

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light rainfall reported in the agricultural plains of Sindh, Balochistan, K.P, G.B & Kashmir regions and dry weather reported from Punjab during the last decade.
- ❖ Highest amount of rainfall recorded as 10.0mm at Ormara during the last decade.
- ❖ Lowest minimum temperature recorded -11.8°C at Skardu during the last decade.
- ❖ Mainly cold and dry weather is expected in most parts of the country however, partly cloudy weather conditions with light to moderate rain (with light snowfall over the hills) is expected at Punjab, K.P, G.B & Kashmir.
- ❖ Farmers are advised to cultivate winter vegetables in time so that present soil moisture may fully be utilized.
- ❖ Wheat cultivation has completed in most of the irrigated areas. Farmers of irrigated areas should irrigate the crop as per requirement due to dry weather prevailing in most of the irrigated agricultural plains of the country. Normally first irrigation is given 20-25 days after sowing and 2nd irrigation is given just before heading stage and the 3rd irrigation is given at milk maturity stage.
- ❖ Farmers of barani areas are advised to remove weeds from the fields, so that the present soil moisture may fully be utilized.
- ❖ Falling leaves from the trees negatively affect standing Rabi crops like wheat and other Rabi crops. Farmers should collect leaves from the crops as early as possible so that crop normal growth may not be disturbed.

