

# Decadal Agromet Bulletin of Pakistan



## Highlights....

- ❖ Light to moderate rainfall reported in the agricultural plains of the country during the last decade.
- ❖ Highest amount of rainfall reported as 248.5mm at Parachinar during the last decade.
- ❖ Lowest minimum temperature recorded -6.6°C at Astore during the last decade.
- ❖ Light to moderate rainfall expected in the agricultural plains of the Punjab, K.P, Balochistan, G.B & Kashmir & and light rainfall reported in Sindh is expected during the decade.
- ❖ Wheat crop is in flowering/milk maturity/wax maturity stages. Farmers are advised to irrigate the crops keeping the expected rain in the agricultural plains of the country.
- ❖ Weeds are expected to shoot in excess after recent rains. Farmers should control weeds growth soon after rains.
- ❖ 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.
- ❖ Farmers of upper half and northwest Balochistan should be careful about irrigation and spraying chemicals on the crops.
- ❖ Farmers of irrigated/ barani areas are advised to remove weeds from the fields, so that the present soil moisture may fully be utilized.

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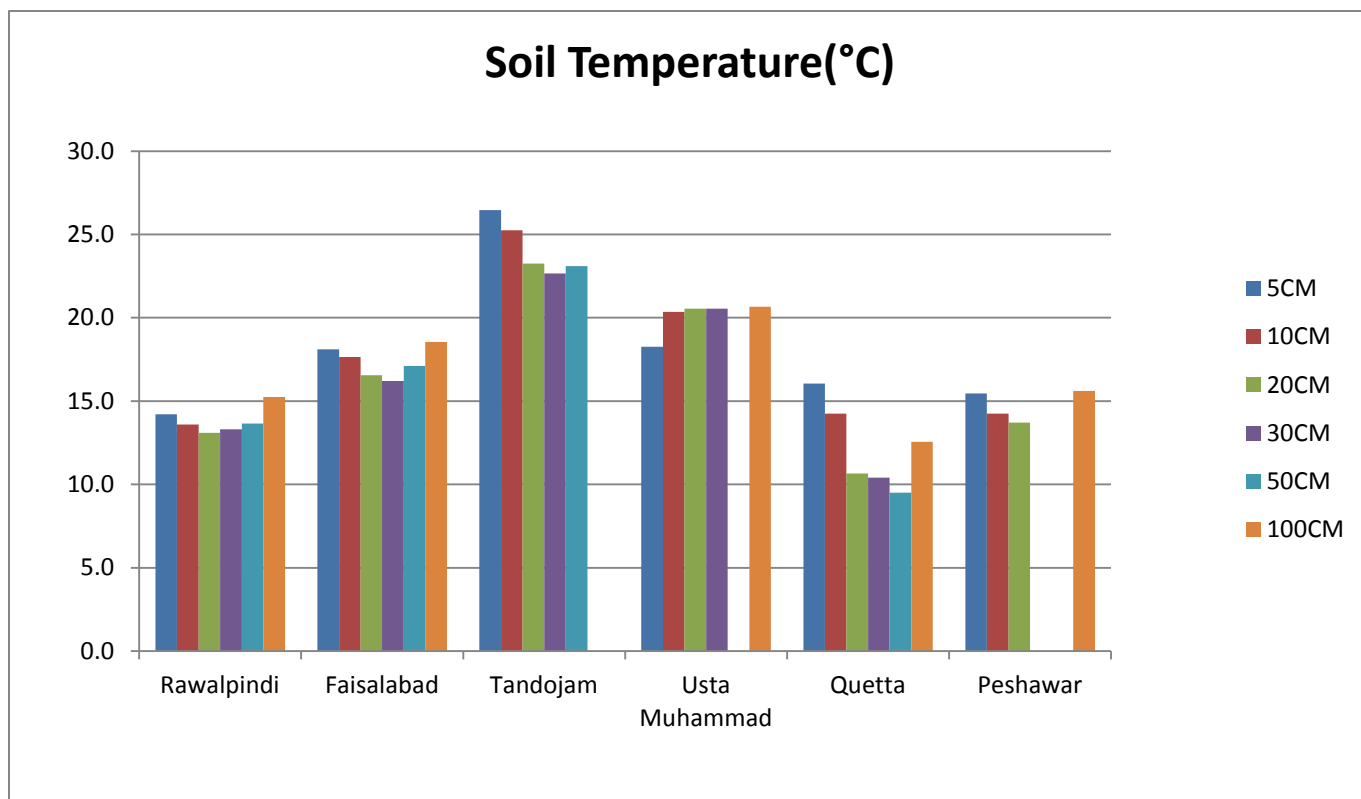
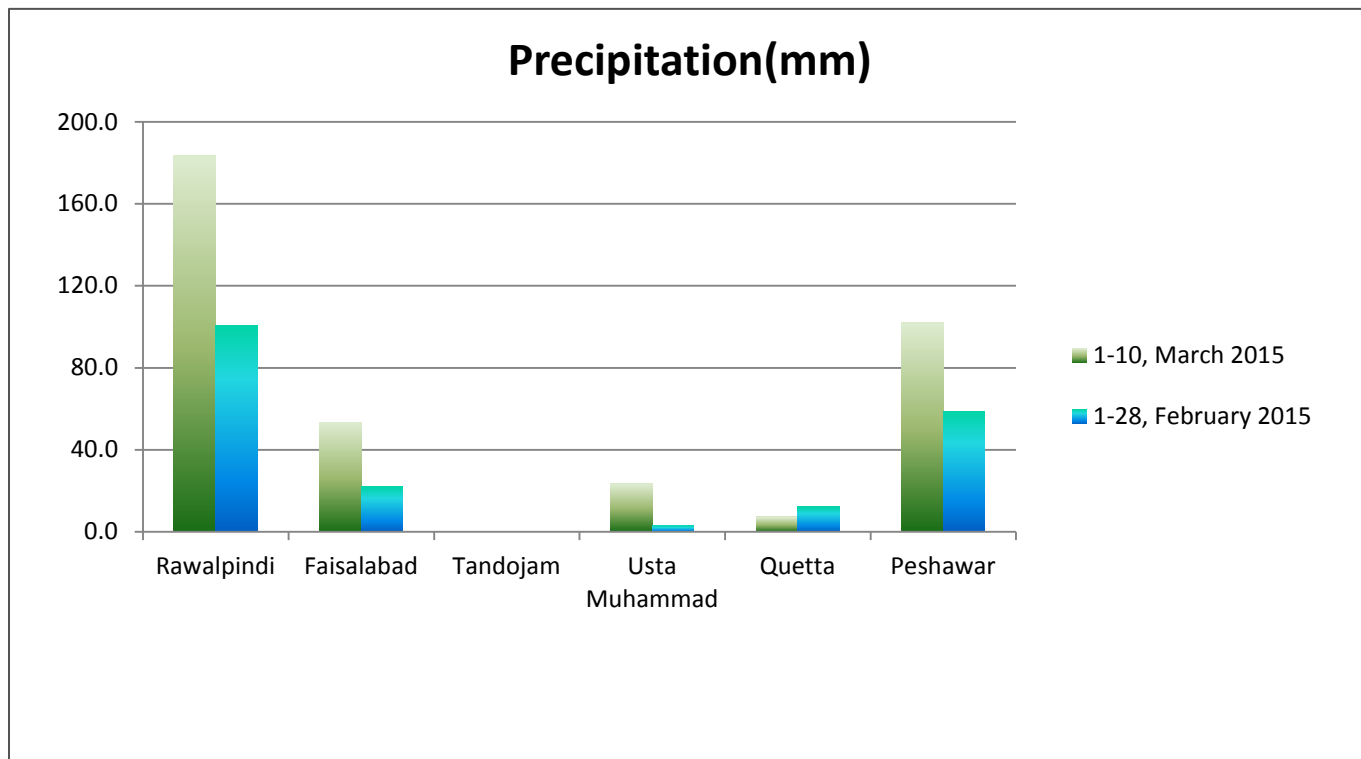
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Meteorological conditions during 1<sup>st</sup> decade of March, 2015

