

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light to moderate rainfall reported in the agricultural plains of Punjab, K.P, Balochistan, G.B & Kashmir however dry weather reported in the agricultural plains of the Sindh during the last decade.
- ❖ Highest amount of rainfall reported as 55.0mm at Muzzaffarabad during the last decade.
- ❖ Lowest minimum temperature recorded -10.0°C at Parachinar during the last decade.
- ❖ Wheat crop is in tillering/shooting/heading 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 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.
- ❖ Farmers are advised to ensure field sanitation and spray prophylactic fungicidal sprays to prevent spread of diseases on vegetables.

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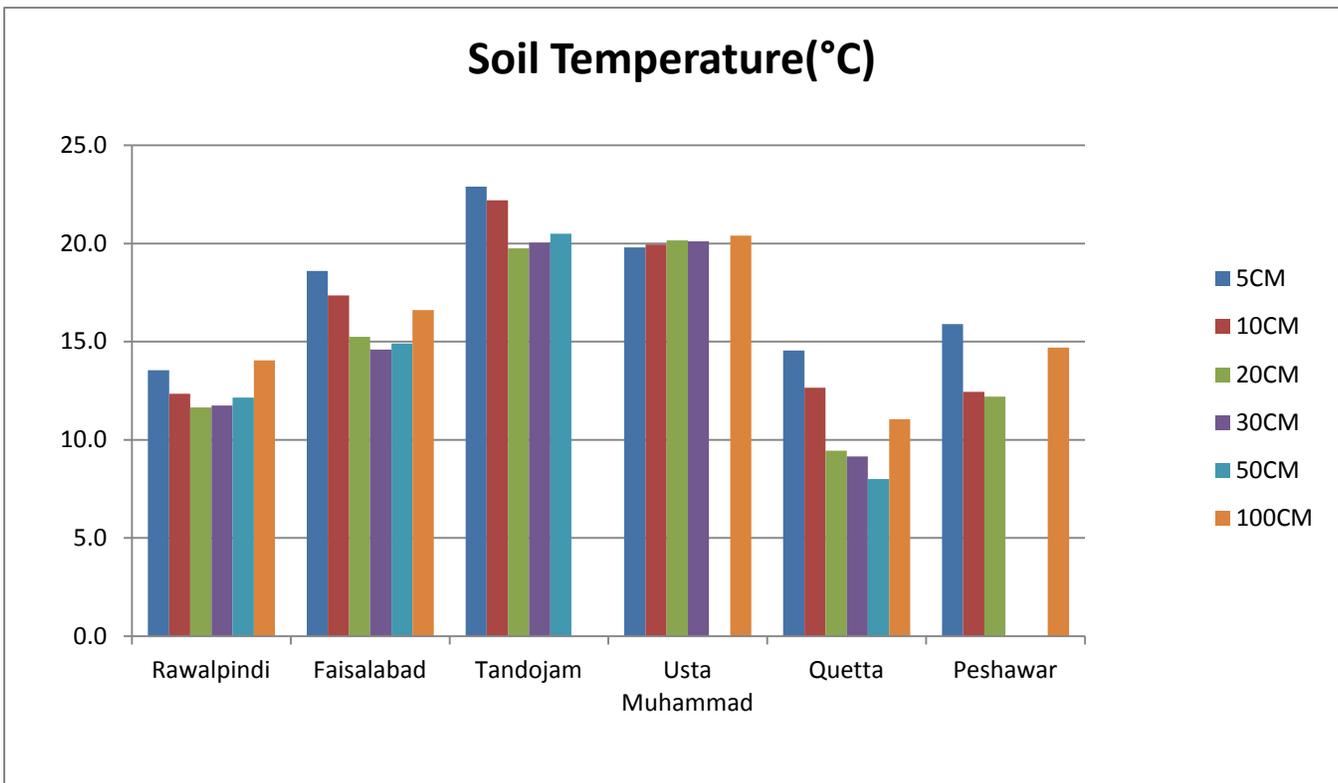
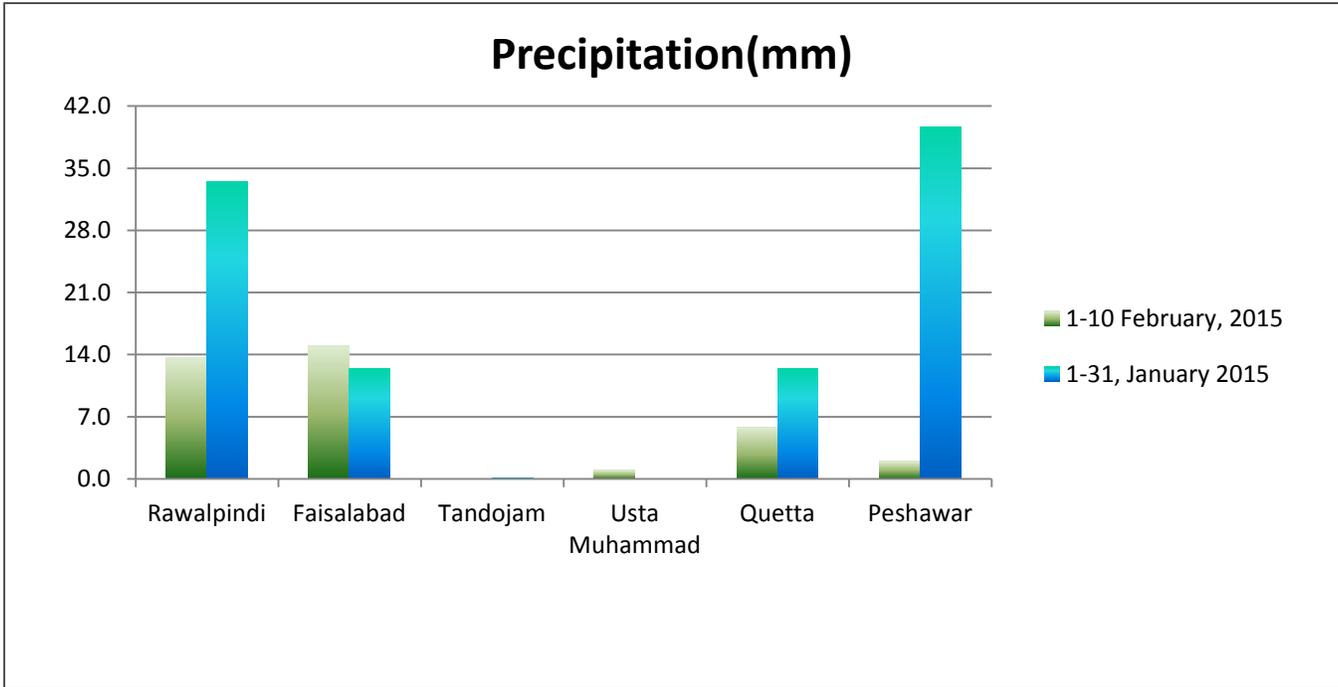
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Meteorological conditions during 1st decade of February, 2015