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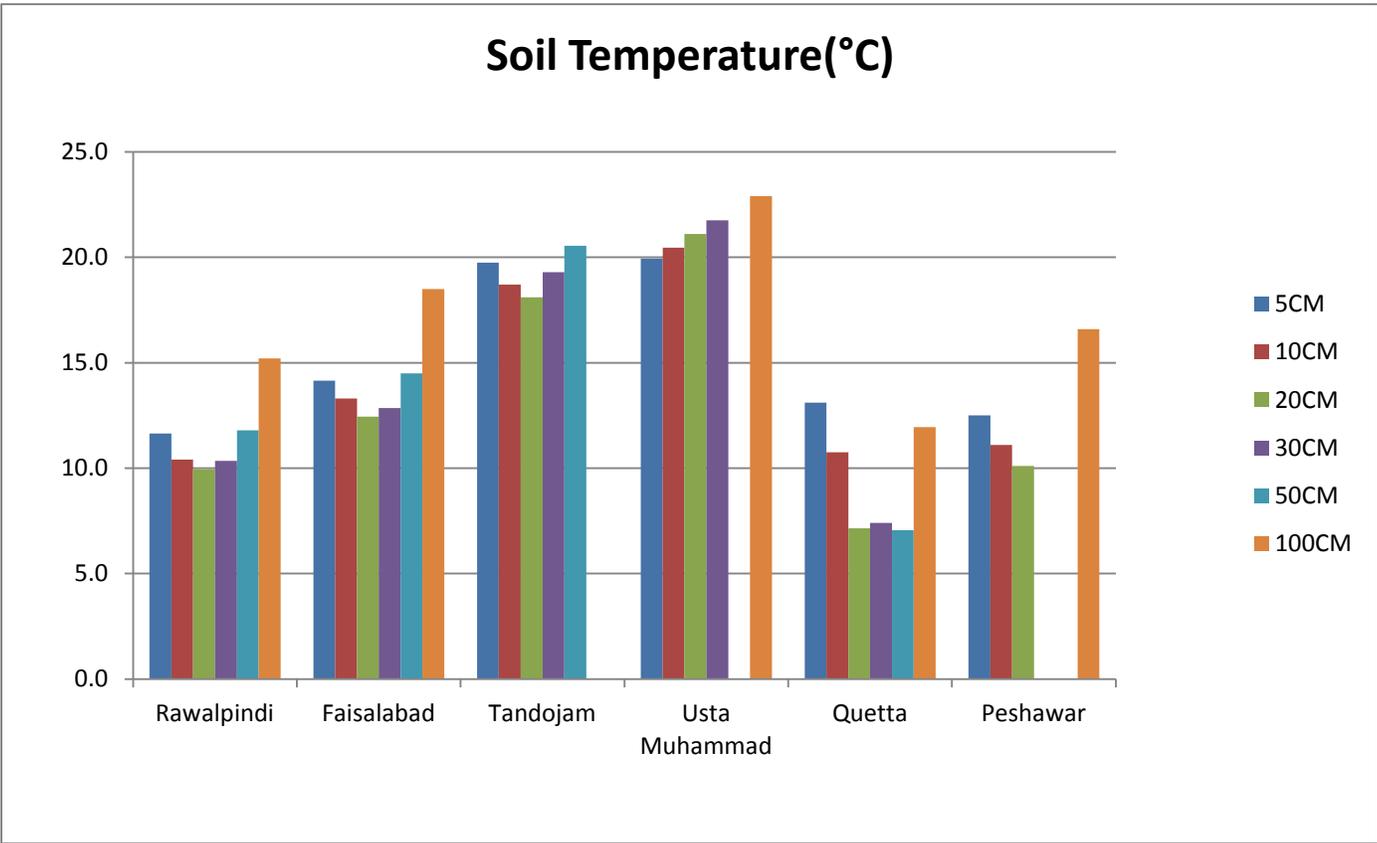
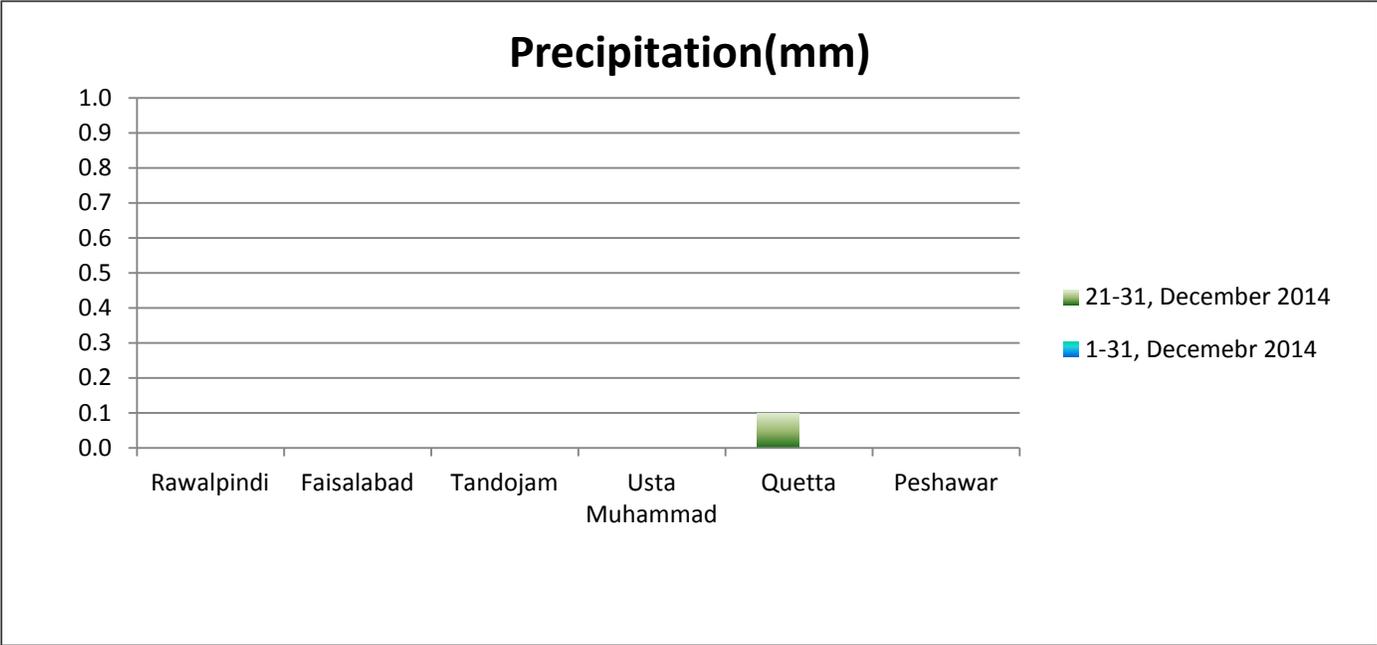
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Meteorological conditions during 3rd decade of December, 2014