Sr. No.	Station	Precipitation (mm)			Air Temperature (°C)			Soil Temperatures (°C)						R.H (%)	Sunshine Duration(hours)	Wind Speed (km/hr)	ET <sub>0</sub> (mm/day)
		Normal	Actual	Dep	Tmax Dep	Tmin Dep	Mean	5cm	10cm	20cm	30cm	50cm	100cm				
1	RAWALPINDI	2.0	183.6	181.6	-7.3	-1.2	12.4	14.2	13.6	13.1	13.3	13.7	15.3	79	28.4	4.5	1.7
2	FAISALABAD	0.8	53.5	52.7	-7.1	-2.0	14.6	18.1	17.7	16.6	16.2	17.1	18.6	73	46.1	4.7	2.2
3	JHELUM	0.9	83.9	83.0	-7.0	-1.7	14.7	17.6	16.7	16.0	15.7	16.4	***	73	45.1	6.3	2.3
4	LAHORE	0.9	72.0	71.1	-6.3	-4.2	15.2	17.6	17.2	16.8	16.4	***	18.2	73	44.6	3.8	2.2
5	SARGODHA	0.5	84.8	84.3	-8.9	-2.4	14.3	17.9	17.2	16.1	16.6	17.4	18.4	83	40.5	0.6	1.8
6	MULTAN	0.6	11.4	10.8	-6.6	-2.3	15.7	***	***	***	***	***	***	61	55.7	5.5	2.8
7	KHANPUR	3.2	12.5	9.3	-7.2	-2.6	16.4	***	18.9	19.3	19.9	21.0	22.0	63	62.4	6.2	3.0
8	TANDOJAM	0.0	0.0	0.0	-4.6	-2.0	19.7	26.5	25.3	23.3	22.7	23.1	***	54	78.9	2.0	3.2
9	SAKRAND ☆	0.0	0.0	0.0	-4.0	-5.9	17.4	30.7	26.1	***	***	***	24.6	49	86.4	5.3	4.0
10	ROHRI	0.4	8.0	7.6	-6.9	-4.9	17.7	26.9	24.6	21.3	22.2	20.6	24.6	59	72.1	6.1	3.4
11	DI KHAN	0.6	39.0	38.4	-7.1	-2.8	13.9	***	***	***	***	***	***	75	50.4	***	2.5
12	PESHAWAR	1.4	102.0	100.6	-7.4	-3.6	12.3	15.5	14.3	13.7	***	***	15.6	80	28.0	3.5	1.7
13	USTA MUHAMMAD	0.0	23.3	23.3	-13.2	-4.4	14.3	18.3	20.4	20.6	20.6	***	20.7	61	***	***	2.7
14	QUETTA	0.6	7.2	6.6	-3.4	-0.9	8.5	16.1	14.3	10.7	10.4	9.5	12.6	41	81.3	7.3	3.1
15	SKARDU	0.7	6.9	6.2	-2.7	0.3	4.2	***	***	***	***	***	***	57	30.3	0.9	1.3
16	GILGIT	0.3	0.6	0.3	-4.7	-0.8	8.1	***	***	***	***	***	***	52	21.6	3.8	2.0

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. ET<sub>0</sub> 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, 2015



**Past Weather (1<sup>st</sup> to 10<sup>th</sup> March, 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, Sialkot & Chakwal. Decadal maximum & minimum temperature departure both dropped below normal by 7.2°C & 2.3 respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 72%, 46.1hrs, 4.5km/hr and 2.3mm/day respectively.

**1.2 Sindh**

Light to moderate rainfall reported in the agricultural plains of Sindh. Chief amount of rainfall received in Jacobabad, Sukkur & Rohri. Decadal maximum & minimum temperature departure both dropped below normal by 5.2°C & 4.3 respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 54%, 79.1 hrs, 4.5km/hr and 5.5mm/day respectively.

**1.3 Khyber Pakhtunkhwa (KP)**

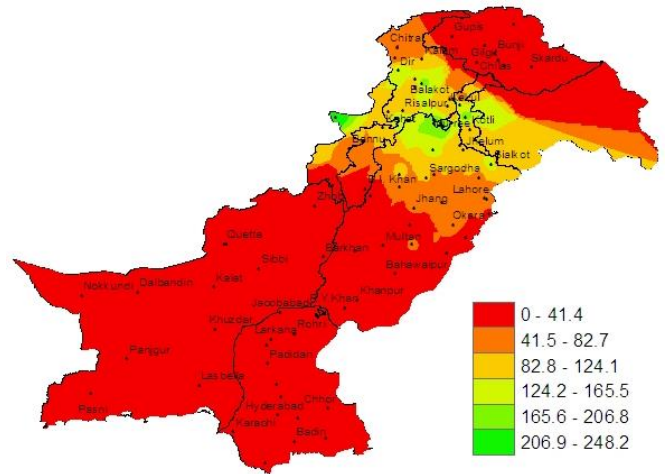
Light to moderate rainfall reported in the agricultural plains of KP. Chief amount of rainfall received in Parachinar, Malamjabba & Cherat. Decadal maximum & minimum temperature departure both dropped below normal by 7.3°C & 3.2 respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 78%, 39.2 hrs, 3.5km/hr and 2.1 mm/day respectively.

