

# Decadal Agromet Bulletin of Pakistan



## Highlights....

- ❖ Light rainfall reported in the agricultural plains of Punjab & Balochistan, however light to moderate in KPK, G.B & Kashmir and dry weather reported in Sindh during the last decade.
- ❖ Highest amount of rainfall reported as 56.9mm at Parachinar during the last decade.
- ❖ Lowest Minimum temperature recorded  $-7.5^{\circ}\text{C}$  at Kalat during the last decade.
- ❖ Light to moderate rainfall is expected in different parts of country excluding Sindh during this decade.
- ❖ Farmers are advised to cultivate winter vegetables in time so that present soil moisture may fully be utilized.
- ❖ Farmers are advised to take in time precautionary measures to protect livestock from expected dry/cold weather during the decade.
- ❖ Farmers of cotton crop areas are advised to prepare their field for incoming rabi crops and complete sowing in time.
- ❖ Farmers of rainfed areas are advised to sow their rabi crops during November. After this, yield of wheat crop decreases gradually. Farmers of irrigated areas of Punjab, Sindh and KPK are advised to complete sowing of wheat crop in the month of November. Late varieties may be cultivated in December.
- ❖ Farmers of rainfed areas of K.P & Punjab are advised to complete cultivation of Rabi crops as soon as possible. The status of soil moisture is very suitable after rains in the season.