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	Tmin	Mean	5cm	10cm	20cm	30cm	50cm	100cm				
1	RAWALPINDI	3.2	13.7	10.5	0.5	1.7	12.9	13.6	12.4	11.7	11.8	12.2	14.1	60	56.4	3.5	1.8
2	FAISALABAD	0.7	15.0	14.3	0.4	1.5	14.6	18.6	17.4	15.3	14.6	14.9	16.6	65	61.6	2.1	1.8
3	JHELUM	1.8	3.2	1.4	1.0	-0.9	14.0	15.5	14.6	13.6	13.3	14.4	***	59	56.3	2.3	1.7
4	LAHORE	0.9	26.7	25.8	-0.3	-0.6	15.0	15.8	15.3	14.2	14.0	***	16.5	67	69.8	3.0	1.9
5	SARGODHA	1.0	2.0	1.0	0.1	1.3	14.8	18.2	16.2	15.1	16.0	16.1	17.4	69	50.6	0.7	1.5
6	MULTAN	0.7	4.9	4.2	-0.9	1.3	14.8	***	***	***	***	***	***	64	53.7	4.2	2.1
7	KHANPUR	0.9	0.0	-0.9	-1.1	-0.3	15.1	***	16.9	17.2	17.6	18.3	19.6	67	61.5	5.4	2.4
8	TANDOJAM	0.0	0.0	0.0	-0.3	1.2	18.1	22.9	22.2	19.8	20.1	20.5	***	58	87.3	1.9	2.5
9	SAKRAND ☆	0.1	0.0	-0.1	-0.5	-1.2	15.1	25.6	21.7	***	***	***	22.6	57	94.6	7.2	3.4
10	ROHRI	0.4	7.0	6.6	-1.7	0.3	17.5	23.8	22.0	19.4	20.5	18.8	23.6	61	81.7	3.6	2.6
11	DI KHAN	1.3	9.2	7.9	-0.7	-0.4	13.3	***	***	***	***	***	***	66	55.0	3.3	2.4
12	PESHAWAR	2.5	2.0	-0.5	1.2	-0.3	13.2	15.9	12.5	12.2	***	***	14.7	59	45.2	2.3	1.6
13	USTA MUHAMMAD	0.2	1.0	0.8	-1.7	0.5	16.1	19.8	20.0	20.2	20.1	***	20.4	59	***	***	3.0
14	QUETTA	1.8	5.8	4.0	2.2	2.3	8.2	14.6	12.7	9.5	9.2	8.0	11.1	42	76.2	4.5	2.2
15	SKARDU	0.8	6.0	5.2	-5.4	12.6	3.9	***	***	***	***	***	***	52	44.1	0.2	1.0
16	GILGIT	0.1	0.1	0.0	-1.1	-1.3	4.6	***	***	***	***	***	***	54	45.5	2.9	1.5

