

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 81.0mm at Dir during the last decade.
- ❖ Lowest minimum temperature recorded -11.5°C at Parachinar during the last decade.
- ❖ Wheat crop is in tillering/shooting/heading stages. Farmers are advised to stop irrigation the crops by keeping in view the expected rain in the agricultural plains of the country.
- ❖ The upcoming rain is beneficiary for all rabi crops.
- ❖ Farmers of irrigated/barani areas are advised to remove weeds from the fields, so that the present soil moisture may fully be utilized.
- ❖ 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.

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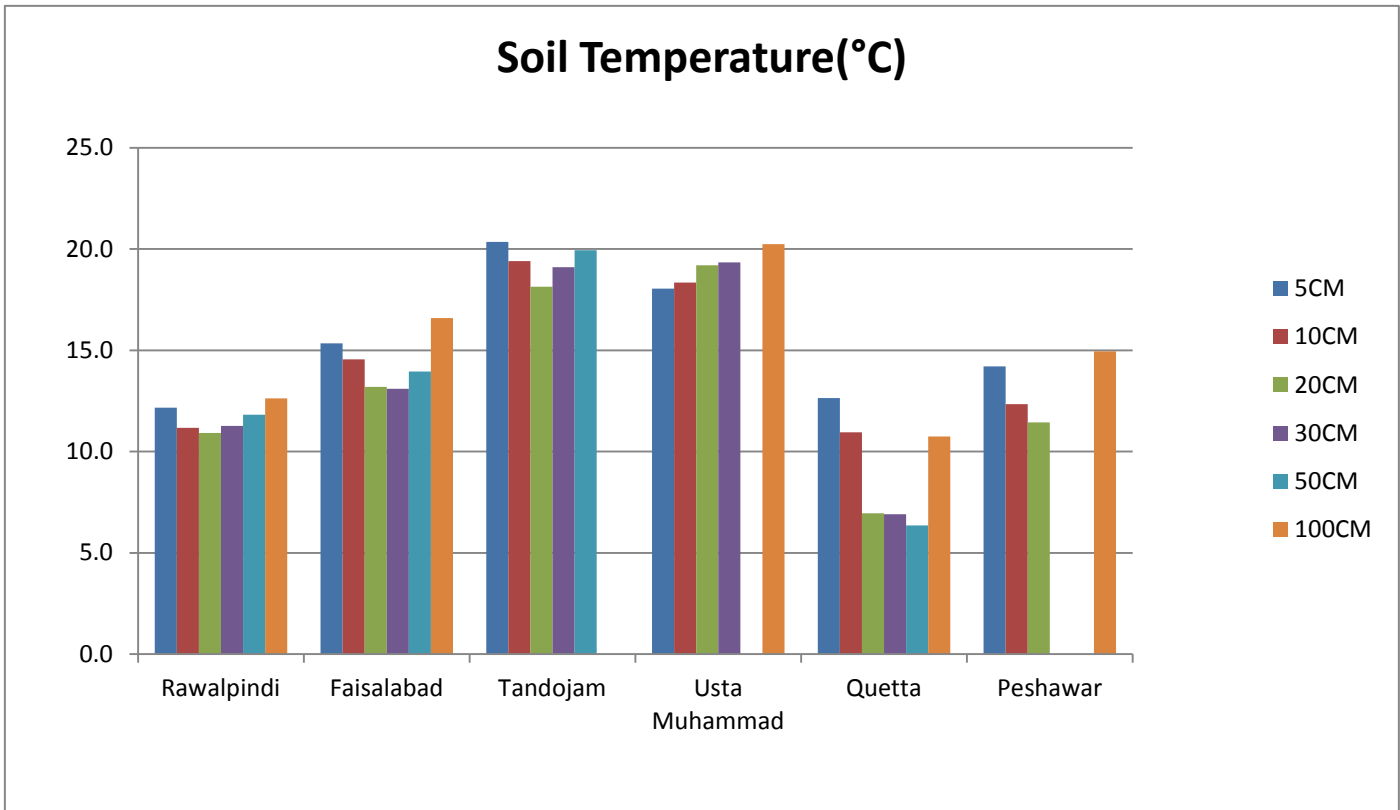
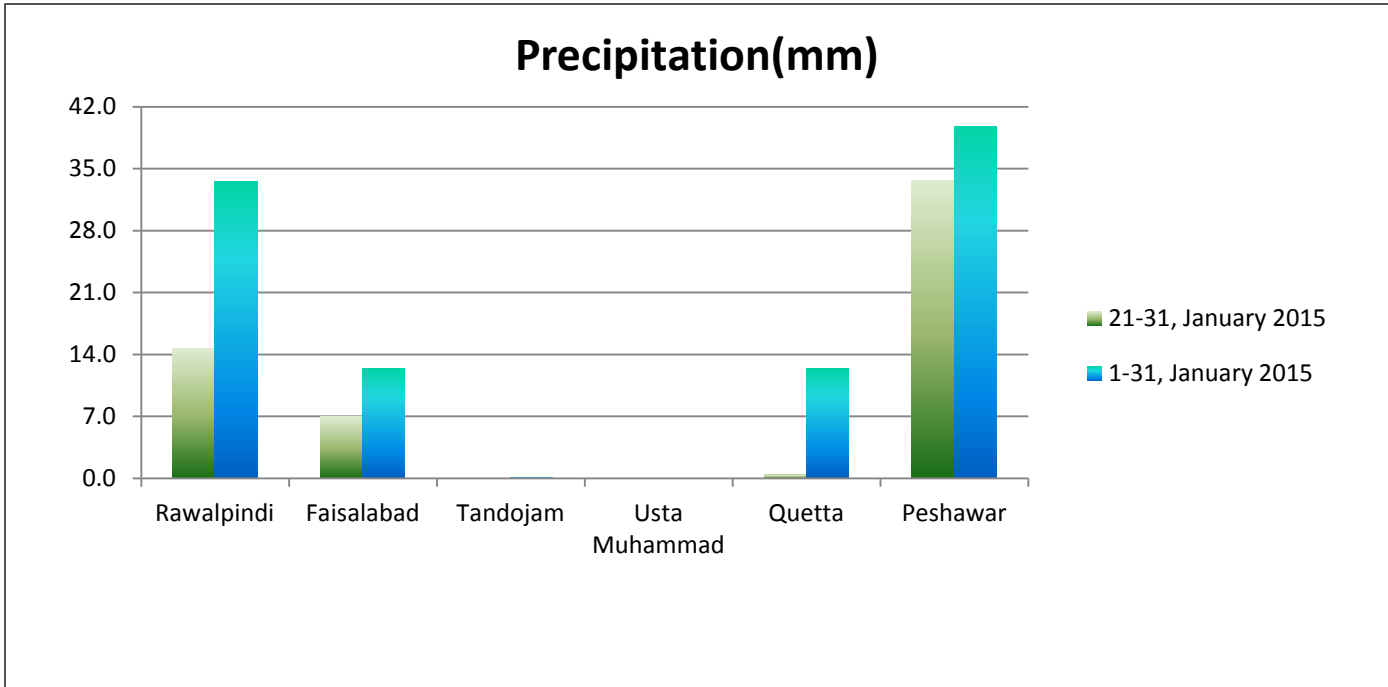
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Meteorological conditions during 3rd decade of January, 2015

