

# Decadal Agromet Bulletin of Pakistan



## Highlights....

- ❖ Light to moderate rainfall reported in the agricultural plains of Punjab, KPK & G.B and light rainfall reported in Sindh and Balochistan during the last decade.
- ❖ Highest amount of rainfall reported as 166.2mm at Islamabad during the last decade.
- ❖ Lowest Minimum temperature recorded  $-2.6^{\circ}\text{C}$  at Skardu during the last decade.
- ❖ Light to moderate rainfall is expected in different parts of country excluding Sindh from 01<sup>st</sup> to 4<sup>th</sup> and 08<sup>th</sup> to 10<sup>th</sup> of the decade.
- ❖ Farmers of rainfed areas obtaining water through tube wells and irrigated areas in upper parts are advised to schedule the irrigation according to the expected weather mentioned during the decade. Farmers should be very careful in this regard.
- ❖ 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 their crops, livestock and other property from any expected rain.
- ❖ 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 the period 15<sup>th</sup> October to 15<sup>th</sup> November. After this time yield of wheat crop decreases gradually.
- ❖ 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 recent rains in these areas.

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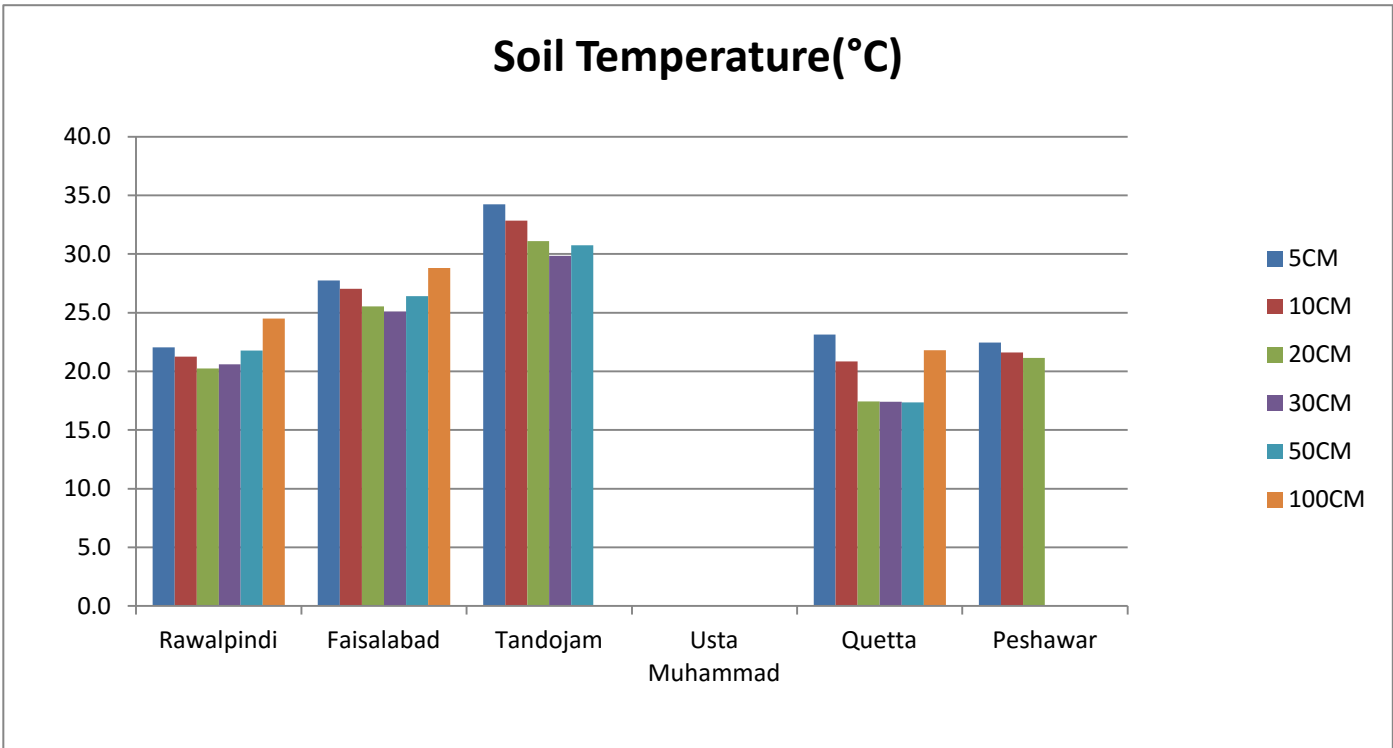
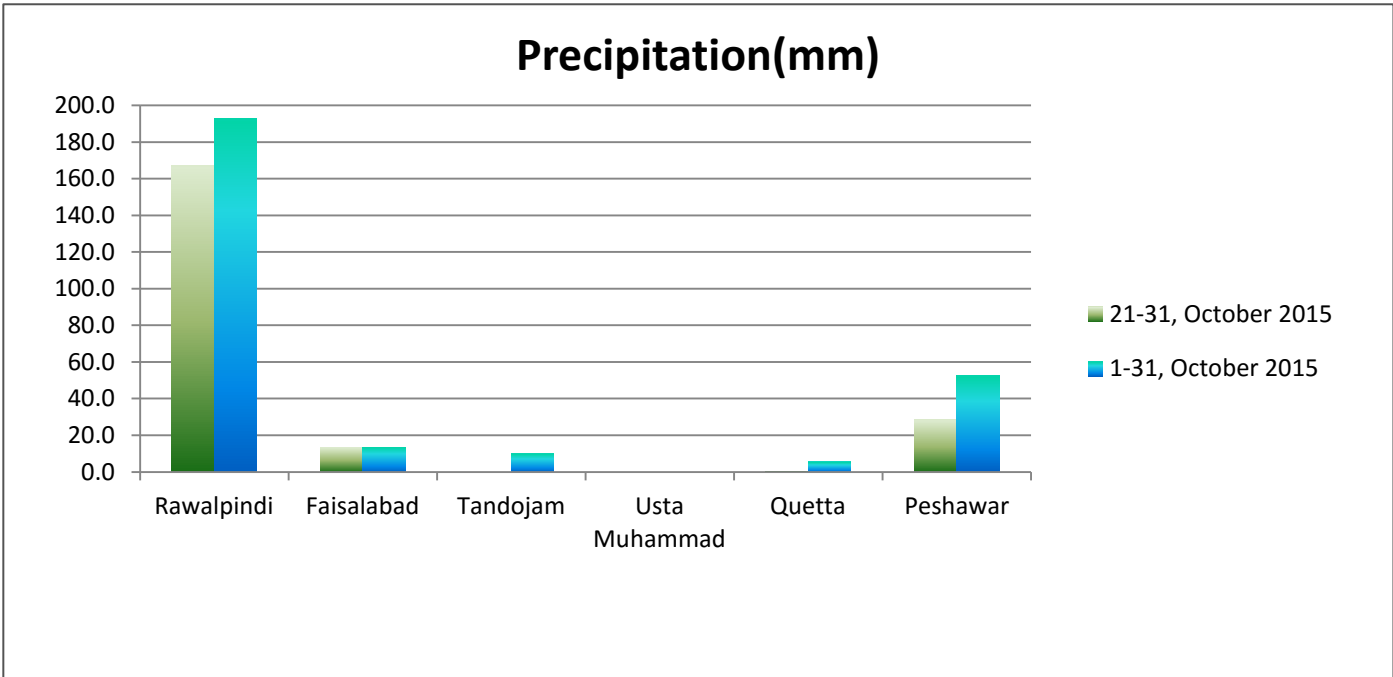
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Meteorological conditions during 3<sup>rd</sup> decade of October, 2015

