

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light rainfall reported in the agricultural plains of K.P however dry weather reported in the agricultural plains of the Punjab, Sindh, Balochistan, G.B & Kashmir during the last decade.
- ❖ Highest amount of rainfall reported as 3.0mm at Kalam during the last decade.
- ❖ Lowest minimum temperature recorded -8.1°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

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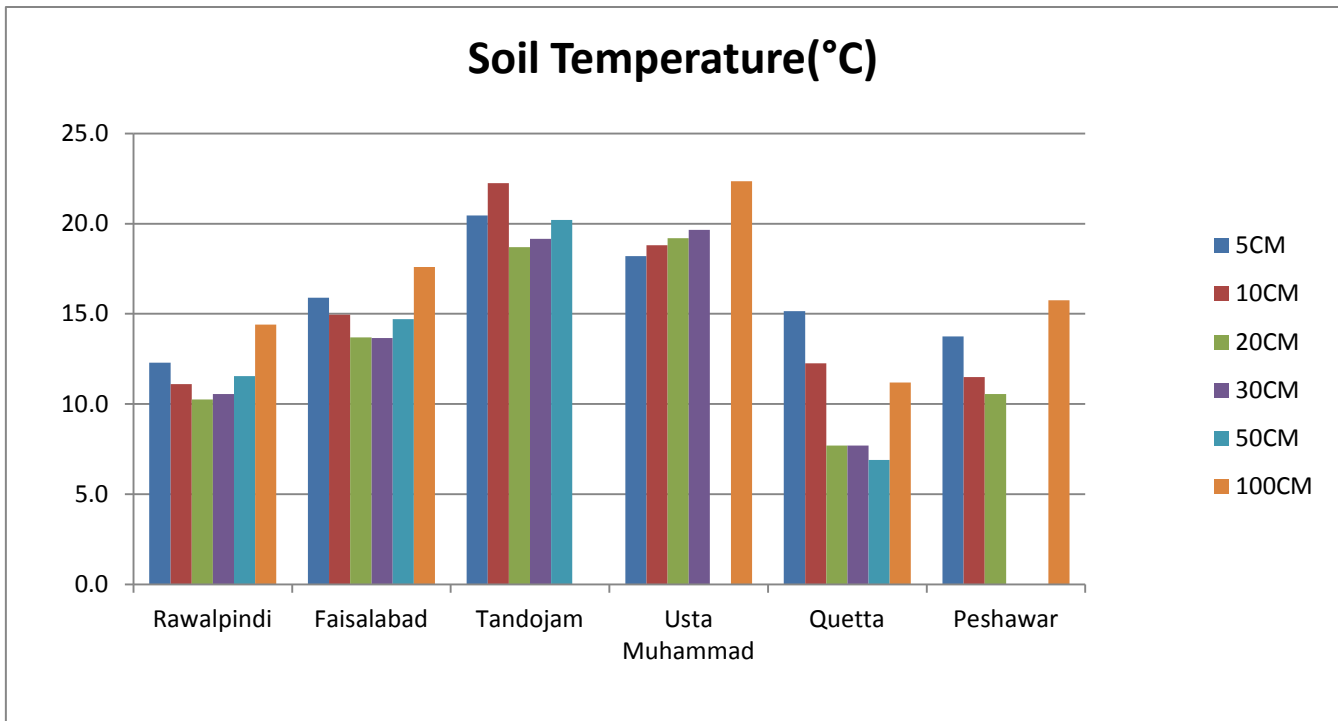
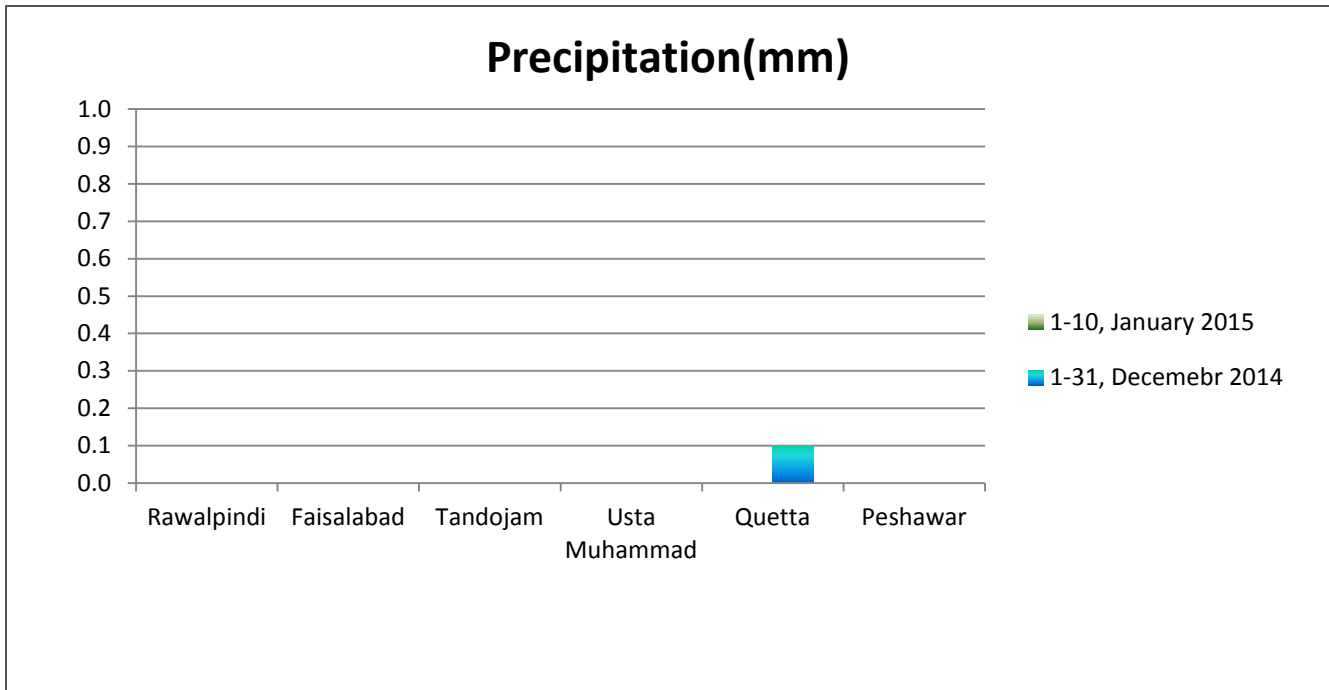
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Meteorological conditions during 1st decade of January, 2015