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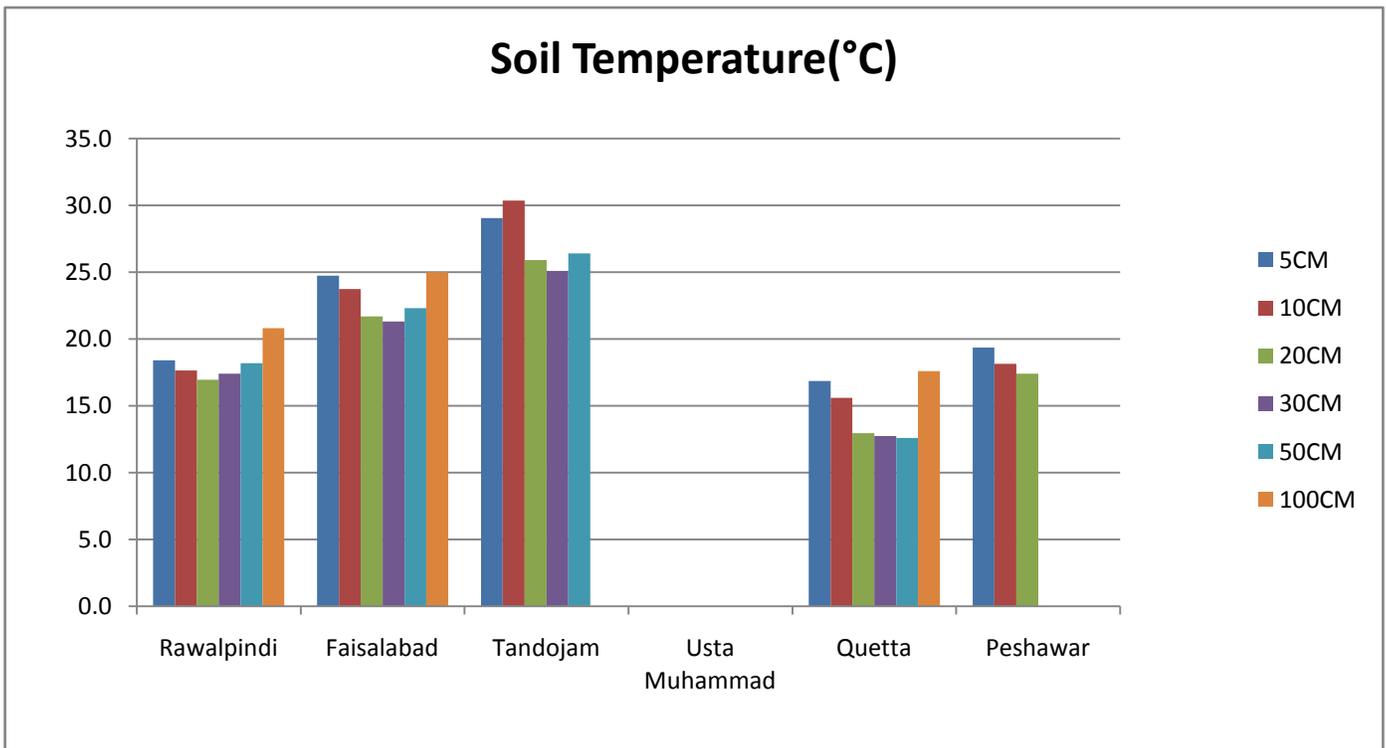
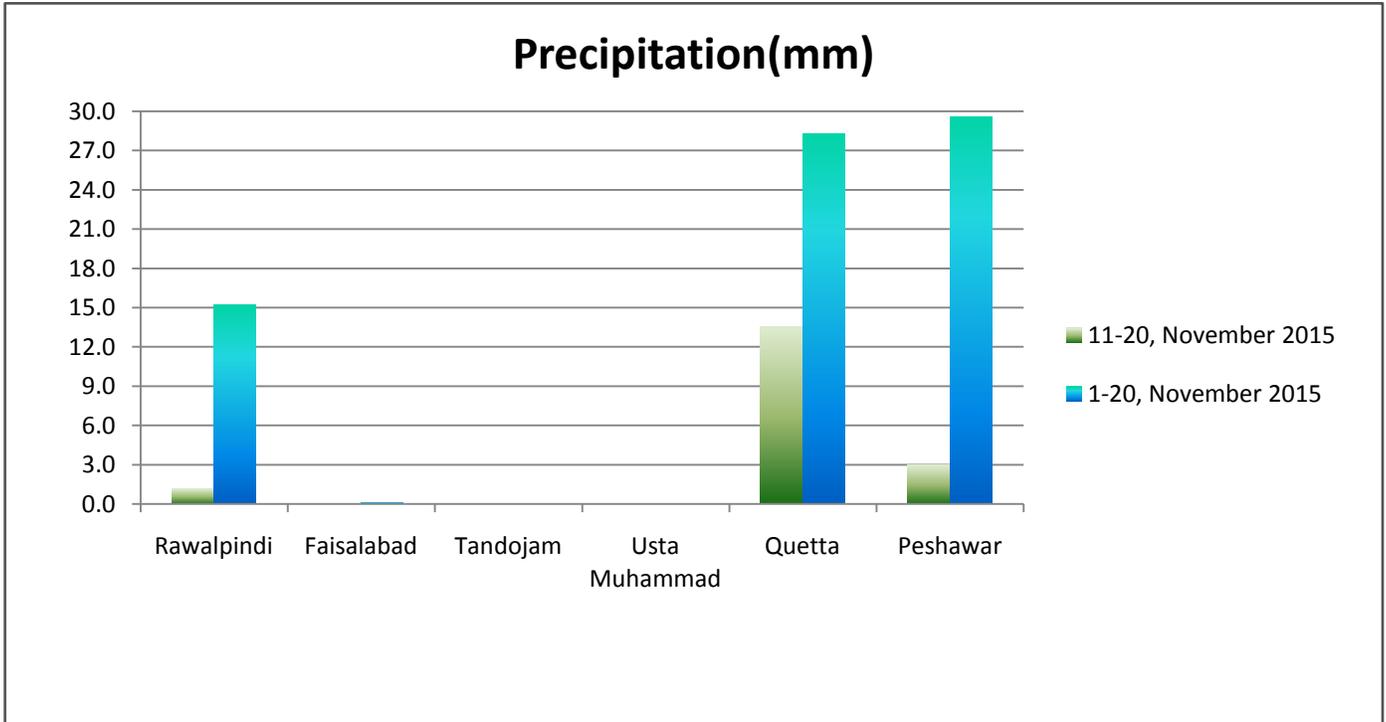
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Meteorological conditions during 2<sup>nd</sup> decade of November, 2015