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	0.3	167.4	167.1	-3.2	1.1	19.7	22.1	21.3	20.3	20.6	21.8	24.5	63	81.8	2.6	2.4
2	FAISALABAD	0.0	13.6	13.6	-2.0	-0.1	22.4	27.8	27.1	25.6	25.1	26.4	28.8	56	89.5	1.7	2.6
3	JHELUM	0.3	26.3	26.0	-3.0	-0.9	21.6	23.2	22.4	22.2	22.8	24.0	***	64	90.6	1.7	2.5
4	LAHORE	0.1	0.1	0.0	-1.5	-1.8	22.8	25.1	24.7	24.1	24.3	***	27.0	60	86.4	2.3	2.7
5	SARGODHA	0.2	6.0	5.8	-3.0	0.2	22.8	24.5	23.3	22.9	24.7	24.6	26.7	64	74.2	1.1	2.3
6	MULTAN	0.0	10.7	10.7	-2.6	0.2	23.5	***	***	***	***	***	***	53	86.9	3.4	3.1
7	KHANPUR	0.0	0.0	0.0	-2.5	-0.2	23.5	***	26.9	27.3	28.1	28.9	29.9	56	91.8	3.1	3.3
8	TANDOJAM	0.0	0.0	0.0	-1.8	0.7	26.1	34.3	32.9	31.1	29.9	30.8	***	55	102.0	4.8	4.3
9	SAKRAND ☆	0.0	0.0	0.0	-0.9	-3.8	23.4	37.8	33.7	***	***	***	33.7	59	104.7	3.7	3.8
11	D I KHAN	0.1	9.0	8.9	-3.3	-3.7	20.4	***	***	***	***	***	***	63	82.8	***	3.5
12	PESHAWAR	0.1	28.4	28.3	-3.0	-0.6	20.3	22.5	21.6	21.2	***	***	***	72	56.4	0.8	1.8
13	USTA MUHAMMAD	0.0	0.0	0.0	2.0	-3.0	26.1	***	***	***	***	***	***	52	***	15.9	4.8
14	QUETTA	0.0	0.1	0.1	-1.7	1.0	15.4	23.2	20.9	17.5	17.4	17.4	21.8	26	102.1	4.8	3.3
15	SKARDU	0.0	9.1	9.1	-2.4	0.5	9.2	***	***	***	***	***	***	57	67.9	1.5	1.6
16	GILGIT	0.1	4.0	3.9	-4.6	2.1	13.0	***	***	***	***	***	***	59	59.1	1.9	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.

# Graphs of RAMC's during October, 2015



**Past Weather (21<sup>st</sup> to 31<sup>st</sup> October, 2015)**

Light to moderate rainfall reported in the agricultural plains of Punjab, KPK & G.B and light rainfall reported in Sindh and 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 Islamabad, Murree & Kamra. Decadal maximum & minimum temperature both dropped below normal by 2.5°C & 0.2°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 59%, 85.9hrs, 2.3km/hr and 2.7mm/day respectively.

**1.2 Sindh**

Light rainfall reported in the agricultural plains of Sindh. Chief amount of rainfall received in Larkana & Sukkur. Decadal maximum & minimum temperature both dropped below normal by 1.4°C & 1.0°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 38%, 68.9hrs, 2.8km/hr and 4.1mm/day respectively.

