

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light to moderate rainfall reported in the agricultural plains of Punjab, K.P, G.B & Kashmir however dry weather reported in the agricultural plains of the Sindh & Balochistan during the last decade.
- ❖ Highest amount of rainfall reported as 81.0mm at Rawalakot during the last decade.
- ❖ Lowest Minimum temperature recorded -11.0°C at Kalam during the last decade.
- ❖ Light to moderate rainfall (with snowfall over the hills) is expected in different upper parts of country from 28th to 29th of the 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.
- ❖ 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.
- ❖ Falling leaves from trees negatively affect standing Rabi crops like wheat and other crops. Framers should collect leaves from the crops as early as possible so that crop normal growth may not be disturbed.

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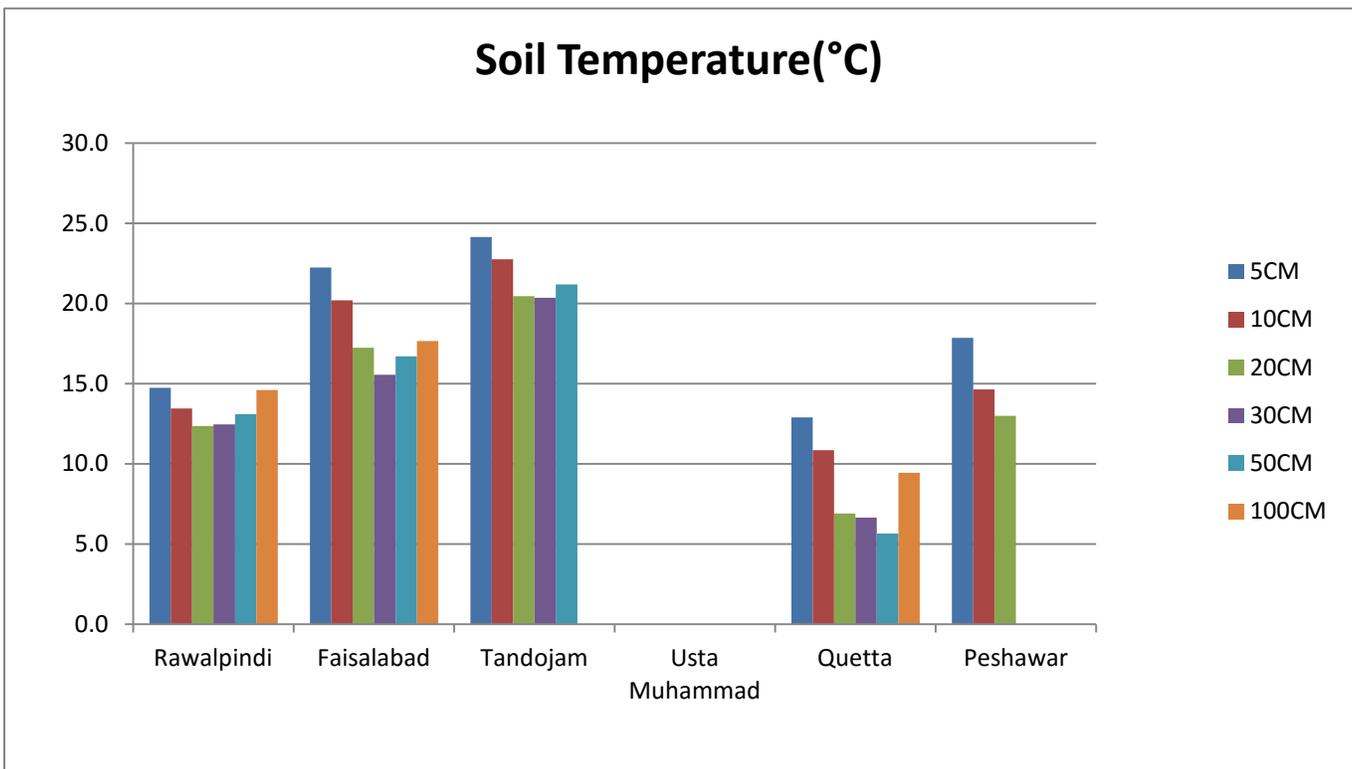
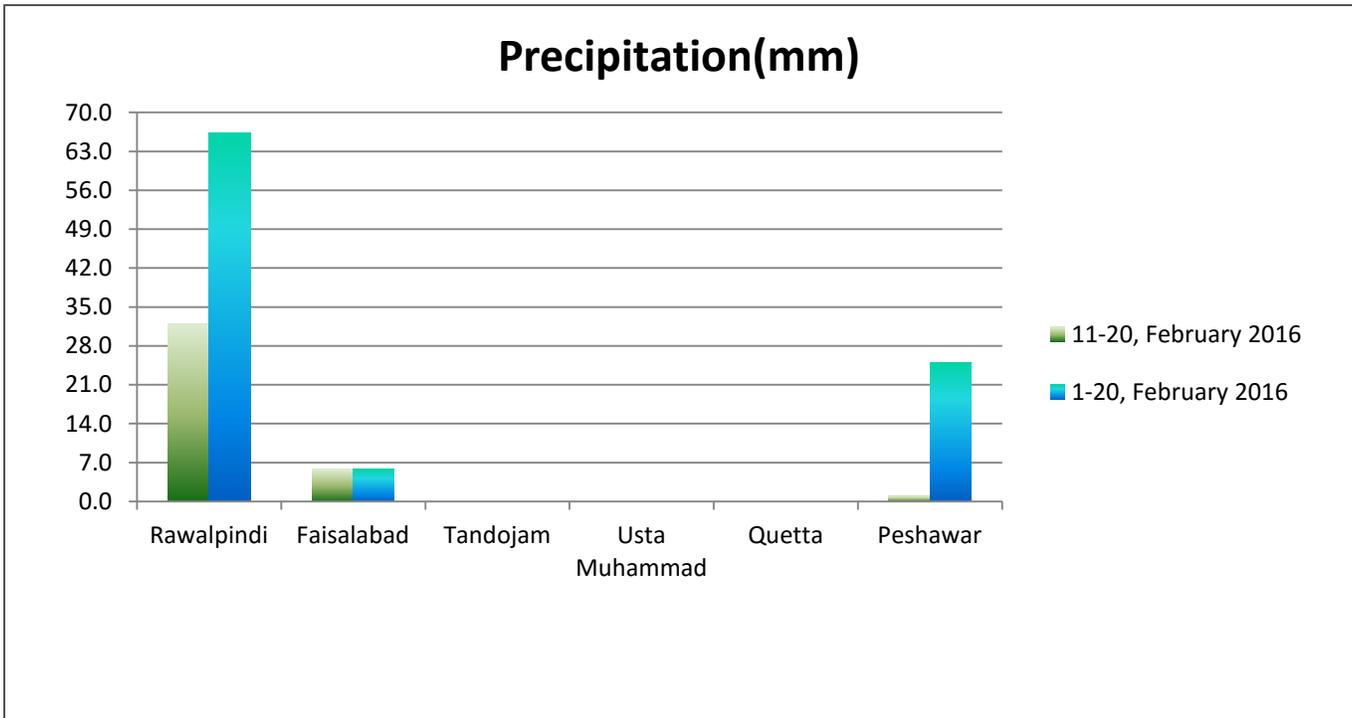
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Meteorological conditions during 2nd decade of February, 2016