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	1.2	0.7	-1.3	1.3	16.8	18.4	17.7	17.0	17.4	18.2	20.8	65	71.7	1.8	1.6
2	FAISALABAD	0.1	0.0	-0.1	0.9	0.8	19.8	24.8	23.8	21.7	21.3	22.3	25.0	68	71.4	2.0	2.0
3	JHELUM	0.5	0.0	-0.5	-0.4	0.7	19.2	19.6	18.7	18.5	18.9	20.2	***	61	71.8	2.0	1.9
4	LAHORE	0.2	0.1	-0.1	0.3	-1.7	20.3	21.5	21.0	20.6	20.4	***	23.9	58	80.5	2.0	2.1
5	SARGODHA	0.4	0.1	-0.3	-0.2	1.0	19.8	22.0	21.1	20.5	21.0	22.1	23.8	61	63.6	0.7	1.6
6	MULTAN	0.0	0.0	0.0	0.2	1.6	20.9	***	***	***	***	***	***	53	72.8	1.8	2.1
7	KHANPUR	0.0	0.0	0.0	0.8	0.7	21.0	***	23.2	23.1	23.7	24.4	26.1	55	73.1	2.9	2.5
8	TANDOJAM	0.0	0.0	0.0	-0.1	1.0	23.2	29.1	30.4	25.9	25.1	26.4	***	51	86.3	2.8	3.0
9	SAKRAND ☆	0.0	0.0	0.0	1.4	-2.8	20.1	32.4	28.1	***	***	***	30.7	56	87.1	2.2	2.6
11	D I KHAN	0.4	0.1	-0.3	0.4	-0.8	18.9	***	***	***	***	***	***	61	80.5	***	3.1
12	PESHAWAR	0.7	3.0	2.3	-1.1	-0.3	16.9	19.4	18.2	17.4	***	***	***	65	50.0	16.8	3.4
13	USTA MUHAMMAD	0.0	0.0	0.0	-0.4	-2.2	21.9	***	***	***	***	***	***	52	***	7.7	3.6
14	QUETTA	1.8	13.6	11.8	0.2	4.4	12.6	16.9	15.6	13.0	12.8	12.6	17.6	41	82.3	4.6	2.4
15	SKARDU	0.1	15.8	15.7	-2.0	1.3	5.3	***	***	***	***	***	***	71	46.6	0.6	1.0
16	GILGIT	0.1	10.0	9.9	-2.4	1.9	9.4	***	***	***	***	***	***	63	47.0	1.9	1.3

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.

# Graphs of RAMC's during November, 2015



**Past Weather (11<sup>th</sup> to 20<sup>th</sup> November, 2015)**

Light rainfall reported in the agricultural plains of Punjab and Baluchistan, however light to moderate in KPK, G.B & Kashmir and dry weather reported in Sindh during the last decade.

**1.1 Punjab**

Light rainfall reported in the agricultural plains of Punjab. Chief amount of rainfall received in Murree, Islamabad and Mangla. Decadal maximum remained normal & minimum temperature raised above normal by 0.6°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETO were recorded as 60%, 72.1 hrs, 1.9km/hr and 2.0mm/day respectively.

**1.2 Sindh**

Dry weather reported in the agricultural plains of Sindh. Decadal maximum raised above normal by 0.4°C & minimum temperature dropped below normal by 0.6°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETO were recorded as 56%, 57.8hrs, 1.7 km/hr and 2.8mm/day respectively.

