

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light to moderate rainfall reported in the agricultural plains of the Punjab, K.P, G.B & Kashmir and light rainfall reported from Sindh & Balochistan during the last decade.
- ❖ Highest amount of rainfall reported as 327.1mm at Islamabad during the last decade.
- ❖ Highest maximum temperature recorded 45.5°C at Sukkur during the last decade.
- ❖ Scattered rainfall is expected in the agricultural plains of country from 22nd to 24th and heavy fall expected in the country from 26th to 29th 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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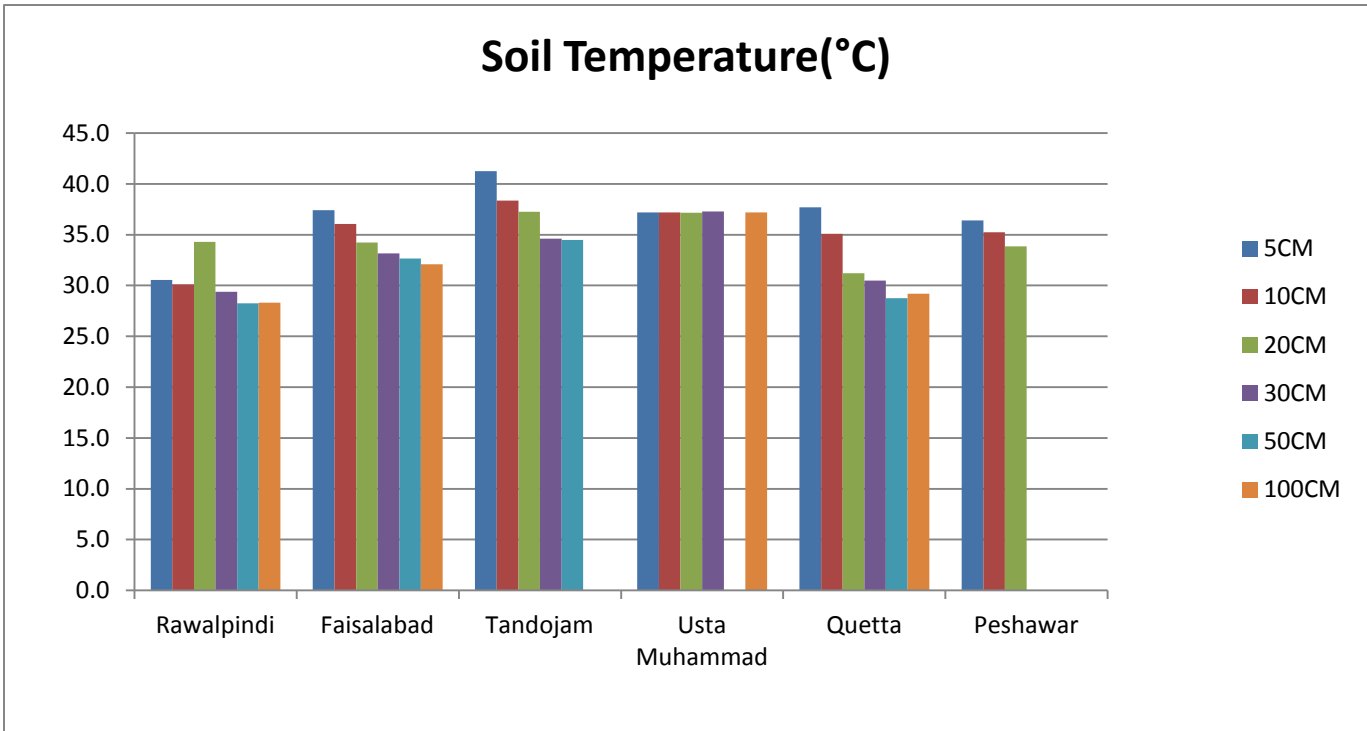
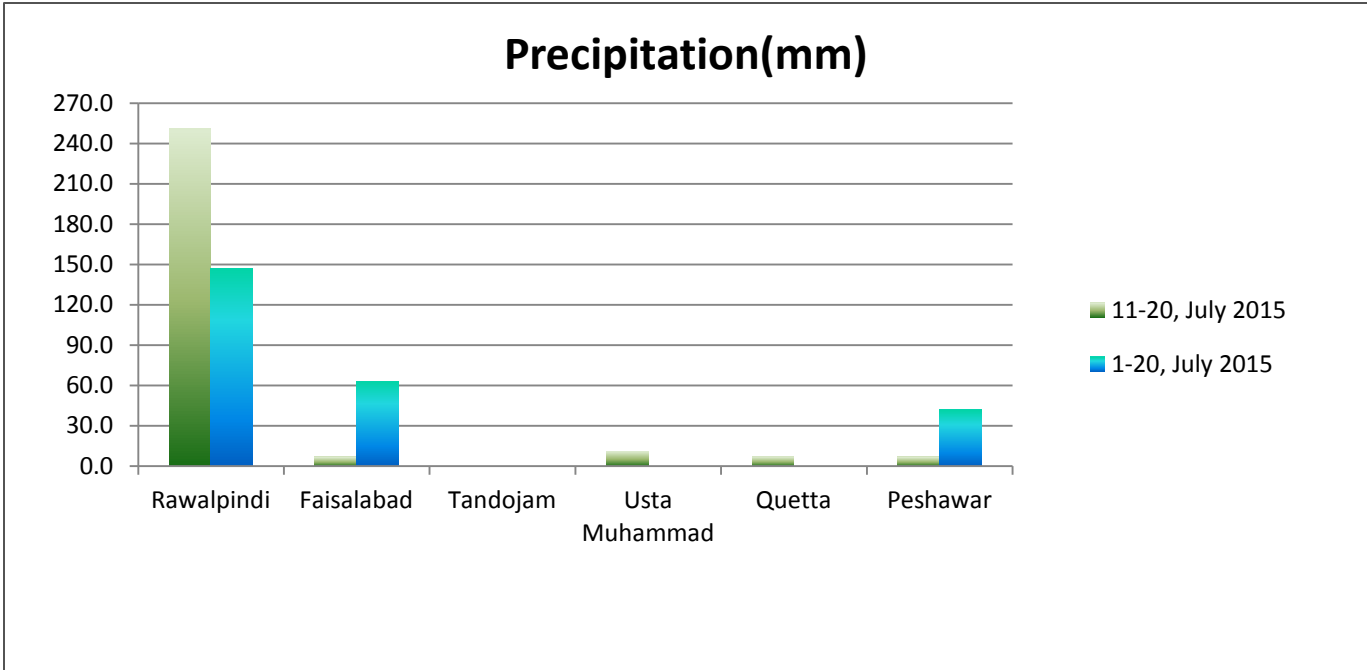
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Meteorological conditions during 2nd decade of July, 2015