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	3.4	32.0	28.6	0.9	-0.5	13.7	14.8	13.5	12.4	12.5	13.1	14.6	59	71.8	3.5	2.4
2	FAISALABAD	1.3	5.8	4.5	-0.3	-2.0	14.8	22.3	20.2	17.3	15.6	16.7	17.7	56	67.2	2.2	2.3
3	JHELUM	3.3	23.0	19.7	0.3	-2.0	15.1	16.1	14.9	14.1	14.0	14.8	***	57	77.5	3.3	2.5
4	LAHORE	2.3	2.6	0.3	-0.3	-2.7	15.8	18.0	17.2	15.7	15.2	***	17.5	60	72.9	2.4	2.4
5	SARGODHA	1.6	6.0	4.4	-1.0	-0.8	15.2	19.5	18.1	16.6	16.7	17.4	18.3	65	52.9	1.9	2.0
6	MULTAN	1.1	2.0	0.9	-0.3	-1.0	15.7	***	***	***	***	***	***	49	65.6	2.2	2.4
7	KHANPUR	0.1	1.0	0.9	-1.4	-1.6	15.8	***	17.3	17.8	18.3	19.6	20.3	47	76.6	4.3	3.2
8	TANDOJAM	0.6	0.0	-0.6	-3.2	-1.9	17.1	24.2	22.8	20.5	20.4	21.2	***	45	88.3	3.8	3.5
9	SAKRAND ☆	0.0	0.0	0.0	-2.2	-0.6	16.8	29.1	22.9	***	***	***	23.4	50	87.1	7.8	4.1
11	DI KHAN	1.5	0.0	-1.5	1.5	-2.7	14.5	***	***	***	***	***	***	49	83.5	***	3.6
11	PESHAWAR	4.1	1.0	-3.1	1.2	-2.5	13.5	17.9	14.7	13.0	***	***	***	60	64.4	1.9	2.0
12	USTA MUHAMMAD	0.0	0.0	0.0	-1.5	-3.2	16.1	***	***	***	***	***	***	49	***	***	4.1
13	QUETTA	1.7	0.0	-1.7	-2.3	-4.5	4.7	12.9	10.9	6.9	6.7	5.7	9.5	32	94.2	5.4	2.7
14	SKARDU	1.0	9.4	8.4	1.7	0.5	3.3	***	***	***	***	***	***	57	57.6	2.2	1.5
15	GILGIT	0.6	7.9	7.3	-0.1	-0.4	7.5	***	***	***	***	***	***	42	43.0	3.5	1.9

