

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light to moderate rainfall reported in agriculture plains of Punjab, K.P, GB & Kashmir. Light rainfall reported in the agricultural plains of Balochistan & dry weather reported in Sindh during the last decade.
- ❖ Highest amount of rainfall reported 97.0mm at Parachinar during the last decade.
- ❖ Highest Maximum temperature recorded 52.0°C at Sibbi during the last decade.
- ❖ Mainly hot and dry weather is expected in most parts of the country, however rain-thunderstorm with strong gusty winds are expected at isolated places of upper parts of country during the decade.
- ❖ Due to prevailing dry weather and rising day time temperature, cotton and sugarcane farmers should irrigate the crops as per requirement.
- ❖ Farmers of rainfed areas in upper parts are advised to cultivate maize crop due to recent rains. Farmers obtaining crop water through tube wells are also advised to schedule the irrigation according to the expected weather mentioned during the decade.
- ❖ Farmers are advised to control further weeds growth at the present growing stages to stop any negative impact over the crops. Weeds removing practices should be started soon after expected rains in the mentioned.

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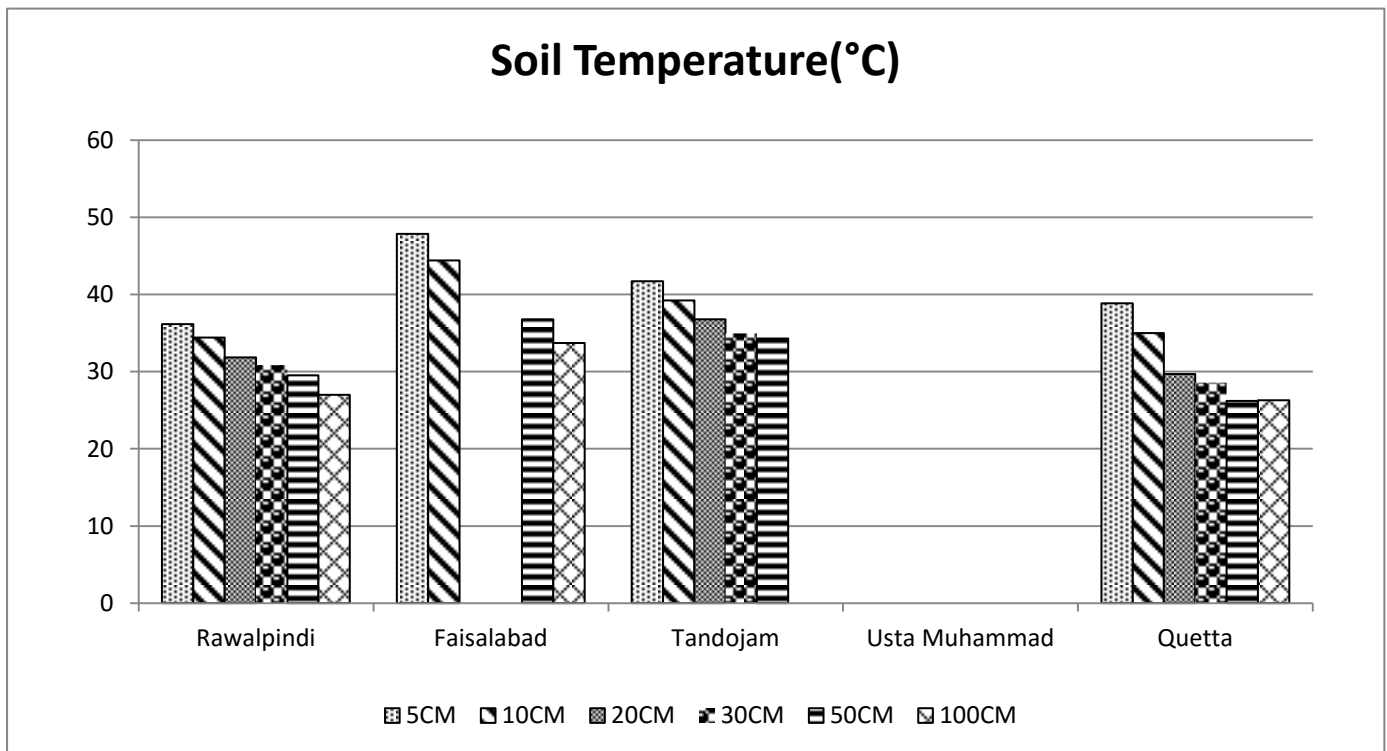
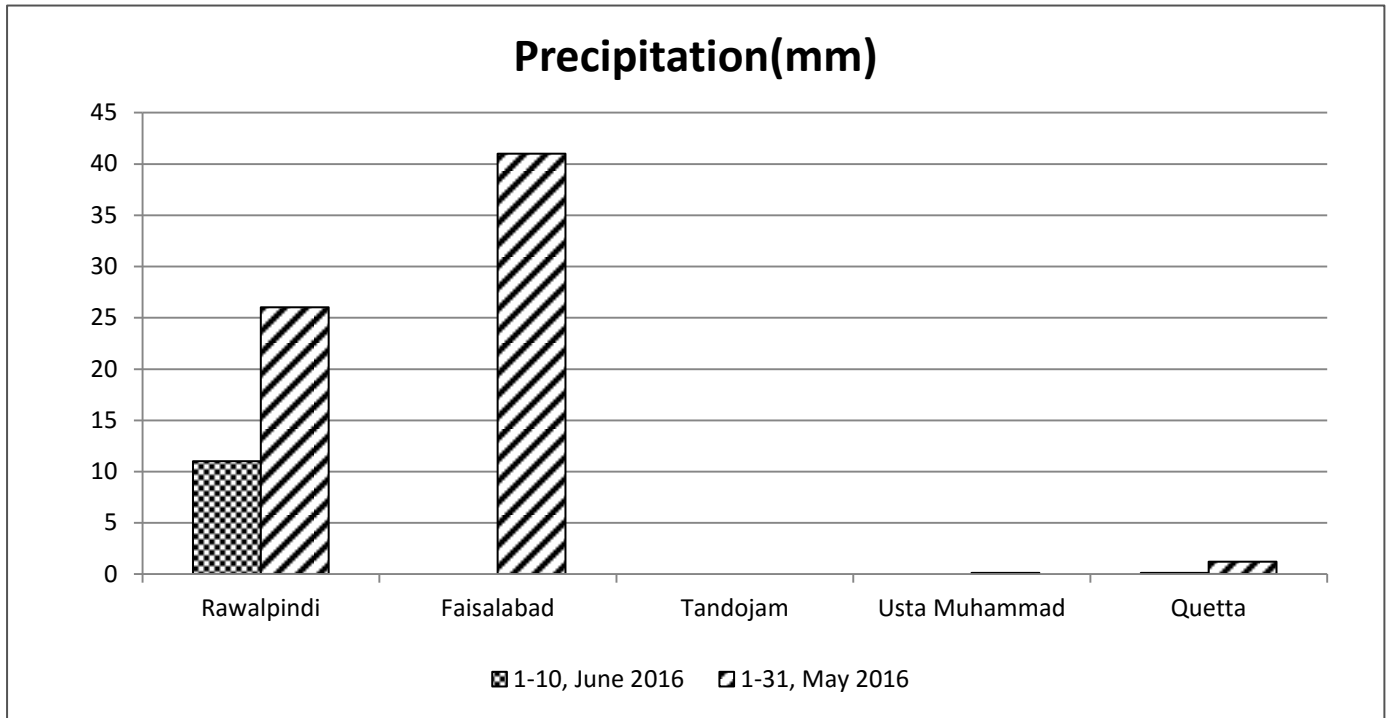
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Meteorological conditions during 1st decade of June, 2016