**1.3 Khyber Pakhtunkhwa (KP)**

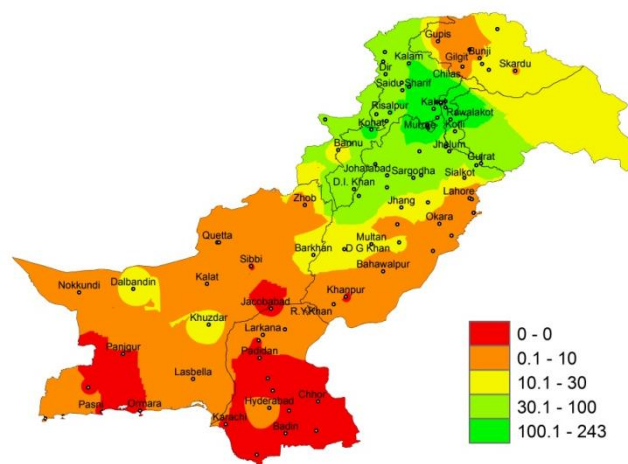
Light to moderate rainfall reported in the agricultural plains of KP. Chief amount of rainfall received in Balakot, Kakul & Pattan. Decadal maximum & minimum temperature both dropped below normal by 3.2°C & 2.2°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 68%, 69.9hrs, 0.8km/hr and 2.7mm/day respectively.

**1.4 Balochistan**

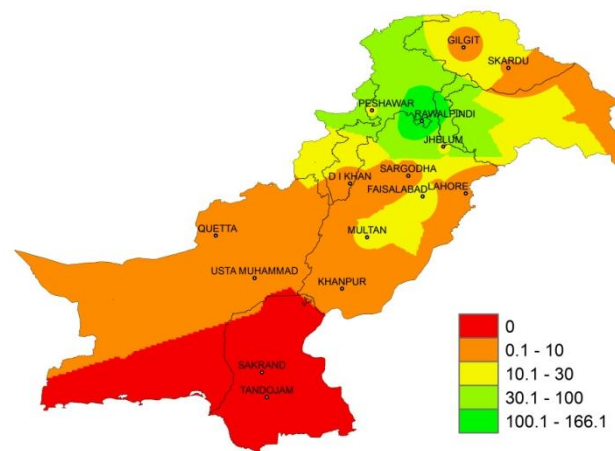
Light rainfall reported in the agricultural plains of Balochistan. Chief amount of rainfall received in Barkhan, Zhob & Lasbella. Decadal maximum raised above normal by 0.2°C & minimum temperature dropped below normal by 1.0°C, in the province. Whereas mean values relative humidity, sunshine hour, wind speed & ETo were recorded as 39%, 102.1hrs, 10.4km/hr and 4.1mm/day respectively.

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

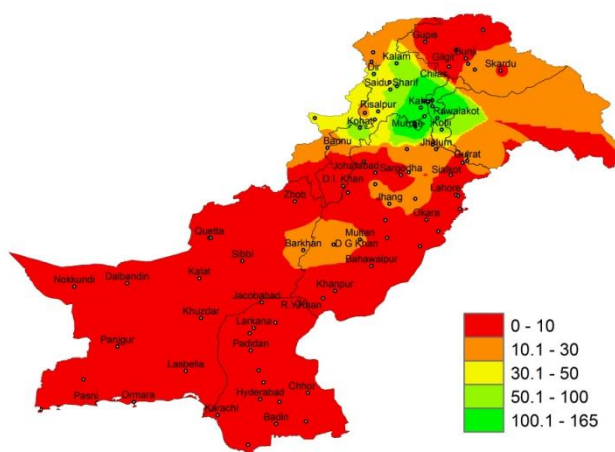
Light to moderate rainfall reported in the agricultural plains of GB & Kashmir. Chief amount of rainfall received in Garhi Dopatta, Muzzaffarabad & Rawalakot. Decadal maximum dropped below normal by 3.5°C & minimum temperature raised above normal by 1.3°C, in the province. Relative humidity, sunshine hour, wind speed & ETo were recorded as 58%, 63.5hrs, 1.7km/hr and 1.8mm/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**  
(21<sup>st</sup> to 31<sup>st</sup> October, 2015)

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

Rainfall reported as 167.4mm during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 63%. Mean day temperature was 26.0°C while night temperature recorded as 13.4°C with 81.8hours bright sunshine duration. Wind speed recorded as 2.6km/hr with mean wind direction *westerly*.