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	7.9	251.2	243.3	-3.2	0.5	28.7	30.6	30.1	34.3	29.4	28.3	28.3	75	69.0	4.6	4.7
2	FAISALABAD	2.9	7.0	4.1	-2.1	-0.8	31.0	37.4	36.1	34.3	33.2	32.7	32.1	67	52.5	4.4	4.7
3	JHELUM	4.1	69.2	65.1	-2.8	-0.9	30.1	32.7	33.1	31.9	31.1	31.5	***	73	65.2	2.6	4.6
4	LAHORE	4.4	133.8	129.4	-0.3	-3.2	28.8	31.7	31.9	30.8	30.0	***	29.5	76	43.3	2.4	3.8
5	SARGODHA	3.0	11.4	8.4	-3.0	-1.1	31.2	34.0	33.0	31.7	31.4	31.4	30.5	70	70.2	5.7	5.3
6	MULTAN	1.5	6.0	4.5	-2.4	-1.2	32.9	***	***	***	***	***	***	61	76.9	6.8	6.1
7	KHANPUR	0.4	56.2	55.8	-1.8	-2.1	33.3	***	37.8	37.7	37.8	38.0	35.6	64	79.3	5.9	6.0
8	TANDOJAM	2.0	0.0	-2.0	-0.7	-0.1	32.0	41.3	38.4	37.3	34.6	34.5	***	67	73.1	15.1	6.9
9	SAKRAND ☆	0.4	0.0	-0.4	-0.9	-4.0	31.6	48.3	42.8	***	***	***	37.1	59	85.4	8.9	7.0
10	ROHRI	0.0	0.1	0.1	-1.5	-0.8	35.2	47.5	43.8	39.1	38.1	35.7	35.5	52	88.5	4.7	6.5
11	DI KHAN	2.7	0.0	-2.7	-2.0	-1.5	31.1	***	***	***	***	***	***	67	74.1	***	5.8
12	PESHAWAR	1.4	7.0	5.6	-1.9	-0.4	31.5	36.4	35.3	33.9	***	***	***	68	71.2	3.1	5.0
13	USTA MUHAMMAD	0.3	11.2	10.9	-2.7	-2.7	33.2	37.2	37.2	37.2	37.3	***	37.2	46	***	***	7.3
14	QUETTA	0.3	7.2	6.9	-1.6	-0.3	28.0	37.7	35.1	31.2	30.5	28.8	29.2	32	79.5	5.5	6.0
15	SKARDU	0.4	19.7	19.3	-0.9	0.9	22.6	***	***	***	***	***	***	62	46.6	0.9	3.5
16	GILGIT	0.1	4.3	4.2	-1.4	3.4	27.3	***	***	***	***	***	***	54	52.2	2.1	4.4