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 (1st to 10th February, 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 Lahore, Murree & Okara. Decadal maximum remains normal & minimum raised above normal by 0.6°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 64%, 58.6hrs, 3.0km/hr and 1.9mm/day respectively.

1.2 Sindh

Light to moderate rainfall reported in the agricultural plains of Sindh. Chief amount of rainfall received in Moen Jo Daro, Sukkur, Larkana. Decadal maximum dropeed below normal by 0.8°C & minimum temperature raised above normal by 0.1°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 59%, 87.9hrs, 4.2km/hr and 2.8mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

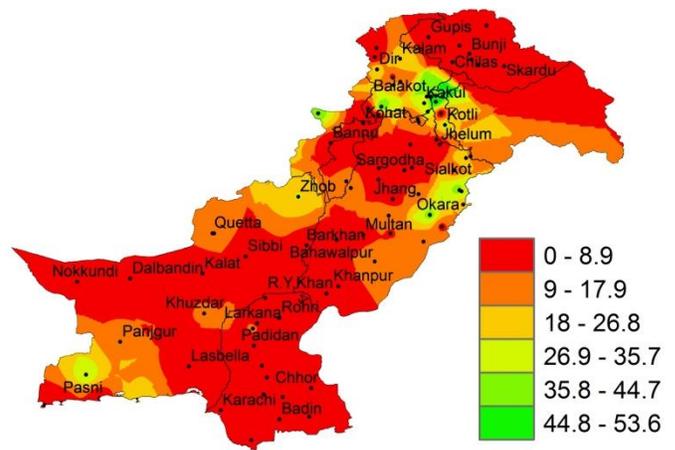
Light to moderate rainfall reported in the agricultural plains of KP. Chief amount of rainfall received in Parachinar, Pattan & Balakot. Decadal maximum raised above normal by 0.3°C & minimum temperature dropped below normal by 2.1°C & 0.4°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 63%, 50.1hrs, 2.8km/hr and 2.0mm/day respectively.

1.4 Balochistan

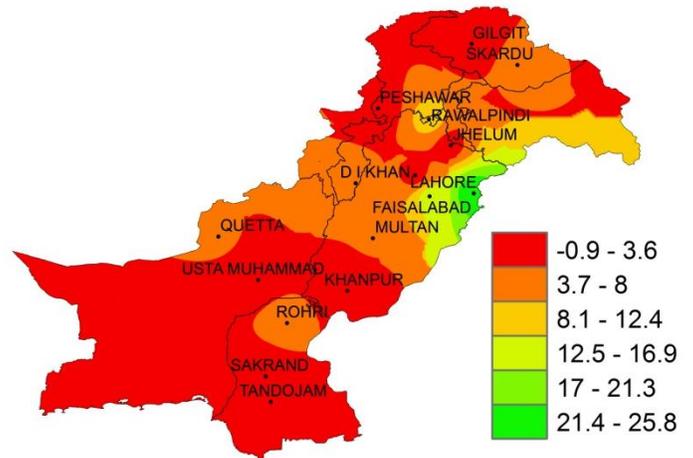
Light to moderate rainfall reported in the agricultural plains of Balochistan. Chief amount of rainfall received in Turbat, Zhob & Ormara. Decadal maximum raised & minimum temperature both raised above normal by 0.3°C & 1.4°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 51%, 76.2hrs, 4.5km/hr and 2.6mm/day respectively.

