

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light to moderate rainfall reported in the agricultural plains of Punjab, K.P, G.B & Kashmir and however light rainfall reported in the agricultural plains Sindh & Balochistan during the last decade.
- ❖ Highest amount of rainfall reported as 83.6mm at Pattan during the last decade.
- ❖ Highest Maximum temperature recorded 40.8°C at Mithi during the last decade.
- ❖ Mainly cloudy weather is expected in most parts of the country however light to moderate rainfall (snowfall over the hills) is expected in most of the country during the decade.
- ❖ Wheat crop is in flowering/milk maturity/wax maturity stages in most of the agricultural plains of the country. Farmers are advised to stop irrigation the crops by keeping in view the expected rain in the agricultural plains of Punjab & KP.
- ❖ At this stage of wheat crop, farmers should control weeds further growth by manual practices or any recommended spray.
- ❖ Farmers of irrigated/barani areas are advised to remove weeds from the fields, so that the present soil moisture may fully be utilized.
- ❖ Farmers of upper half and northwest Balochistan should be careful about irrigation and spraying chemicals on the crop.
- ❖ Farmers in the lower half of the country especially those in central regions are advised to take up poultry rearing houses to maintain optimum room temperature and take care against the rapid changes in air temperature and relative humidity.

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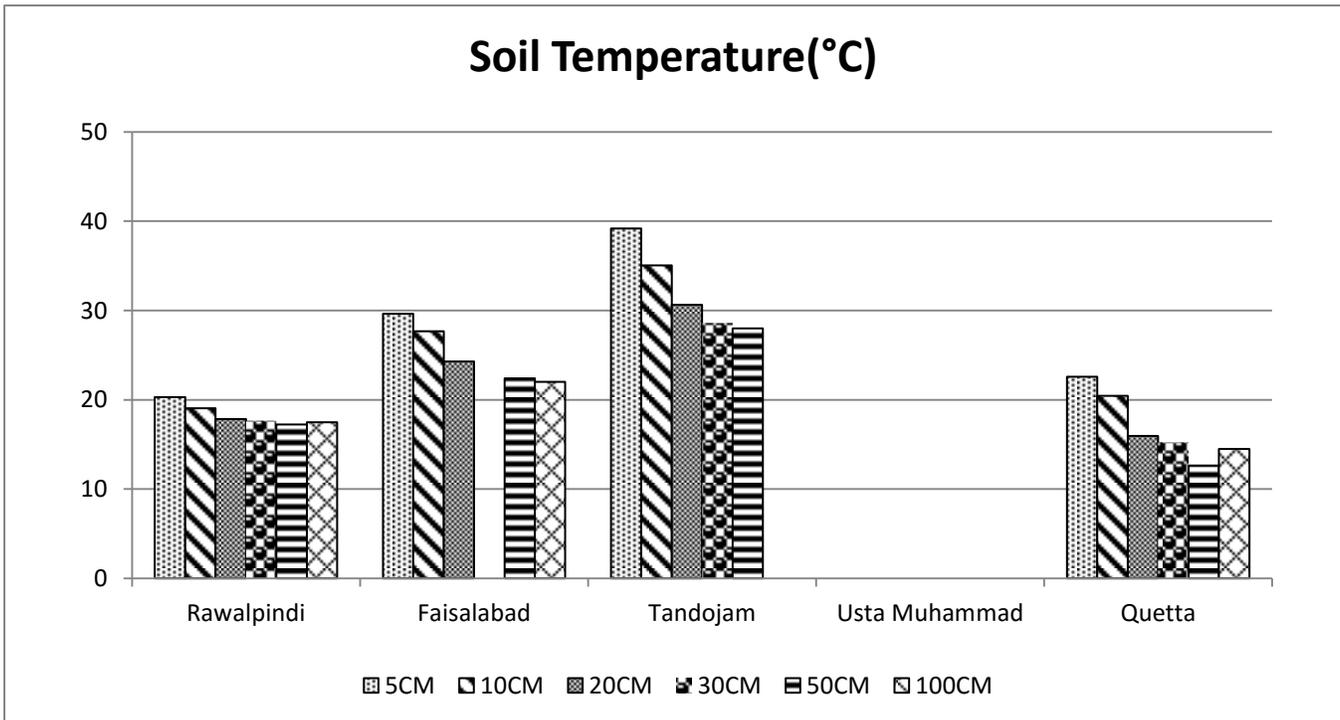
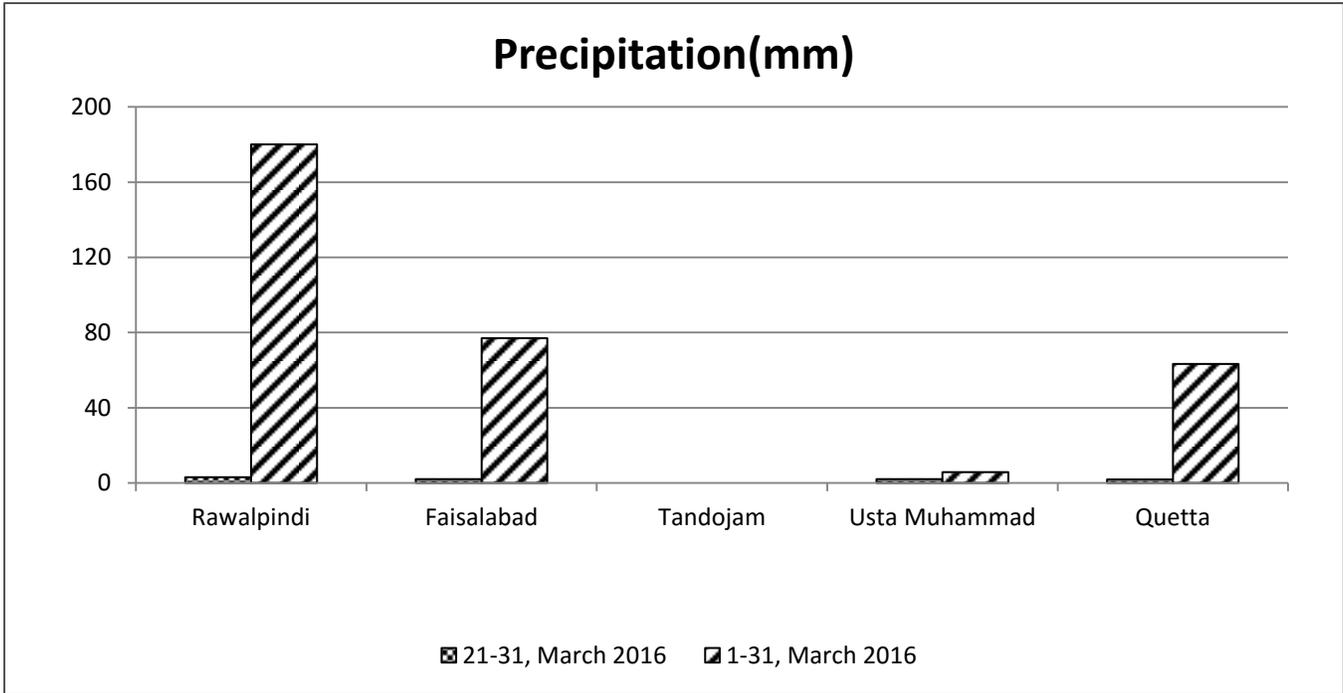
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Meteorological conditions during 3rd decade of March, 2016

