.1	4.9
4	LAHORE	6.5	107.6	101.1	-1.7	-1.8	29.4	32.3	32.3	31.0	30.2	***	29.4	78	50.8	3.1	4.1
5	SARGODHA	5.4	17.0	11.6	-2.6	0.5	31.1	35.1	34.1	32.7	32.1	31.9	30.3	72	48.6	5.6	4.6
6	MULTAN	1.4	94.2	92.8	-2.6	-1.1	31.6	***	***	***	***	***	***	69	62.0	7.1	5.3
7	KHANPUR	2.0	224.6	222.6	-5.2	-1.8	30.0	***	33.4	33.6	34.1	34.9	34.6	81	49.0	5.5	4.2
8	TANDOJAM		85.5	79.9	-1.0	-1.1	29.8	34.6	34.1	33.2	32.0	32.7	***	77	65.1	9.7	5.1
9	SAKRAND ☆	1.8	131.0	129.2	-2.2	-4.8	28.7	41.8	38.1	***	***	***	36.7	71	53.7	4.1	4.4
10	ROHRI	4.2	52.0	47.8	-4.3	-0.6	32.3	44.4	39.1	36.5	35.5	34.6	35.6	66	54.9	4.8	4.9
11	DI KHAN	3.0	106.0	103.0	-1.7	1.3	31.9	***	***	***	***	***	***	88	58.3	***	4.5
12	PESHAWAR	4.4	38.0	33.6	-2.2	-0.3	30.1	32.1	31.4	31.1	***	***	***	75	61.4	2.6	4.4
13	USTA MUHAMMAD	3.5	57.7	54.2	-2.5	-0.1	32.0	33.5	33.8	34.1	34.4	***	35.0	49	***	***	6.6
14	QUETTA	0.0	0.8	0.8	-3.3	0.8	27.2	34.3	32.8	30.1	29.4	27.9	28.9	40	49.4	5.3	5.0
15	SKARDU	0.2	13.4	13.2	-0.6	0.2	23.7	***	***	***	***	***	***	58	66.0	2.4	4.3
16	GILGIT	0.6	3.7	3.1	-2.2	2.8	26.8	***	***	***	***	***	***	65	61.6	2.5	4.6

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 of RAMC's during July, 2015



Past Weather (21st to 31st July, 2015)

Heavy rainfall reported in the agricultural plains of the country during the last decade.

1.1 Punjab

Heavy rainfall reported in the agricultural plains of Punjab. Chief amount of rainfall received in Khanpur, Murree & Sialkot. Decadal maximum & minimum temperature both dropped below normal by 2.3°C & 0.7°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETO were recorded as 74%, 56.8hrs, 5.1km/hr and 4.6mm/day respectively.

1.2 Sindh

Heavy rainfall reported in the agricultural plains of Sindh. Chief amount of rainfall received in Mithi, Badin & Chorr. Decadal maximum & minimum temperature both dropped below normal by 2.5°C & 2.2°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETO were recorded as 71%, 57.9hrs, 5.1km/hr and 4.6mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

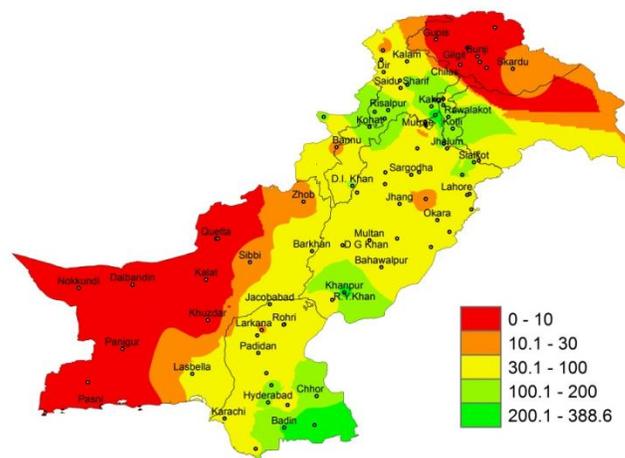
Heavy rainfall reported in the agricultural plains of KP. Chief amount of rainfall received in Balakot, Cherat & Kakul. Decadal maximum dropped below normal by 2.0°C & minimum temperature raised above normal by 0.5°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETO were recorded as 82, 59.9hrs, 2.6km/hr and 4.5mm/day respectively.