1.5 Gilgit-Baltistan and Azad Jammu & Kashmir

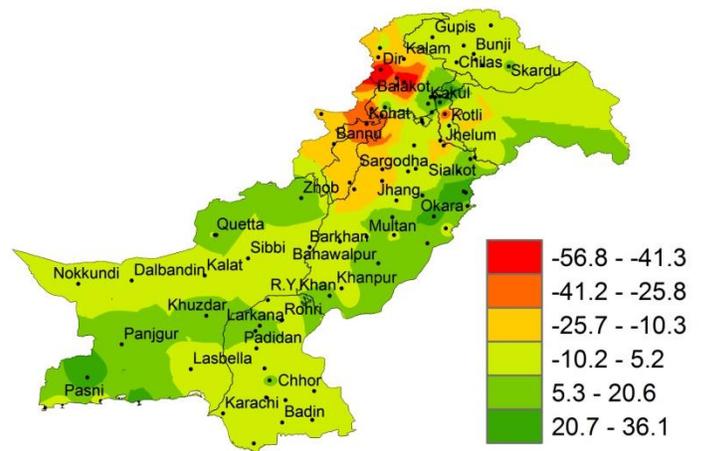
Light to moderate rainfall reported in the agricultural plains of GB & Kashmir. Chief amount of rainfall received in Muzaffarabad, Rawalakot & Garhi dopatta. Decadal maximum raised dropped below by 3.3°C & minimum raised above normal by 5.7°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 53%, 44.8hrs, 1.6km/hr and 1.3mm/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**
(1st to 10th February, 2015)

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

Rainfall reported as 13.7mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 60%. Mean day temperature was 19.4°C while night temperature recorded as 6.3°C with 56.4hours bright sunshine duration. Wind speed recorded as 3.5km/hr with mean wind direction *north westerly*.

Wheat (Chakwal-97): Good condition, 7th leaf stage.

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

Rainfall reported as 15.0mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 65%. Mean day temperature was 21.5°C while night temperature recorded as 7.7°C with 61.55hours bright sunshine duration. Wind speed recorded as 2.1km/hr with mean wind direction *north westerly*.

Wheat: Excellent condition, shooting stage completed.

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

Dry weather reported during the decade however weather remained cloudy for 02days. Average relative humidity recorded as 58%. Mean day temperature was 26.1°C while night temperature recorded as 10.0°C with 87.3hours bright sunshine duration. Wind speed recorded as 1.9km/hr with mean wind direction *north easterly*.

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

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

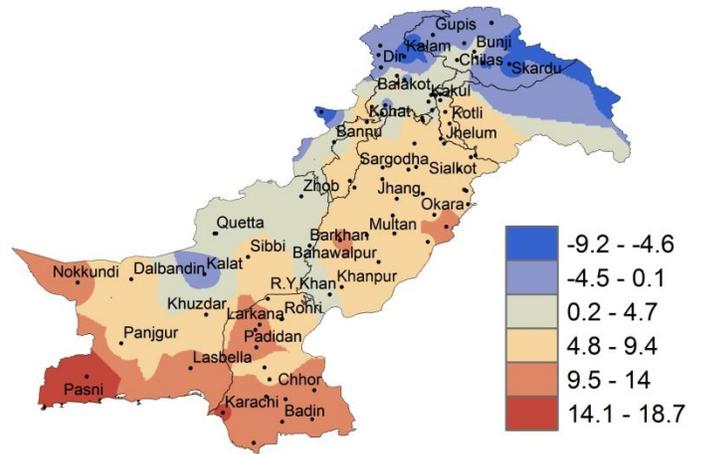
Rainfall reported as 1.0mm during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 59%. Mean day temperature was 23.1°C while night temperature recorded as 9.0°C.

Wheat (Zardana): Good condition, shooting stage.

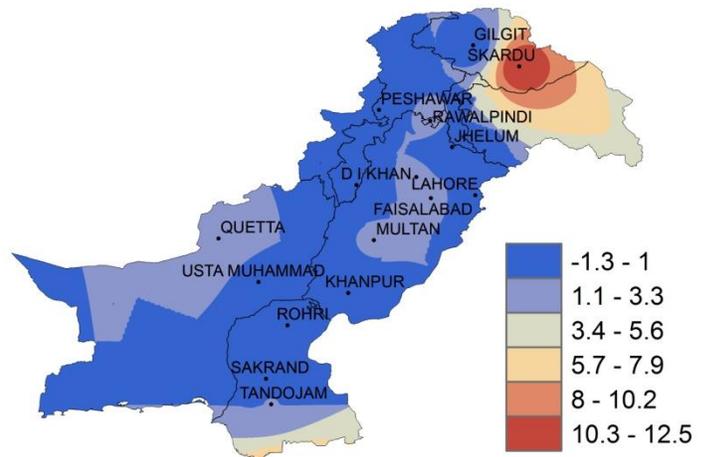
2.5 **RAMC, Quetta (Northern Balochistan)**

Rainfall reported as 5.8mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 42%. Mean day temperature was 14.5°C while night temperature recorded as 1.8°C with 76.2hours bright sunshine duration and wind speed recorded as 4.5km/hr with mean wind direction *southerly*.