**1.3 Khyber Pakhtunkhwa (KP)**

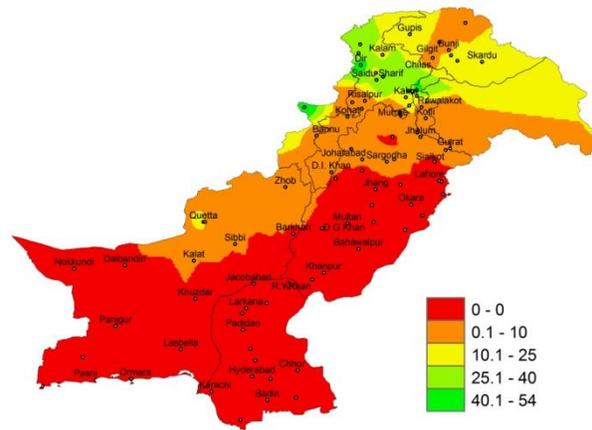
Light to moderate rainfall reported in the agricultural plains of KP. Chief amount of rainfall received in, Parachinar, Pattan & Dir. Decadal maximum & minimum temperature both dropped below normal by 0.4°C & 0.6°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETO were recorded as 63%, 65.3hrs, 16.8km/hr and 3.3mm/day respectively.

**1.4 Balochistan**

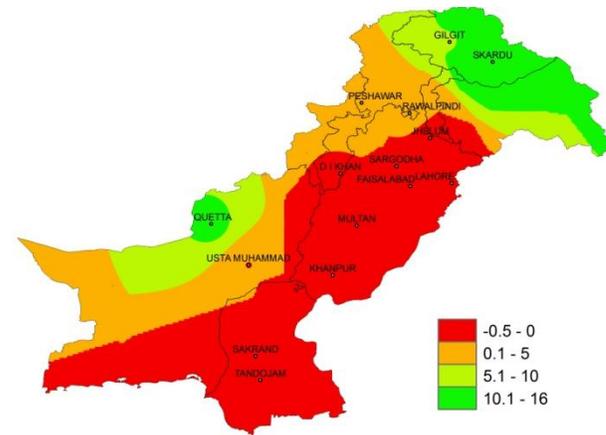
Light rainfall reported in few agricultural plains of Balochistan. Chief amount of rainfall received in Quetta and Zhob. Decadal maximum & minimum both dropped below normal by 1.7°C & 0.4°C respectively, in the province. Whereas mean values relative humidity, sunshine hour, wind speed & ETO were recorded as 47%, 82.3hrs, 6.2km/hr and 3.0mm/day respectively.

**1.5 Gilgit-Baltistan and Azad Jammu & Kashmir**

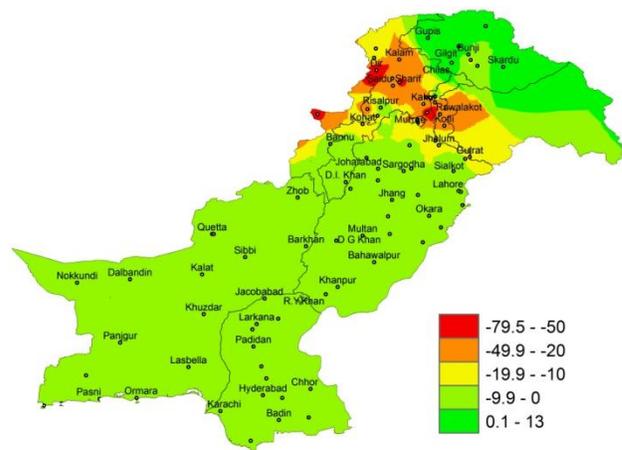
Light to moderate rainfall reported in the agricultural plains of GB & Kashmir. Chief amount of rainfall received in Muzafarabad, Gupis and Astore. Decadal maximum dropped below normal by 2.2°C & minimum temperature raised above normal by 1.6°C, in the province. Relative humidity, sunshine hour, wind speed & ETO were recorded as 67%, 46.8hrs, 1.3km/hr and 1.2mm/day respectively.



❖ Actual rainfall



❖ Departure of rainfall from Normal



❖ Departure of rainfall from Previous Decade

*Figure.1: Rainfall distribution during previous decade in "mm"*

2(a) **Past Weather for Major Agricultural Plains  
(11<sup>th</sup> to 20<sup>th</sup> November, 2015)**

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

Rainfall reported as 1.2mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 65%. Mean day temperature was 23.6°C while night temperature recorded as 9.9°C with 71.7 hours bright sunshine duration. Wind speed recorded as 1.8 km/hr with mean wind direction *westerly*.

