

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 113.0mm at Rawalakot during the last decade.
- ❖ Lowest minimum temperature recorded -3.3°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 & light rainfall reported in Sindh is expected during the 2nd half of decade.
- ❖ Wheat crop is in different 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 during or before expected rains during the decade.

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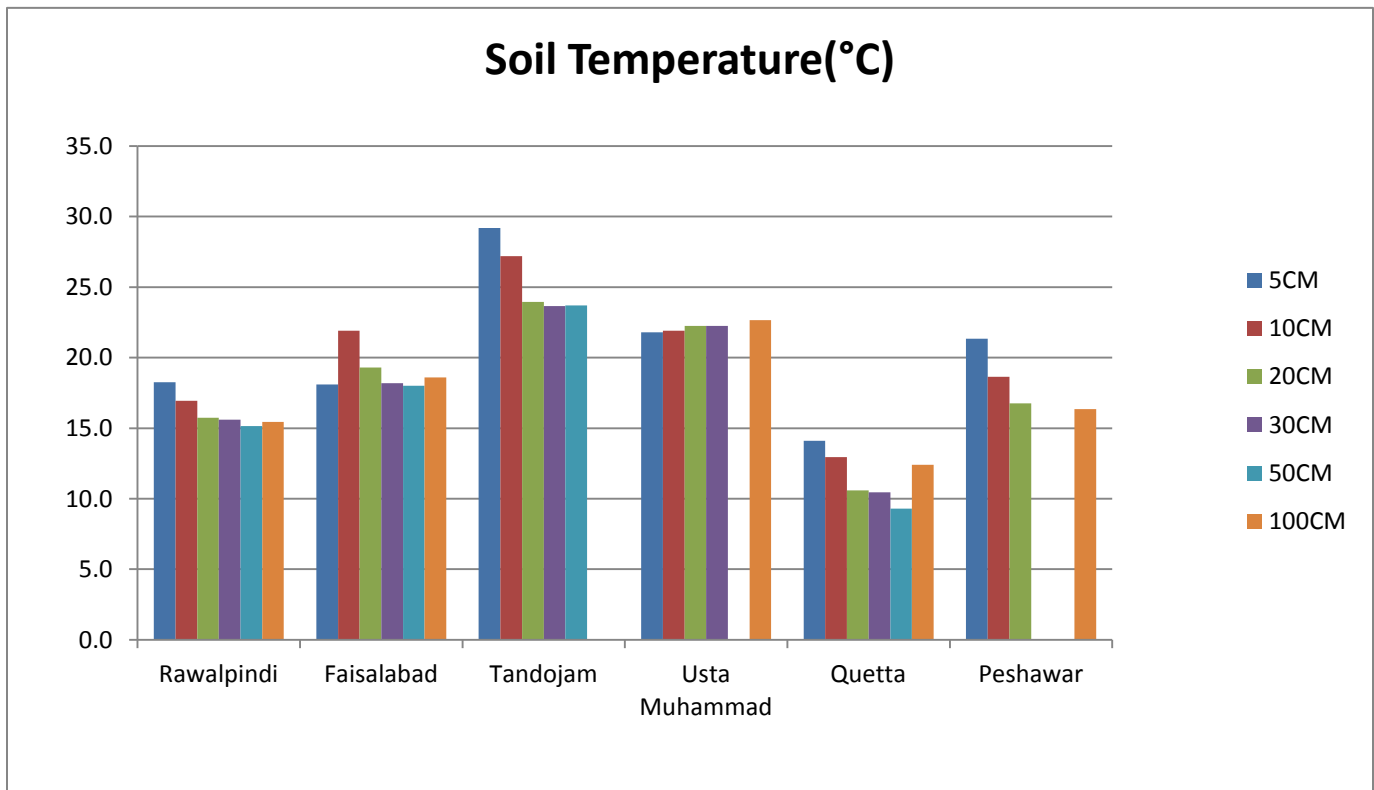
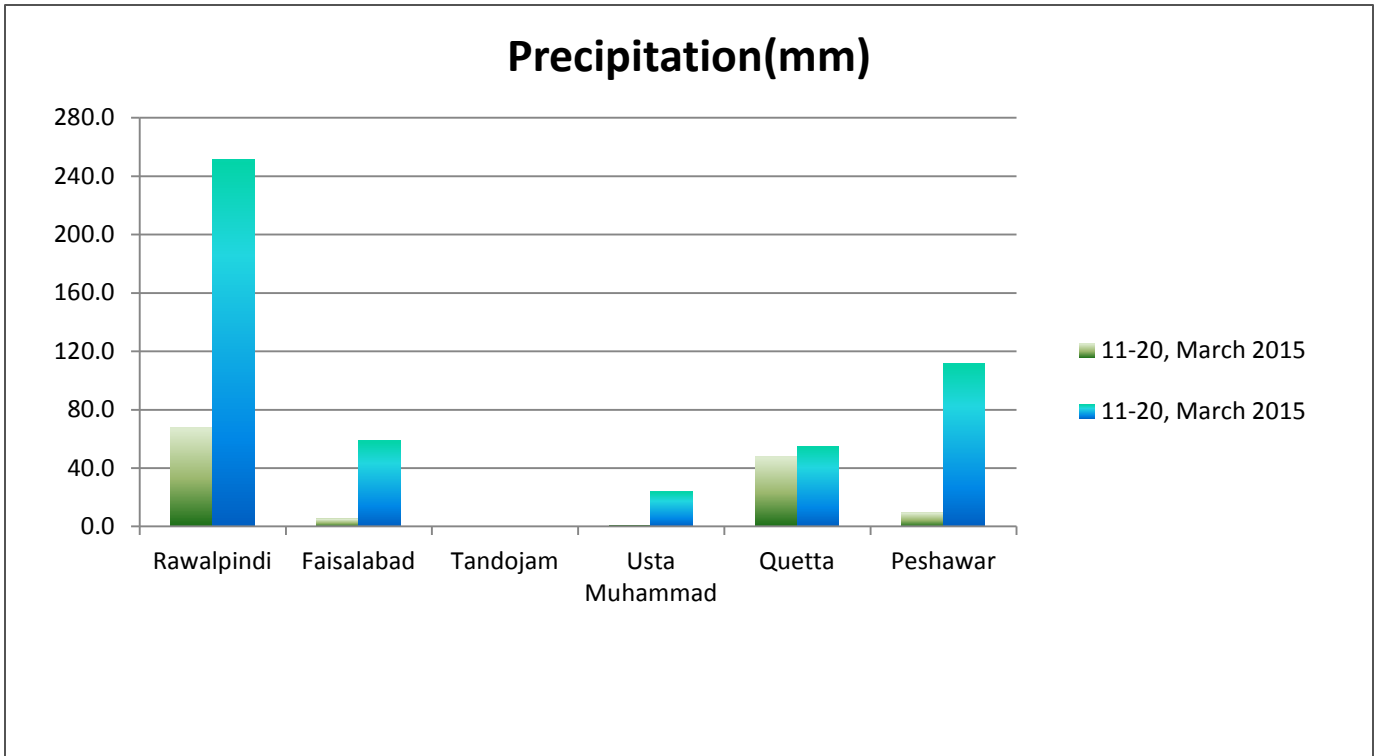
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Meteorological conditions during 2nd decade of March, 2015