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

Rainfall reported as 13.6mm during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 56%. Mean day temperature was 29.6°C while night temperature recorded as 15.1°C with 89.45hours bright sunshine duration. Wind speed recorded as 1.7km/hr with mean wind direction *north westerly*.

**Cotton:** Good condition, Full maturity stage completed.

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

Dry weather reported during the decade however weather remained cloudy for 01day. Average relative humidity recorded as 55%. Mean day temperature was 33.7°C while night temperature recorded as 18.5°C with 102.0hours bright sunshine duration. Wind speed recorded as 4.8km/hr with mean wind direction *north easterly*.

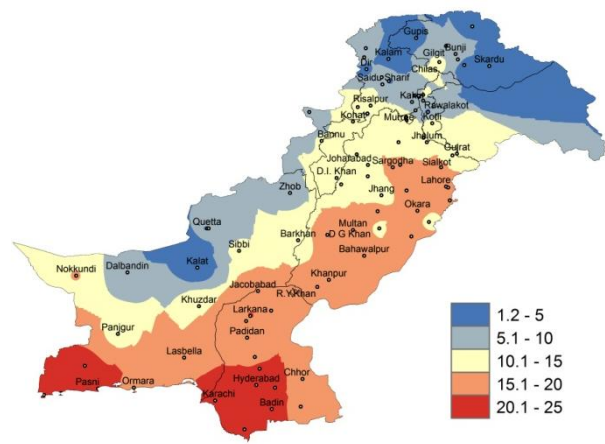
**Cotton (Sindh-I):** The crop has been harvested.

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

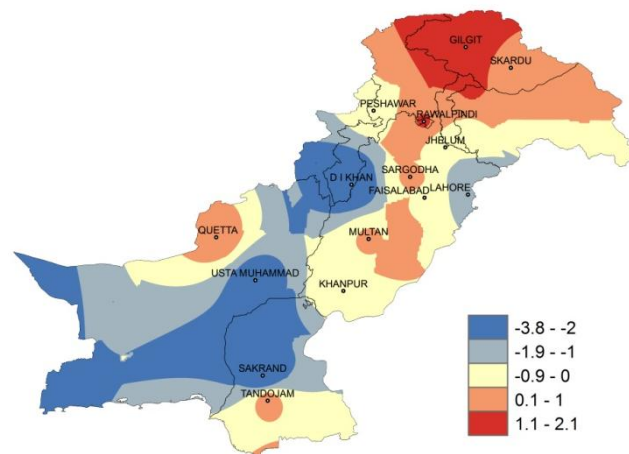
Dry weather reported during the decade however weather remained clear throughout the decade. Average relative humidity recorded as 52%. Mean day temperature was 35.0°C while night temperature recorded as 17.1°C and wind speed recorded as 15.9km/hr with mean wind direction *south westerly*.

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

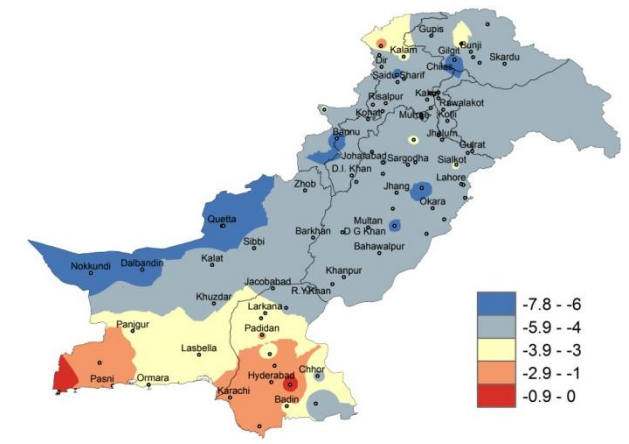
Rainfall reported as Trace (not measureable) during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 26%. Mean day temperature was 23.0°C while night temperature recorded as 7.7°C with 102.1hours bright sunshine duration and wind speed recorded as 4.8km/hr with mean wind direction *southerly*.