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

No Rainfall reported during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 68%. Mean day temperature was 27.8°C while night temperature recorded as 11.7°C with 71.6 hours bright sunshine duration. Wind speed recorded as 2.0km/hr with mean wind direction *westerly*.

*Wheat:* Good at emergence stage.

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

Dry weather reported during the decade however weather remained cloudy for 01day. Average relative humidity recorded as 51%. Mean day temperature was 31.0°C while night temperature recorded as 15.3°C with 86.3hours bright sunshine duration. Wind speed recorded as 2.8km/hr with mean wind direction *north easterly*.

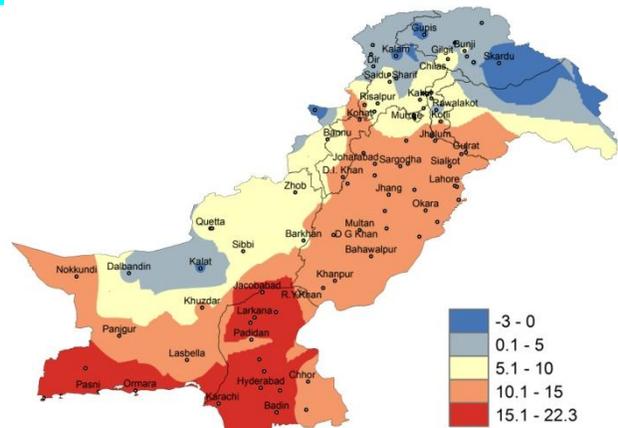
*Note:* Field preparing for new crop.

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

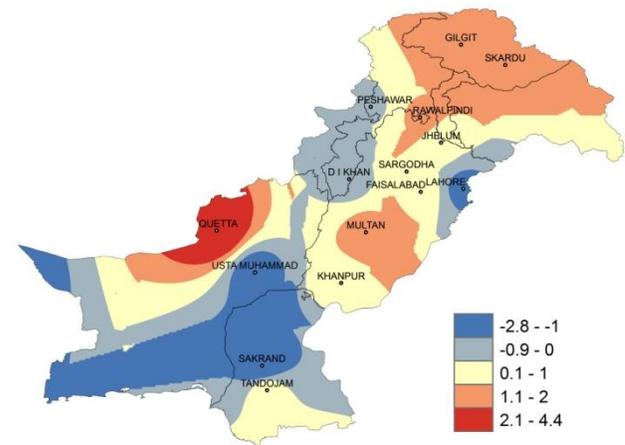
Dry weather reported during the decade however weather remained clear throughout the decade. Average relative humidity recorded as 52%. Mean day temperature was 29.4°C while night temperature recorded as 14.4°C and wind speed recorded as 7.7 km/hr with mean wind direction *south easterly*.

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

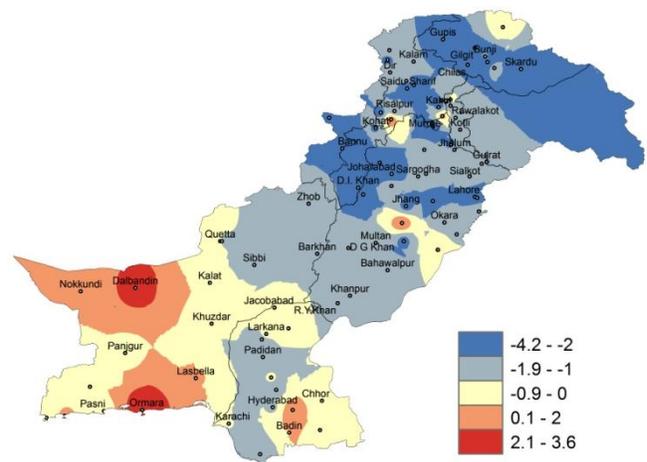
Rainfall reported as 13.6mm during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 41%. Mean day temperature was 18.8°C while night temperature recorded as 6.3°C with 82.3hours bright sunshine duration and wind speed recorded as 4.6km/hr with mean wind direction *northerly*.