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	2.4	14.7	12.3	-1.2	1.0	11.0	12.2	11.2	10.9	11.3	11.8	12.6	64	69.7	0.4	1.1
2	FAISALABAD	0.3	7.0	6.7	-2.7	1.0	11.5	15.4	14.6	13.2	13.1	14.0	16.6	71	49.4	2.2	1.4
3	JHELUM	1.7	17.0	15.3	-1.0	0.5	12.8	14.7	13.9	13.0	12.9	14.2	***	62	65.4	3.6	1.7
4	LAHORE	0.7	5.6	4.9	-2.4	-0.5	12.4	13.8	13.8	13.3	13.3	***	16.7	71	53.8	2.8	1.5
5	SARGODHA	1.0	10.0	9.0	-2.5	0.4	11.8	15.8	14.9	13.9	14.5	15.6	17.4	75	49.1	1.1	1.2
6	MULTAN	0.2	0.0	-0.2	-3.6	0.2	11.7	***	***	***	***	***	***	71	43.7	3.1	1.5
7	KHANPUR	0.0	0.0	0.0	-3.7	-1.0	12.1	***	15.1	15.8	16.2	17.1	19.4	71	56.3	3.6	1.7
8	TANDOJAM	0.0	0.0	0.0	-1.9	3.6	15.2	20.4	19.4	18.2	19.1	20.0	***	60	99.2	1.5	2.2
9	SAKRAND ☆	0.0	0.0	0.0	3.0	-3.5	13.0	24.1	20.1	***	***	***	23.3	57	101.2	2.4	2.3
10	ROHRI	0.0	0.1	0.1	-3.0	-1.3	14.5	22.1	20.1	18.4	17.4	18.9	24.2	61	92.6	5.0	2.5
11	DI KHAN	0.6	20.7	20.1	-2.6	-0.9	10.8	***	***	***	***	***	***	71	70.5	***	1.9
12	PESHAWAR	1.7	33.7	32.0	-1.6	0.1	11.4	14.2	12.4	11.5	***	***	15.0	67	57.4	2.7	1.3
13	USTA MUHAMMAD	0.3	0.0	-0.3	2.0	-1.5	14.9	18.1	18.4	19.2	19.4	***	20.3	62	***	***	2.8
14	QUETTA	0.5	0.4	-0.1	-0.3	0.1	4.9	12.7	11.0	7.0	6.9	6.4	10.8	49	85.3	4.5	1.8
15	SKARDU	0.8	4.0	3.2	2.0	3.0	0.8	***	***	***	***	***	***	54	23.9	2.0	0.9
16	GILGIT	0.2	0.1	-0.1	-0.5	1.1	4.7	***	***	***	***	***	***	55	28.0	2.9	1.2

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 January, 2015



Past Weather (21st to 31st January, 2015)

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.

1.1 Punjab

Light to moderate rainfall reported in the agricultural plains of Punjab. Chief amount of rainfall received in Bhakkar, Murree & Islamabad. Decadal maximum dropped below normal by 2.4°C & minimum raised above normal by 0.2°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 69%, 55.3hrs, 2.4km/hr and 1.4mm/day respectively.

1.2 Sindh

Dry weather reported in the agricultural plains of Sindh. Decadal maximum & minimum temperature both dropped below normal by 0.6°C & 0.4°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 59%, 97.7hrs, 3.0km/hr and 2.3mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

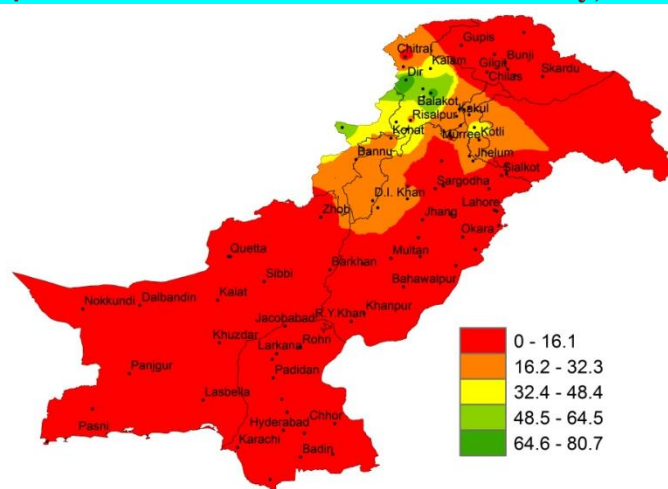
Light to moderate rainfall reported in the agricultural plains of KP. Chief amount of rainfall received in Dir, Malam Jabba & Parachinar. Decadal maximum & minimum temperature both dropped below normal by 2.1°C & 0.4°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 69%, 64.0hrs, 2.7km/hr and 1.6mm/day respectively.