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; Dep divided by Normal multiplied by 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, 2016



Past Weather (11th to 20th February, 2016)

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

1.1 Punjab

Light to moderate rainfall reported in the agricultural plains of Punjab. Chief amount of rainfall received in Murree, Islamabad & Chakwal. Decadal maximum & minimum both dropped below normal by 0.3°C & 1.5°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 56%, 69.2hrs, 2.8km/hr and 2.5mm/day respectively.

1.2 Sindh

Dry weather reported in the agricultural plains of Sindh. Decadal maximum & minimum temperature both dropped below normal by 1.8°C & 0.8°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 32%, 58.5hrs, 3.9km/hr and 3.8mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

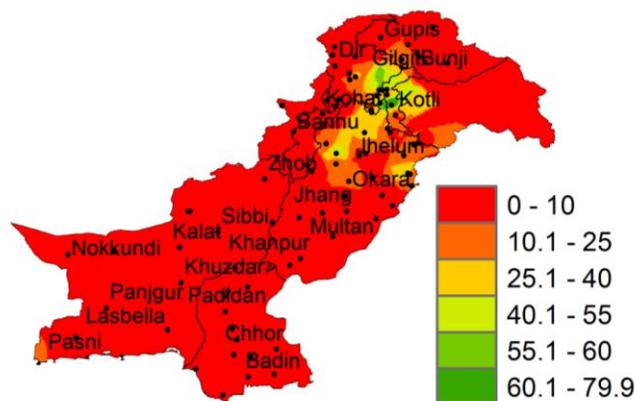
Light to moderate rainfall reported in the agricultural plains of KP. Chief amount of rainfall received in Balakot, Kakul & Pattan. Decadal maximum raised above normal by 1.4°C & minimum temperature dropped below normal by 2.6°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 55%, 74.0hrs, 1.9km/hr and 2.8mm/day respectively.

1.4 Balochistan

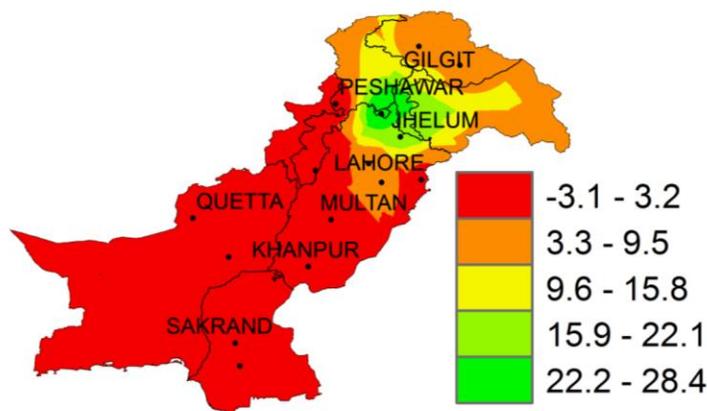
Dry weather reported in the agricultural plains of Balochistan. Decadal maximum & minimum temperature both dropped below normal by 1.9°C & 3.9°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 41%, 94.2hrs, 5.4km/hr and 3.4mm/day respectively.