| 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 | 1.6 | 11.0 | 9.4 | 1.3 | 2.9 | 32.7 | 36.2 | 34.4 | 31.9 | 30.9 | 29.5 | 27.0 | 37 | 106.5 | 6.3 | 7.4 |
| 2 | FAISALABAD | 1.1 | 0.0 | -1.1 | 2.8 | 2.3 | 36.0 | 47.9 | 44.4 | *** | *** | 36.8 | 33.7 | 33 | 100.6 | 4.7 | 7.2 |
| 3 | JHELUM | 2.1 | 33.3 | 31.2 | 2.7 | 1.1 | 35.0 | 41.7 | 39.0 | 35.3 | 34.1 | 33.6 | *** | 29 | 89.9 | 5.5 | 7.3 |
| 4 | LAHORE | 1.2 | 0.0 | -1.2 | 3.4 | 0.6 | 35.5 | 39.6 | 38.0 | 35.7 | 33.4 | *** | 29.4 | 35 | 101.5 | 4.6 | 7.1 |
| 5 | SARGODHA | 0.3 | 3.0 | 2.7 | 1.4 | 1.5 | 36.0 | 41.4 | 39.0 | 33.9 | 34.8 | 32.7 | 30.2 | 40 | 82.2 | 3.1 | 6.1 |
| 6 | MULTAN | 0.1 | 0.0 | -0.1 | 1.5 | 2.3 | 37.2 | *** | *** | *** | *** | *** | *** | 31 | 99.6 | 6.0 | 7.9 |
| 7 | KHANPUR | 0.6 | 0.0 | -0.6 | 3.2 | 0.9 | 36.0 | *** | 38.7 | 23.4 | 38.2 | 38.2 | 35.3 | 43 | 106.1 | 4.7 | 7.3 |
| 8 | TANDOJAM | 0.9 | 0.0 | -0.9 | 2.1 | -1.4 | 33.3 | 41.7 | 39.2 | 36.8 | 35.0 | 34.3 | *** | 48 | 106.6 | 14.5 | 9.7 |
| 9 | SAKRAND ☆ | 0.9 | 0.0 | -0.9 | 2.3 | 1.4 | 35.7 | 51.5 | 43.4 | *** | *** | *** | 35.7 | 37 | 111.8 | 6.1 | 8.1 |
| 11 | D I KHAN | 0.3 | 0.0 | -0.3 | 1.9 | 1.8 | 35.0 | *** | *** | *** | *** | *** | *** | 37 | 85.0 | *** | 7.8 |
| 11 | PESHAWAR | 0.6 | 16.0 | 15.4 | 1.4 | -0.2 | 32.9 | 40.5 | 37.2 | 34.6 | *** | *** | *** | 52 | 84.3 | 3.1 | 5.8 |
| 12 | USTA MUHAMMAD | 0.5 | 0.0 | -0.5 | 1.3 | 0.7 | 37.5 | *** | *** | *** | *** | *** | *** | 36 | *** | *** | 9.1 |
| 13 | QUETTA | 0.5 | 0.1 | -0.4 | 0.2 | 3.3 | 27.5 | 38.9 | 35.0 | 29.7 | 28.6 | 26.2 | 26.3 | 27 | 104.0 | 6.6 | 6.9 |
| 14 | SKARDU | 0.3 | 1.1 | 0.8 | 2.5 | 0.5 | 21.4 | *** | *** | *** | *** | *** | *** | 32 | 96.8 | 4.4 | 5.5 |
| 15 | GILGIT | 0.6 | 13.1 | 12.5 | -0.5 | 1.9 | 23.9 | *** | *** | *** | *** | *** | *** | 44 | 53.8 | 2.6 | 4.2 |

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. 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 RAMCs during June, 2016



1. Past Weather (1st to 10th June, 2016)

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

1.1 Punjab

Light to moderate rainfall reported in the agricultural plains of Punjab. Chief amount of rainfall received in Jhelum, Mandi Bahudin & Murree. Decadal maximum & minimum both raised above normal by 2.3°C & 1.7°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 35%, 98.1hrs, 5.0km/hr and 7.2mm/day respectively.

1.2 Sindh

Dry weather reported in the agricultural plains of Sindh. Decadal maximum raised above normal by 2.2°C & minimum temperature remains normal, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 43%, 109.2hrs, 10.3km/hr and 8.9mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