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 (11<sup>th</sup> to 20<sup>th</sup> November, 2015)**

2.6 **Jhelum**

Dry weather reported during the decade however weather remained cloudy for 03days. Average relative humidity recorded as 61%. Mean day temperature was 26.5°C while night temperature recorded as 11.8°C with 71.8hours bright sunshine duration and wind speed recorded as 2.0km/hr with mean wind direction *north westerly*.

2.7 **Lahore**

Rainfall reported as 0.4mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 58%. Mean day temperature was 27.3°C while night temperature recorded as 13.2°C with 80.5hours bright sunshine duration. Wind speed recorded as 2.0km/hr with mean wind direction *westerly*.

2.8 **Sargodha**

Rainfall reported as Trace (Non measurable) during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 61%. Mean day temperature was 26.6°C while night temperature recorded as 13.0°C with 63.6hours bright sunshine duration. Wind speed recorded as 0.7km/h with mean wind direction *easterly*.

2.9 **Multan**

Dry weather reported during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 53%. Mean day temperature was 28.0°C while night temperature recorded as 13.8°C with 72.8hours bright sunshine duration. Wind speed recorded 1.8km/hr with mean wind direction *North easterly*.

2.10 **Khanpur**

Dry weather reported during the decade however weather remained cloudy for 02day. Average relative humidity recorded as 55%. Mean day temperature was 28.9°C while night temperature recorded as 13.1°C with 73.0hours bright sunshine duration. Wind speed recorded 2.9km/hr with mean wind direction *Variable*.

2.11 **Sakrand**

Dry weather reported during the decade however weather remained clear throughout the decade. Average relative humidity recorded as 56%. Mean day temperature was 30.3°C while night temperature recorded as 9.8°C with 87.1hours bright sunshine duration. Wind speed recorded 2.2km/hr with mean wind direction *northerly*.

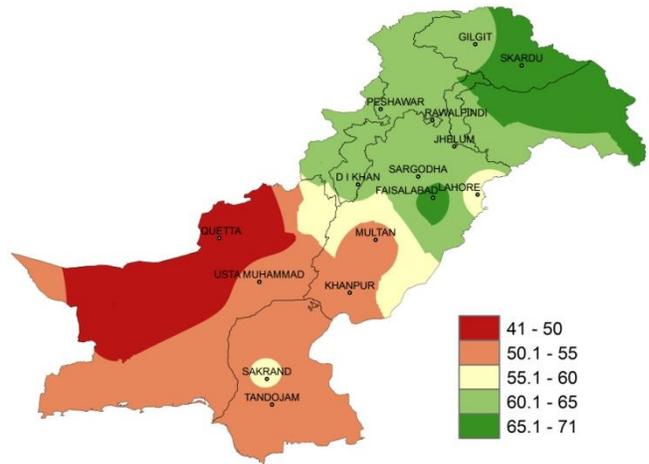


Figure.3: Relative Humidity in percentage (%)