1.5 Gilgit-Baltistan and Azad Jammu & Kashmir

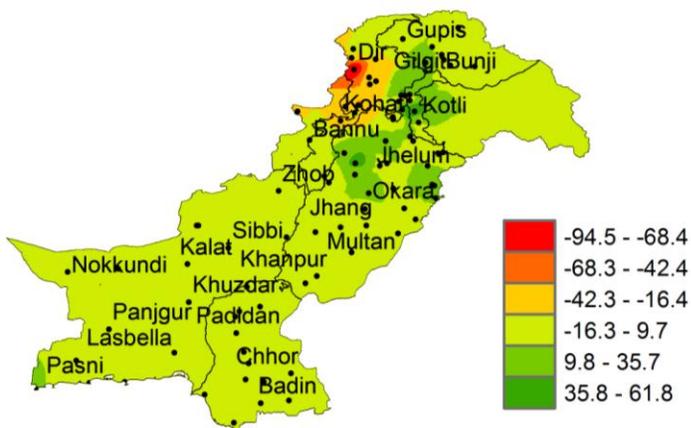
Light to moderate rainfall reported in the agricultural plains of GB & Kashmir. Chief amount of rainfall received in Rawalakot, Kotli & Muzaffarabad. Decadal maximum & minimum both raised above normal by 0.8°C & 0.1°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 50%, 50.3hrs, 2.9km/hr and 1.7mm/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 February, 2016)**

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

Rainfall reported as 32.0mm during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 59%. Mean day temperature was 21.1°C while night temperature recorded as 6.3°C with 71.8hours bright sunshine duration. Wind speed recorded as 3.5km/hr with mean wind direction *westerly*.

Wheat (Chakwal-97): Good condition, tillering stage.

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

Rainfall reported as 5.8mm during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 56%. Mean day temperature was 22.6°C while night temperature recorded as 7.0°C with 67.15hours bright sunshine duration. Wind speed recorded as 2.2km/hr with mean wind direction *westerly north-westerly*.

Wheat: Very Good condition, shooting stage completed.

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

Dry weather reported during the decade however weather remained clear. Average relative humidity recorded as 45%. Mean day temperature was 25.3°C while night temperature recorded as 8.9°C with 88.3hours bright sunshine duration. Wind speed recorded as 3.8km/hr with mean wind direction *north easterly*.

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

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

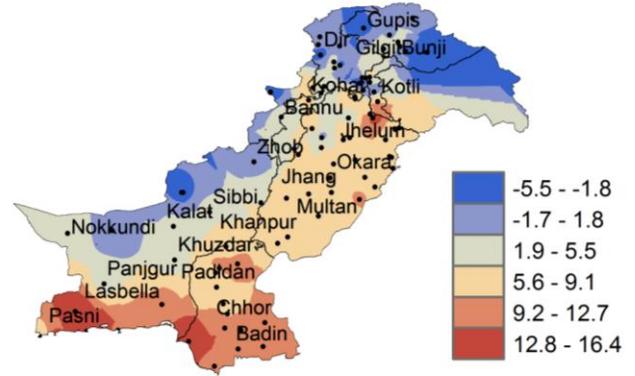
Dry weather reported during the decade however weather remained clear throughout the decade. Average relative humidity recorded as 49%. Mean day temperature was 25.1°C while night temperature recorded as 7.1°C. Wind speed recorded as 50.9km/hr with mean wind direction *north easterly*.

Wheat (Zardana): Good condition, shooting stage.