Sr. No.	Station	Precipitation (mm)			Air Temperature (°C)			Soil Temperatures (°C)						R.H (%)	Sunshine Duration(hours)	Wind Speed (km/hr)	ET _o (mm/day)
		Normal	Actual	Dep	Tmax Dep	Tmin Dep	Mean	5cm	10cm	20cm	30cm	50cm	100cm				
1	RAWALPINDI	0.5	0.0	-0.5	-0.4	-1.2	10.5	11.7	10.4	10.0	10.4	11.8	15.2	64	52.4	2.5	1.2
2	FAISALABAD	0.2	0.0	-0.2	-6.2	-3.6	7.8	14.2	13.3	12.5	12.9	14.5	18.5	80	26.3	2.0	0.9
3	JHELUM	0.4	0.0	-0.4	-5.3	-1.7	9.8	12.3	11.7	11.5	12.3	13.9	***	75	37.7	0.8	0.8
4	LAHORE	0.3	0.0	-0.3	-5.8	-3.0	9.7	13.0	12.0	12.5	13.0	***	17.9	84	19.3	1.5	0.8
5	SARGODHA	0.4	0.0	-0.4	-5.7	-1.3	9.8	13.9	13.2	13.3	14.2	15.8	18.8	83	37.5	0.6	0.8
6	MULTAN	0.1	0.0	-0.1	-6.5	-1.4	9.6	***	***	***	***	***	***	81	37.8	3.3	1.1
7	KHANPUR	0.1	0.0	-0.1	-4.6	-2.4	10.7	***	13.8	14.6	15.5	17.1	25.5	77	48.0	4.1	1.4
8	TANDOJAM	0.4	0.0	-0.4	-0.7	-1.5	15.6	19.8	18.7	18.1	19.3	20.6	***	57	87.7	1.5	1.8
9	SAKRAND ☆	0.0	0.0	0.0	-0.4	-3.7	12.8	22.2	18.7	***	***	***	24.5	57	95.2	0.2	1.4
10	ROHRI	0.0	0.0	0.0	-2.1	-1.5	14.4	20.9	19.3	18.2	20.4	19.8	25.9	59	89.1	3.6	2.0
11	DI KHAN	0.4	0.0	-0.4	-5.1	-5.2	8.6	***	***	***	***	***	***	73	52.2	***	1.6
12	PESHAWAR	0.6	0.0	-0.6	0.3	-2.1	11.4	12.5	11.1	10.1	***	***	16.6	61	21.1	0.9	0.8
13	USTA MUHAMMAD	0.0	0.0	0.0	-0.9	-2.7	13.1	20.0	20.5	21.1	21.8	***	22.9	71	***	***	2.2
14	QUETTA	0.4	0.1	-0.3	0.6	1.2	6.3	13.1	10.8	7.2	7.4	7.1	12.0	33	89.1	4.5	1.8
15	SKARDU	0.5	0.0	-0.5	0.5	-1.8	-1.0	***	***	***	***	***	***	58	36.4	0.2	0.6
16	GILGIT	0.4	0.1	-0.3	-0.7	-1.8	3.1	***	***	***	***	***	***	50	34.0	1.7	0.9

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_o 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 December, 2014



Past Weather (21st to 31st December, 2014)

Light rainfall reported in the agricultural plains of Sindh, Balochistan, K.P, G.B & Kashmir regions and dry weather reported from Punjab during the last decade.

1.1 Punjab

Dry weather reported in the agricultural plains of Punjab. Decadal maximum and minimum dropped below normal by 4.9°C & 2.1°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 78%, 37.0hrs, 2.1km/hr and 1.0mm/day respectively.

1.2 Sindh

Light rainfall reported in the agricultural plains of Sindh. Chief amount of rainfall received in Karachi. Decadal maximum and minimum dropped below normal by 1.1°C & 2.2°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 58%, 90.7hrs, 1.8km/hr and 1.7mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