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	2.7	3.0	0.3	-0.3	1.1	20.8	20.3	19.1	17.9	17.7	17.3	17.5	52	76.6	4.8	3.9
2	FAISALABAD	0.6	2.0	1.4	-0.5	0.5	23.2	29.7	27.7	24.3	***	22.4	22.0	52	82.0	3.2	3.9
3	JHELUM	1.6	4.4	2.8	-0.6	-1.0	21.9	24.8	22.9	21.2	20.2	20.4	***	54	74.8	2.7	3.5
4	LAHORE	1.7	0.1	-1.6	1.0	-1.5	24.1	28.5	27.2	23.9	22.8	***	22.0	48	87.4	3.6	4.2
5	SARGODHA	1.0	120.7	119.7	-1.6	0.4	23.2	25.7	24.2	22.0	21.3	19.9	20.5	65	74.1	3.0	3.6
6	MULTAN	1.2	9.8	8.6	-1.2	1.0	24.4	***	***	***	***	***	***	52	73.6	4.5	4.2
7	KHANPUR	0.5	0.1	-0.4	-0.1	1.0	25.8	***	26.5	26.6	26.7	26.7	25.7	46	80.6	5.2	4.9
8	TANDOJAM	0.0	0.0	0.0	-0.2	-0.6	26.8	39.2	35.1	30.7	28.6	28.0	***	41	108.1	6.5	6.3
9	SAKRAND ☆	0.1	0.0	-0.1	1.7	1.2	27.7	44.0	34.7	***	***	***	27.7	41	91.8	6.7	6.1
11	D I KHAN	0.8	0.1	-0.7	0.0	0.9	23.2	***	***	***	***	***	***	63	63.4	***	4.2
11	PESHAWAR	2.4	7.0	4.6	0.6	-0.2	21.3	26.0	21.9	20.6	***	***	***	59	58.9	2.1	3.0
12	USTA MUHAMMAD	0.5	2.0	1.5	-0.6	0.2	25.6	***	***	***	***	***	***	45	***	5.4	5.3
13	QUETTA	0.9	1.8	0.9	-0.3	1.6	15.4	22.6	20.5	16.0	15.3	12.7	14.5	31	76.5	5.2	3.9
14	SKARDU	0.5	19.0	18.5	-1.8	-0.7	9.1	***	***	***	***	***	***	57	57.6	0.8	2.2
15	GILGIT	0.2	6.2	6.0	-8.4	0.3	10.5	***	***	***	***	***	***	60	46.6	2.6	2.2

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.

Graph at RAMC's during March, 2016



Past Weather (21st to 31st March, 2016)

Light to moderate rainfall reported in the agricultural plains of Punjab, K.P, G.B & Kashmir and however light rainfall reported in the agricultural plains Sindh & Balochistan during the last decade.

1.1 Punjab

Light to moderate rainfall reported in the agricultural plains of Punjab. Chief amount of rainfall received in Murree, Layyah & Kot Addu. Decadal maximum dropped below normal by 0.5°C & minimum temperature raised above normal by 0.2°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 53%, 78.4hrs, 3.9km/hr and 4.0mm/day respectively.

1.2 Sindh

Light rainfall reported in the agricultural plains of Sindh. Chief amount of rainfall received Jacobabad & Rohri. Decadal maximum & minimum temperature both raised above normal by 0.5°C & 0.2°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 27%, 66.6hrs, 4.4km/hr and 6.2mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

Light to moderate rainfall reported in the agricultural plains of KP. Chief amount of rainfall received in Pattan, Kalam & Dir. Decadal maximum & minimum temperature both raised above normal by 0.3°C & 0.4°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 61%, 61.2hrs, 2.1km/hr and 3.6mm/day respectively.

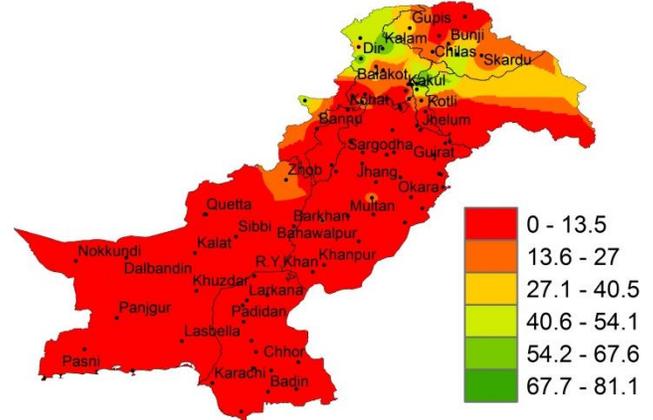
1.4 Balochistan

Light rainfall reported in the agricultural plains of Balochistan. Chief amount of rainfall received in Zhob, Barkhan & Quetta. Decadal maximum dropped below normal by 0.5°C & minimum temperature raised above normal by 0.9°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 38%, 76.5hrs, 5.3km/hr and 4.6mm/day respectively.