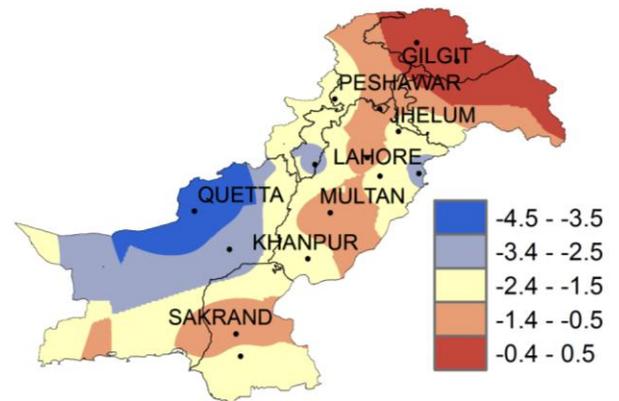
2.5 **RAMC, Quetta (Northern Balochistan)**

Dry weather reported during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 32%. Mean day temperature was 12.9°C while night temperature recorded as -3.6°C with 94.2hours bright sunshine duration with mean wind direction *southerly*.

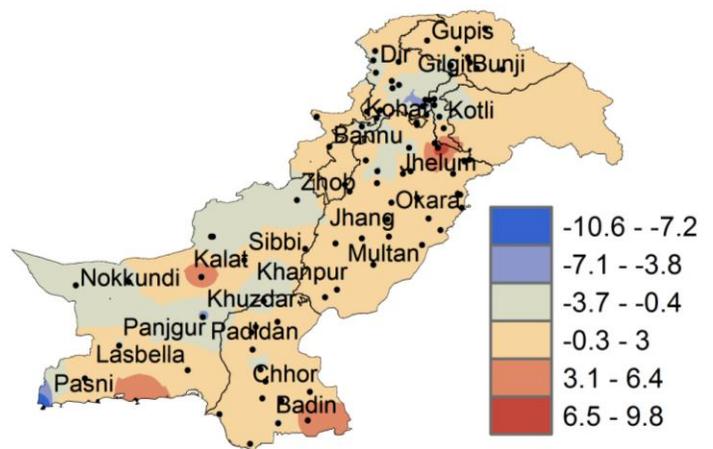
Wheat: Good condition, tillering stage.



❖ 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 (11th to 20th February, 2016)**

2.6 **Jhelum**

Rainfall reported as 23.0mm during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 57%. Mean day temperature was 23.0°C while night temperature recorded as 7.1°C with 77.5hours bright sunshine duration. Wind speed recorded 3.3km/hr with wind direction *north westerly*.

2.7 **Lahore**

Rainfall reported as 2.6mm during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 60%. Mean day temperature was 22.4°C while night temperature recorded as 9.1°C with 72.9hours bright sunshine duration. Wind speed recorded as 2.4km/hr with mean wind direction *north westerly*.

2.8 **Sargodha**

Rainfall reported as 6.0mm during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 65%. Mean day temperature was 22.0°C while night temperature recorded as 8.4°C with 52.9hours bright sunshine duration. Wind speed recorded 1.9km/hr with mean wind direction *north easterly*.

2.9 **Multan**

Rainfall reported as 2.0mm during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 49%. Mean day temperature was 23.2°C while night temperature recorded as 8.2°C with 65.6hours bright sunshine duration. Wind speed recorded 2.2km/hr with mean wind direction *north easterly*.

2.10 **Khanpur**

Rainfall reported as 1.0mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 47%. Mean day temperature was 24.2°C while night temperature recorded as 7.3°C with 76.6hours bright sunshine duration. Wind speed recorded 4.3km/hr with mean wind direction *north easterly*.

2.11 **Sakrand**

Dry weather reported during the decade however weather remains cloudy for 02days. Average relative humidity recorded as 50%. Mean day temperature was 24.9°C while night temperature recorded as 8.6°C with 87.1hours bright sunshine duration. Wind speed recorded 7.8km/hr with wind direction *north westerly*.

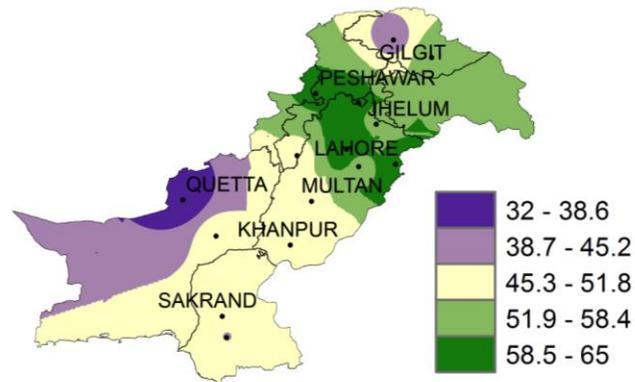


Figure.3: Relative Humidity in percentage (%)