1.4 Balochistan

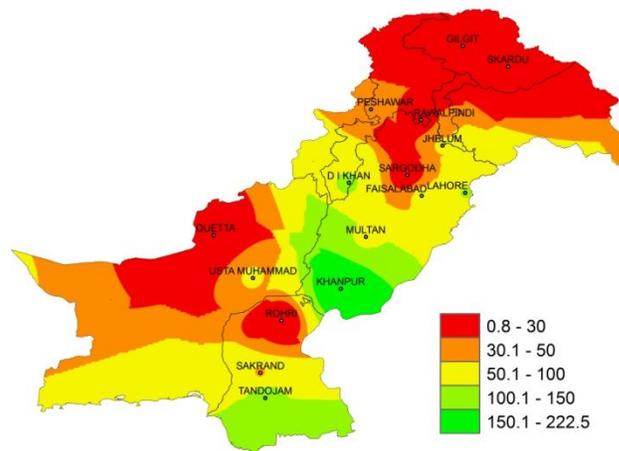
Heavy rainfall reported in the agricultural plains of Balochistan. Chief amount of rainfall received in Barkhan, Lasbella & Sibbi. Decadal maximum dropped below by 2.9°C & minimum temperature raised above normal by 0.4°C, in the province. Whereas mean values relative humidity, sunshine hour, wind speed & ETO were recorded as 45%, 49.4hrs, 5.3km/hr and 5.8mm/day respectively.

1.5 Gilgit-Baltistan and Azad Jammu & Kashmir

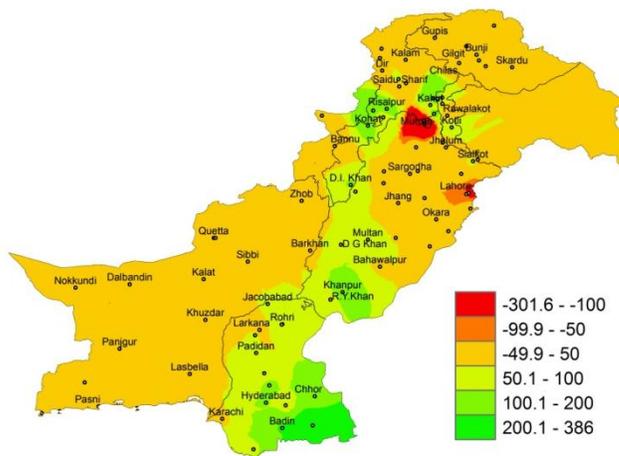
Heavy rainfall reported in the agricultural plains of GB & Kashmir. Chief amount of rainfall received in Kotli, Muzaffarabad & Rawalakot. Decadal maximum dropped below normal by 1.4°C & minimum temperature raised above normal by 1.5°C, in the province. Relative humidity, sunshine hour, wind speed & ETO were recorded as 62%, 63.8hrs, 2.5km/hr and 4.5mm/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
(21st to 31st July, 2015)**

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

Rainfall reported as 35.0mm during the decade however weather remained cloudy for 11days. Average relative humidity recorded as 72%. Mean day temperature was 33.5°C while night temperature recorded as 23.0°C with 50.7hours bright sunshine duration. Wind speed recorded as 4.8km/hr with mean wind direction *variable*.

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

Rainfall reported as 58.5mm during the decade however weather remained cloudy for 11days. Average relative humidity recorded as 75%. Mean day temperature was 34.7°C while night temperature recorded as 26.3°C with 64.3hours bright sunshine duration. Wind speed recorded as 5.3km/hr with mean wind direction *south easterly*.
Cotton: Very good condition, flowering stage.

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

Rainfall reported as 131.0mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 77%. Mean day temperature was 34.4°C while night temperature recorded as 25.1°C with 65.1hours bright sunshine duration. Wind speed recorded as 9.7km/hr with mean wind direction *south westerly*.

Cotton (Sindh-I): Good condition, boll formation Stage.

