

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light rainfall reported in the agricultural plains of Punjab, KPK, Balochistan & G.B and dry weather reported in Sindh during the last decade.
- ❖ Highest amount of rainfall reported as 66.0mm at Bhakkar during the last decade.
- ❖ Highest maximum temperature recorded 27.0°C at Karachi during the last decade.
- ❖ Light to moderate rainfall is expected in different parts of country excluding Sindh from 23rd to 27th 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. 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.

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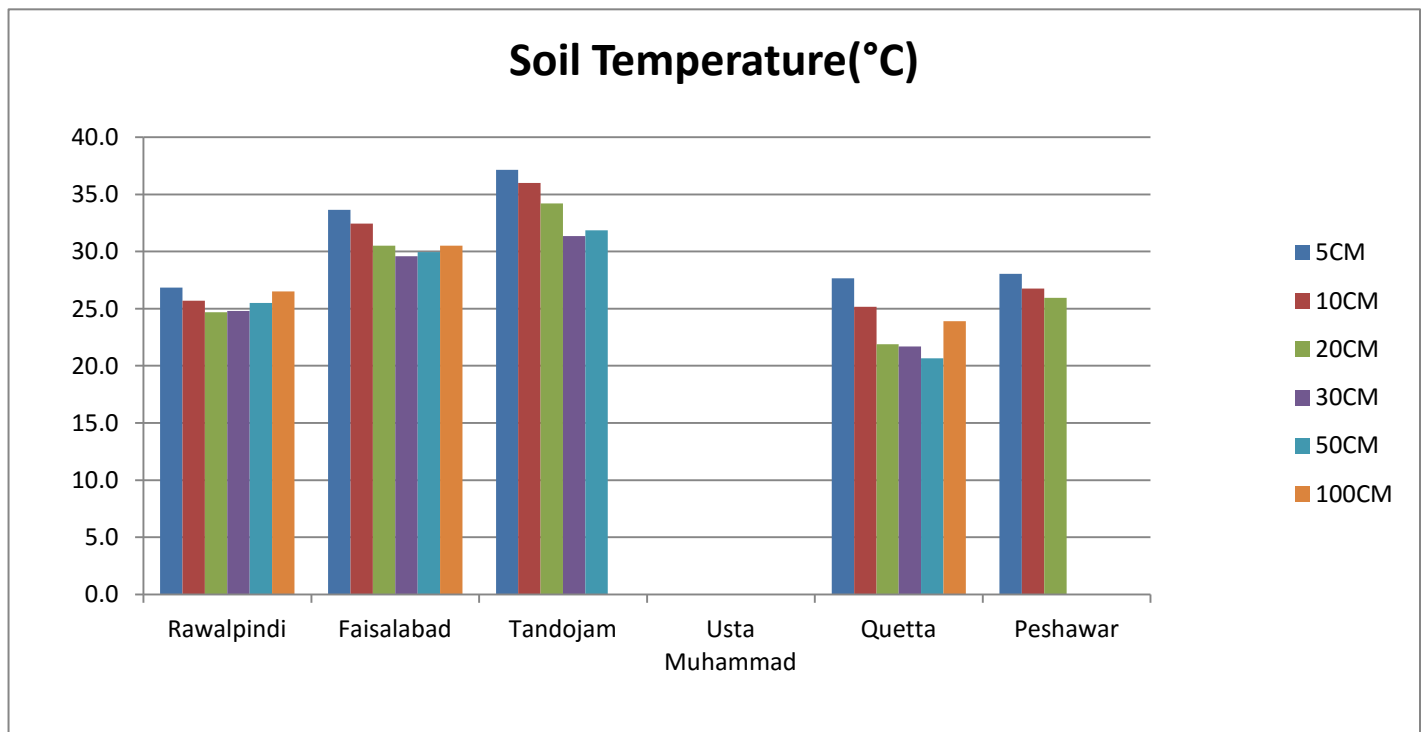
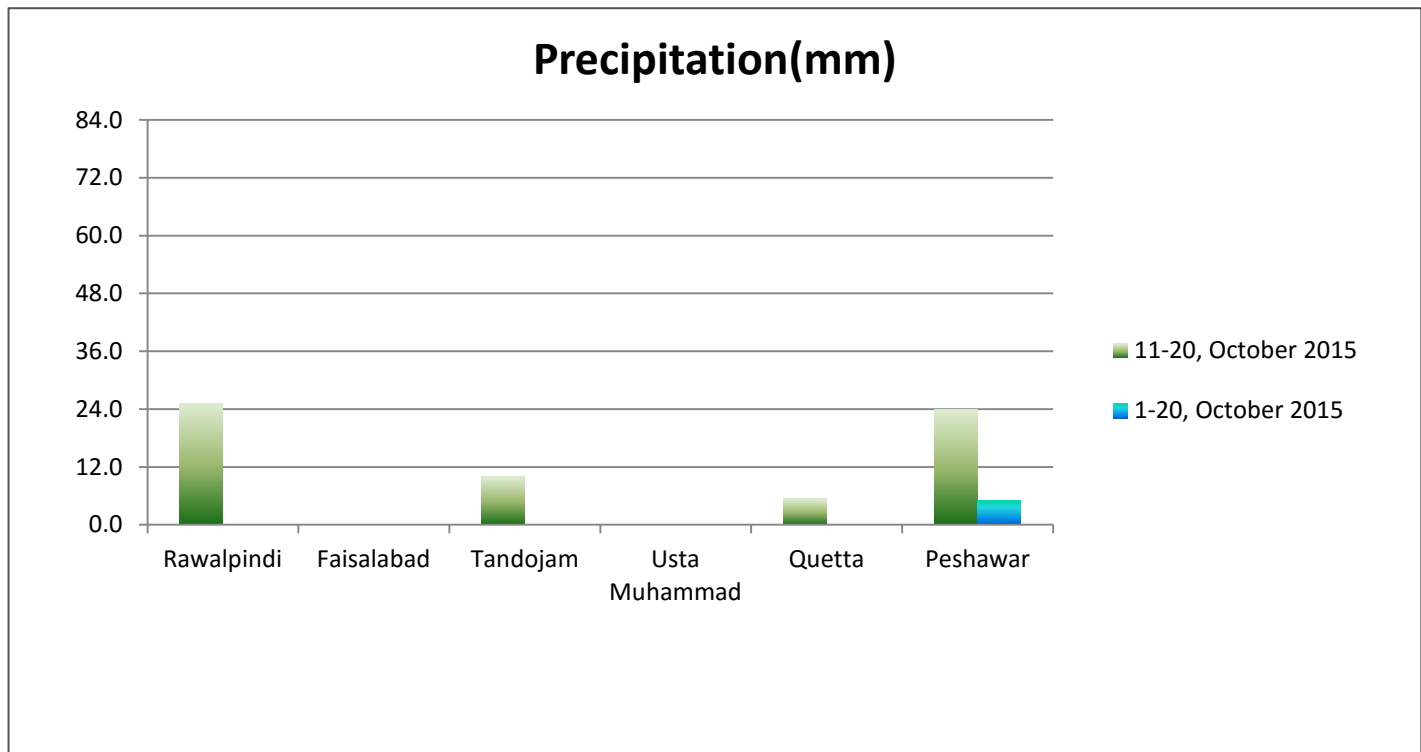
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Meteorological conditions during 2nd decade of October, 2015