1.4 Balochistan

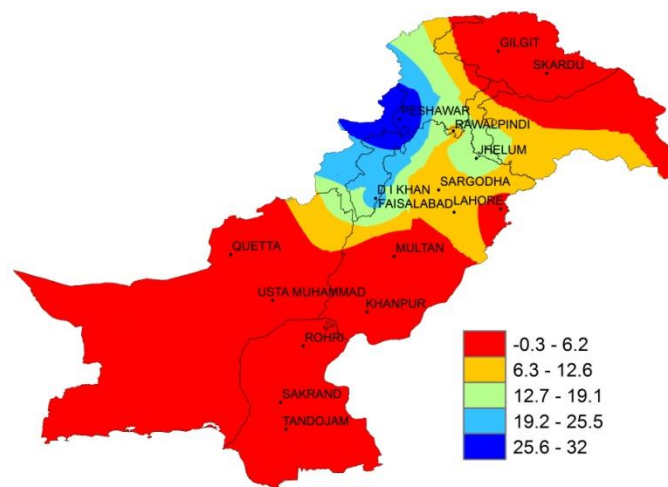
Light to moderate rainfall reported in the agricultural plains of Balochistan. Chief amount of rainfall received in Zhob, Dalbandin & Quetta. Decadal maximum raised above normal by 0.9°C & minimum temperature dropped below normal by 0.7°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 56%, 85.3hrs, 4.5km/hr and 2.3mm/day respectively.

1.5 Gilgit-Baltistan and Azad Jammu & Kashmir

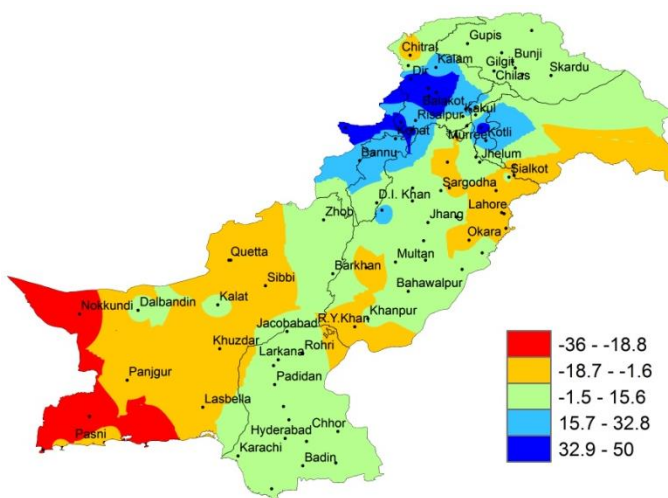
Light to moderate rainfall reported in the agricultural plains of GB & Kashmir. Chief amount of rainfall received in Rawalakot, Kotli & Muzaffarabad. Decadal maximum raised above normal by 0.8°C & minimum dropped below normal by 2.1°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 55%, 26.0hrs, 2.5km/hr and 1.1mm/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 January, 2015)

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

Rainfall reported as 14.7mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 64%. Mean day temperature was 17.5°C while night temperature recorded as 4.5°C with 69.7hours bright sunshine duration. Wind speed recorded as 0.4km/hr with mean wind direction *westerly*.

Wheat (Chakwal-97): Good condition, 9th leaf stage.