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 July, 2015



Past Weather (11th to 20th July, 2015)

Light to moderate rainfall reported in the agricultural plains of the country during the last decade.

1.1 Punjab

Light to moderate rainfall reported in the agricultural plains of Punjab. Chief amount of rainfall received in Islamabad, Lahore & Murreel. Decadal maximum & minimum temperature both dropped below normal by 2.2°C & 1.3°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETO were recorded as 69%, 65.2hrs, 4.6km/hr and 5.0mm/day respectively.

1.2 Sindh

Light to moderate rainfall reported in the agricultural plains of Sindh. Chief amount of rainfall received in Padidan, Dadu & Karachi. Decadal maximum & minimum temperature both dropped below normal by 1.0°C & 1.6°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 59%, 82.3hrs, 9.6km/hr and 6.8mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

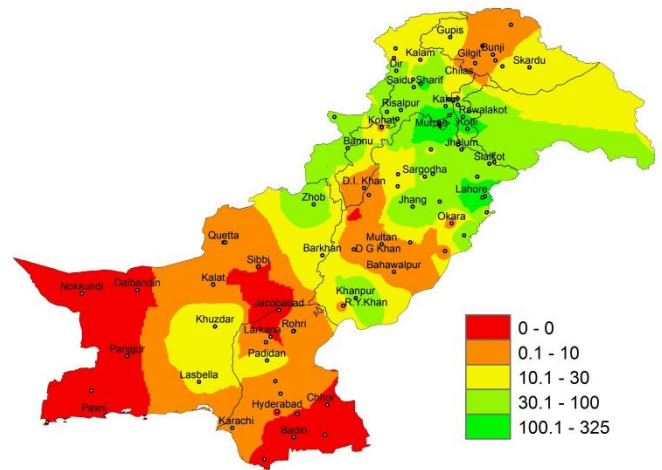
Light to moderate rainfall reported in the agricultural plains of KP. Chief amount of rainfall received in Malam Jabba, Cherat & Kakul. Decadal maximum & minimum temperature both dropped below normal by 2.0°C & 1.0°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 68, 72.7hrs, 3.1km/hr and 5.4mm/day respectively.