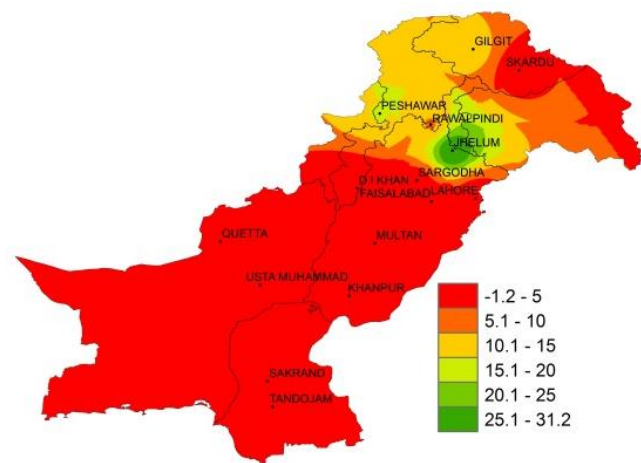
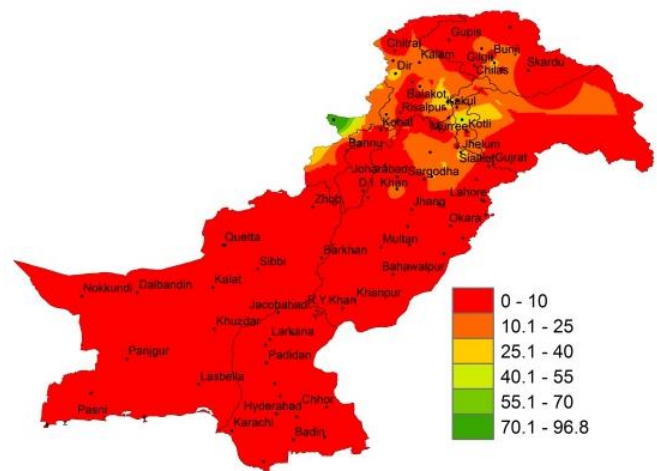
Light to moderate rainfall reported in the agricultural plains of KP. Chief amount of rainfall received in Parachinar, Mirkhani & Balakot. Decadal maximum & minimum both raised above normal by 1.7°C & 0.8°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 45%, 84.7hrs, 3.1km/hr and 6.8mm/day respectively.

1.4 Balochistan

Light rainfall reported in the agricultural plains of Balochistan. Chief amount of rainfall received in Zhob, Barkhan & Lasbella. Decadal maximum & minimum both raised above normal by 0.8°C & 2.0°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 32%, 104.0hrs, 6.6km/h and 8.0mm/day respectively.

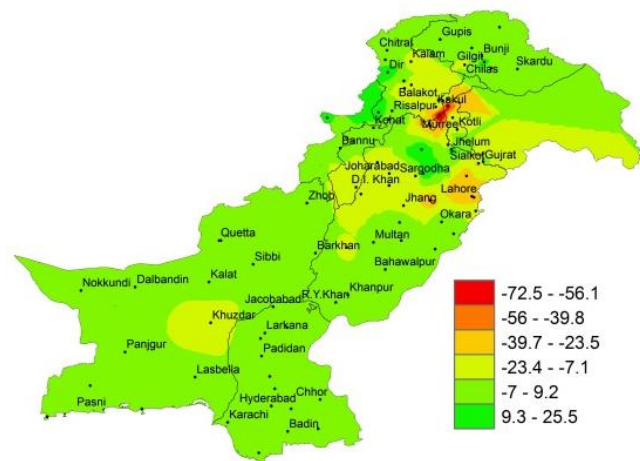
1.5 Gilgit-Baltistan and Azad Jammu & Kashmir

Light to moderate rainfall reported in the agricultural plains of GB & Kashmir. Chief amount of rainfall received Rawalakot, Muzaffarabad & Garhidopatta. Decadal maximum & minimum temperature both raised above normal by 1.0°C & 1.2°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 38%, 75.3hrs, 3.5km/hr and 4.9mm/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 June, 2016)**

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

Rainfall reported as 11.0mm during the decade; however weather remained cloudy for 04days. Average relative humidity recorded as 37%. Mean day temperature was 39.9°C while night temperature recorded as 25.5°C with 106.5hours bright sunshine duration. Wind speed recorded as 6.3km/hr with mean wind direction *westerly*.

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

Dry weather reported during the decade; however weather remained cloudy for 02days. Average relative humidity recorded as 33%. Mean day temperature was 43.6°C while night temperature recorded as 28.4°C with 100.6hours bright sunshine duration. Wind speed recorded as 4.7km/hr with mean wind direction *south easterly*.

Cotton: Very good condition, Budding stage.