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	0.5	0.0	-0.5	0.0	0.1	11.3	12.3	11.1	10.3	10.6	11.6	14.4	58	66.5	3.2	1.5
2	FAISALABAD	0.2	0.0	-0.2	-4.0	1.7	11.6	15.9	15.0	13.7	13.7	14.7	17.6	74	23.0	2.0	1.1
3	JHELUM	0.4	0.0	-0.4	-3.7	-0.1	11.4	14.3	12.7	12.3	12.5	13.9	***	76	31.3	1.7	1.0
4	LAHORE	0.3	0.0	-0.3	-4.2	-0.5	11.7	14.2	14.0	13.5	13.5	***	17.2	83	19.5	1.7	0.9
5	SARGODHA	0.4	0.0	-0.4	-5.9	0.1	10.4	13.7	13.1	13.4	14.1	15.5	17.8	85	19.8	0.0	0.8
6	MULTAN	0.1	0.0	-0.1	-4.2	1.2	12.1	***	***	***	***	***	***	79	37.9	2.7	1.2
7	KHANPUR	0.1	0.0	-0.1	-3.3	0.2	12.7	***	14.4	15.0	15.5	16.7	19.4	79	38.6	3.7	1.4
8	TANDOJAM	0.4	0.0	-0.4	0.8	0.1	17.2	20.5	22.3	18.7	19.2	20.2	***	62	76.7	1.1	1.8
9	SAKRAND ☆	0.0	0.1	0.1	0.8	-2.6	13.9	23.5	19.5	***	***	***	23.5	62	83.0	4.6	2.4
10	ROHRI	0.0	0.0	0.0	-1.2	-4.9	13.1	21.8	20.1	18.8	20.5	19.2	25.0	67	61.0	2.4	1.7
11	DI KHAN	0.4	0.0	-0.4	-4.1	-3.3	10.0	***	***	***	***	***	***	74	38.1	***	1.6
12	PESHAWAR	0.6	0.0	-0.6	2.1	-2.2	12.2	13.8	11.5	10.6	***	***	15.8	55	27.2	1.1	1.0
13	USTA MUHAMMAD	0.0	0.0	0.0	0.4	-2.5	13.9	18.2	18.8	19.2	19.7	***	22.4	72	***	***	2.3
14	QUETTA	0.4	0.0	-0.4	4.5	2.3	8.8	15.2	12.3	7.7	7.7	6.9	11.2	28	91.4	4.5	2.1
15	SKARDU	0.5	0.0	-0.5	2.0	-1.6	-0.2	***	***	***	***	***	***	53	53.2	0.3	0.6
16	GILGIT	0.4	0.0	-0.4	1.7	-0.8	4.8	***	***	***	***	***	***	54	35.1	1.9	1.0

