

# Decadal Agromet Bulletin of Pakistan



## Highlights....

- ❖ Heavy rainfall reported in the agricultural plains of the K.P, G.B & Kashmir, light to moderate rainfall reported in Punjab & Balochistan and light rainfall reported in Sindh during the last decade.
- ❖ Highest amount of rainfall reported as 202.1mm at Parachinar during the last decade.
- ❖ Lowest minimum temperature recorded  $-8.5^{\circ}\text{C}$  at Kalam during the last decade.
- ❖ Light to moderate rainfall reported 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 heading/flowering stages. Farmers are advised to irrigate the crops keeping the expected rain in the agricultural plains of the country.
- ❖ 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 are advised to ensure field sanitation and spray prophylactic fungicidal sprays to prevent spread of diseases on vegetables.
- ❖ Farmers of upper half and northwest Balochistan should be careful about irrigation and spraying chemicals on the crops.

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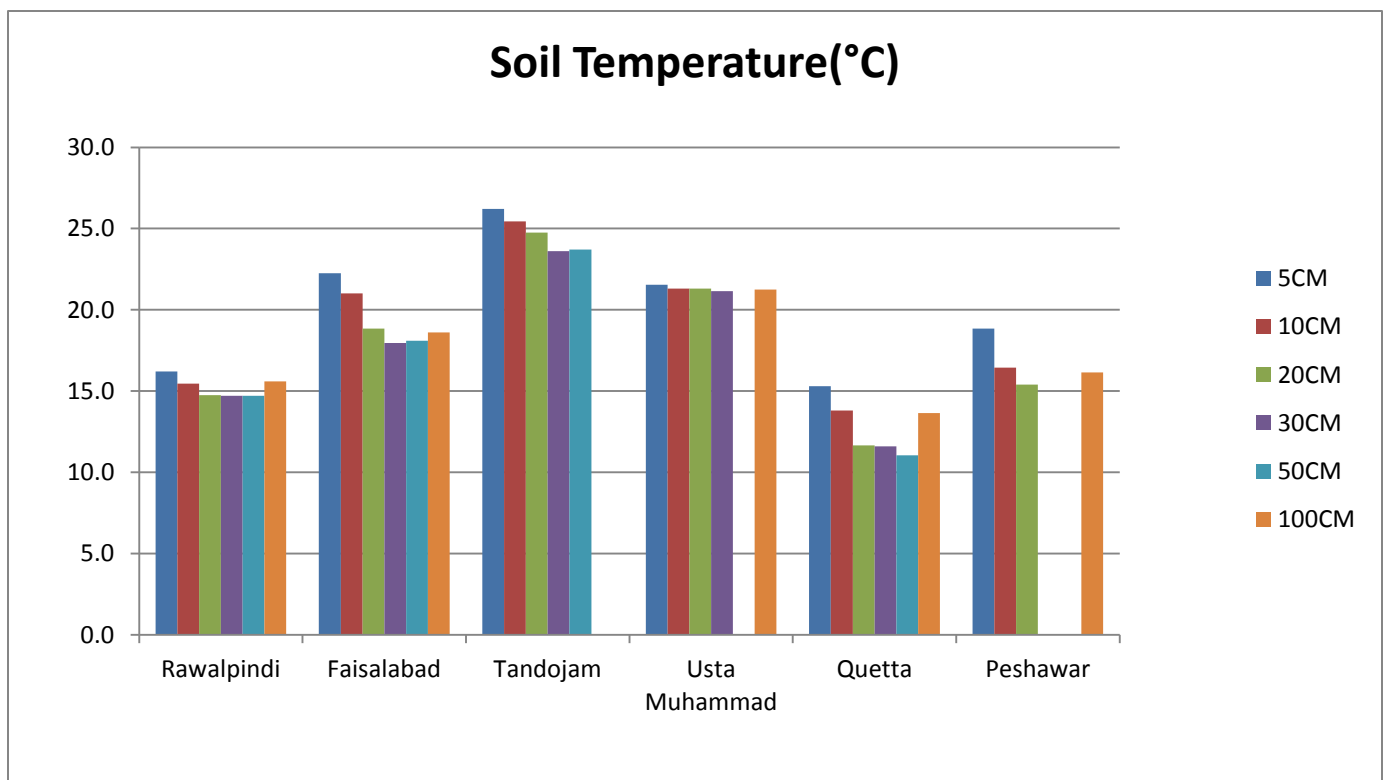
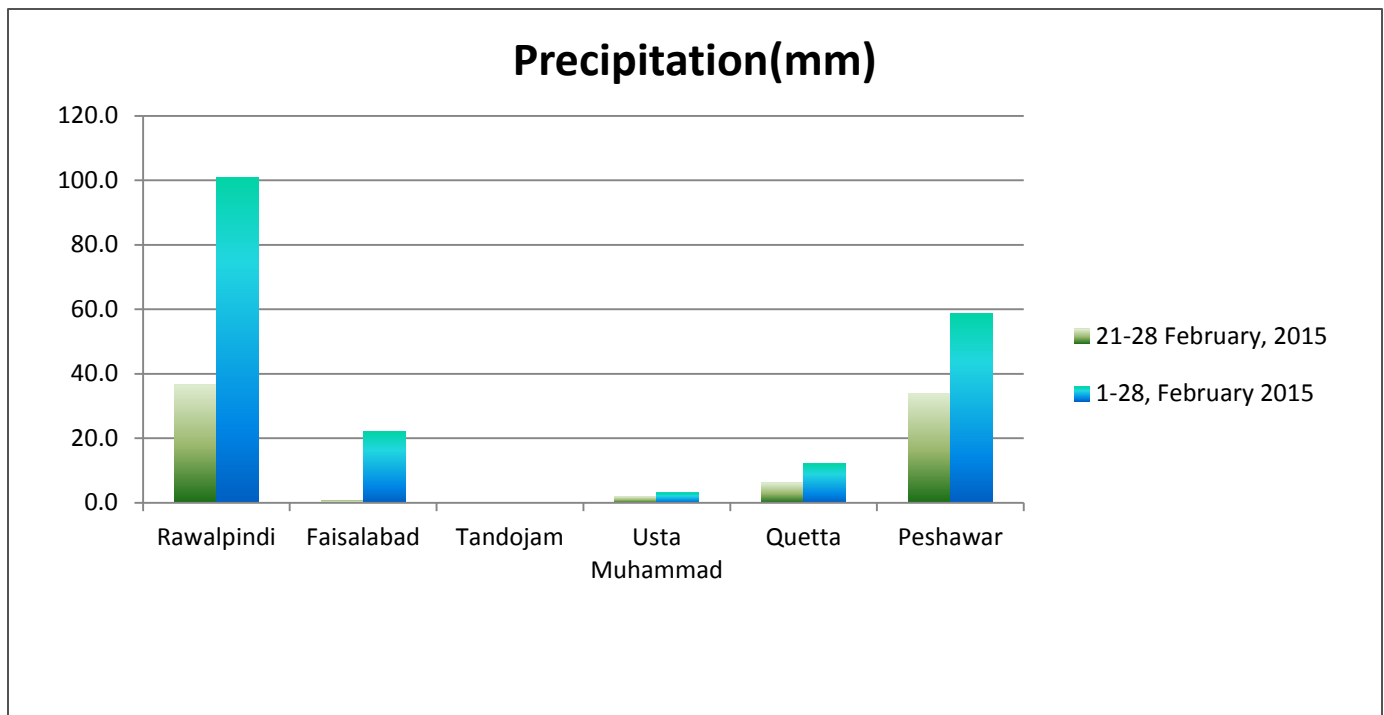
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Meteorological conditions during 3<sup>rd</sup> decade of February, 2015