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	2.0	67.6	65.6	-3.6	-0.4	17.2	18.3	17.0	15.8	15.6	15.2	15.5	60	71.0	4.4	3.1
2	FAISALABAD	0.6	5.2	4.6	-4.0	-2.1	18.7	18.1	21.9	19.3	18.2	18.0	18.6	64	65.4	2.8	2.9
3	JHELUM	1.5	56.2	54.7	-3.2	-1.8	19.0	21.1	19.6	18.1	17.3	17.6	***	61	61.0	4.8	3.2
4	LAHORE	0.7	72.0	71.3	-9.2	-6.8	15.2	17.6	17.2	16.8	16.4	***	18.2	73	44.6	3.8	2.3
5	SARGODHA	1.1	22.2	21.1	-4.9	-1.7	19.3	22.1	20.3	18.0	17.6	17.8	18.1	73	56.4	0.7	2.4
6	MULTAN	0.4	55.0	54.6	-4.7	-1.7	19.9	***	***	***	***	***	***	61	70.0	3.6	3.3
7	KHANPUR	0.4	4.8	4.4	-3.9	-2.0	20.6	***	21.8	21.8	22.0	21.4	22.6	50	77.8	5.4	4.1
8	TANDOJAM	0.9	0.1	-0.8	-3.3	-2.9	22.4	29.2	27.2	24.0	23.7	23.7	***	48	86.6	1.7	3.7
9	SAKRAND ☆	0.8	0.1	-0.7	-3.0	-3.8	19.9	34.5	28.4	***	***	***	24.5	50	98.1	5.4	4.6
10	ROHRI	0.0	3.3	3.3	-5.3	-2.0	22.0	30.3	27.5	23.8	23.8	21.6	24.6	61	88.3	2.6	3.6
11	DI KHAN	1.1	18.0	16.9	-3.6	-3.8	17.8	***	***	***	***	***	***	67	62.6	***	3.4
12	PESHAWAR	2.0	9.4	7.4	-1.8	-2.1	18.5	21.4	18.7	16.8	***	***	16.4	64	56.9	2.2	2.6
13	USTA MUHAMMAD	0.7	0.5	-0.2	-5.4	-2.7	19.7	21.8	21.9	22.3	22.3	***	22.7	52	***	***	4.2
14	QUETTA	0.6	47.7	47.1	-6.9	-1.0	10.1	14.1	13.0	10.6	10.5	9.3	12.4	55	53.8	5.2	2.6
15	SKARDU	0.8	0.0	-0.8	-8.5	-0.2	3.5	***	***	***	***	***	***	42	49.9	2.2	1.8
16	GILGIT	0.4	0.0	-0.4	-0.2	-1.0	12.6	***	***	***	***	***	***	32	54.2	4.1	3.0