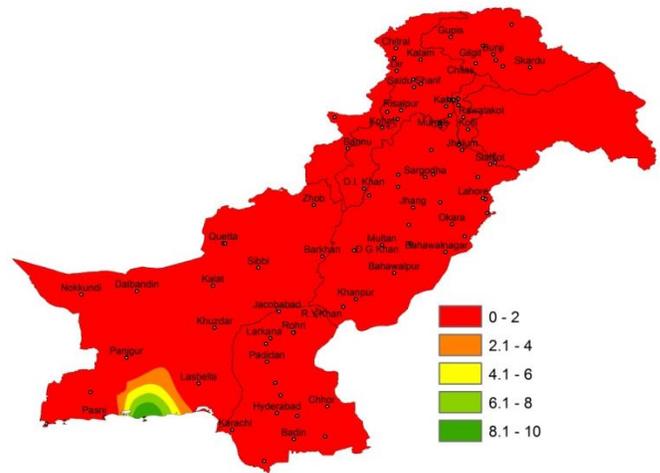
Light rainfall reported in the agricultural plains of KP. Chief amount of rainfall received in Kalam and Mirkhani. Decadal maximum and minimum dropped below normal by 2.4°C & 3.7°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 67%, 36.7hrs, 0.9km/hr and 1.2mm/day respectively.

1.4 Balochistan

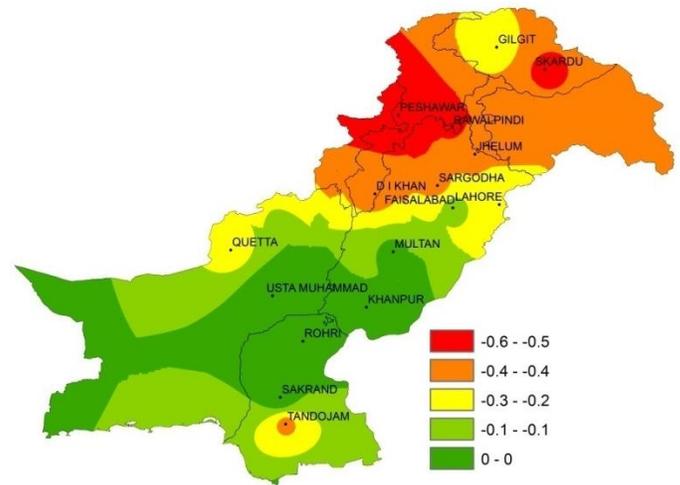
Light rainfall reported in the agricultural plains of Balochistan. Chief amount of rainfall received in Ormara, Quetta and Sibbi. Decadal maximum and minimum dropped below normal by 0.1°C & 0.8°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 52%, 89.1hrs, 4.5km/hr and 2.0mm/day respectively.

1.5 Gilgit-Baltistan and Azad Jammu & Kashmir

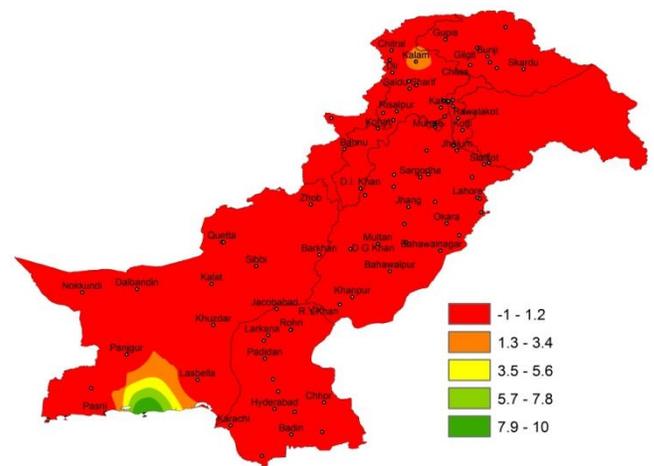
Light rainfall reported in the agricultural plains of GB & Kashmir. Chief amount of rainfall received in Gilgit and Bunji. Decadal maximum and minimum dropped below normal by 0.1°C & 1.8°C, in the province... Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 54%, 35.2hrs, 1.0km/hr and 0.8mm/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 December, 2014)**

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

Dry weather reported during the decade however weather remained cloudy for 06 days. Average relative humidity recorded as 64%. Mean day temperature was 18.8°C while night temperature recorded as 2.1°C with 52.4 hours bright sunshine duration. Wind speed recorded as 2.5 km/hr with mean wind direction *variable*.

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

Dry weather reported during the decade however weather remained cloudy for 06 days. Average relative humidity recorded as 80%. Mean day temperature was 14.3°C while night temperature recorded as 1.3°C with 26.5 hours bright sunshine duration. Wind speed recorded as 2.0 km/hr with mean wind direction *north easterly*.