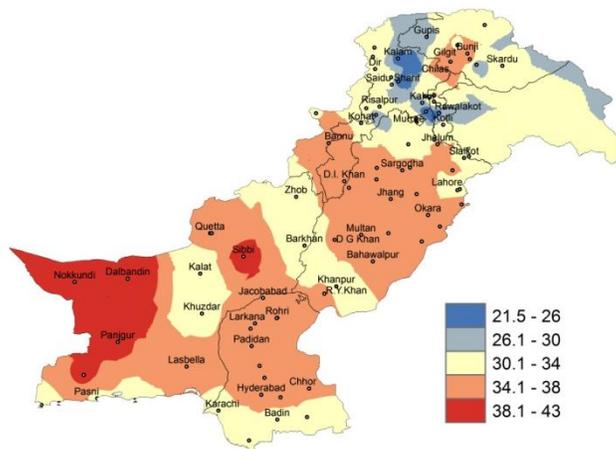
2.4 **RAMC, Usta Muhammad (Eastern Balochistan)**

Rainfall reported as 57.7mm during the decade however weather remained cloudy for 11days. Average relative humidity recorded as 49%. Mean day temperature was 37.8°C while night temperature recorded as 26.2°C.

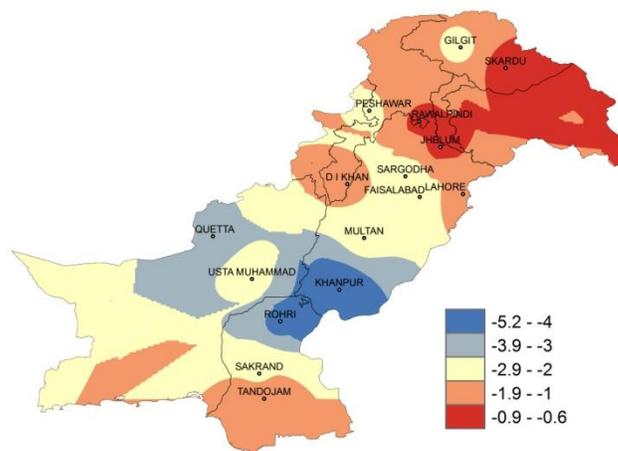
Rice (Paniri): Good Condition, 3rd leaf stage.

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

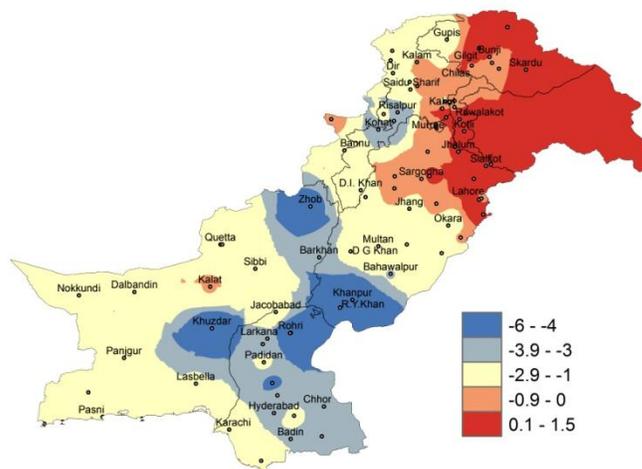
Rainfall reported as 0.8mm during the decade, however weather remained cloudy for 11days. Average relative humidity recorded as 40%. Mean day temperature was 32.3°C while night temperature recorded as 22.1°C with 49.4hours bright sunshine duration and wind speed recorded as 5.3km/hr with mean wind direction *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 (21st to 31st July, 2015)**

2.6 **Jhelum**

Rainfall reported as 61.7mm during the decade however weather remained cloudy for 11days. Average relative humidity recorded as 74%. Mean day temperature was 34.4°C while night temperature recorded as 26.2°C with 72.0hours bright sunshine duration and wind speed recorded as 4.1km/hr with mean wind direction *south easterly*.

2.7 **Lahore**

Rainfall reported as 107.6mm during the decade however weather remained cloudy for 11days. Average relative humidity recorded as 78%. Mean day temperature was 33.3°C while night temperature recorded as 25.4°C with 50.8hours bright sunshine duration. Wind speed recorded as 3.1km/hr with mean wind direction *north easterly*.