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	1.4	36.6	35.2	-0.9	2.2	15.7	16.2	15.5	14.8	14.7	14.7	15.6	65	38.3	5.2	2.3
2	FAISALABAD	0.3	0.6	0.3	-1.8	1.3	17.4	22.3	21.0	18.9	18.0	18.1	18.6	65	42.6	3.5	2.3
3	JHELUM	1.0	10.6	9.6	-0.3	0.9	17.8	19.7	18.6	17.3	16.6	17.2	***	60	46.3	5.1	2.6
4	LAHORE	0.5	24.3	23.8	-0.9	-0.4	18.4	19.8	19.5	18.2	17.6	***	18.3	66	48.4	4.0	2.4
5	SARGODHA	0.3	5.7	5.4	-2.1	1.9	17.9	20.9	19.3	18.4	18.3	18.7	19.1	75	40.8	1.5	1.9
6	MULTAN	0.5	0.1	-0.4	-2.4	0.9	18.0	***	***	***	***	***	***	59	35.2	4.9	2.6
7	KHANPUR	0.1	0.1	0.0	-3.0	-0.7	17.9	***	21.3	21.7	22.1	22.6	22.5	62	40.7	6.6	3.0
8	TANDOJAM	0.0	0.0	0.0	-3.1	0.1	20.5	26.2	25.5	24.8	23.6	23.7	***	52	61.0	2.5	2.9
9	SAKRAND ☆	0.0	0.0	0.0	-2.8	-3.3	17.7	30.8	27.2	***	***	***	24.3	54	60.7	8.0	3.9
10	ROHRI	0.5	0.0	-0.5	-3.4	-0.1	20.3	25.4	23.8	22.0	22.5	21.1	24.6	47	57.0	6.3	3.6
11	DI KHAN	0.6	0.1	-0.5	-1.5	-0.8	16.2	***	***	***	***	***	***	63	42.6	4.5	2.8
12	PESHAWAR	1.9	33.9	32.0	-0.5	2.4	16.7	18.9	16.5	15.4	***	***	16.2	67	35.3	4.2	2.1
13	USTA MUHAMMAD	0.4	2.0	1.6	-4.1	-1.4	18.3	21.6	21.3	21.3	21.2	***	21.3	52	***	***	3.7
14	QUETTA	1.2	6.2	5.0	-4.9	-0.2	7.8	15.3	13.8	11.7	11.6	11.1	13.7	51	51.3	8.4	2.5
15	SKARDU	1.1	20.9	19.8	0.2	3.4	5.7	***	***	***	***	***	***	63	5.4	0.5	1.1
16	GILGIT	0.3	13.0	12.7	-1.5	2.4	9.7	***	***	***	***	***	***	56	8.2	3.9	1.8

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. 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 February, 2015



**Past Weather (21<sup>st</sup> to 28<sup>th</sup> February, 2015)**

Heavy rainfall reported in the agricultural plains of the K.P, G.B & Kashmir, light to moderate rainfall reported in Punjab & Balochistan and light rainfall reported in Sindh 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, Islamabad & Mangla. Decadal maximum dropped below normal by 1.6°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 65%, 41.8hrs, 4.4km/hr and 2.4mm/day respectively.

**1.2 Sindh**

Light rainfall reported in the agricultural plains of Sindh. Chief amount of rainfall received in Jacobabad, Larkana & Sukkur. Decadal maximum & minimum temperature both dropped below normal by 5.1°C and 1.1°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 51%, 59.6 hrs, 5.6km/hr and 3.5mm/day respectively.

**1.3 Khyber Pakhtunkhwa (KP)**

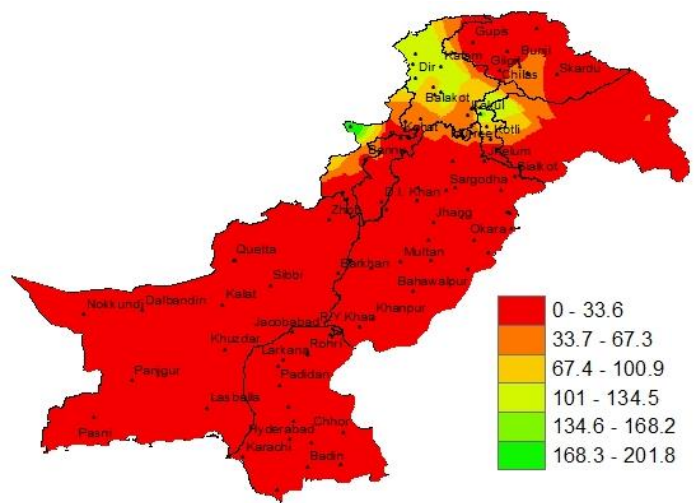
Heavy rainfall reported in the agricultural plains of KP. Chief amount of rainfall received in Parachinar, Malanjabba & Dir. Decadal maximum dropped below normal by 1.0°C & minimum temperature raised above normal by 0.8°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 65%, 39.0 hrs, 4.4km/hr and 2.5 mm/day respectively.