Wheat: Excellent condition, Tilling stage completed.

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

Dry weather reported during the decade however weather remained clear throughout the decade. Average relative humidity recorded as 57%. Mean day temperature was 23.6°C while night temperature recorded as 7.6°C with 87.7 hours bright sunshine duration. Wind speed recorded as 1.5 km/hr with mean wind direction *northerly*.

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

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

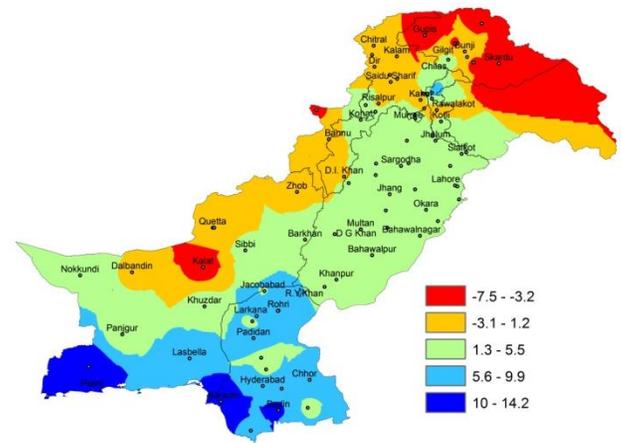
Dry weather reported during the decade however weather remained cloudy for 02 days. Average relative humidity recorded as 71%. Mean day temperature was 21.0°C while night temperature recorded as 5.2°C.

Wheat (Zardana): Good condition, 3rd Leaf stage completed.

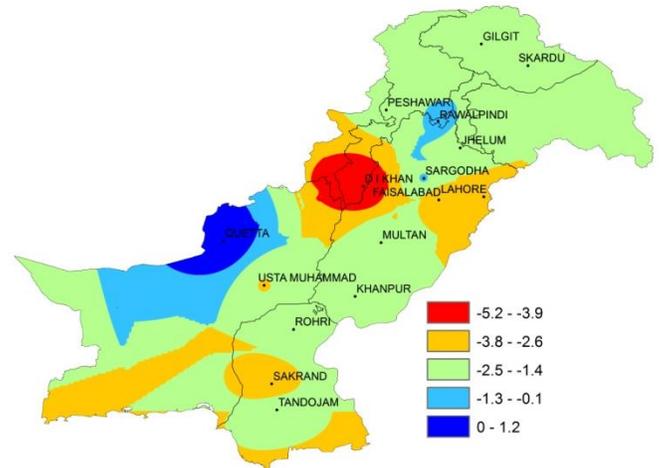
2.5 **RAMC, Quetta (Northern Balochistan)**

Rainfall reported as Trace (Non measureable) during the decade however weather remained cloudy for 08 days. Average relative humidity recorded as 33%. Mean day temperature was 13.4°C while night temperature recorded as -0.9°C with 89.1 hours bright sunshine duration and wind speed recorded as 4.5 km/hr with mean wind direction *northerly*.

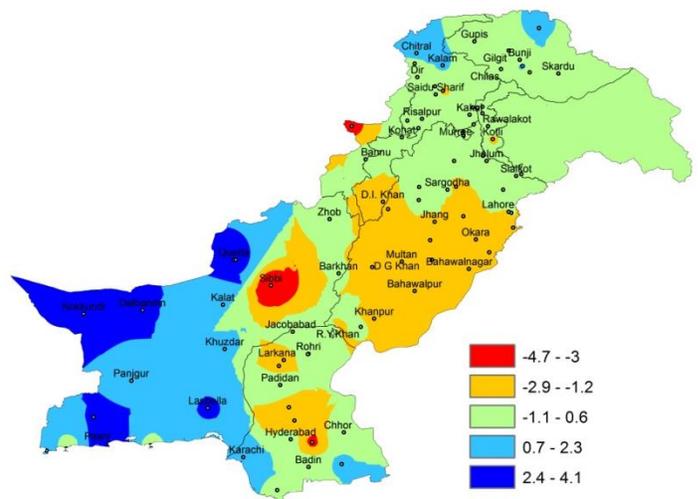
Wheat: Good condition, Emergence stage.