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

Rainfall reported as 7.0mm during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 71%. Mean day temperature was 17.0°C while night temperature recorded as 5.9°C with 49.40hours bright sunshine duration. Wind speed recorded as 2.2km/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 04days. Average relative humidity recorded as 53%. Mean day temperature was 23.2°C while night temperature recorded as 7.1°C with 99.2hours bright sunshine duration. Wind speed recorded as 1.5km/hr with mean wind direction *northerly*.

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

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

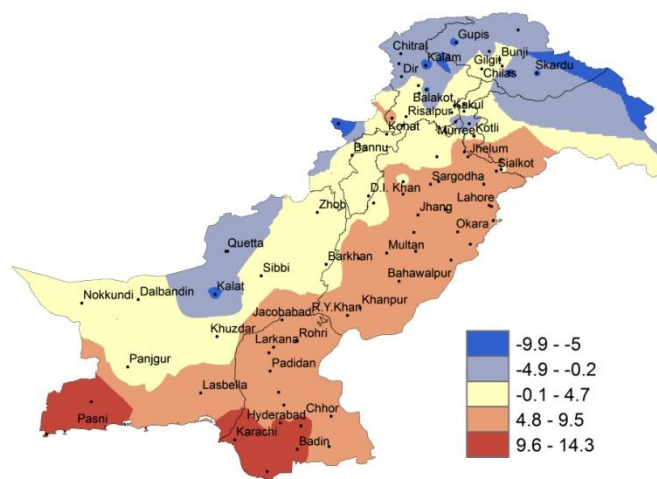
Dry weather reported during the decade however weather remained clear throughout the decade. Average relative humidity recorded as 62%. Mean day temperature was 23.2°C while night temperature recorded as 6.5°C.

Wheat (Zardana): Good condition, shooting stage.

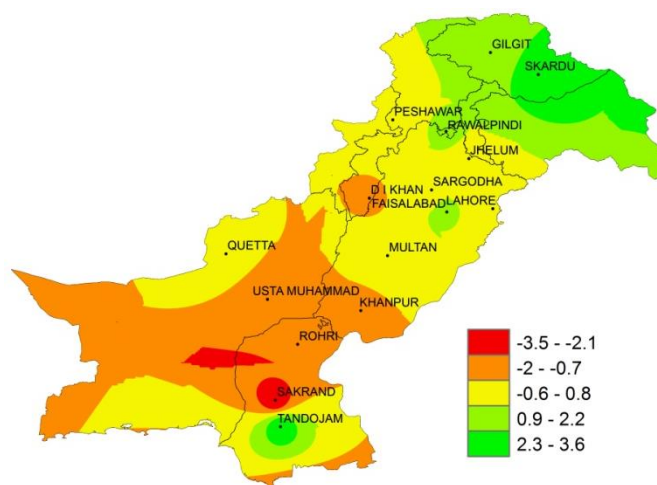
2.5 **RAMC, Quetta (Northern Balochistan)**

Rainfall reported as 0.4mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 49%. Mean day temperature was 10.8°C while night temperature recorded as -1.0°C with 85.3hours bright sunshine duration and wind speed recorded as 4.5km/hr with mean wind direction *northerly*.

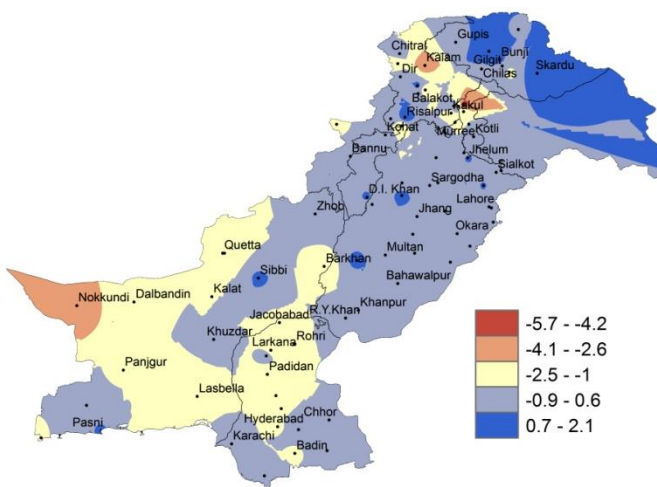
Wheat: Good condition, 3rd leaf stage.