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. 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 (1st to 10th January, 2015)

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

1.1 Punjab

Dry weather reported in the agricultural plains of Punjab. Decadal maximum dropped below normal by 3.6°C & minimum raised above normal by 0.4°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 76%, 33.8hrs, 2.1km/hr and 1.1mm/day respectively.

1.2 Sindh

Dry weather reported in the agricultural plains of Sindh. Decadal maximum raised above normal by 0.1°C & minimum dropped below normal by 2.5°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 64%, 73.6hrs, 2.7km/hr and 2.0mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

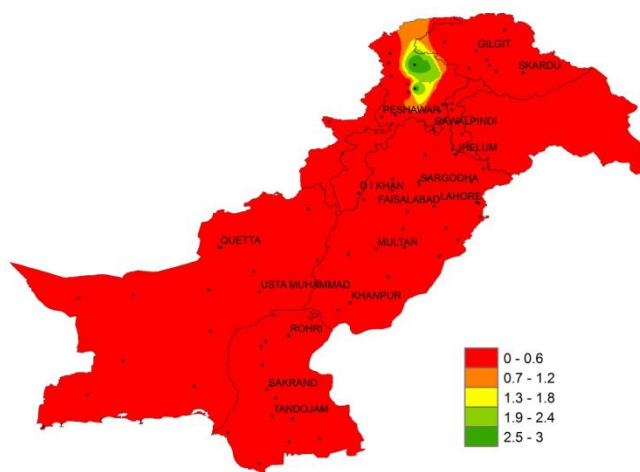
Dry weather reported in the agricultural plains of KP. Decadal maximum and minimum both dropped below normal by 1.0°C & 2.8°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 65%, 32.7hrs, 1.1km/hr and 1.3mm/day respectively.

1.4 Balochistan

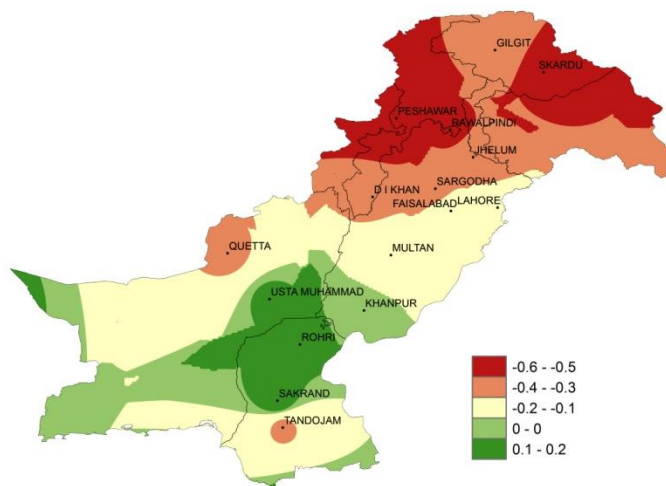
Dry weather reported in the agricultural plains of Balochistan. Decadal maximum raised above normal by 2.5°C & minimum dropped below normal by 0.1°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 50%, 91.4hrs, 4.5km/hr and 2.2mm/day respectively.