Sr. No.	Station	Precipitation (mm)			Air Temperature (°C)			Soil Temperatures (°C)						R.H (%)	Sunshine Duration(hours)	Wind Speed (km/hr)	ET ₀ (mm/day)
		Normal	Actual	Dep	Tmax Dep	Tmin Dep	Mean	5cm	10cm	20cm	30cm	50cm	100cm				
1	RAWALPINDI	1.9	25.2	23.3	-0.2	19.1	3.2	26.9	25.7	24.7	24.8	25.5	26.5	59	61.9	3.5	2.8
2	FAISALABAD	0.1	0.0	-0.1	0.2	22.1	4.7	33.7	32.5	30.5	29.6	30.0	30.5	57	72.0	2.5	4.2
3	JHELUM	1.1	45.8	44.7	-28.6	31.5	14.2	28.2	27.2	26.4	26.3	27.0	***	64	64.2	2.3	2.7
4	LAHORE	0.6	0.1	-0.5	-0.1	21.5	0.4	29.9	29.5	28.1	27.4	***	28.3	64	72.7	2.5	3.8
5	SARGODHA	0.4	34.0	33.6	-1	22.2	3.1	31.2	29.6	28.0	27.8	28.4	28.5	68	70.1	2.4	2.9
6	MULTAN	0.0	1.0	1.0	0.2	22.5	3.3	***	***	***	***	***	***	55	76.6	3.7	3.1
7	KHANPUR	0.0	0.0	0.0	-0.5	21.6	2.3	***	30.6	30.8	31.1	31.4	31.3	61	84.4	3.1	3.6
8	TANDOJAM	0.0	10.0	10.0	1.9	21.7	1.8	37.2	36.0	34.2	31.4	31.9	***	55	94.2	5.8	4.9
9	SAKRAND ☆	0.0	0.0	0.0	1.3	18.7	-0.6	42.2	36.6	***	***	***	34.5	55	100.7	2.9	4.0
11	DI KHAN	0.2	69.0	68.8	-1.7	18.6	0.5	***	***	***	***	***	***	69	71.7	***	3.8
12	PESHAWAR	0.5	24.0	23.5	-0.1	18.4	1.2	28.1	26.8	26.0	***	***	***	65	55.3	1.0	2.2
13	USTA MUHAMMAD	0.0	0.0	0.0	-1.7	20.2	-1.6	***	***	***	***	***	***	51	***	14.3	5.5
14	QUETTA	0.0	5.4	5.4	-0.9	13.5	5.2	27.7	25.2	21.9	21.7	20.7	23.9	34	81.2	4.8	3.3
15	SKARDU	0.2	0.0	-0.2	2.2	5.9	2.6	***	***	***	***	***	***	51	63.4	2.0	2.1
16	GILGIT	0.1	2.8	2.7	3	8.8	3	***	***	***	***	***	***	53	68.3	0.7	2.2