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 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 (11th to 20th 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 MandiBahu Din, Islamabad & G.G Khan. Decadal maximum & minimum temperature departure both dropped below normal by 4.8°C & 2.4°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETO were recorded as 63%, 63.7hrs, 3.6km/hr and 3.0mm/day respectively.

1.2 Sindh

Light to moderate rainfall reported in the agricultural plains of Sindh. Chief amount of rainfall received in Larkana, Dadu & Rohri. Decadal maximum & minimum temperature departure both dropped below normal by 3.9°C & 2.9°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETO were recorded as 53%, 91.0hrs, 3.2km/hr and 4.0mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

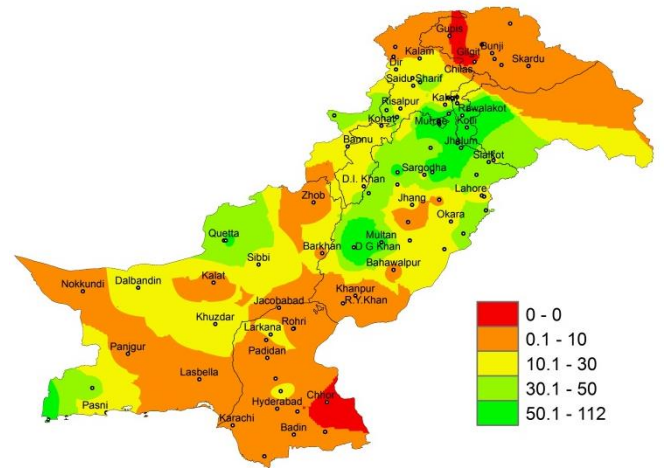
Light to moderate rainfall reported in the agricultural plains of KP. Chief amount of rainfall received in Parachinar, Malamjabba & Peshawar. Decadal maximum & minimum temperature departure both dropped below normal by 2.7°C & 3.0°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETO were recorded as 66%, 59.8hrs, 2.2km/hr and 3.0mm/day respectively.