1.4 Balochistan

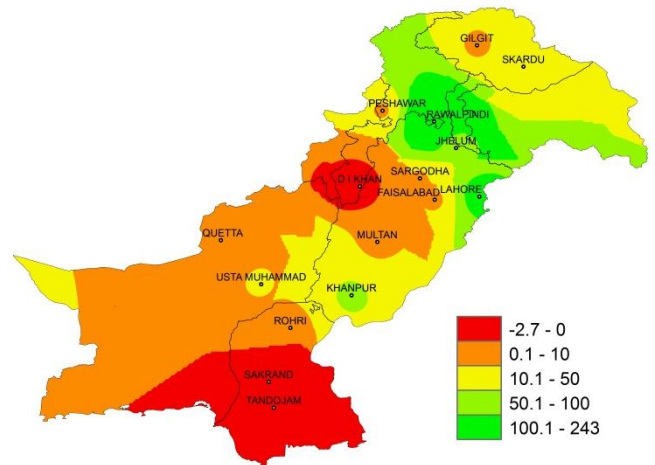
Light to moderate rainfall reported in the agricultural plains of Balochistan. Chief amount of rainfall received in, Zhob, Khuzdar & Barkhan. Decadal maximum raised & minimum temperature both raised above normal by 2.2°C & 1.5°C respectively, in the province. Whereas mean values relative humidity, sunshine hour, wind speed & ETo were recorded as 39%, 79.5hrs, 5.5km/hr and 6.7mm/day respectively.

1.5 Gilgit-Baltistan and Azad Jammu & Kashmir

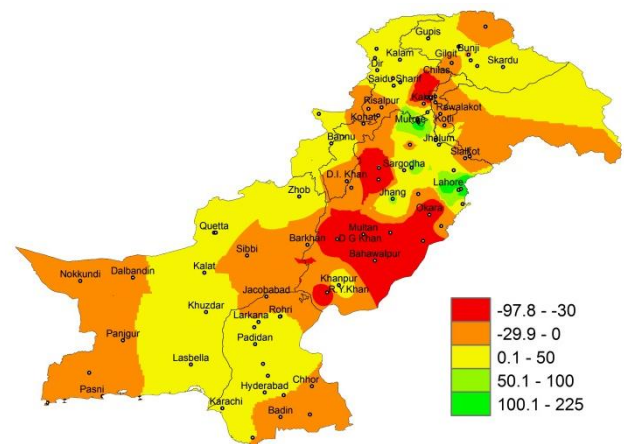
Light to moderate rainfall reported in the agricultural plains of GB & Kashmir. Chief amount of rainfall received in Kotli, Rawalakot & Garhi Doppata. Decadal maximum dropped below normal by 1.2°C & minimum temperature raised above normal by 2.2°C, in the province. Relative humidity, sunshine hour, wind speed & ETo were recorded as 58%, 49.4hrs, 1.5km/hr and 4.0mm/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**
(11th to 20th July, 2015)

2.1 RAMC, Rawalpindi (Potohar region)

Rainfall reported as 251.2mm during the decade however weather remained cloudy for 09day. Average relative humidity recorded as 75%. Mean day temperature was 33.2°C while night temperature recorded as 24.1°C with 69.0hours bright sunshine duration. Wind speed recorded as 4.6km/hr with mean wind direction *variable*.

2.2 RAMC, Faisalabad (Central Punjab)

Rainfall reported as 7.0mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 67%. Mean day temperature was 35.7°C while night temperature recorded as 26.2°C with 52.45hours bright sunshine duration. Wind speed recorded as 4.4km/hr with mean wind direction *south easterly*.
Cotton: Very good condition, flowering stage.