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. ET₀ 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 (11th to 20th October, 2015)

Light rainfall reported in the agricultural plains of Punjab, KPK, Balochistan & G.B 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 Chakwal, Bhakkar & Jhelum. Decadal maximum dropped below normal by 4.3°C & minimum temperature raised above normal 4.5°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 61%, 71.7hrs, 2.9km/hr and 3.3mm/day respectively.

1.2 Sindh

Dry weather reported in the agricultural plains of Sindh. Decadal maximum raised above normal & minimum temperature both dropped below normal by 11.0°C & 7.0°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 62%, 65hrs, 2.9km/hr and 4.5mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

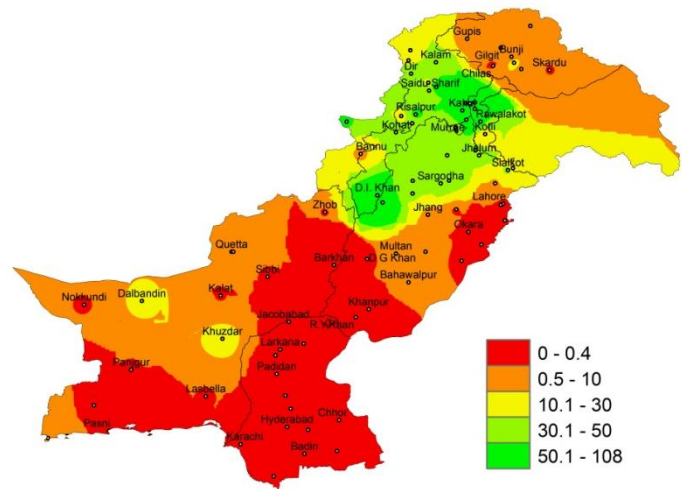
Light rainfall reported in the agricultural plains of KP. Chief amount of rainfall received in Mirkhani, Peshawar & Cherat. Decadal maximum dropped below normal by 0.9°C & minimum temperature raised above normal by 0.9°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 67%, 63.5hrs, 1.0km/hr and 3.0mm/day respectively.

1.4 Balochistan

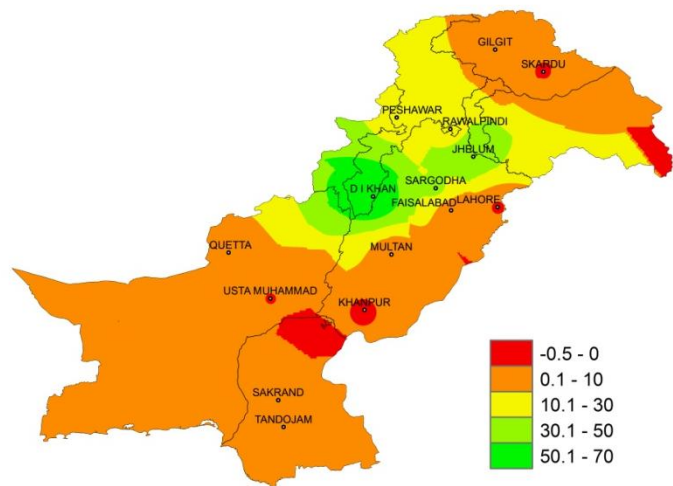
Light rainfall reported at one place of Balochistan i.e Barkhan. Decadal maximum & minimum temperature both raised above normal by 0.6°C & 1.4°C respectively, in the province. Whereas mean values relative humidity, sunshine hour, wind speed & ETo were recorded as 38%, 102.0hrs, 6.0km/hr and 5.1mm/day respectively.