1.4 Balochistan

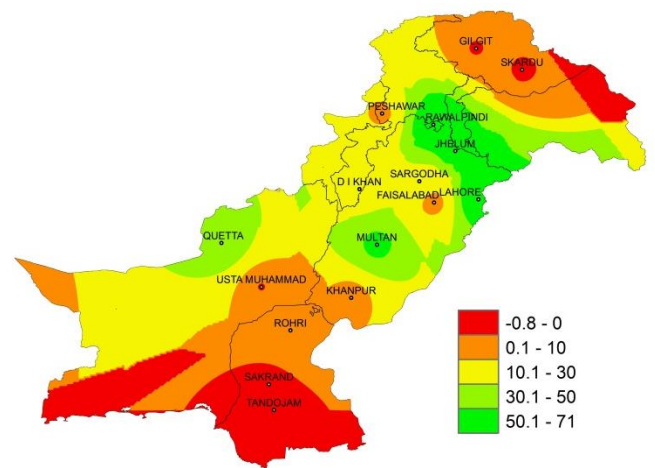
Light to moderate rainfall reported in the agricultural plains of Balochistan. Chief amount of rainfall received in Jiwani, Quetta & Turbat. Decadal maximum & minimum temperature departure both dropped below normal by 6.2°C & 1.9°C respectively, in the province. Relative humidity, sunshine hour, wind speed & ETO were recorded as 54%, 53.8hrs, 5.2km/hr and 3.4mm/day respectively.

1.5 Gilgit-Baltistan and Azad Jammu & Kashmir

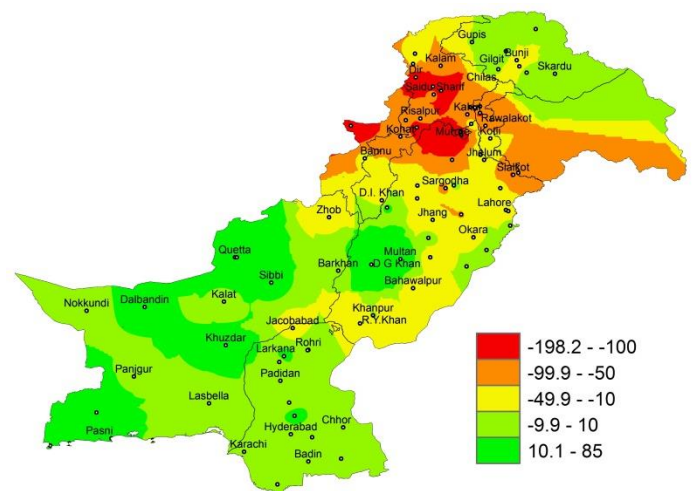
Light to moderate rainfall reported in the agricultural plains of GB & Kashmir. Chief amount of rainfall received in Rawalakot, Kotli & Garhidopatta. Decadal maximum & minimum temperature departure both dropped below normal by 4.4°C & 0.6°C respectively, in the province. Relative humidity, sunshine hour, wind speed & ETO were recorded as 37%, 52.1hrs, 3.2km/hr and 2.4mm/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 March, 2015)**

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

Rainfall reported as 67.6mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 60%. Mean day temperature was 23.5°C while night temperature recorded as 10.9°C with 71.0hours bright sunshine duration. Wind speed recorded as 4.4km/hr with mean wind direction *westerly*.