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 (21<sup>st</sup> to 31<sup>st</sup> October, 2015)**

2.6 **Jhelum**

Rainfall reported as 26.3mm during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 61%. Mean day temperature was 28.6°C while night temperature recorded as 14.6°C with 90.6hours bright sunshine duration and wind speed recorded as 1.7km/hr with mean wind direction *north westerly*.

2.7 **Lahore**

Rainfall reported as 3.8mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 60%. Mean day temperature was 28.9°C while night temperature recorded as 16.7°C with 86.4hours bright sunshine duration. Wind speed recorded as 2.3km/hr with mean wind direction *north westerly*.

2.8 **Sargodha**

Rainfall reported as 6.0mm during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 64%. Mean day temperature was 28.5°C while night temperature recorded as 17.0°C with 74.2hours bright sunshine duration. Wind speed recorded as 1.1km/h with mean wind direction *north easterly*.

2.9 **Multan**

Rainfall reported as 10.7mm during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 53%. Mean day temperature was 30.0°C while night temperature recorded as 17.0°C with 86.9hours bright sunshine duration. Wind speed recorded 3.4km/hr with mean wind direction *north easterly*.

2.10 **Khanpur**

Dry weather reported during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 56%. Mean day temperature was 30.5°C while night temperature recorded as 16.5°C with 91.8hours bright sunshine duration. Wind speed recorded 3.1km/hr with mean wind direction *northerly*.

2.11 **Sakrand**

Dry weather reported during the decade however weather remained cloudy for 02days. Average relative humidity recorded as 59%. Mean day temperature was 33.2°C while night temperature recorded as 13.5°C with 104.7hours bright sunshine duration. Wind speed recorded 2.0km/hr with mean wind direction *southerly*.

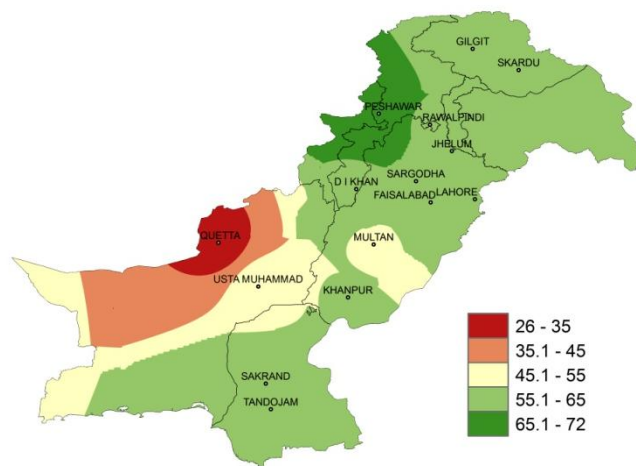


Figure.3: Relative Humidity in percentage (%)