**1.4 Balochistan**

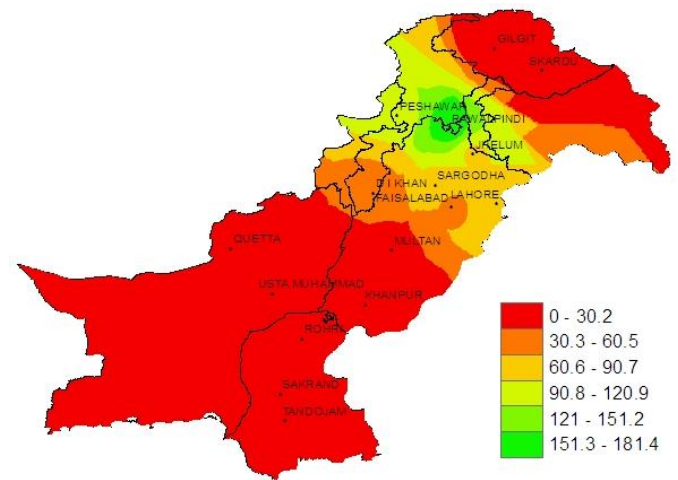
Light to moderate rainfall reported in the agricultural plains of Balochistan. Chief amount of rainfall received in Zhob, Quetta & Barkhan. Decadal maximum & minimum temperature departure both dropped below normal by 8.3°C & 2.7 respectively, in the province. Relative humidity, sunshine hour, wind speed & ETo were recorded as 51%, 81.3hrs, 7.3km/hr and 2.9mm/day respectively.

**1.5 Gilgit-Baltistan and Azad Jammu & Kashmir**

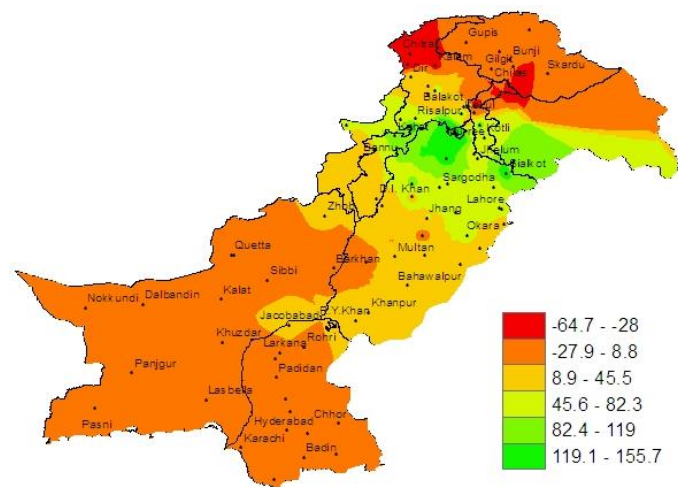
Light to moderate rainfall reported in the agricultural plains of GB & Kashmir. Chief amount of rainfall received in Rawalakot, Garhidopatta & Muzaffarabad. Decadal maximum & minimum temperature departure both dropped below normal by 3.7°C & 0.3 respectively, in the province. Relative humidity, sunshine hour, wind speed & ETo were recorded as 55%, 26.0hrs, 2.4km/hr and 1.7mm/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 (1<sup>st</sup> to 10<sup>th</sup> March, 2015)**

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

Rainfall reported as 183.6mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 79%. Mean day temperature was 17.1°C while night temperature recorded as 7.7°C with 28.4hours bright sunshine duration. Wind speed recorded as 4.5km/hr with mean wind direction *westerly*.

**Wheat (Chakwal-97):** fair condition, Teslling stage.

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

Rainfall reported as 53.5mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 73%. Mean day temperature was 19.5°C while night temperature recorded as 9.7°C with 46.1hours bright sunshine duration. Wind speed recorded as 4.7km/hr with mean wind direction *westerly*.

**Wheat:** very good condition, flowering stage.

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

Dry weather reported during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 54%. Mean day temperature was 27.5°C while night temperature recorded as 11.8°C with 78.9hours bright sunshine duration. Wind speed recorded as 2.0km/hr with mean wind direction *northerly*.