Wheat (Chakwal-97): Fair condition, teslling stage.

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

Rainfall reported as 5.2mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 64%. Mean day temperature was 25.4°C while night temperature recorded as 12.0°C with 65.41hours bright sunshine duration. Wind speed recorded as 2.8km/hr with mean wind direction *north westerly*.

Wheat: very good condition, flowering stage.

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

Rainfall reported as Trace (not measureable) during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 48%. Mean day temperature was 31.6°C while night temperature recorded as 13.1°Cwith 86.6hours bright sunshine duration. Wind speed recorded as 1.7km/hr with mean wind direction *northerly*.

Wheat (TJ-83): Good condition, full maturity stage.

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

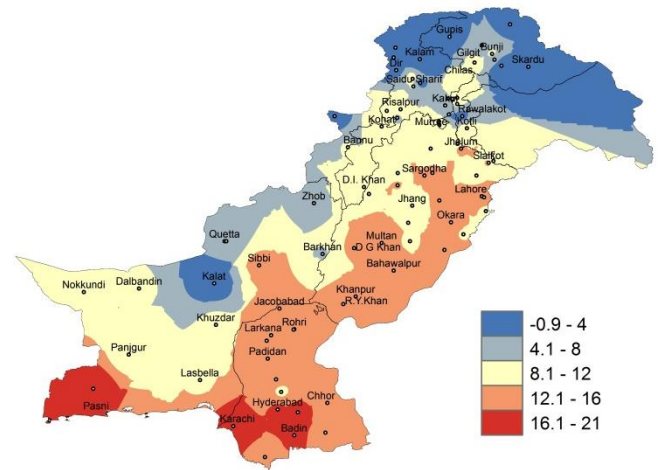
Rainfall reported as 0.5mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 52%. Mean day temperature was 26.3°C while night temperature recorded as 13.1°C.

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

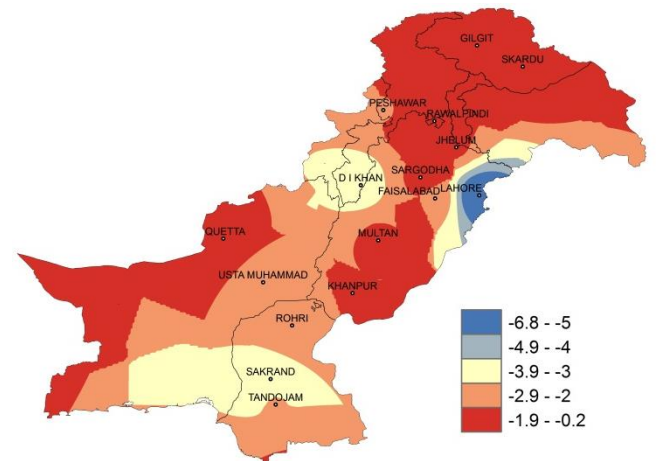
2.5 **RAMC, Quetta (Northern Balochistan)**

Rainfall reported as 47.7mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 55%. Mean day temperature was 14.9°C while night temperature recorded as 5.2°C with 53.8 hours bright sunshine duration and wind speed recorded as 5.2km/hr with mean wind direction *southerly*.

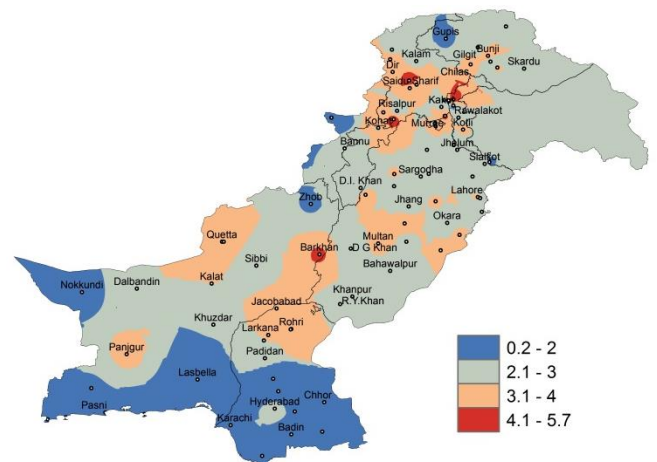
Wheat: Good condition, Tillering.