1.5 Gilgit-Baltistan and Azad Jammu & Kashmir

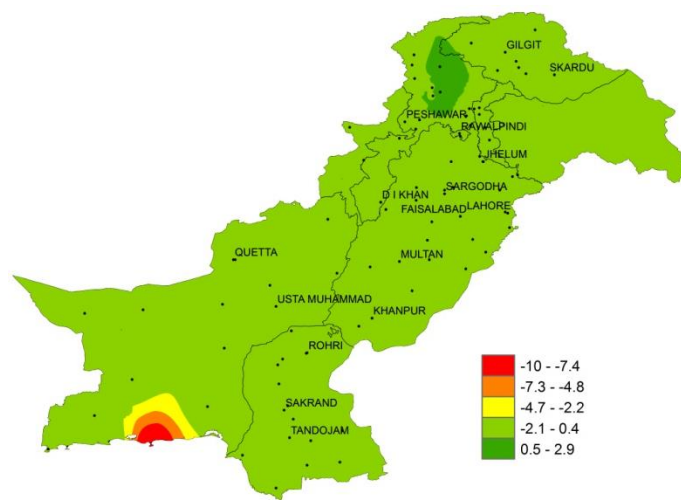
Dry weather reported in the agricultural plains of GB & Kashmir. Decadal maximum raised above normal by 1.9°C & minimum dropped below normal by 1.2°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 54%, 44.2hrs, 1.1km/hr and 0.8mm/day respectively.



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**
(1st to 10th January, 2015)

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

Dry weather reported during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 58%. Mean day temperature was 19.2°C while night temperature recorded as 3.4°C with 66.5hours bright sunshine duration. Wind speed recorded as 3.2km/hr with mean wind direction *westerly*.

Wheat (chakwal): Poor condition, 3rd leaf stage.

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

Dry weather reported during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 74%. Mean day temperature was 16.5°C while night temperature recorded as 6.6°C with 23.05hours bright sunshine duration. Wind speed recorded as 2.0km/hr with mean wind direction *north westerly*.

Wheat: Excellent condition, Tillering 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 62%. Mean day temperature was 25.1°C while night temperature recorded as 9.2°C with 76.7hours bright sunshine duration. Wind speed recorded as 1.1km/hr with mean wind direction *northerly*.

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

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

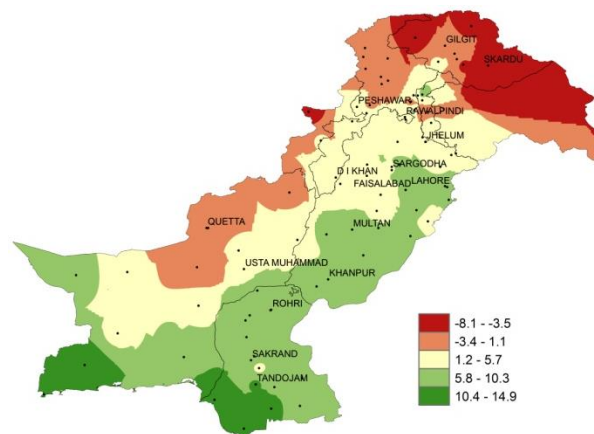
Dry weather reported during the decade however weather remained clear throughout the decade. Average relative humidity recorded as 72%. Mean day temperature was 22.3°C while night temperature recorded as 5.4°C.

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

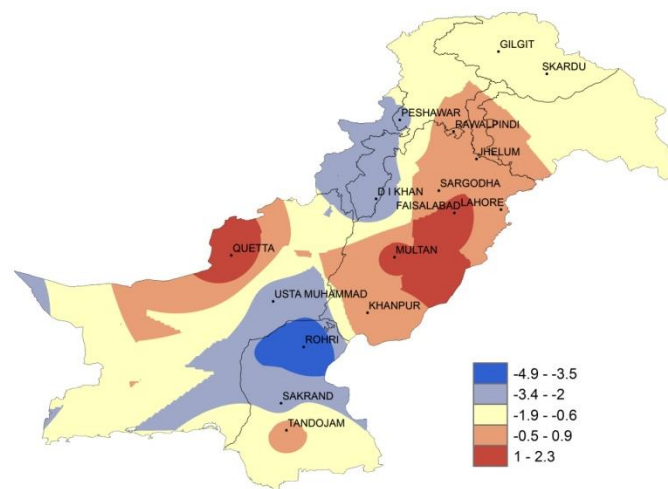
2.5 **RAMC, Quetta (Northern Balochistan)**

Dry weather reported during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 28%. Mean day temperature was 17.3°C while night temperature recorded as 0.2°C with 91.4hours bright sunshine duration and wind speed recorded as 4.5km/hr with mean wind direction *southerly*.