❖ 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 (21st to 31st January, 2015)**

2.6 **Jhelum**

Rainfall reported as 17.0mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 62%. Mean day temperature was 19.2°C while night temperature recorded as 6.3°C with 65.4hours bright sunshine duration. Wind speed recorded 3.6km/hr with wind direction *north westerly*.

2.7 **Lahore**

Rainfall reported as 5.6mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 71%. Mean day temperature was 16.9°C while night temperature recorded as 7.8°C with 53.8hours bright sunshine duration. Wind speed recorded as 2.8km/hr with mean wind direction *north westerly*.

2.8 **Sargodha**

Rainfall reported as 10.0mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 75%. Mean day temperature was 17.5°C while night temperature recorded as 6.0°C with 49.1hours bright sunshine duration. Wind speed recorded as 0.6km/h with mean wind direction *north easterly*.

2.9 **Multan**

Dry weather reported during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 71%. Mean day temperature was 17.3°C while night temperature recorded as 6.0°C with 43.7hours bright sunshine duration. Wind speed recorded 3.1km/hr with mean wind direction *northerly*.

2.10 **Khanpur**

Dry weather reported during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 71%. Mean day temperature was 18.8°C while night temperature recorded as 5.4°C with 56.3hours bright sunshine duration. Wind speed recorded 3.6km/hr with mean wind direction *north easterly*.

2.11 **Sakrand**

Dry weather reported during the decade however weather remains cloudy for 08days. Average relative humidity recorded as 57%. Mean day temperature was 22.6°C while night temperature recorded as 3.4°C with 101.2hours bright sunshine duration. Wind speed recorded 4.4km/hr with wind direction *northerly*.

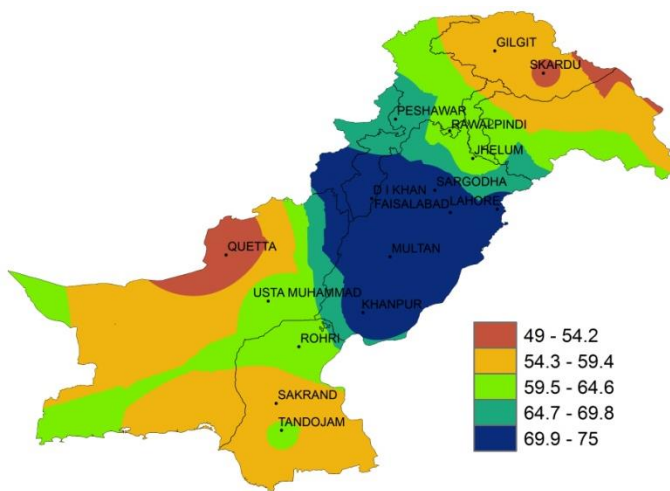


Figure.3: Relative Humidity in percentage (%)