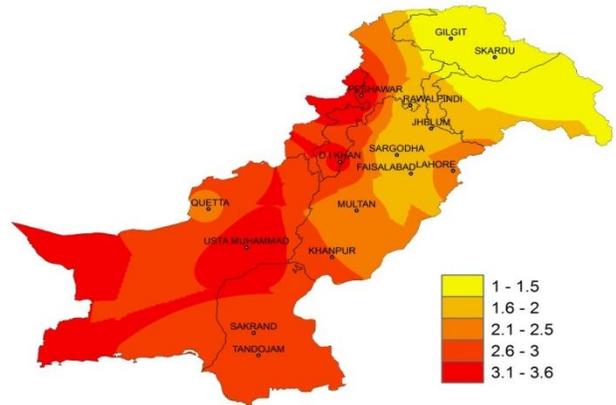


Figure.4: Reference Crop Evapotranspiration "ETo" in mm/day

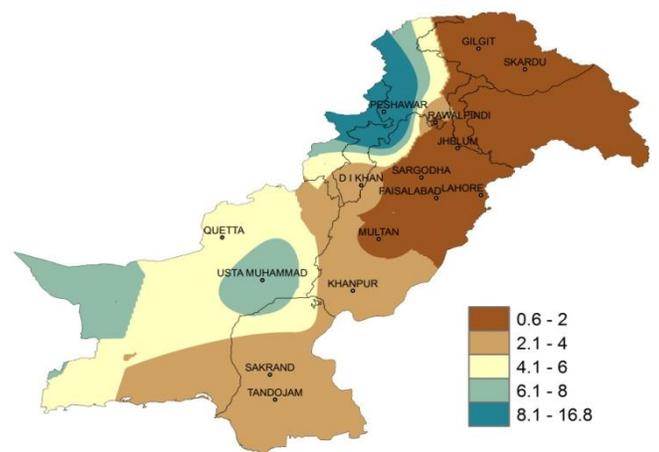


Figure 5: Wind Speed in kilometer per hour (km/h)

**2.12 D.I. Khan**

Rainfall reported as Trace (Non measureable) during the decade; however weather remained cloudy for 03days. Average relative humidity recorded as 61%. Mean day temperature was 27.5°C while night temperature recorded as 10.2°C with 80.5hours bright sunshine duration.

**2.13 Peshawar**

Rainfall reported as 3.0mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 65%. Mean day temperature was 23.6°C while night temperature recorded as 10.2°C with 50.0 hours bright sunshine duration. Wind speed recorded as 16.8km/hr with mean wind direction *north westerly*.

**2.14 Skardu**

Rainfall reported as 16.8mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 71%. Mean day temperature was 11.4°C while night temperature recorded as -0.8°C with 46.6hours bright sunshine duration. Wind speed recorded as 0.6km/hr with mean wind direction *east north easterly*.

**2.15 Gilgit**

Rainfall reported as 10.0mm during the decade however weather remained cloudy for 01days. Average relative humidity recorded as 63%. Mean day temperature was 16.3°C while night temperature recorded as 2.5°C with 47.0hours bright sunshine duration. Wind speed recorded as 1.9km/hr with mean wind direction *southerly*.

**3. Ten Days Weather Advisory for Farmers  
(21<sup>st</sup> to 30<sup>th</sup> November, 2015)****3.1 Temperature Forecast**

Night temperatures are expected to drop slightly (1-2°C) and day time temperatures are likely to be slightly normal in most of the agricultural plains 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:** Mainly dry weather is expected in the province. However scattered light to moderate rainfall is expected in over hills during the end of decade.
- ❖ **Khyber Pakhtunkhwa:** Mainly cold and dry weather is expected in the province. However light to moderate rainfall with snowfall is expected in scattered places

including Hazara, Malakand, Mardan, Peshawar & Kohat, divisions of this decade.

- ❖ **Sindh:** Dry weather is expected in most parts of the Sindh during this decade.
- ❖ **Balochistan:** Mainly hot and dry weather is expected in most parts of the Balochistan however light to moderate rain is expected during end of this decade.
- ❖ **Gilgit Baltistan:** Mainly dry weather is expected in most parts of Gilgit Baltistan. However light to moderate rain with snowfall is expected at Gilgit, Skardu during this decade
- ❖ **Kashmir:** Light to moderate rainfall with snowfall is expected in most of the parts of the Kashmir including Rawalakot, Muzaffarabad & Kotli divisions during this decade.

**3.4 Advisory for Farmers**

- ❖ Farmers are advised to cultivate winter vegetables in time so that present soil moisture may fully be utilized.
- ❖ Farmers are advised to take in time precautionary measures to protect livestock from expected dry/cold weather during the decade.
- ❖ Farmers of cotton crop areas are advised to prepare their field for incoming rabi crops and complete sowing in time.
- ❖ Farmers of rainfed areas are advised to sow their rabi crops during November. After this, yield of wheat crop decreases gradually. Farmers of irrigated areas of Punjab, Sindh and KPK are advised to complete sowing of wheat crop in the month of November. Late varieties may be cultivated in December.
- ❖ Farmers of rainfed areas of K.P & Punjab are advised to complete cultivation of Rabi crops as soon as possible. The status of soil moisture is very suitable after rains in the season