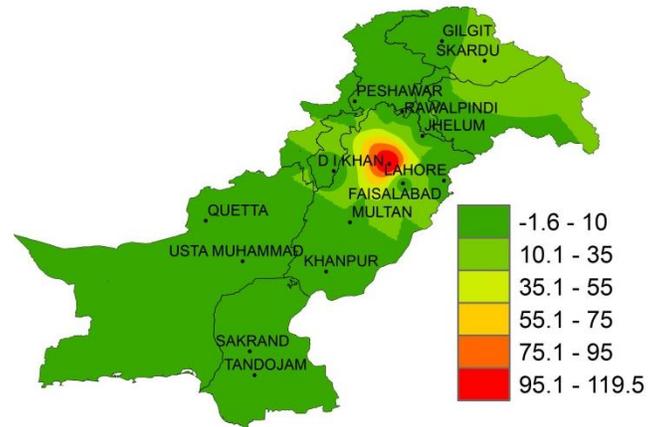
1.5 Gilgit-Baltistan and Azad Jammu & Kashmir

Light to moderate rainfall reported in the agricultural plains of GB & Kashmir. Chief amount of rainfall received in Astore, Garhi Dopatta & Gupis. Decadal maximum dropped & minimum temperature both dropped below normal by 5.1°C & 0.2°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed &

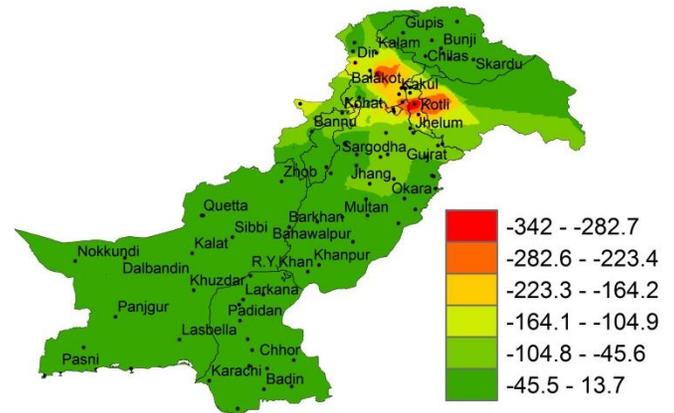
ETo were recorded as 59%, 52.1hrs, 1.7km/hr and 2.2mm/day respectively.



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 March, 2016)

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

Rainfall reported as 3.0mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 52%. Mean day temperature was 27.7°C while night temperature recorded as 13.8°C with 76.6hours bright sunshine duration. Wind speed recorded as 4.8km/hr with mean wind direction *westerly*.

Wheat (Chakwal-97): Good condition, flowering stage.

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

Rainfall reported as 2.0mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 52%. Mean day temperature was 30.3°C while night temperature recorded as 16.1°C with 82.0hours bright sunshine duration. Wind speed recorded as 3.2km/hr with mean wind direction *north westerly*.

Wheat: Very Good condition, maturity completed.

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

Dry weather reported during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 41%. Mean day temperature was 36.4°C while night temperature recorded as 17.1°C with 108.1hours bright sunshine duration. Wind speed recorded as 6.5km/hr with mean wind direction *south westerly*.

Wheat (TJ-83): Harvested on 31.03.2016.