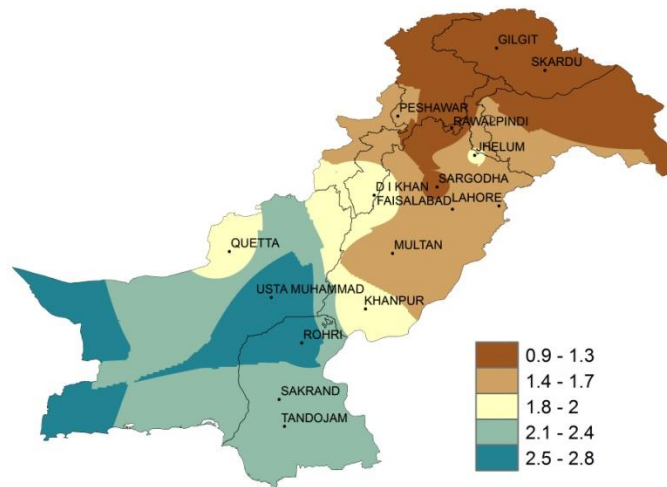


Figure.4: Reference Crop Evapotranspiration “ETo” in mm/day

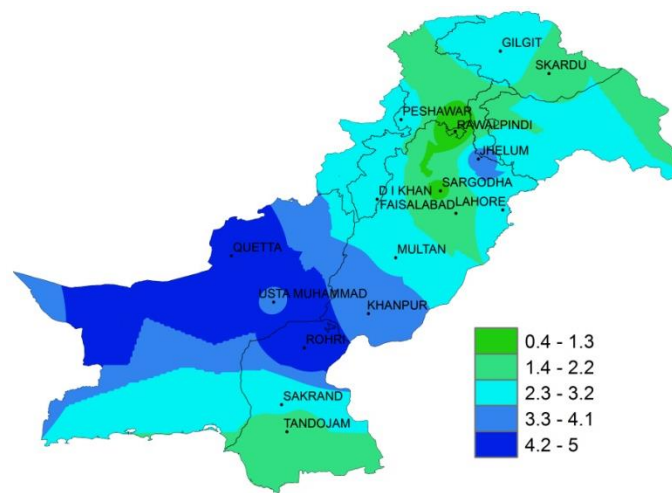


Figure 5: Wind Speed in kilometer per hour (km/h)

2.12 Rohri

Rainfall reported as Trace (not measureable) during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 61%. Mean day temperature was 20.4°C while night temperature recorded as 8.6°C with 92.6hours bright sunshine duration. Wind speed recorded as 5.0km/hr with mean wind direction *north easterly*.

2.13 D.I. Khan

Rainfall reported as 20.7mm during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 71%. Mean day temperature was 17.5°C while night temperature recorded as 4.1°C with 70.5hours bright sunshine duration.

2.14 Peshawar

Rainfall reported as 33.7mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 67%. Mean day temperature was 17.2°C while night temperature recorded as 5.5°C with 57.4hours bright sunshine duration. Wind speed recorded as 2.7km/hr with mean wind direction *north westerly*.

2.15 Skardu

Rainfall reported as 4.0mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 56%. Mean day temperature was 6.6°C while night temperature recorded as -5.1°C with 23.9hours bright sunshine duration. Wind speed recorded as 2.0km/hr with mean wind direction *southerly*.

2.16 Gilgit

Rainfall reported as Trace (not measureable) during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 55%. Mean day temperature was 10.5°C while night temperature recorded as -1.2°C with 28.0hours bright sunshine duration. Wind speed recorded as 2.9km/hr with mean wind direction *south easterly*.

3. Ten Days Weather Advisory for Farmers **(1st to 10th 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 Rain Forecast

- ❖ **Punjab:** Mostly cold and dry weather is expected during the decade. However light rainfall is expected in most parts of the province during the 1st 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 1st half of decade.
- ❖ **Sindh:** Mostly dry weather expected in most of the parts of Sindh however light to moderate rain is expected at few places of Sindh including Karachi, Thatta, Port Qasim in 1st 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 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 in 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 the 1st half of the decade.

3.4 Advisory for Farmers

- ❖ Wheat crop is in tillering/shooting/heading stages. Farmers are advised to stop irrigation the crops by keeping in view the expected rain in the agricultural plains of the country.
- ❖ The upcoming rain is beneficiary for all rabi crops.
- ❖ Farmers of irrigated/barani areas are advised to remove weeds from the fields, so that the present soil moisture may fully be utilized.
- ❖ 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.