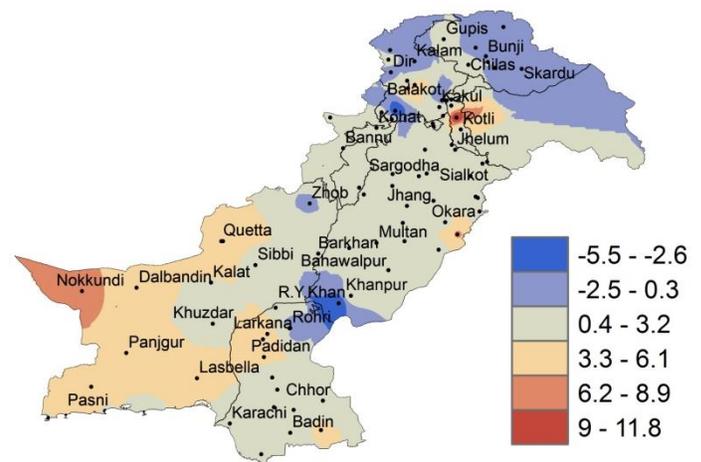
Wheat: Good condition, 3rd leaf stage.



❖ Actual min-temp



❖ Departure of min-temp from Normal



❖ 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 (1st to 10th February, 2015)**

2.6 **Jhelum**

Rainfall reported as 3.2mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 59%. Mean day temperature was 21.7°C while night temperature recorded as 6.2°C with 56.3hours bright sunshine duration. Wind speed recorded 2.3km/hr with wind direction *easterly*.

2.7 **Lahore**

Rainfall reported as 26.7mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 67%. Mean day temperature was 20.6°C while night temperature recorded as 9.3°C with 69.8hours bright sunshine duration. Wind speed recorded as 3.0km/hr with mean wind direction *north westerly*.

2.8 **Sargodha**

Rainfall reported as 2.0mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 69%. Mean day temperature was 21.3°C while night temperature recorded as 8.2°C with 50.6hours bright sunshine duration. Wind speed recorded as 0.74km/h with mean wind direction *variable*.

2.9 **Multan**

Rainfall reported as 4.9mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 64%. Mean day temperature was 21.1°C while night temperature recorded as 8.4°C with 53.7hours bright sunshine duration. Wind speed recorded 4.2km/hr with mean wind direction *north easterly*.

2.10 **Khanpur**

Dry weather reported during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 67%. Mean day temperature was 22.3°C while night temperature recorded as 7.9°C with 61.5hours bright sunshine duration. Wind speed recorded 5.4km/hr with mean wind direction *north easterly*.

2.11 **Sakrand**

Dry weather reported during the decade however weather remains cloudy for 04days. Average relative humidity recorded as 57%. Mean day temperature was 24.2°C while night temperature recorded as 6.0°C with 94.6hours bright sunshine duration. Wind speed recorded 7.2km/hr with wind direction *northerly*.

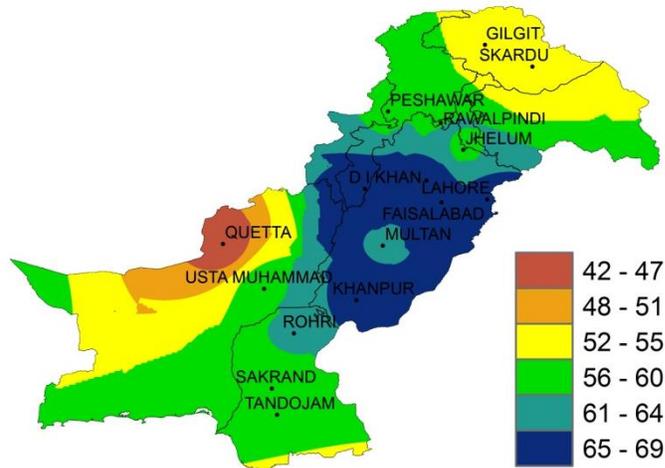


Figure.3: Relative Humidity in percentage (%)