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

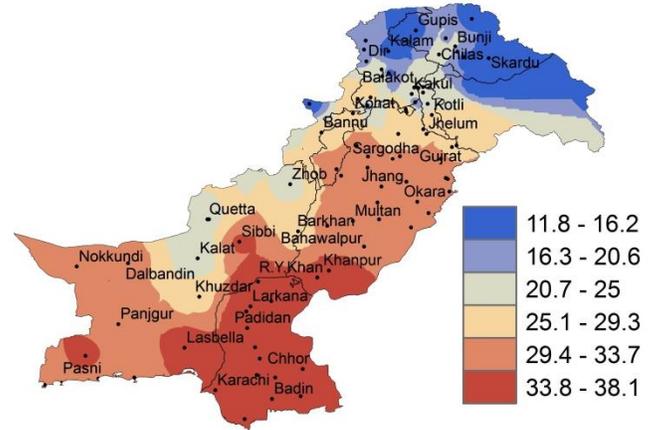
Rainfall reported as 2.0mm during the decade however weather remained cloudy for 02days. Average relative humidity recorded as 45%. Mean day temperature was 34.0°C while night temperature recorded as 17.2°C. Wind speed recorded as 5.4km/hr with mean wind direction *south easterly*.

Wheat (Zardana): Good condition, wax maturity stage.

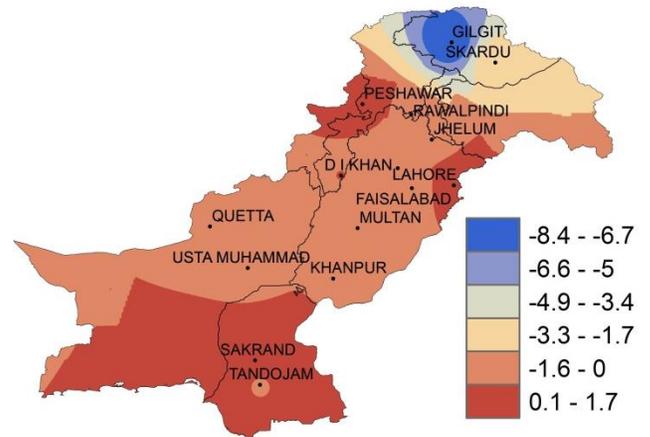
2.5 **RAMC, Quetta (Northern Balochistan)**

Rainfall reported as 1.8mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 31%. Mean day temperature was 22.0°C while night temperature recorded as 8.8°C with 76.5hours bright sunshine duration. Wind speed recorded as 5.2km/hr with mean wind direction *southerly*.

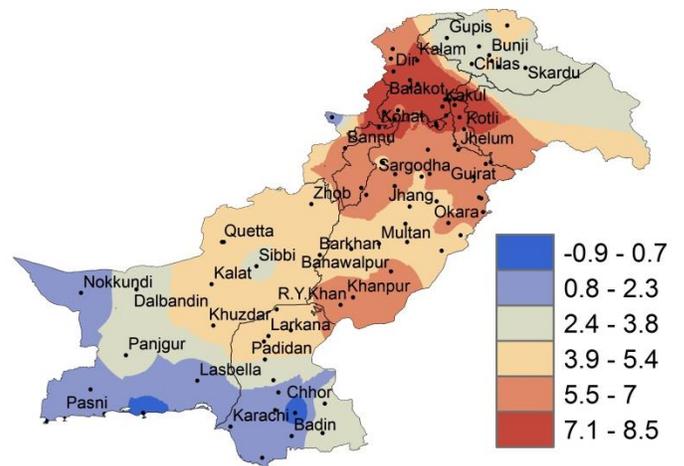
Wheat: Good condition, heading stage.



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 March, 2016)**

2.6 **Jhelum**

Rainfall reported as 4.4mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 54%. Mean day temperature was 29.3°C while night temperature recorded as 14.5°C with 74.8hours bright sunshine duration. Wind speed recorded 2.7km/hr with wind direction *north westerly*.

2.7 **Lahore**

Rainfall reported as Trace (not measureable) during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 48%. Mean day temperature was 31.0°C while night temperature recorded as 17.2°C with 87.4hours bright sunshine duration. Wind speed recorded as 3.6km/hr with mean wind direction *north westerly*.