1.5 Gilgit-Baltistan and Azad Jammu & Kashmir

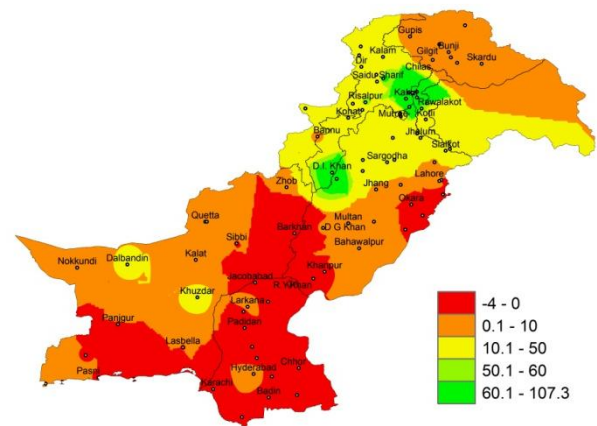
Light rainfall reported at one place of GB & Kashmir i.e Gilgit. Decadal maximum dropped below normal by 1.3°C & minimum temperature raised above normal by 1.8°C, in the province. Relative humidity, sunshine hour, wind speed & ETo were recorded as 43%, 81.2hrs, 9.6km/hr and 4.4mm/day respectively.



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 October, 2015)

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

Rainfall reported as 25.2mm during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 59%. Mean day temperature was 30.4°C while night temperature recorded as 19.1°C with 61.9hours bright sunshine duration. Wind speed recorded as 3.5km/hr with mean wind direction *north westerly*.

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

Dry weather reported during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 57%. Mean day temperature was 33.3°C while night temperature recorded as 22.1°C with 72.0hours bright sunshine duration. Wind speed recorded as 2.5km/hr with mean wind direction *south easterly*.

Cotton: Good condition, Full maturity stage completed.

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

Rainfall reported as 10.0mm during the decade however weather remained cloudy for 01day. Average relative humidity recorded as 55%. Mean day temperature was 38.3°C while night temperature recorded as 21.7°C with 94.2hours bright sunshine duration. Wind speed recorded as 5.8km/hr with mean wind direction *south westerly*.

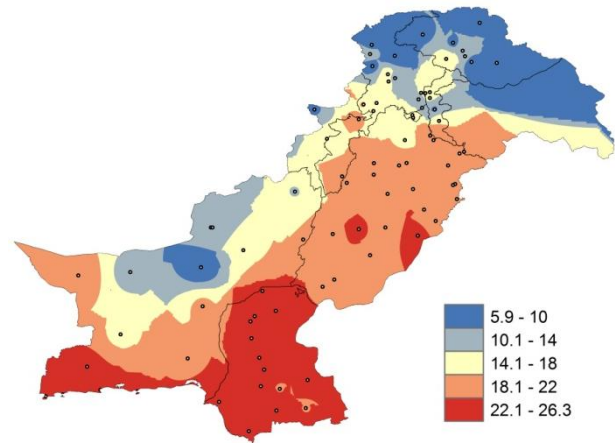
Cotton (Sindh-I): The crop has been harvested.

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

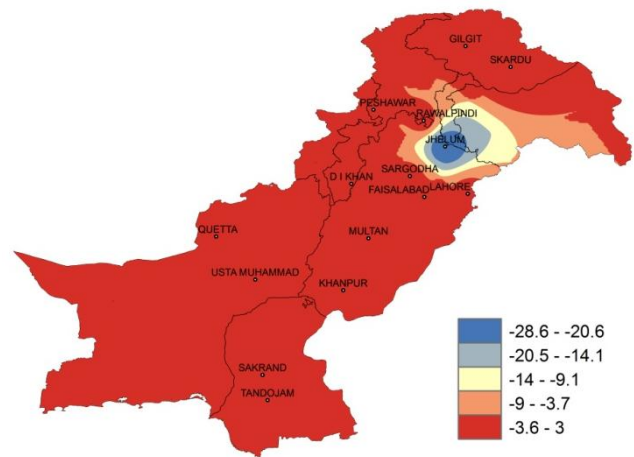
Dry weather reported during the decade however weather remained clear throughout the decade. Average relative humidity recorded as 51%. Mean day temperature was 33.0°C while night temperature recorded as 20.2°C with 81.2hours bright sunshine duration and wind speed recorded as 14.3km/hr with mean wind direction *southerly*.