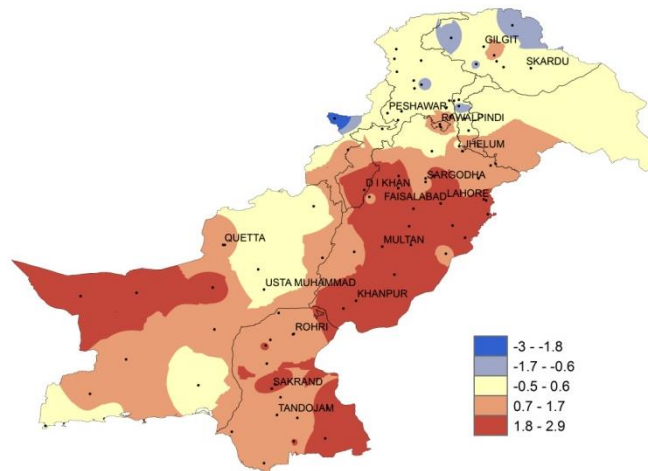
Wheat: Good condition, 3rd leaf stage.



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 (1st to 10th January, 2015)**

2.6 **Jhelum**

Dry weather reported during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 76%. Mean day temperature was 17.3°C while night temperature recorded as 5.5°C with 31.3hours bright sunshine duration. Wind speed recorded 1.7km/hr with wind direction *south westerly*.

2.7 **Lahore**

Dry weather reported during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 83%. Mean day temperature was 15.5°C while night temperature recorded as 7.9°C with 19.5hours bright sunshine duration. Wind speed recorded as 1.7km/hr with mean wind direction *north westerly*.

2.8 **Sargodha**

Dry weather reported during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 85%. Mean day temperature was 14.8°C while night temperature recorded as 6.0°C with 19.8hours bright sunshine duration Wind remain calm.

2.9 **Multan**

Dry weather reported during the decade however weather remained cloudy for 02days. Average relative humidity recorded as 37.9%. Mean day temperature was 17.2°C while night temperature recorded as 6.9°C with 37.9hours bright sunshine duration. Wind speed recorded 2.7km/hr with mean wind direction *southerly*.

2.10 **Khanpur**

Dry weather reported during the decade however weather remained clear throughout the decade. Average relative humidity recorded as 79%. Mean day temperature was 18.8°C while night temperature recorded as 6.5°C with 38.6hours bright sunshine duration. Wind speed recorded 3.7km/hr with mean wind direction *north easterly*.

2.11 **Sakrand**

Rainfall reported as Trace (not measureable) during the decade however weather remains cloudy for 03days. Average relative humidity recorded as 62%. Mean day temperature was 23.2°C while night temperature recorded as 4.6°C with 83.0hours bright sunshine duration. Wind speed recorded 4.6km/hr with wind direction *northerly*.

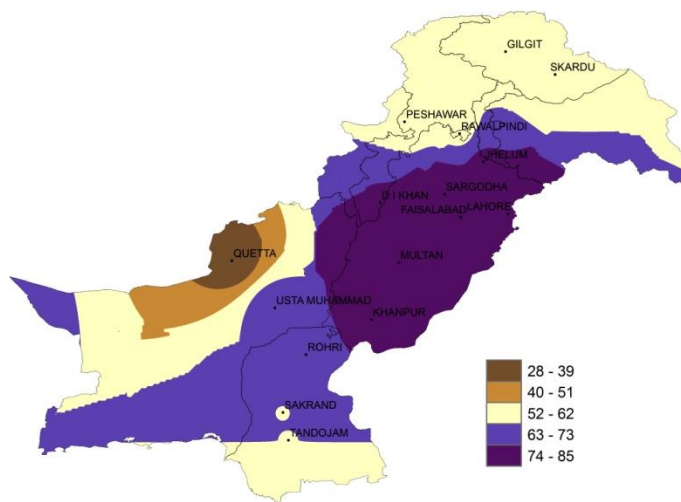


Figure.3: Relative Humidity in percentage (%)