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

Dry weather was reported during the decade. Sky remained clear throughout the decade. Average relative humidity recorded as 48%. Mean day temperature was 41.5°C while night temperature recorded as 25.0°C with 106.6hours bright sunshine duration. Wind speed recorded as 14.5km/h with mean wind direction *south westerly*.

Cotton (Star-2): Good condition, Third leaf stage.

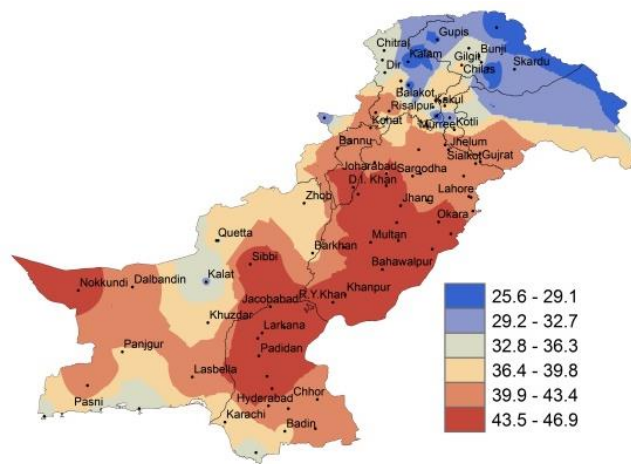
2.4 **RAMC, Usta Muhammad (Eastern Balochistan)**

Dry weather reported during the decade; however weather remained cloudy for 04days. Average relative humidity recorded as 36%. Mean day temperature was 46.6°C while night temperature recorded as 28.4°C.

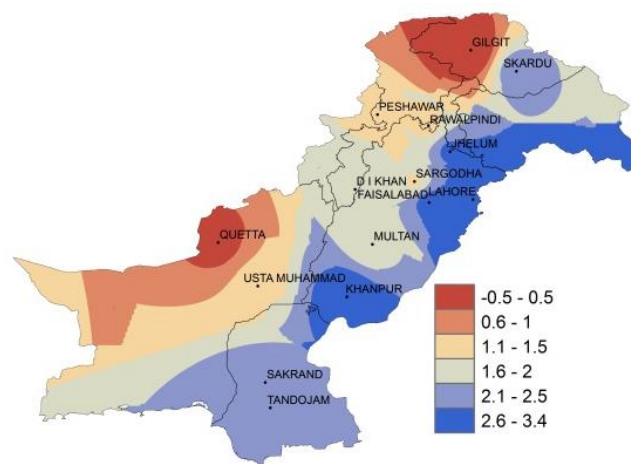
Rice (Paniri): Good Condition.

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

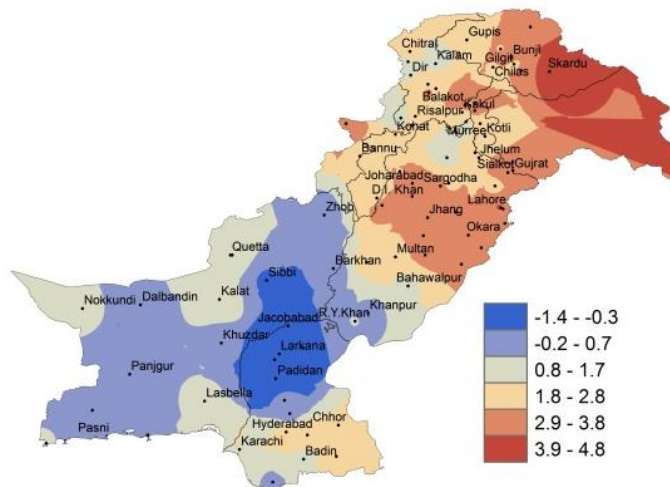
Rainfall reported as Trace (not measureable) was reported during the decade; however weather remained cloudy for 09days. Average relative humidity recorded as 27%. Mean day temperature was 34.0°C while night temperature recorded as 20.9°C with 104.0hours bright sunshine duration. Wind speed recorded as 6.6km/hr with mean wind direction *north westerly*.



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 (1st to 10th June, 2016)**

2.6 **Jhelum**

Rainfall reported as 33.3mm during the decade; however weather remained cloudy for 06days. Average relative humidity recorded as 29%. Mean day temperature was 43.3°C while night temperature recorded as 26.7°C with 89.9hours bright sunshine duration. Wind speed recorded 5.5km/hr with wind direction *variable*.