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 (11th to 20th March, 2015)**

2.6 **Jhelum**

Rainfall reported as 56.2mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 61%. Mean day temperature was 25.8°C while night temperature recorded as 12.2°C with 61.0 hours bright sunshine duration and wind speed recorded as 4.8km/hr with mean wind direction *south westerly*.

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 22.2mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 73%. Mean day temperature was 25.1°C while night temperature recorded as 13.4°C with 56.4hours bright sunshine duration. Wind speed recorded as 0.7km/h with mean wind direction *variable*.

2.9 **Multan**

Rainfall reported as 55.0mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 61%. Mean day temperature was 26.0°C while night temperature recorded as 13.8°C with 70.0 hours bright sunshine duration. Wind speed recorded 3.6km/hr with mean wind direction *variable*.

2.10 **Khanpur**

Rainfall reported 4.8mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 50%. Mean day temperature was 27.6°C while night temperature recorded as 13.5°C with 77.8hours bright sunshine duration. Wind speed recorded 5.4km/hr with mean wind direction *north easterly*.

2.11 **Sakrand**

Rainfall reported as Trace (not measurable) during the decade however weather remains cloudy for 06days. Average relative humidity recorded as 50%. Mean day temperature was 29.6°C while night temperature recorded as 10.2°C with 98.1hours bright sunshine duration. Wind speed recorded 5.4km/hr with wind direction *northerly*

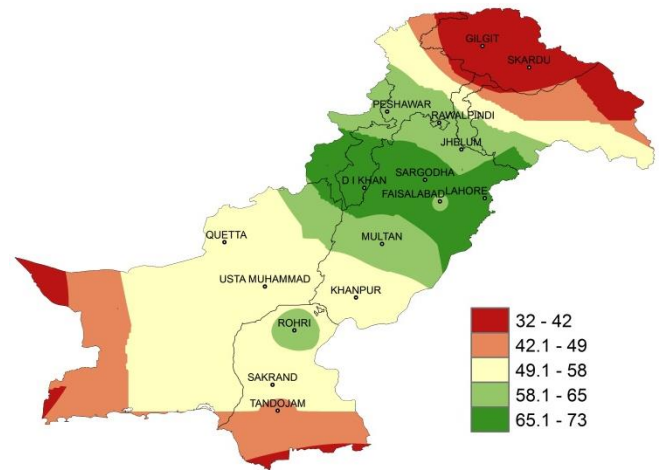


Figure.3: Relative Humidity in percentage (%)