**Wheat (TJ-83):** Good condition, wax maturity.

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

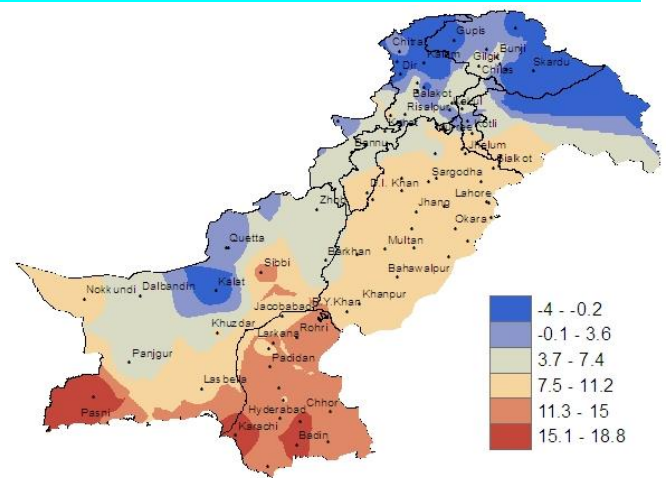
Rainfall reported as 23.3mm during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 61%. Mean day temperature was 18.2°C while night temperature recorded as 10.3°C.

**Wheat (Zardana):** Good condition, flowering stage.

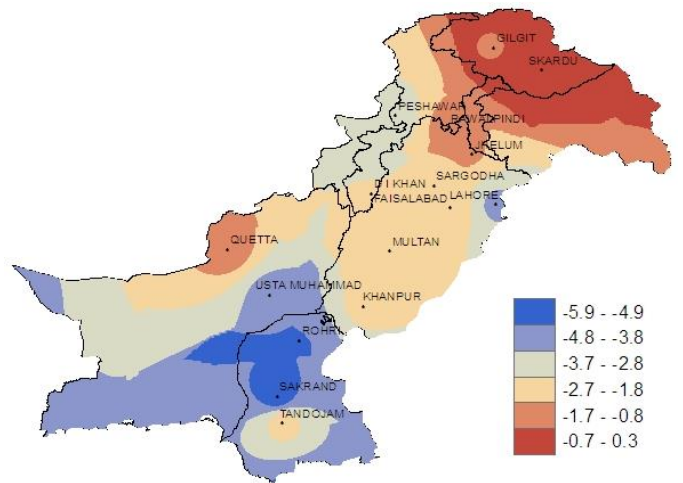
2.5 **RAMC, Quetta (Northern Balochistan)**

Rainfall reported as 7.2mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 41%. Mean day temperature was 14.6°C while night temperature recorded as 2.4°C with 81.3 hours bright sunshine duration and wind speed recorded as 7.3km/hr with mean wind direction *southerly*.

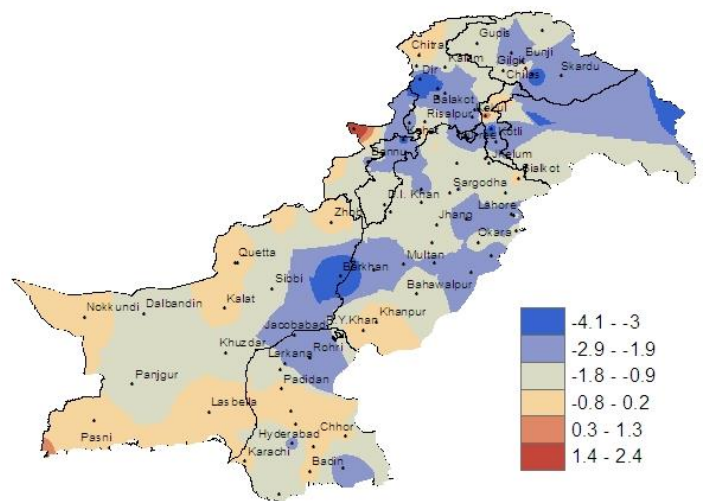
**Wheat:** Good condition, Tilling.



I. Actual min-temp



II. Departure of min-temp from Normal



III. Departure of min-temp from Previous Decade

Figure.2: Minimum Temperature distribution during previous decade in °C

2(b) Past Weather for Sub-Regional Agricultural Plains (1<sup>st</sup> to 10<sup>th</sup> March, 2015)

2.6 **Jhelum**

Rainfall reported as 83.9mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 73%. Mean day temperature was 19.5°C while night temperature recorded as 9.9°C with 45.1 hours bright sunshine duration and wind speed recorded as 6.3 km/hr with mean wind direction *variable*.