2.7 **Lahore**

Dry weather reported during the decade; however weather remained cloudy for 02days. Average relative humidity recorded as 35%. Mean day temperature was 42.6°C while night temperature recorded as 28.3°C with 101.5hours bright sunshine duration. Wind speed recorded as 4.6km/hr with mean wind direction *westerly*.

2.8 **Sargodha**

Rainfall reported as 3.0mm during the decade; however weather remained cloudy for 04days. Average relative humidity recorded as 40%. Mean day temperature was 43.1°C while night temperature recorded as 28.8°C with 82.2hours bright sunshine duration. Wind speed recorded 3.14km/hr with mean wind direction *north easterly*.

2.9 **Multan**

Dry weather reported during the decade; however weather remained cloudy for 04days. Average relative humidity recorded as 31%. Mean day temperature was 43.6°C while night temperature recorded as 30.7°C with 99.6hours bright sunshine duration. Wind speed recorded 6.0km/hr with mean wind direction *south westerly*.

2.10 **Khanpur**

Dry weather reported during the decade. However sky remained cloudy for 03days. Average relative humidity recorded as 43%. Mean day temperature was 44.0°C while night temperature recorded as 28.0°C with 106.1hours bright sunshine duration. Wind speed recorded 4.7km/hr with mean wind direction *south westerly*.

2.11 **Skrand**

Dry weather reported during the decade; however weather remains cloudy for 02days. Average relative humidity recorded as 37%. Mean day temperature was 43.9°C while night temperature recorded as 27.4°C with 111.8hours bright sunshine duration. Wind speed recorded 6.1km/hr with wind direction *south easterly*.

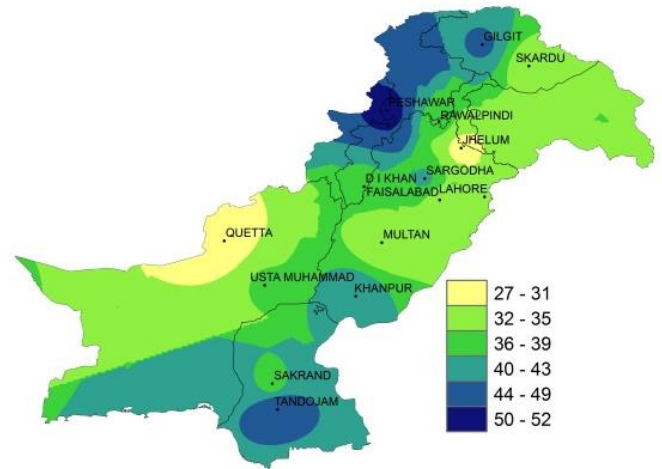


Figure.3: Relative Humidity in Percentage (%)