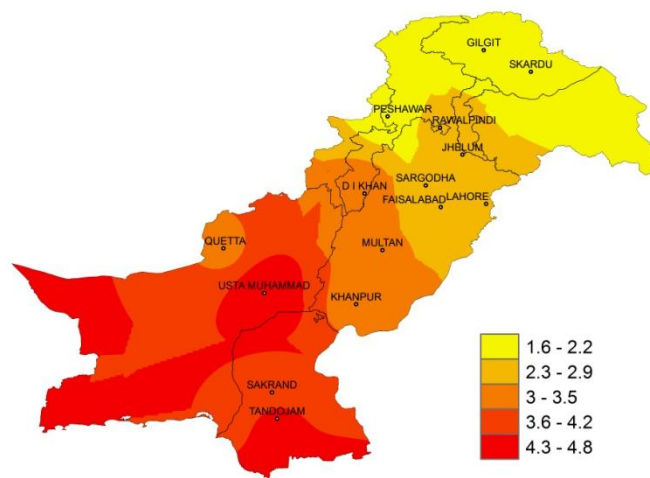


Figure.4: Reference Crop Evapotranspiration “ETo” in mm/day

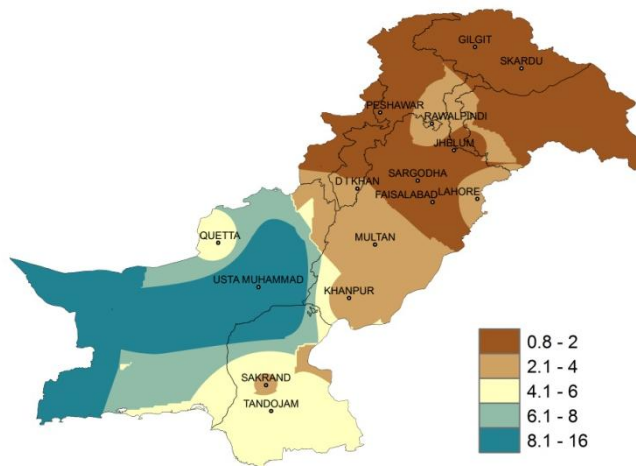


Figure 5: Wind Speed in kilometer per hour (km/h)

**2.12 D.I. Khan**

Rainfall reported as 9.0mm during the decade; however weather remained cloudy for 03days. Average relative humidity recorded as 63%. Mean day temperature was 28.7°C while night temperature recorded as 12.1°C with 82.8hours bright sunshine duration.

**2.13 Peshawar**

Rainfall reported as 28.4mm during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 72%. Mean day temperature was 26.1°C while night temperature recorded as 14.5°C with 56.4hours bright sunshine duration. Wind speed recorded as 0.8km/hr with mean wind direction *north easterly*.

**2.14 Skardu**

Rainfall reported as 9.1mm during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 57%. Mean day temperature was 16.9°C while night temperature recorded as 1.4°C with 67.9hours bright sunshine duration. Wind speed recorded as 1.5km/hr with mean wind direction *east north easterly*.

**2.15 Gilgit**

Rainfall reported as 4.0mm during the decade however weather remained cloudy for 11days. Average relative humidity recorded as 59%. Mean day temperature was 20.4°C while night temperature recorded as 5.5°C with 59.1hours bright sunshine duration. Wind speed recorded as 1.9km/hr with mean wind direction *easterly*.

**3. Ten Days Weather Advisory for Farmers  
(1<sup>st</sup> to 10<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 Lahore, Rawalpindi, Gujranwala and Faisalabad divisions from 3rd to 5th and 8th to 10th of this decade.
- ❖ **Khyber Pakhtunkhwa:** Mainly dry weather is expected in the province. However light to moderate rainfall is expected in Hazara division and Rain-thunderstorm is

expected in Malakand, Hazara, Mardan, Peshawar, Kohat, divisions from 1st to 4th 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 at Quetta and Zhob from 1st to 4th of this decade.
- ❖ **Gilgit Baltistan:** Mainly dry weather is expected in most parts of Gilgit Baltistan. However light to moderate rain is expected at Gilgit, Skardu from 1st to 5th and 8th to 10th of this decade
- ❖ **Kashmir:** Light to moderate rainfall is expected in most of the parts of the Kashmir including Rawalakot, Muzaffarabad & Kotli divisions.

**3.4 Advisory for Farmers**

- ❖ Farmers of rainfed areas obtaining water through tube wells and irrigated areas in upper parts are advised to schedule the irrigation according to the expected weather mentioned during the decade. Rainfall/ gusty winds after irrigation cause water logging of standing crops like maize, sugarcane and cotton. Farmers should be very careful in this regard.
- ❖ 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 their crops, livestock and other property from any expected rain.
- ❖ 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 the period 15th October to 15th November. After this time 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 recent rains in these areas.