2.3 RAMC, Tandojam (Lower Sindh)

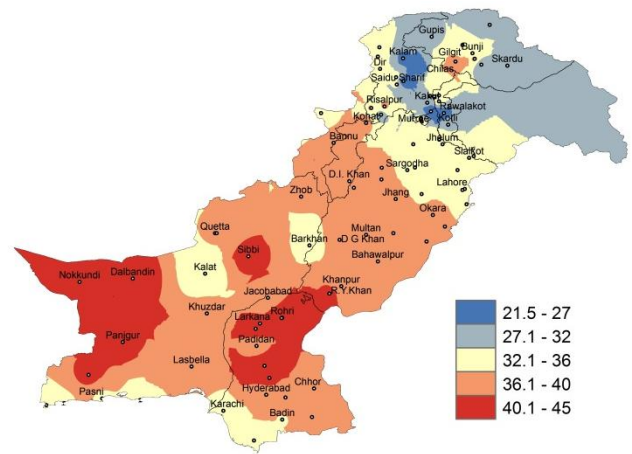
Dry weather reported during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 67%. Mean day temperature was 37.1°C while night temperature recorded as 26.9°C with 73.1hours bright sunshine duration. Wind speed recorded as 15.1km/hr with mean wind direction *south westerly*.
Cotton (Sindh-I): Good condition, flowering Stage.

2.4 RAMC, Usta Muhammad (Eastern Balochistan)

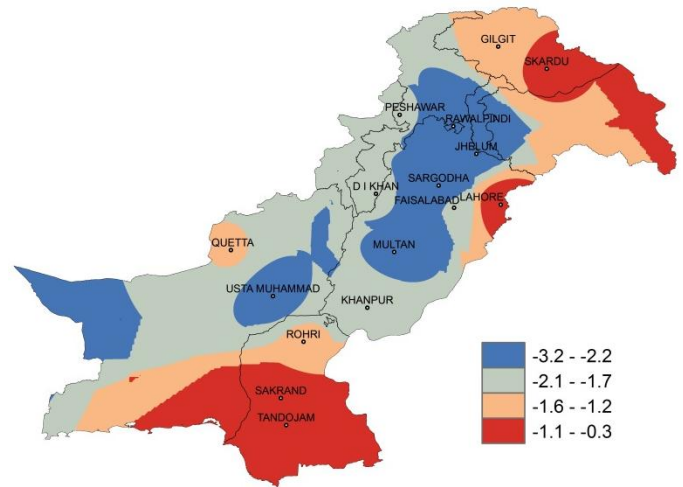
Rainfall reported as 11.2mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 46%. Mean day temperature was 40.0°C while night temperature recorded as 26.3°C.
Rice (Paniri): Good Condition, 3rd leaf stage.

2.5 RAMC, Quetta (Northern Balochistan)

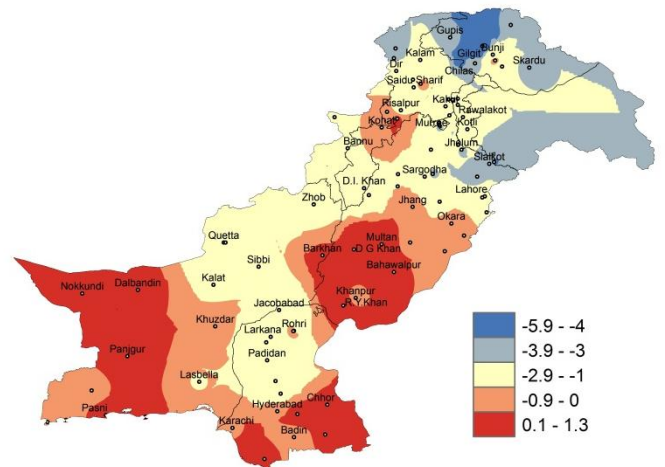
Rainfall reported as 7.2mm during the decade, however weather remained cloudy for 09days. Average relative humidity recorded as 32%. Mean day temperature was 34.7°C while night temperature recorded as 21.2°C with 79.5hours bright sunshine duration and wind speed recorded as 5.5km/hr with mean wind direction *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 (11th to 20th July, 2015)**

2.6 **Jhelum**

Rainfall reported as 69.2mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 73%. Mean day temperature was 34.4°C while night temperature recorded as 25.8°C with 65.2hours bright sunshine duration and wind speed recorded as 2.6km/hr with mean wind direction *variable*.