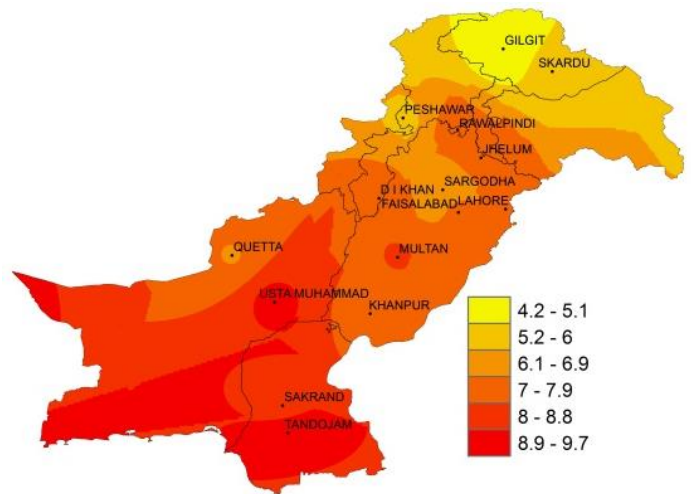


Figure.4: Reference Crop Evapotranspiration “ETo” in mm/day

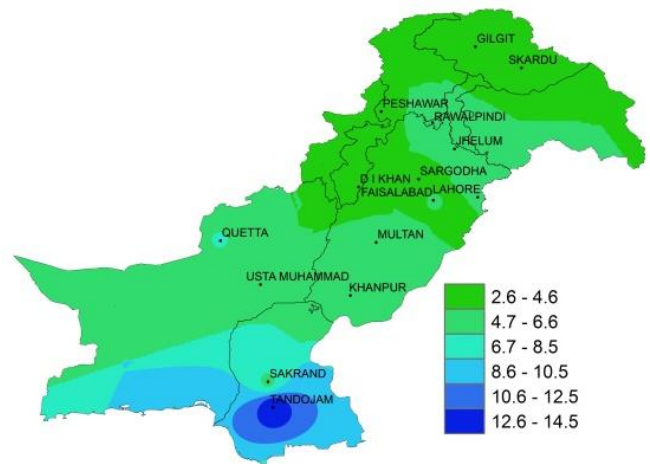


Figure 5: Wind Speed in kilometer per hour (km/h)

2.12 D.I. Khan

Dry weather reported during the decade; however weather remained cloudy for 04days. Average relative humidity recorded as 37%. Mean day temperature was 43.0°C while night temperature recorded as 27.0°C with 85.0hours bright sunshine duration.

2.13 Peshawar

Rainfall reported as 16.0mm during the decade; however weather remained cloudy for 06days. Average relative humidity recorded as 52%. Mean day temperature was 40.8°C while night temperature recorded as 25.0°C with 84.3hours bright sunshine duration. Wind speed recorded as 3.1km/hr with mean wind direction *north westerly*.

2.14 Skardu

Rainfall reported as 1.1mm during the decade; however weather remained cloudy for 05days. Average relative humidity recorded as 32%. Mean day temperature was 30.2°C while night temperature recorded as 12.6°C with 96.8hours bright sunshine duration. Wind speed recorded as 4.4km/hr with mean wind direction *south east southerly*.

2.15 Gilgit

Rainfall reported as 13.1mm during the decade; however weather remained cloudy for 10days. Average relative humidity recorded as 44%. Mean day temperature was 32.7°C while night temperature recorded as 15.1°C with 53.8hours bright sunshine duration. Wind speed recorded as 2.6km/hr with mean wind direction *westerly*.

**3. Ten Days Weather Advisory for Farmers
(11th to 20th June, 2016)****3.1 Temperature Forecast**

Day time temperature expected to remain 2-4°C above normal in most parts of the country & night temperatures are expected 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 and hot weather is expected during the decade. Rain-dust storm/thunderstorm and gusty wind at isolated places in Rawalpindi, Lahore & Gujranwala

division are expected on 13th to 15th and from 17th to 20th June during the decade.

- ❖ **Khyber Pakhtunkhwa:** Mainly hot and dry weather is expected in most parts of the province. However Rain-thunderstorm is expected at few places in Kohat, Mardan, Malakand, Hazara & Peshawar Division during the decade.
- ❖ **Sindh:** Very hot and dry weather is expected in most parts of the province with the possibility of dust-storm due to the heat. Light rainfall reported at isolated places including Hyderabad, Mirpur Khas & Sukkur divisions at end of the decade
- ❖ **Balochistan:** Very hot and dry weather is expected in most parts of Balochistan, however rain-dust storm/thunderstorm with gusty winds is expected at isolated places in Zhob and Quetta during the decade.
- ❖ **Gilgit Baltistan:** Mainly hot weather is expected in most parts of G.B. However rain-thunderstorm is expected at isolated places including Astore, Gilgit, Hunza-Nagar & Skardu during the decade.
- ❖ **Kashmir:** Mainly hot weather is expected in most parts of Kashmir. However rain-thunderstorm is expected at isolated places including Muzaffarabad, Kotli, Neelum & Rawalakot during the decade.

3.4 Advisory for Farmers

- ❖ Due to prevailing dry weather and rising day time temperature, cotton and sugarcane farmers should irrigate the crops as per requirement.
- ❖ Farmers of rainfed areas in upper parts are advised to cultivate maize crop due to recent rains. Farmers obtaining crop water through tube wells are also advised to schedule the irrigation according to the expected weather mentioned during the decade.
- ❖ Farmers are advised to control further weeds growth at the present growing stages to stop any negative impact over the crops. Weeds removing practices should be started soon after expected rains in the mentioned.