2.7 **Lahore**

Rainfall reported as 72.0mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 73%. Mean day temperature was 19.6°C while night temperature recorded as 10.7°C with 44.6hours bright sunshine duration. Wind speed recorded as 3.8km/hr with mean wind direction *north westerly*.

2.8 **Sargodha**

Rainfall reported as 84.8mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 83%. Mean day temperature was 18.3°C while night temperature recorded as 10.3°C with 40.5hours bright sunshine duration. Wind speed recorded as 0.6km/h with mean wind direction *easterly*.

2.9 **Multan**

Rainfall reported as 11.4mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 61%. Mean day temperature was 21.0°C while night temperature recorded as 10.4°C with 55.7 hours bright sunshine duration. Wind speed recorded 5.5km/hr with mean wind direction *north easterly*.

2.10 **Khanpur**

Rainfall reported 12.5mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 63%. Mean day temperature was 22.0°C while night temperature recorded as 10.8°C with 62.4hours bright sunshine duration. Wind speed recorded 6.2km/hr with mean wind direction *north easterly*.

2.11 **Sakrand**

Dry weather reported during the decade however weather remains cloudy for 05days. Average relative humidity recorded as 49%. Mean day temperature was 27.3°C while night temperature recorded as 7.5°C with 86.4hours bright sunshine duration. Wind speed recorded 5.3km/hr with wind direction *northerly*

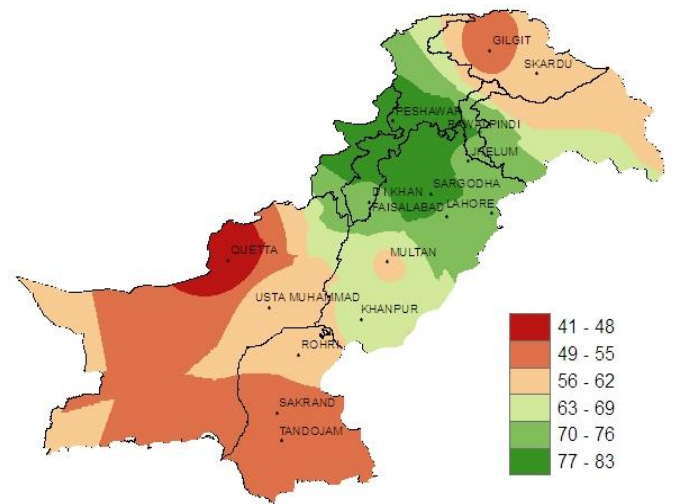


Figure.3: Relative Humidity in percentage (%)