2.8 **Sargodha**

Rainfall reported as 12.7mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 65%. Mean day temperature was 29.4°C while night temperature recorded as 16.9°C with 74.1hours bright sunshine duration. Wind speed recorded 3.0km/hr with mean wind direction *variable*.

2.9 **Multan**

Rainfall reported as 9.8mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 52%. Mean day temperature was 30.8°C while night temperature recorded as 17.9°C with 73.6hours bright sunshine duration. Wind speed recorded 4.5km/hr with mean wind direction *northerly*.

2.10 **Khanpur**

Rainfall reported as Trace (not measureable) during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 46%. Mean day temperature was 33.7°C while night temperature recorded as 17.8°C with 80.6hours bright sunshine duration. Wind speed recorded 5.2km/hr with mean wind direction *variable*.

2.11 **Sakrand**

Dry weather reported during the decade however weather remains cloudy for 08days. Average relative humidity recorded as 41%. Mean day temperature was 37.1°C while night temperature recorded as 18.2°C with 91.8hours bright sunshine duration. Wind speed recorded 6.7km/hr with wind direction *north westerly*.

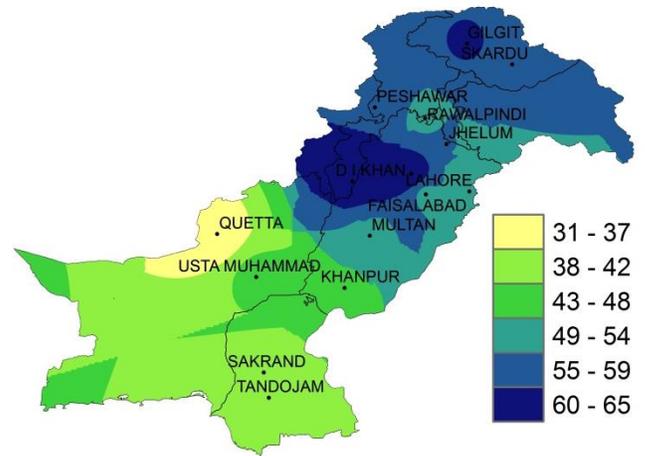


Figure.3: Relative Humidity in percentage (%)

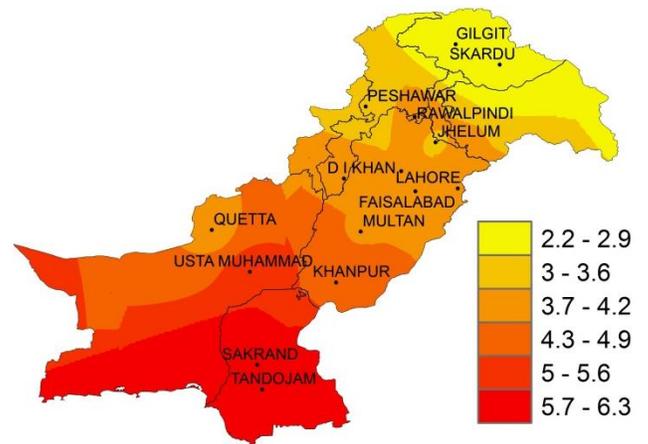


Figure.4: Reference Crop Evapotranspiration “ETo” in mm/day

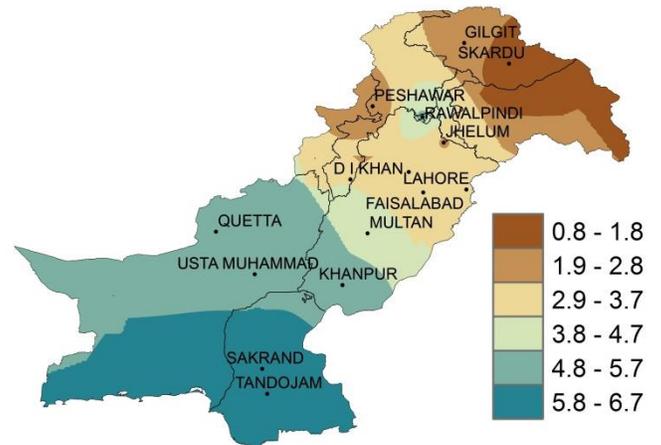


Figure 5: Wind Speed in kilometer per hour (km/h)

2.12 D.I. Khan

Rainfall reported as Trace (not measureable) during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 63%. Mean day temperature was 30.0°C while night temperature recorded as 16.4°C with 63.4hours bright sunshine duration.