**1.4 Balochistan**

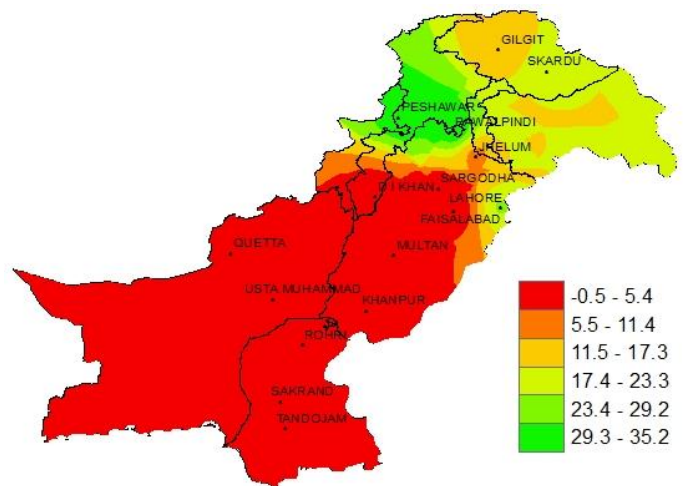
Light to moderate rainfall reported in the agricultural plains of Balochistan. Chief amount of rainfall received in Barkhan, Quetta & Dalbandin. Decadal maximum & minimum temperature both dropped below normal by 4.5°C and 0.8°C respectively, in the province. Relative humidity, sunshine hour, wind speed & ETo were recorded as 52%, 51.3hrs, 8.4km/hr and 3.1mm/day respectively.

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

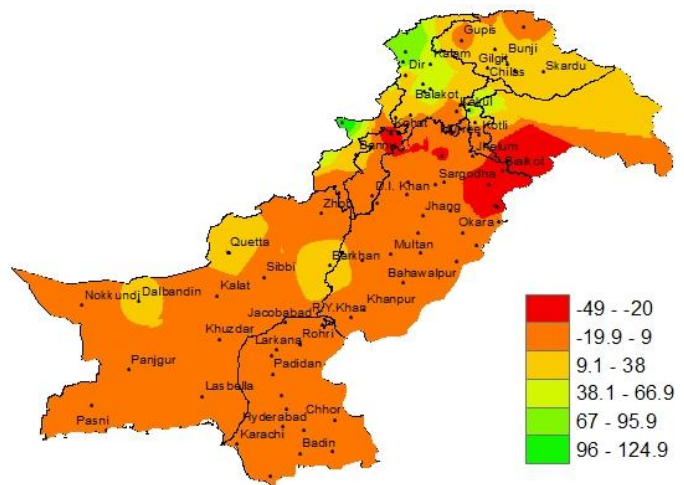
Heavy rainfall reported in the agricultural plains of GB & Kashmir. Chief amount of rainfall received in Garhidopatta, Rawalakot & Muzaffarabad. Decadal maximum dropped below normal by 0.7°C & minimum raised above normal by 2.9°C, in the province. Relative humidity, sunshine hour, wind speed & ETo were recorded as 60%, 6.8hrs, 2.2km/hr and 1.5mm/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  
(21<sup>st</sup> to 28<sup>th</sup> February, 2015)**

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

Rainfall reported as 36.6mm during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 65%. Mean day temperature was 21.2°C while night temperature recorded as 10.2°C with 38.3hours bright sunshine duration. Wind speed recorded as 5.2km/hr with mean wind direction *Westerly*.