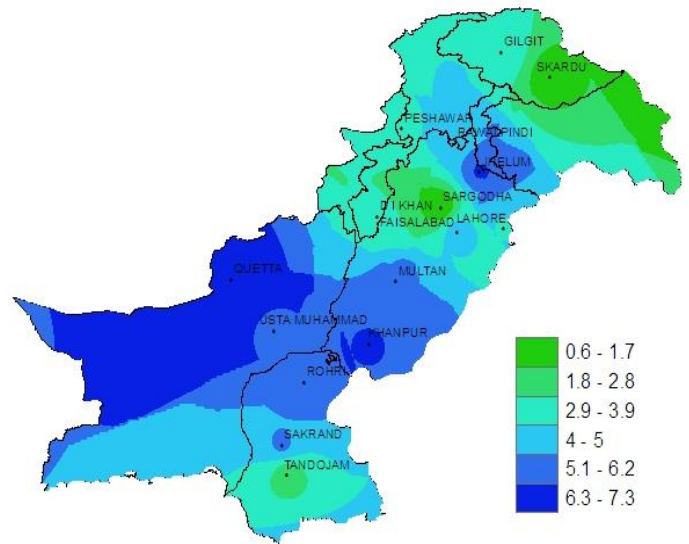


Figure.4: Reference Crop Evapotranspiration “ETo” in mm/day

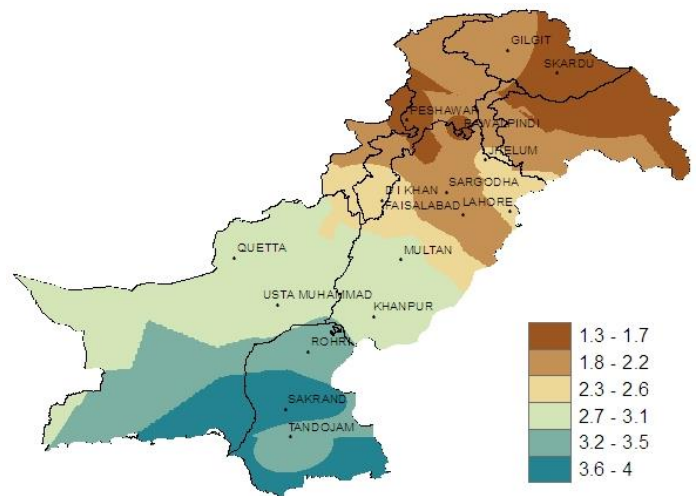


Figure 5: Wind Speed in kilometer per hour (km/h)

**2.12 Rohri**

Rainfall reported as 8.0mm during the decade, however weather remained cloudy for 07days. Average relative humidity recorded as 59%. Mean day temperature was 23.8°C while night temperature recorded as 11.5°C with 72.1hours bright sunshine duration. Wind speed recorded as 6.1km/hr with mean wind direction *north easterly*.

**2.13 D.I. Khan**

Rainfall reported as 39.0mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 75%. Mean day temperature was 19.4°C while night temperature recorded as 8.4°C with 50.4hours bright sunshine duration.

**2.14 Peshawar**

Rainfall reported as 102.0mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 80%. Mean day temperature was 16.7°C while night temperature recorded as 7.9°C with 28.0hours bright sunshine duration. Wind speed recorded as 3.5km/hr with mean wind direction *north westerly*.

**2.15 Skardu**

Rainfall reported as 6.9mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 57%. Mean day temperature was 9.1°C while night temperature recorded as -0.8°C with 30.3hours bright sunshine duration. Wind speed recorded as 0.9km/hr with mean wind direction *north westerly*.

**2.16 Gilgit**

Rainfall reported as 0.6mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 52%. Mean day temperature was 13.5°C while night temperature recorded as 2.6°C with 21.6 hours bright sunshine duration. Wind speed recorded as 3.8km/hr with mean wind direction *easterly*.

### **3. Ten Days Weather Advisory for Farmers** **(11<sup>th</sup> to 20<sup>th</sup> March, 2015)**

**3.1 Temperature Forecast**

Day and night temperatures are expected slightly normal in most of the agricultural plains of the country especially in upper parts 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:** Mostly cold and dry weather is expected in upper and central parts of Punjab during the decade. However light to moderate rainfall is expected in upper

and central parts of the province from 13th to 16th of the decade.

- ❖ **Khyber Pakhtunkhwa:** Mainly cold and dry weather is expected in the province. However light to moderate rainfall (with light snowfall over the hills) is expected from 14th to 17th of the decade.
- ❖ **Sindh:** Mainly dry weather is expected in most parts of the Sindh. However light to moderate rain is expected in few parts of Sindh Including Dadu, Ghotki, Larkana, Moen Jo Daro and Sukkur from 14th and 17th of the decade.
- ❖ **Balochistan:** Mainly cold and dry weather is expected in most parts of the Balochistan however light to moderate rain (with light snowfall over the hills) is expected at few parts of the province including Dalbandin, Zhob, Quetta from 13th and 16th of 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 during the decade.
- ❖ **Kashmir:** Mainly cold and cloudy weather is expected in most parts of the Kashmir. Widespread rain-thunderstorm (with snowfall over the hills) is expected in most parts of the Kashmir during mid of the decade.

**3.4 Advisory for Farmers**

- ❖ Wheat crop is in flowering/milk maturity/wax maturity stages. Farmers are advised to irrigate the crops keeping the expected rain in the agricultural plains of the country.
- ❖ Weeds are expected to shoot in excess after recent rains. Farmers should control weeds growth soon after rains.
- ❖ 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.
- ❖ Farmers of upper half and northwest Balochistan should be careful about irrigation and spraying chemicals on the crops.
- ❖ Farmers of irrigated/ barani areas are advised to remove weeds from the fields, so that the present soil moisture may fully be utilized.
- ❖ Farmers 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 along the rains expected in the decade.
- ❖ Farmers are advised to ensure field sanitation and spray prophylactic fungicidal sprays to prevent spread of diseases on vegetables.