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

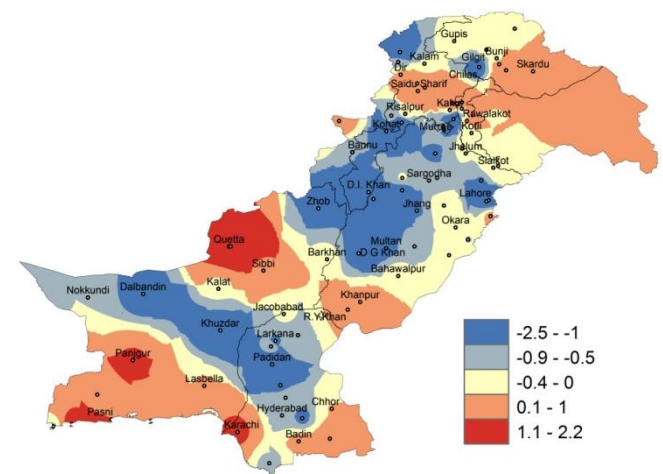
Rainfall reported as 5.4mm during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 34%. Mean day temperature was 26.4°C while night temperature recorded as 13.5°C with 81.2hours bright sunshine duration and wind speed recorded as 4.8km/hr with mean wind direction *northerly*.



I. Actual max-temp



II. Departure of max-temp from Normal



III. Departure of max-temp from Previous Decade

Figure.2: Maximum Temperature distribution during previous decade in "°C"

2(b) **Past Weather for Sub-Regional Agricultural Plains (11th to 20th October, 2015)**

2.6 **Jhelum**

Rainfall reported as 45.8mm during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 68%. Mean day temperature was 31.5°C while night temperature recorded as 19.6°C with 64.2hours bright sunshine duration and wind speed recorded as 2.3km/hr with mean wind direction *variable*.

2.7 **Lahore**

Rainfall reported as Trace (not measureable) during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 64%. Mean day temperature was 31.9°C while night temperature recorded as 21.5°C with 72.7hours bright sunshine duration. Wind speed recorded as 2.5km/hr with mean wind direction *north easterly*.

2.8 **Sargodha**

Rainfall reported as 34.0mm during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 68%. Mean day temperature was 32.2°C while night temperature recorded as 22.2°C with 70.1hours bright sunshine duration. Wind speed recorded as 1.3km/h with mean wind direction *north easterly*.

2.9 **Multan**

Rainfall reported as 1.0mm during the decade however weather remained cloudy for 03days. Average relative humidity recorded as 55%. Mean day temperature was 34.5°C while night temperature recorded as 22.5°C with 76.6hours bright sunshine duration. Wind speed recorded 3.7km/hr with mean wind direction *north easterly*.

2.10 **Khanpur**

Dry weather reported during the decade however weather remained cloudy for 02days. Average relative humidity recorded as 61%. Mean day temperature was 34.7°C while night temperature recorded as 21.6°C with 84.4hours bright sunshine duration. Wind speed recorded 3.1km/hr with mean wind direction *south westerly*.

2.11 **Sakrand**

Dry weather reported during the decade however weather remained cloudy for 01day. Average relative humidity recorded as 55%. Mean day temperature was 37.3°C while night temperature recorded as 18.7°C with 100.7hours bright sunshine duration. Wind speed recorded 2.9km/hr with mean wind direction *southerly*.

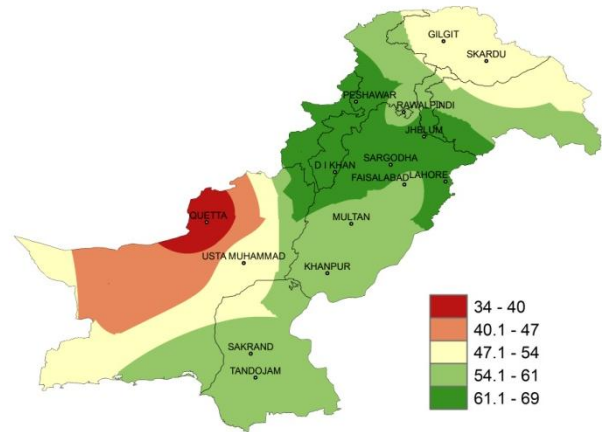


Figure.3: Relative Humidity in percentage (%)