**Wheat (Chakwal-97):** poor condition, 9<sup>th</sup> leaf stage.

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

Rainfall reported as 0.6mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 65%. Mean day temperature was 23.2°C while night temperature recorded as 11.6°C with 42.5hours bright sunshine duration. Wind speed recorded as 3.5km/hr with mean wind direction *north westerly*.

**Wheat:** Excellent condition, Heading.

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

Dry weather reported during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 52%. Mean day temperature was 27.6°C while night temperature recorded as 13.4°C with 61.0hours bright sunshine duration. Wind speed recorded as 2.5km/hr with mean wind direction *northerly*.

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

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

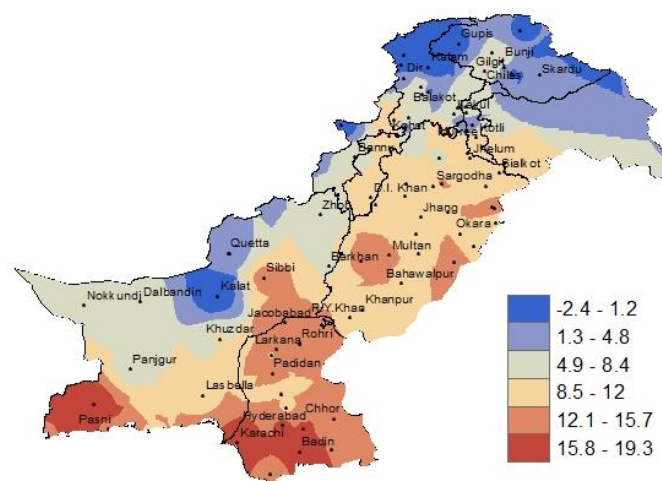
Rainfall reported as 2.0mm during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 52%. Mean day temperature was 25.1°C while night temperature recorded as 11.5°C.

**Wheat (Zardana):** Good condition, Heading.

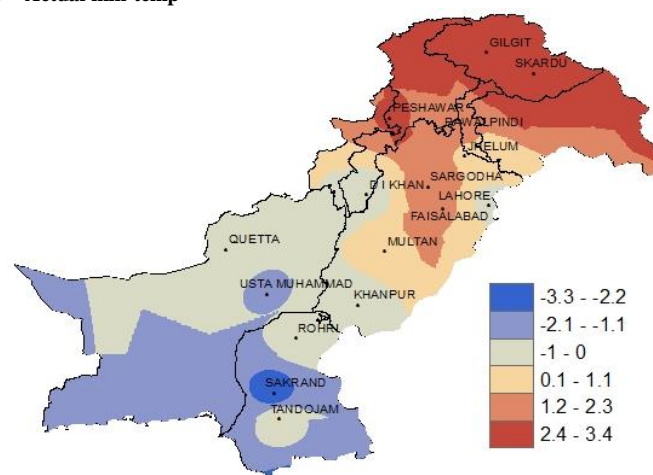
2.5 **RAMC, Quetta (Northern Balochistan)**

Rainfall reported as 6.2mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 51%. Mean day temperature was 12.1°C while night temperature recorded as 3.4°C with 51.3 hours bright sunshine duration and wind speed recorded as 8.4km/hr with mean wind direction *southerly*.

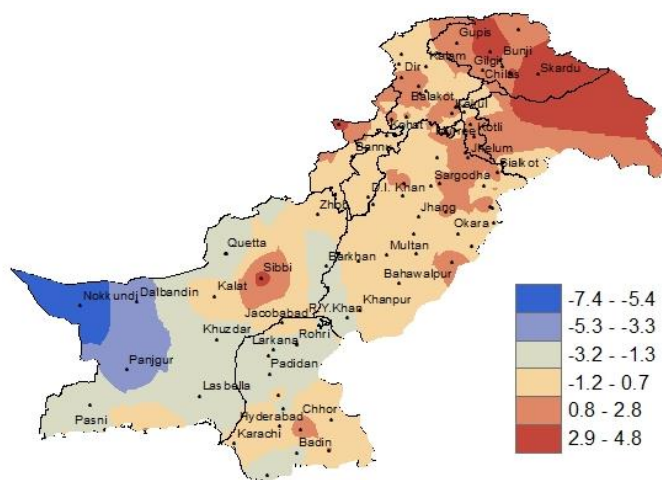
**Wheat:** Good condition, Tillering.