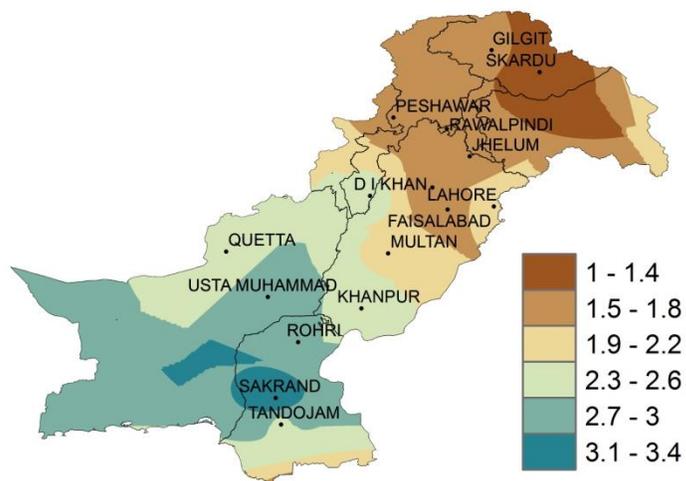


Figure.4: Reference Crop Evapotranspiration “ETo” in mm/day

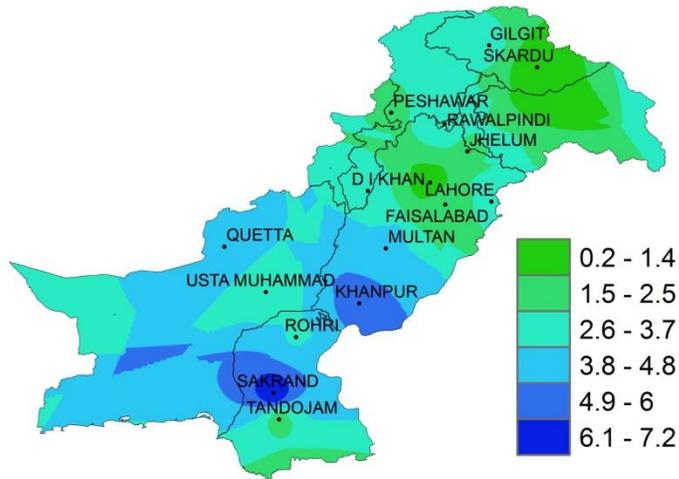


Figure 5: Wind Speed in kilometer per hour (km/h)

2.12 Rohri

Rainfall reported as 7.0mm during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 61%. Mean day temperature was 23.1°C while night temperature recorded as 11.9°C with 81.7hours bright sunshine duration. Wind speed recorded as 3.6km/hr with mean wind direction *north easterly*.

2.13 D.I. Khan

Rainfall reported as 9.2mm during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 66%. Mean day temperature was 20.6°C while night temperature recorded as 5.9°C with 55.0hours bright sunshine duration.

2.14 Peshawar

Rainfall reported as 2.0mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 69%. Mean day temperature was 20.1°C while night temperature recorded as 6.2°C with 45.2hours bright sunshine duration. Wind speed recorded as 2.3km/hr with mean wind direction *north westerly*.

2.15 Skardu

Rainfall reported as 5.5mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 59%. Mean day temperature was 6.7°C while night temperature recorded as -4.8°C with 44.1hours bright sunshine duration. Wind speed recorded as 0.2km/hr with mean wind direction *north easterly*.

2.16 Gilgit

Rainfall reported as Trace (not measureable) during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 54%. Mean day temperature was 11.3°C while night temperature recorded as -2.2°C with 45.5hours bright sunshine duration. Wind speed recorded as 2.9km/hr with mean wind direction *westerly*.

3. Ten Days Weather Advisory for Farmers **(11th to 20th February, 2015)**

3.1 Temperature Forecast

Night temperatures are expected to drop slightly (1-2°C) 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 during the decade. However light to moderate rainfall is expected in most parts of the province during the 2nd half of 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:** Dry weather expected in most of the parts of Sindh.
- ❖ **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 2nd half of 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 in 2nd half of the decade.
- ❖ **Kashmir:** Mainly cold and dry 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 in 2nd half of the decade.

3.4 Advisory for Farmers

- ❖ Wheat crop is in tillering/shooting/heading 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 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.
- ❖ Farmers are advised to ensure field sanitation and spray prophylactic fungicidal sprays to prevent spread of diseases on vegetables.
- ❖ 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.