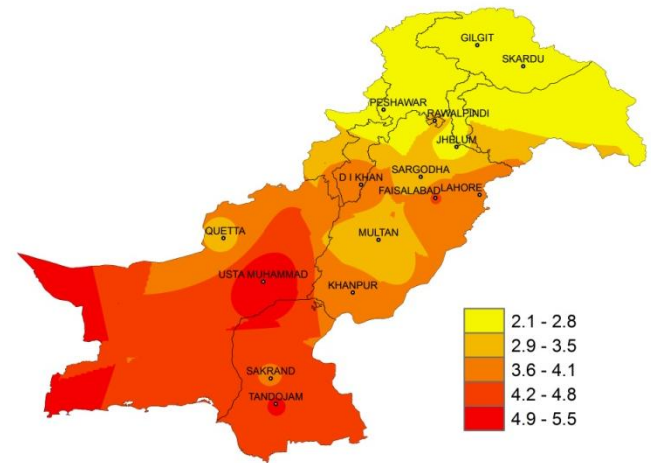


Figure.4: Reference Crop Evapotranspiration “ETo” in mm/day

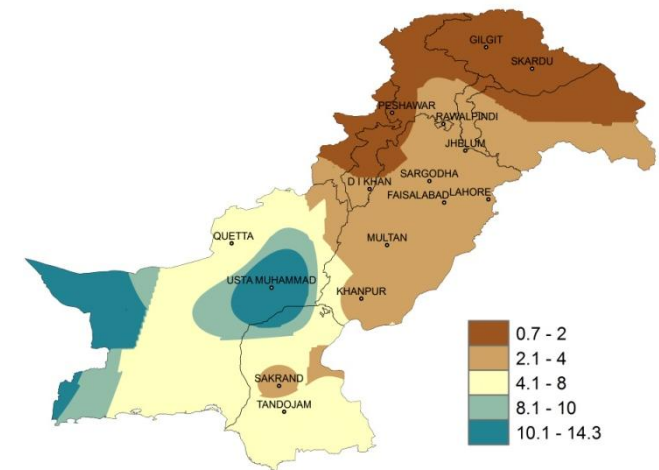


Figure 5: Wind Speed in kilometer per hour (km/h)

2.12 D.I. Khan

Rainfall reported as 69.0mm during the decade; however weather remained cloudy for 05days. Average relative humidity recorded as 69%. Mean day temperature was 32.1°C while night temperature recorded as 18.6°C with 71.7hours bright sunshine duration.

2.13 Peshawar

Rainfall reported as 24.0mm during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 65%. Mean day temperature was 30.6°C while night temperature recorded as 18.4°C with 55.3hours bright sunshine duration. Wind speed recorded as 1.0km/hr with mean wind direction *south westerly*.

2.14 Skardu

Dry weather reported during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 51%. Mean day temperature was 22.7°C while night temperature recorded as 5.9°C with 63.4hours bright sunshine duration. Wind speed recorded as 2.0km/hr with mean wind direction *south easterly*.

2.15 Gilgit

Rainfall reported as 2.8mm during the decade however weather remained cloudy for 01day. Average relative humidity recorded as 53%. Mean day temperature was 26.5°C while night temperature recorded as 8.8°C with 68.3hours bright sunshine duration. Wind speed recorded as 0.7km/hr with mean wind direction *southerly*.

**3. Ten Days Weather Advisory for Farmers
(21st to 31st October, 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.

3.2 Rain Forecast

- ❖ **Punjab:** Mainly dry weather is expected in the province. However scattered light to moderate rainfall is expected in Bahawalpur, Lahore, Gujranwala divisions from 17th to 20th of this decade.

- ❖ **Khyber Pakhtunkhwa:** Mainly dry weather is expected in the province. However Rain-thunderstorm is expected in Malakand, Hazara, Mardan, Peshawar, Kohat divisions from 23rd to 26th of this decade.
- IV. **Sindh:** Dry weather is expected in most parts of the Sindh during this decade.
- V. **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 23rd & 24th of this decade.
- VI. **Gilgit Baltistan:** Mainly dry weather is expected in most parts of Gilgit Baltistan. However light to moderate rain is expected at Gilgit, Skardu on 23rd to 27th of this decade
- VII. **Kashmir:** Mainly dry weather is expected in most of the parts of the Kashmir however rain-thunderstorm is expected from 23rd to 27th of this decade.

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.