2.8 **Sargodha**

Rainfall reported as 17.0mm during the decade however weather remained cloudy for 11days. Average relative humidity recorded as 72%. Mean day temperature was 34.4°C while night temperature recorded as 27.8°C with 48.6hours bright sunshine duration. Wind speed recorded as 5.6km/h with mean wind direction *easterly*.

2.9 **Multan**

Rainfall reported as 94.2mm during the decade however weather remained cloudy for 11days. Average relative humidity recorded as 69%. Mean day temperature was 35.5°C while night temperature recorded as 27.6°C with 62.0hours bright sunshine duration. Wind speed recorded 7.1km/hr with mean wind direction *north easterly*.

2.10 **Khanpur**

Rainfall reported as 224.6mm during the decade however weather remained cloudy for 11days. Average relative humidity recorded as 81%. Mean day temperature was 33.2°C while night temperature recorded as 26.7°C with 49.0hours bright sunshine duration. Wind speed recorded 5.5km/hr with mean wind direction *northerly*.

2.11 **Sakrand**

Rainfall reported as 52.0mm during the decade however weather remains cloudy for 11days. Average relative humidity recorded as 71%. Mean day temperature was 35.7°C while night temperature recorded as 21.6°C with 53.7hours bright sunshine duration. Wind speed recorded 4.1km/hr with wind direction *south westerly*.

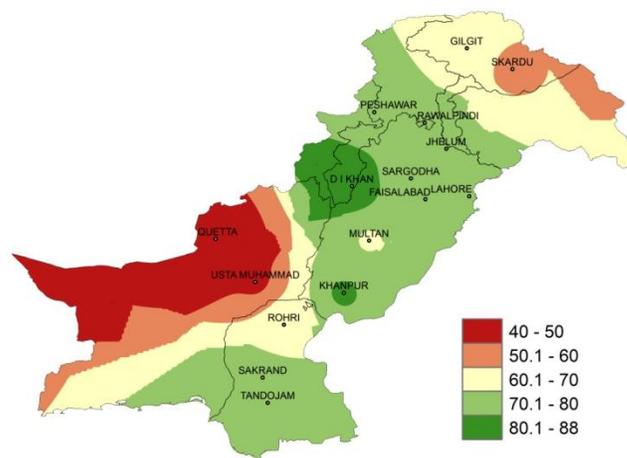


Figure.3: Relative Humidity in percentage (%)

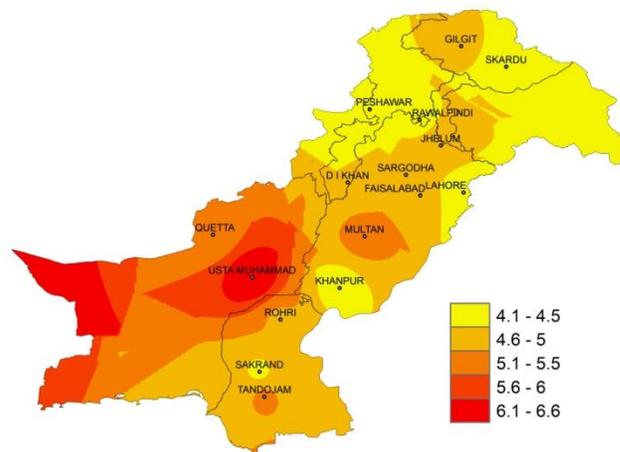


Figure.4: Reference Crop Evapotranspiration “ETo” in mm/day

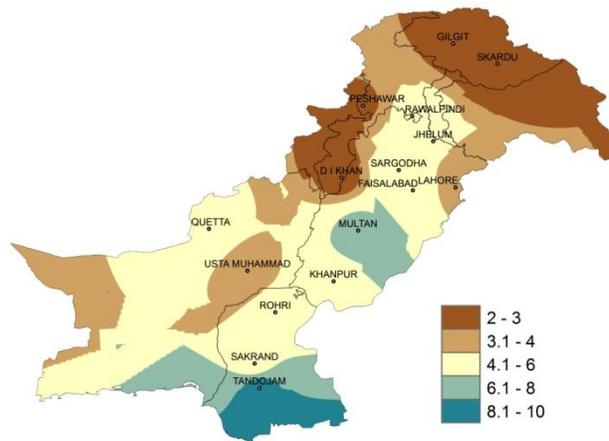


Figure 5: Wind Speed in kilometer per hour (km/h)

2.12 Rohri

Rainfall reported as 3.0mm during the decade; however weather remained cloudy for 11days. Average relative humidity recorded as 66%. Mean day temperature was 35.8°C while night temperature recorded as 28.7°C with 54.9hours bright sunshine duration. Wind speed recorded as 4.8km/hr with mean wind direction *southerly*.