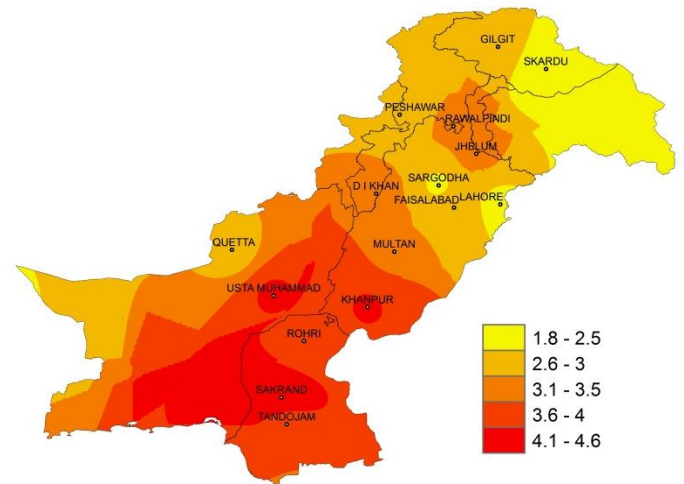


Figure.4: Reference Crop Evapotranspiration “ETo” in mm/day

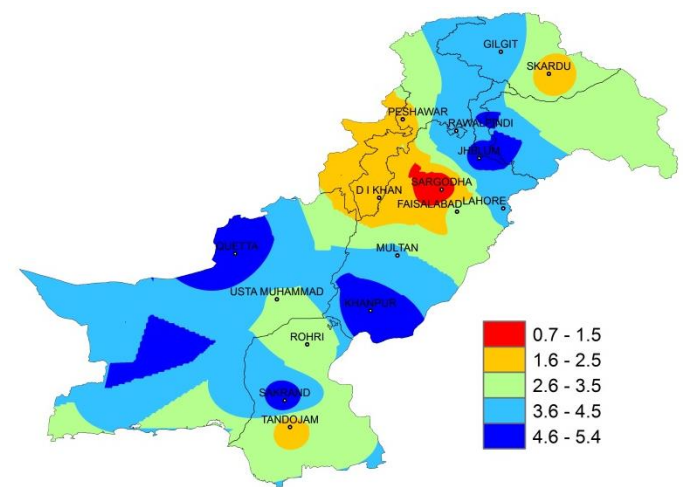


Figure 5: Wind Speed in kilometer per hour (km/h)

2.12 Rohri

Rainfall reported as 3.3mm during the decade, however weather remained cloudy for 06days. Average relative humidity recorded as 61%. Mean day temperature was 27.7°C while night temperature recorded as 16.3°C with 88.3hours bright sunshine duration. Wind speed recorded as 2.6km/hr with mean wind direction *north easterly*.

2.13 D.I. Khan

Rainfall reported as 18.0mm during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 67%. Mean day temperature was 25.1°C while night temperature recorded as 10.4°C with 62.6hours bright sunshine duration.

2.14 Peshawar

Rainfall reported as 9.4mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 64%. Mean day temperature was 25.2°C while night temperature recorded as 11.7°C with 56.9hours bright sunshine duration. Wind speed recorded as 2.2km/hr with mean wind direction *south westerly*.

2.15 Skardu

Dry weather reported during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 42%. Mean day temperature was 6.0°C while night temperature recorded as 1.7°C with 49.9hours bright sunshine duration. Wind speed recorded as 2.2km/hr with mean wind direction *southerly*.

2.16 Gilgit

Dry weather reported during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 32%. Mean day temperature was 20.3°C while night temperature recorded as 4.8°C with 54.2hours bright sunshine duration. Wind speed recorded as 4.1km/hr with mean wind direction *easterly*.

3. Ten Days Weather Advisory for Farmers**(21st to 31st 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 dry weather is expected during the decade. However light to moderate rainfall is expected in

upper and central parts of the province from 27th to 31st of the decade.

- ❖ **Khyber Pakhtunkhwa:** Mainly cold and dry weather is expected in the province. However light to moderate rainfall is expected in 2nd half of decade.
- ❖ **Sindh:** Mainly dry weather is expected in most parts of the Sindh. However light to moderate rain is expected in few places including Dadu, Ghotki, Larkana, Moen Jo Daro and Sukkur from 28th and 30th of the decade.
- ❖ **Balochistan:** Mainly dry weather is expected in most parts of the Balochistan however light to moderate rain is expected at few places of the province including Kalat, Khuzdar, Zhob, Quetta from 26th to 28th of March 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 during 2nd half of the decade.
- ❖ **Kashmir:** Widespread rain-thunderstorm is expected in most parts of the Kashmir during 2nd half of the decade. Whereas mostly dry weather is expected during first half of the decade.

3.4 Advisory for Farmers

- ❖ Wheat crop is in different 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 during or before expected rains during the decade.