2.7 **Lahore**

Rainfall reported as 133.8mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 76%. Mean day temperature was 33.0°C while night temperature recorded as 24.5°C with 43.3hours bright sunshine duration. Wind speed recorded as 2.4km/hr with mean wind direction *south easterly*.

2.8 **Sargodha**

Rainfall reported as 11.4mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 70%. Mean day temperature was 35.5°C while night temperature recorded as 26.8°C with 70.2hours bright sunshine duration. Wind speed recorded as 5.7km/h with mean wind direction *north easterly*.

2.9 **Multan**

Rainfall reported as 6.0mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 61%. Mean day temperature was 37.5°C while night temperature recorded as 28.2°C with 76.9hours bright sunshine duration. Wind speed recorded 6.8km/hr with mean wind direction *variable*.

2.10 **Khanpur**

Rainfall reported as 56.2mm during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 64%. Mean day temperature was 39.0°C while night temperature recorded as 27.5°C with 79.3hours bright sunshine duration. Wind speed recorded 5.9km/hr with mean wind direction *south westerly*.

2.11 **Sakrand**

Dry weather reported during the decade however weather remains cloudy for 05days. Average relative humidity recorded as 59%. Mean day temperature was 39.6°C while night temperature recorded as 23.6°C with 85.4hours bright sunshine duration. Wind speed recorded 8.9km/hr with wind direction *south westerly*.

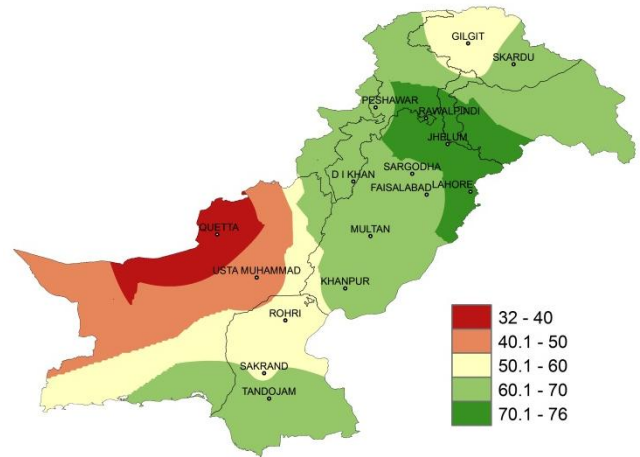


Figure.3: Relative Humidity in percentage (%)