2.13 D.I. Khan

Rainfall reported as 106.0mm during the decade; however weather remained cloudy for 10days. Average relative humidity recorded as 88%. Mean day temperature was 36.0°C while night temperature recorded as 27.7°C with 58.3hours bright sunshine duration.

2.14 Peshawar

Rainfall reported as 38.0mm during the decade however weather remained cloudy for 11days. Average relative humidity recorded as 75%. Mean day temperature was 33.9°C while night temperature recorded as 26.2°C with 61.4hours bright sunshine duration. Wind speed recorded as 2.6km/hr with mean wind direction *north easterly*.

2.15 Skardu

Rainfall reported 13.4mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 58%. Mean day temperature was 30.7°C while night temperature recorded as 16.7°C with 66.0hours bright sunshine duration. Wind speed recorded as 2.4km/hr with mean wind direction *south easterly*.

2.16 Gilgit

Rainfall reported as 3.7mm during the decade however weather remained cloudy for 11days. Average relative humidity recorded as 65%. Mean day temperature was 33.5°C while night temperature recorded as 20.0°C with 61.6hours bright sunshine duration. Wind speed recorded as 2.5km/hr with mean wind direction *easterly*.

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

Temperatures are likely to be slightly above 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 while during thunderstorm it may gust up to 30-50 knots.

3.3 Rain Forecast

- ❖ **Punjab:** Mainly hot and dry weather is expected in most parts of the Punjab however isolated heavy falls is expected in Rawalpindi, Lahore, Gujranwala, Sargodha and Faisalabad divisions from 1st to 4th and light to moderate rainfall is expected in the province including Rawalpindi, Gujranwala, Sargodha, Faisalabad and Lahore division from 4th to 8th of the decade.
 - ❖ **Khyber Pakhtunkhwa:** Mainly dry weather is expected in the province. However scattered heavy rainfall is expected in Peshawar, Kohat, Hazara, Bannu division from 1st to 4th and light to moderate rainfall is expected at few place including Hazara, Peshawar, Bannu, Chitral, Kalam Division 4th to 8th of the decade.
 - ❖ **Sindh:** Mostly hot and dry weather is expected in most parts of the Sindh however light to moderate rainfall is expected at few places including Karachi, Sukkur & Chorr from 10th of the decade
 - ❖ **Balochistan:** Mostly hot and dry weather is expected in most parts of the Balochistan however light to moderate rain is expected at north-west Balochistan including Kalat, Khuzdar, Zhob, Sibbi, and Quetta from 10th of the decade.
 - ❖ **Gilgit Baltistan:** Rain-thunderstorm is expected in most parts of the G.B during the decade.
 - ❖ **Kashmir:** Mainly cloudy weather is expected in most of the parts of the Kashmir however rain-thunderstorm is expected at Muzaffarabad, Kotli & Rawalakot during this decade.
- 3.4 Advisory for Farmers**
- ❖ Pest/viral attacks and more weeds growth are expected after recent rains on sugarcane crop. Farmers are therefore advised to take in time precautionary measures in this regard.
 - ❖ Farmers of upper half and northwest Balochistan should be careful about irrigation and spraying chemicals on the crops during or before expected rains during the decade.
 - ❖ Farmers of rainfed areas in upper parts are advised to cultivate maize crop due to recent rains. Farmers obtaining crop water through tube wells are also advised to schedule the irrigation according to the expected weather mentioned during the decade
 - ❖ Farmers are advised to control further weeds growth at the present growing stages to stop any negative impact over the crops. Weeds removing practices should be started soon after expected rains in the mentioned areas.
 - ❖ Due to onset of monsoon rains, farmers are advised to take in time precautionary measures to protect their crops, livestock and other property from any expected heavy rain.