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 (21st to 31st December, 2014)**

2.6 **Jhelum**

Dry weather reported during the decade however weather remained cloudy for 07 days. Average relative humidity recorded as 75%. Mean day temperature was 15.7°C while night temperature recorded as 3.9°C with 37.7 hours bright sunshine duration. Wind speed recorded 0.8 km/hr with wind direction south westerly.

2.7 **Lahore**

Dry weather reported during the decade however weather remained cloudy for 06 days. Average relative humidity recorded as 84%. Mean day temperature was 13.9°C while night temperature recorded as 5.4°C with 19.3 hours bright sunshine duration. Wind speed recorded as 1.5 km/hr with mean wind direction south easterly.

2.8 **Sargodha**

Dry weather reported during the decade however weather remained cloudy for 05 days. Average relative humidity recorded as 83%. Mean day temperature was 15.0°C while night temperature recorded as 4.6°C with 37.5 hours bright sunshine duration. Wind speed recorded as 0.5 km/hr with mean wind direction as westerly.

2.9 **Multan**

Dry weather reported during the decade however weather remained cloudy for 03 days. Average relative humidity recorded as 81%. Mean day temperature was 14.9°C while night temperature recorded as 4.3°C with 37.8 hours bright sunshine duration. Wind speed recorded 3.3 km/hr with mean wind direction north easterly.

2.10 **Khanpur**

Dry weather reported during the decade however weather remained cloudy for 01 day. Average relative humidity recorded as 77%. Mean day temperature was 17.5°C while night temperature recorded as 3.9°C with 48.0 hours bright sunshine duration. Wind speed recorded 4.1 km/hr with mean wind direction north easterly.

2.11 **Sakrand**

Dry weather reported during the decade however weather remained clear throughout the decade. Average relative humidity recorded as 57%. Mean day temperature was 22.0°C while night temperature recorded as 3.5°C with 95.2 hours bright sunshine duration. Wind speed recorded 0.2 km/hr with wind direction northerly.

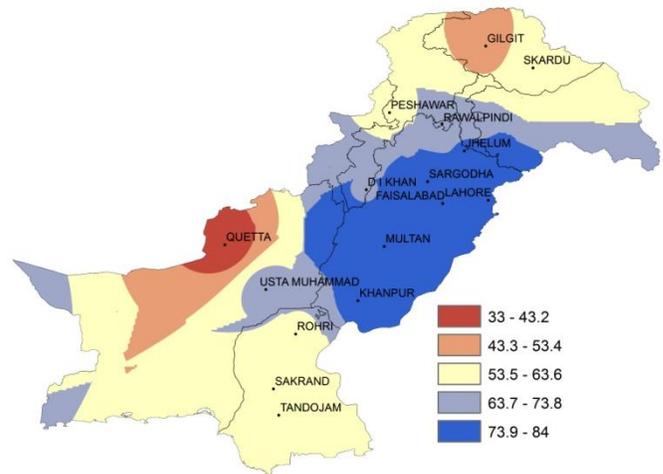


Figure.3: Relative Humidity in percentage (%)