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 (21<sup>st</sup> to 28<sup>th</sup> February, 2015)**

2.6 **Jhelum**

Rainfall reported as 10.6mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 60%. Mean day temperature was 23.9°C while night temperature recorded as 11.6°C with 46.3 hours bright sunshine duration and wind speed recorded as 5.1 km/hr with mean wind direction *north westerly*.

2.7 **Lahore**

Rainfall reported as 24.3mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 66%. Mean day temperature was 23.5°C while night temperature recorded as 13.2°C with 48.4hours bright sunshine duration. Wind speed recorded as 4.0km/hr with mean wind direction *north easterly*.

2.8 **Sargodha**

Rainfall reported as 5.7mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 75%. Mean day temperature was 22.9°C while night temperature recorded as 12.8°C with 40.8hours bright sunshine duration. Wind speed recorded as 1.5km/h with mean wind direction *variable*.

2.9 **Multan**

Rainfall reported as Trace (not measureable) during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 59%. Mean day temperature was 23.5°C while night temperature recorded as 12.4°C with 35.2 hours bright sunshine duration. Wind speed recorded 4.9km/hr with mean wind direction *north easterly*.

2.10 **Khanpur**

Rainfall reported as Trace (not measureable) during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 62%. Mean day temperature was 24.5°C while night temperature recorded as 11.2°C with 40.7hours bright sunshine duration. Wind speed recorded 6.6km/hr with mean wind direction *north easterly*.

2.11 **Sakrand**

Dry weather reported during the decade however weather remains cloudy for 06days. Average relative humidity recorded as 54%. Mean day temperature was 26.4°C while night temperature recorded as 8.9°C with 60.7hours bright sunshine duration. Wind speed recorded 8.0km/hr with wind direction *variable*.

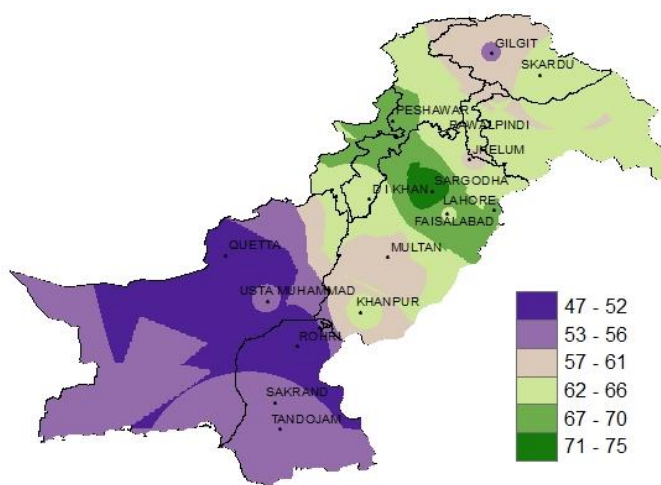


Figure.3: Relative Humidity in percentage (%)