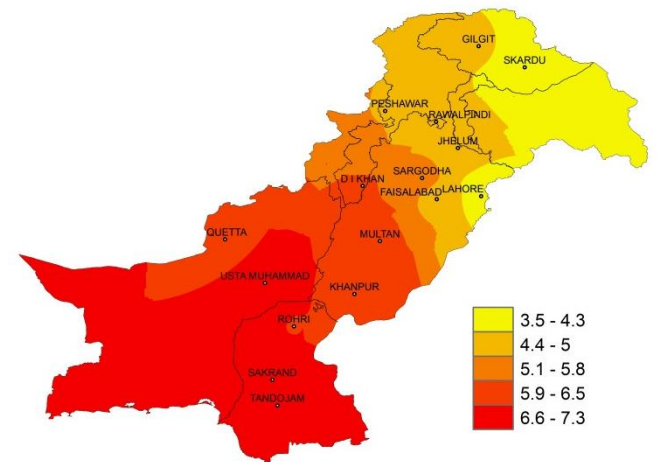


Figure.4: Reference Crop Evapotranspiration “ETo” in mm/day

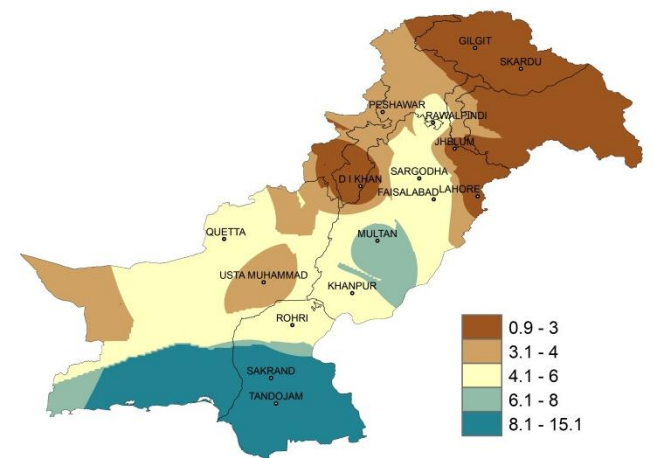


Figure 5: Wind Speed in kilometer per hour (km/h)

2.12 Rohri

Rainfall reported as Trace (not measureable) during the decade; however weather remained cloudy for 07days. Average relative humidity recorded as 52%. Mean day temperature was 40.9°C while night temperature recorded as 29.5°C with 88.5hours bright sunshine duration. Wind speed recorded as 4.7km/hr with mean wind direction *westerly*.

2.13 D.I. Khan

Dry weather reported during the decade; however weather remained cloudy for 04days. Average relative humidity recorded as 67%. Mean day temperature was 37.1°C while night temperature recorded as 25.0°C with 74.1hours bright sunshine duration.

2.14 Peshawar

Rainfall reported as 7.0mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 68%. Mean day temperature was 36.3°C while night temperature recorded as 26.7°C with 71.2hours bright sunshine duration. Wind speed recorded as 3.1km/hr with mean wind direction *north easterly*.

2.15 Skardu

Rainfall reported 19.7mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 62%. Mean day temperature was 29.0°C while night temperature recorded as 16.2°C with 46.6hours bright sunshine duration. Wind speed recorded as 0.9km/hr with mean wind direction *south easterly*.

2.16 Gilgit

Rainfall reported as 4.3mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 54%. Mean day temperature was 34.6°C while night temperature recorded as 20.0°C with 52.2hours bright sunshine duration. Wind speed recorded as 2.1km/hr with mean wind direction *easterly*.

3. Ten Days Weather Advisory for Farmers **(21st to 31st July, 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 dust/thunderstorm it will 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 light to moderate rainfall is expected in the province including Rawalpindi, Gujranwala, Sargodha, Faisalabad, Bahawalpur and Lahore division from 21st to 24th and heavy rainfall is expected from 26th to 29th and scattered rain is expected from 30th to 31st of the decade.
- ❖ **Khyber Pakhtunkhwa:** Mainly dry weather is expected in the province. However light to moderate rainfall is expected at few place including Hazara, Malakand, Peshawar, Bannu, Chitral, Kalam Division 21st to 24th and heavy rainfall is expected from 26th to 29th and scattered rain is expected from 30th to 31st of the decade.
- ❖ **Sindh:** Mostly hot and dry weather is expected in most parts of the Sindh however heavy rainfall is expected at few places including Karachi, Sukkur & Chorr from 22nd to 24th and 26th to 29th of the decade
- ❖ **Balochistan:** Mostly hot and dry weather is expected in most parts of the Balochistan however scattered rain is expected at north-west Balochistan including Kalat, Khuzdar, Zhob, Sibbi, and Quetta from 22nd to 24th and heavy fall is expected from 26th to 29th of the decade.
- ❖ **Gilgit Baltistan:** Rain-thunderstorm is expected in most parts of the G.B during the decade.
- ❖ **Kashmir:** Mainly dry weather is expected in most of the parts of the Kashmir however heavy 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.