2.13 Peshawar

Rainfall reported as 7.0mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 59%. Mean day temperature was 28.1°C while night temperature recorded as 14.4°C with 58.9hours bright sunshine duration. Wind speed recorded as 2.1km/hr with mean wind direction *north westerly*.

2.14 Skardu

Rainfall reported as 19.0mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 57%. Mean day temperature was 15.1°C while night temperature recorded as 3.0°C with 57.6hours bright sunshine duration. Wind speed recorded as 0.8km/hr with mean wind direction *north westerly*.

2.15 Gilgit

Rainfall reported as 6.2mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 60%. Mean day temperature was 13.7°C while night temperature recorded as 7.2°C with 46.6hours bright sunshine duration. Wind speed recorded as 2.6km/hr with mean wind direction *westerly*.

3. Ten Days Weather Advisory for Farmers **(1st to 10th April, 2016)**

3.1 Temperature Forecast

Day temperature slightly above normal in most of the southern parts however day & night temperatures are expected 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 cloudy weather is expected in most central and upper parts of the province during the decade.

However light to moderate rain is expected in most parts of the province including Rawalpindi, Lahore, Gujranwala, Faisalabad & Sargodha divisions from during the decade.

- ❖ **Khyber Pakhtunkhwa:** Mainly cloudy weather is expected in most parts of the province. However light to moderate rainfall (with light snowfall over the hills) is expected in Bannu, Hazara, Peshawar, Kohat, Mardan & D.I Khan division from 1st to 4th and 6th to 9th of the decade.
- ❖ **Sindh:** Mostly dry weather is expected during the decade. However light to moderate rainfall is expected at isolated places of Hyderabad, Larkana & Sukkur divisions from 6th to 8th of the decade.
- ❖ **Balochistan:** Mainly cloudy weather is expected in most parts of the Balochistan however light to moderate rain is expected at isolated places of Quetta, Zhob, Sibbi, & Kalat during the decade.
- ❖ **Gilgit Baltistan:** Mainly cold and cloudy weather is expected in most parts of the G.B however light to moderate rain (with light snowfall over the hills) is expected Gilgit, Skardu & Hunza during the decade.
- ❖ **Kashmir:** Light to moderate rain-thunderstorm is expected in most parts of the Kashmir including Muzaffarabad, Rawalakot, Kotli during the decade.

3.4 Advisory for Farmers

- ❖ Wheat crop is in flowering/milk maturity/wax maturity stages in most of the agricultural plains of the country. Farmers are advised to stop irrigation the crops by keeping in view the expected rain in the agricultural plains of Punjab & KP.
- ❖ At this stage of wheat crop, farmers should control weeds further growth by manual practices or any recommended spray.
- ❖ Farmers of irrigated/barani areas are advised to remove weeds from the fields, so that the present soil moisture may fully be utilized.
- ❖ Farmers of upper half and northwest Balochistan should be careful about irrigation and spraying chemicals on the crop.
- ❖ Farmers in the lower half of the country especially those in central regions are advised to take up poultry rearing houses to maintain optimum room temperature and take care against the rapid changes in air temperature and relative humidity.
- ❖ Removing weeds from the standing crops is very important as weeds utilize moisture and food which may be utilized by the crop. As a result considerable loss in

yield occurs every year. However operations against weeds should be started using weedicides or manually when the crop completely covers the fields.

- ❖ Farmers are advised to ensure field sanitation and spray prophylactic fungicidal sprays to prevent spread of diseases on vegetables.