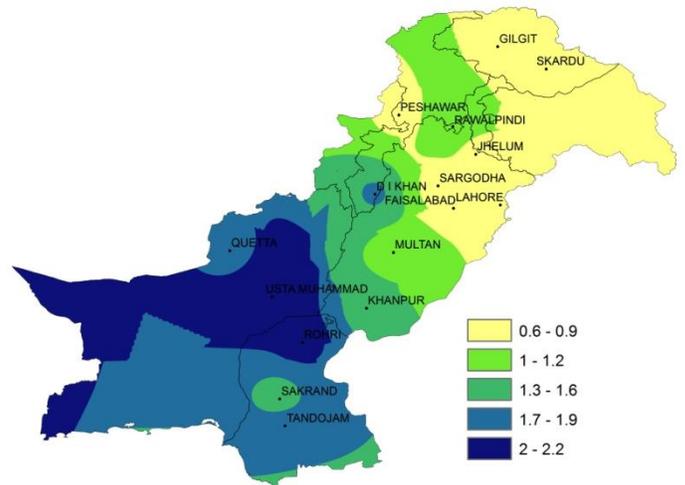


Figure.4: Reference Crop Evapotranspiration “ETo” in mm/day

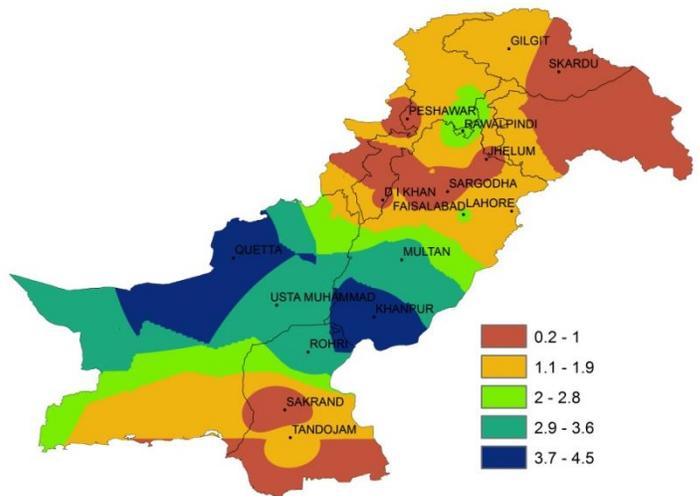


Figure 5: Wind Speed in kilometer per hour (km/h)

2.12 Rohri

Dry weather reported during the decade however weather remained cloudy for 01 day. Average relative humidity recorded as 59%. Mean day temperature was 20.8°C while night temperature recorded as 7.9°C with 89.1 hours bright sunshine duration. Wind speed recorded as 3.6 km/hr with mean wind direction *northeasterly*.

2.13 D.I. Khan

Dry weather reported during the decade however weather remained cloudy for 02 days. Average relative humidity recorded as 73%. Mean day temperature was 16.2°C while night temperature recorded as 0.9°C with 52.2 hours bright sunshine duration.

2.14 Peshawar

Dry weather reported during the decade however weather remained cloudy for 04 days. Average relative humidity recorded as 61%. Mean day temperature was 19.8°C while night temperature recorded as 2.9°C with 21.1 hours bright sunshine duration. Wind speed recorded as 0.9 km/hr with mean wind direction *south westerly*.

2.15 Skardu

Dry weather reported during the decade however weather remained cloudy for 07 days. Average relative humidity recorded as 58%. Mean day temperature was 6.3°C while night temperature recorded as -8.3°C with 36.4 hours bright sunshine duration. Wind speed recorded as 0.2 km/hr with mean wind direction *westerly*.

2.16 Gilgit

Rainfall reported as Trace (Non measureable) during the decade however weather remained cloudy for 10 days. Average relative humidity recorded as 50%. Mean day temperature was 10.6°C while night temperature recorded as -4.4°C with 34.0 hours bright sunshine duration. Wind speed recorded as 1.7 km/hr with mean wind direction *westerly*.

3. Ten Days Weather Advisory for Farmers **(1st to 10th January, 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 rainfall is expected in 1st half of decade.
- ❖ **Khyber Pakhtunkhwa:** Mainly cold and dry weather is expected in the province. However light rainfall (with light snowfall over the hills) is expected in 1st half of decade.
- ❖ **Sindh:** Dry weather expected in most of the parts of Sindh during the decade.
- ❖ **Balochistan:** Mainly cold and dry weather is expected in the province.
- ❖ **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 however partly cloudy weather conditions with light to moderate rain (with light snowfall over the hills) is expected in 1st half of decade.

3.4 Advisory for Farmers

- ❖ Farmers are advised to cultivate winter vegetables in time so that present soil moisture may fully be utilized.
- ❖ Wheat cultivation has completed in most of the irrigated areas. Farmers of irrigated areas should irrigate the crop as per requirement due to dry weather prevailing in most of the irrigated agricultural plains of the country. Normally first irrigation is given 20-25 days after sowing and 2nd irrigation is given just before heading stage and the 3rd irrigation is given at milk maturity stage.
- ❖ Farmers of 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.
- ❖ Falling leaves from the trees negatively affect standing Rabi crops like wheat and other Rabi crops. Farmers should collect leaves from the crops as early as possible so that crop normal growth may not be disturbed.
- ❖ Due to further drop of temperatures, especially farmers of upper areas are advised to protect their crops from the frost.