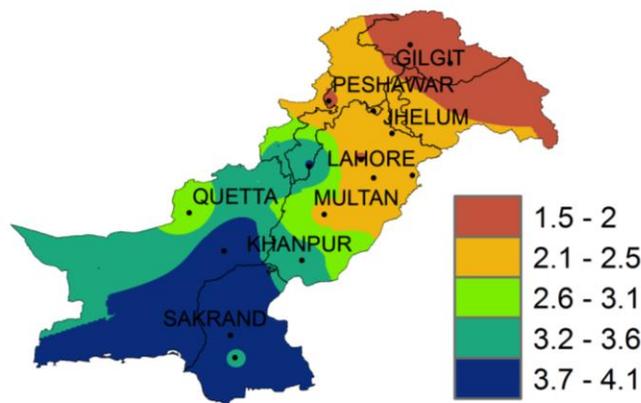


Figure.4: Reference Crop Evapotranspiration “ETo” in mm/day

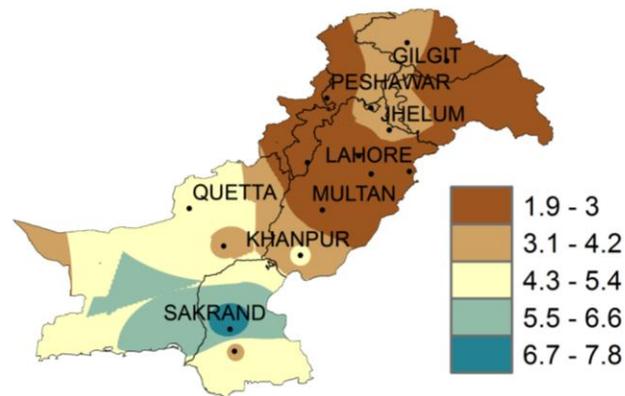


Figure 5: Wind Speed in kilometer per hour (km/h)

2.12 D.I. Khan

Dry weather reported during the decade however weather remained cloudy for 03days. Average relative humidity recorded as 49%. Mean day temperature was 23.6°C while night temperature recorded as 5.4°C with 83.5hours bright sunshine duration.

2.13 Peshawar

Rainfall reported as 1.0mm during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 60%. Mean day temperature was 21.2°C while night temperature recorded as 5.8°C with 64.4hours bright sunshine duration. Wind speed recorded as 1.9km/hr with mean wind direction *north westerly*.

2.14 Skardu

Rainfall reported as 9.4mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 57%. Mean day temperature was 9.5°C while night temperature recorded as -2.9°C with 57.6hours bright sunshine duration. Wind speed recorded as 2.2km/hr with mean wind direction *south westerly*.

2.15 Gilgit

Rainfall reported as 7.9mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 42%. Mean day temperature was 14.4°C while night temperature recorded as 0.5°C with 43.0hours bright sunshine duration. Wind speed recorded as 3.5km/hr with mean wind direction *westerly*.

**3. Ten Days Weather Advisory for Farmers
(21st to 29th February, 2016)****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 dry weather is expected during the decade. However light to moderate rain is expected in most parts of the province including Gujranwala, Rawalpindi, Lahore & D.G Khan divisions from 28th to 29th of the 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 Hazara, & D.I Khan division from 27th to 29th the decade.
- ❖ **Sindh:** Mainly dry weather is expected during the decade.
- ❖ **Balochistan:** Mainly cold and dry weather is expected in most parts of the Balochistan however light to moderate rain (with light snowfall over the hills) is expected in Zhob, Sibbi, & Kalat from 28th to 29th of 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 Gilgit, Skardu & Hunza from 28th & 29th of the decade.
- ❖ **Kashmir:** Widespread rain-thunderstorm (with snowfall over the hills) is expected in most parts of the Kashmir including Muzaffarabad, Rawalakot, Kotli from 28th to 29th 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.
- ❖ 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.
- ❖ 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 trees negatively affect standing Rabi crops like wheat and other crops. Framers should collect leaves from the crops as early as possible so that crop normal growth may not be disturbed.

- ❖ Farmers are advised to ensure field sanitation and spray prophylactic fungicidal sprays to prevent spread of diseases on vegetables.