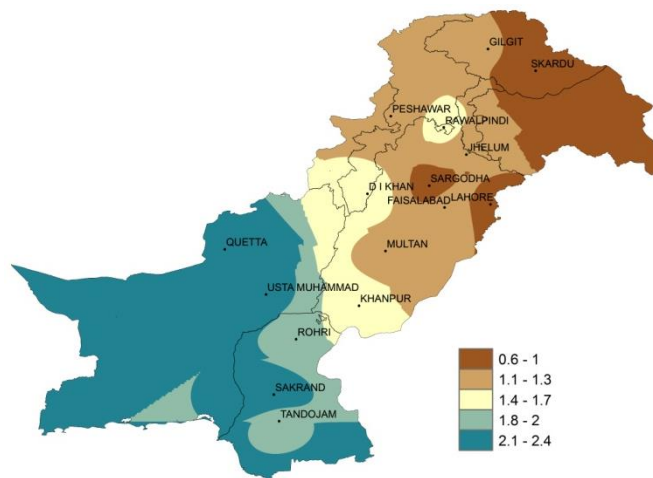


Figure.4: Reference Crop Evapotranspiration "ETo" in mm/day

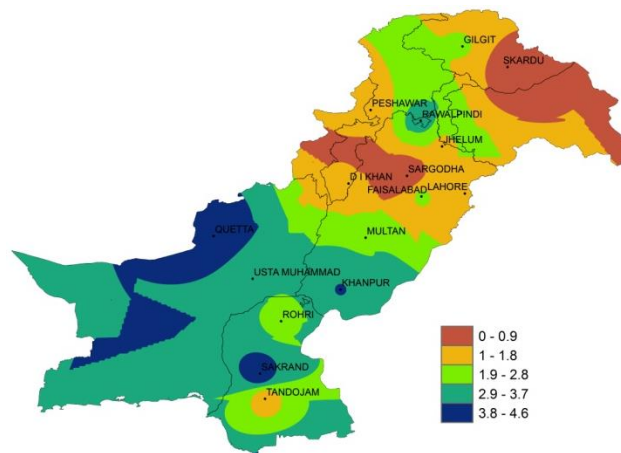


Figure 5: Wind Speed in kilometer per hour (km/h)

2.12 Rohri

Dry weather reported during the decade however weather remained clear throughout the decade. Average relative humidity recorded as 67%. Mean day temperature was 21.7°C while night temperature recorded as 9.5°C with 61.0 hours bright sunshine duration. Wind speed recorded as 2.4 km/hr with mean wind direction *north easterly*.

2.13 D.I. Khan

Dry weather reported during the decade however weather remained clear throughout the decade. Average relative humidity recorded as 74%. Mean day temperature was 17.2°C while night temperature recorded as 2.8°C with 38.1 hours bright sunshine duration.

2.14 Peshawar

Dry weather reported during the decade however weather remained cloudy for 06 days. Average relative humidity recorded as 55%. Mean day temperature was 21.6°C while night temperature recorded as 2.8°C with 27.2 hours bright sunshine duration. Wind speed recorded as 1.1 km/hr with mean wind direction *south westerly*.

2.15 Skardu

Dry weather reported during the decade however weather remained cloudy for 04 days. Average relative humidity recorded as 53%. Mean day temperature was 7.8°C while night temperature recorded as -8.1°C with 53.2 hours bright sunshine duration. Wind speed recorded as 0.3 km/hr with mean wind direction *east-south easterly*.

2.16 Gilgit

Dry weather reported during the decade however weather remained cloudy for 07 days. Average relative humidity recorded as 54%. Mean day temperature was 13.0°C while night temperature recorded as -3.4°C with 35.0 hours bright sunshine duration. Wind speed recorded as 1.9 km/hr with mean wind direction *westerly*.

3. Ten Days Weather Advisory for Farmers **(11th to 20th 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 decade.
- ❖ **Sindh:** Mostly dry weather expected in most of the parts of Sindh however light to moderate rain is expected in end 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 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 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.