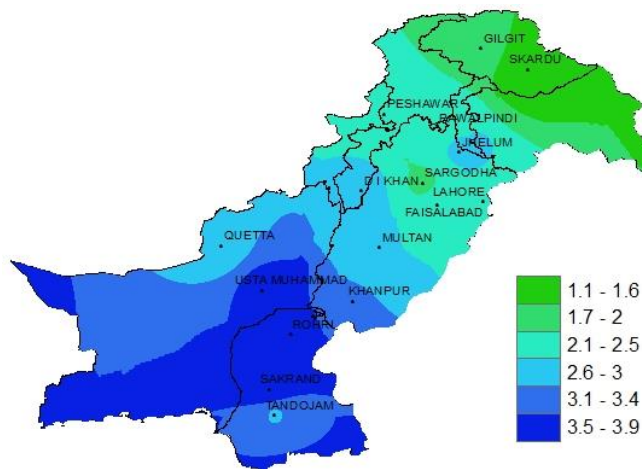


Figure.4: Reference Crop Evapotranspiration "ETo" in mm/day

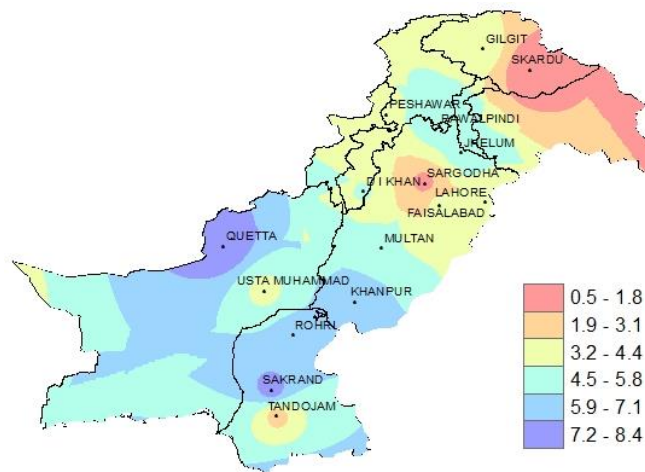


Figure 5: Wind Speed in kilometer per hour (km/h)

**2.12 Rohri**

Dry weather reported during the decade, however weather remained cloudy for 04days. Average relative humidity recorded as 47%. Mean day temperature was 25.4°C while night temperature recorded as 15.1°C with 57.0hours bright sunshine duration. Wind speed recorded as 6.3km/hr with mean wind direction *north easterly*.

**2.13 D.I. Khan**

Rainfall reported as Trace (not measureable) during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 63%. Mean day temperature was 22.9°C while night temperature recorded as 9.5°C with 42.6hours bright sunshine duration.

**2.14 Peshawar**

Rainfall reported as 33.9mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 67%. Mean day temperature was 21.3°C while night temperature recorded as 12.1°C with 35.3hours bright sunshine duration. Wind speed recorded as 4.2km/hr with mean wind direction *north westerly*.

**2.15 Skardu**

Rainfall reported as 20.9mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 63%. Mean day temperature was 9.5°C while night temperature recorded as 1.8°C with 5.4hours bright sunshine duration. Wind speed recorded as 0.5km/hr with mean wind direction *South easterly*.

**2.16 Gilgit**

Rainfall reported as 13.0mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 56%. Mean day temperature was 14.3°C while night temperature recorded as 5.0°C with 8.2 hours bright sunshine duration. Wind speed recorded as 3.9km/hr with mean wind direction *easterly*.

### **3. Ten Days Weather Advisory for Farmers (1<sup>st</sup> to 10<sup>th</sup> March, 2015)**

**3.1 Temperature Forecast**

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 cloudy weather is expected in upper and central parts of Punjab during the decade. However light to moderate rainfall is expected in most parts of the province during the decade.
- ❖ **Khyber Pakhtunkhwa:** Mainly cold and cloudy weather is expected in the province. However light to moderate rainfall (with light snowfall over the hills) is expected in decade.
- ❖ **Sindh:** Mainly dry weather is expected in most parts of the Sindh however light to moderate rain is expected in mid of the decade.
- ❖ **Balochistan:** Mainly cold and cloudy weather is expected in most parts of the Balochistan however light to moderate rain (with light snowfall over the hills) is expected in mid 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 the decade.

**3.4 Advisory for Farmers**

- ❖ Wheat crop is in heading/flowering stages. Farmers are advised to irrigate the crops keeping the expected rain in the agricultural plains of the country.
- ❖ Farmers of upper half and northwest Balochistan should be careful about irrigation and spraying chemicals on the crops.
- ❖ 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 are advised to ensure field sanitation and spray prophylactic fungicidal sprays to prevent spread of diseases on vegetables.