

# Decadal Agromet Bulletin of Pakistan



## Highlights....

- ❖ Light to moderate rainfall reported from agricultural plains of the country during the last decade.
- ❖ Highest amount of rainfall recorded as 273.0mm at Islamabad during the last decade.
- ❖ Highest maximum temperature recorded 46.0°C at Dalbandin during the last decade.
- ❖ Lower values of relative humidity reported from Quetta & Skardu regions while higher values reported from Punjab, K.P & Lower parts of Sindh during the last decade.
- ❖ Lower values of ETo reported from K.P & Gilgit-Baltistan while higher values reported from Sindh & Balochistan during the last decade.
- ❖ Temperature is likely to be normal/slightly above normal in the agricultural plains of the country during the decade.
- ❖ Dust storm/ gusty wind conditions likely to prevail in the country during the decade.
- ❖ Due to expected onset of monsoon rains during the decade farmers are advised to take in time precautionary measures to protect their crops, livestock and other property from any expected heavy rain.
- ❖ 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.

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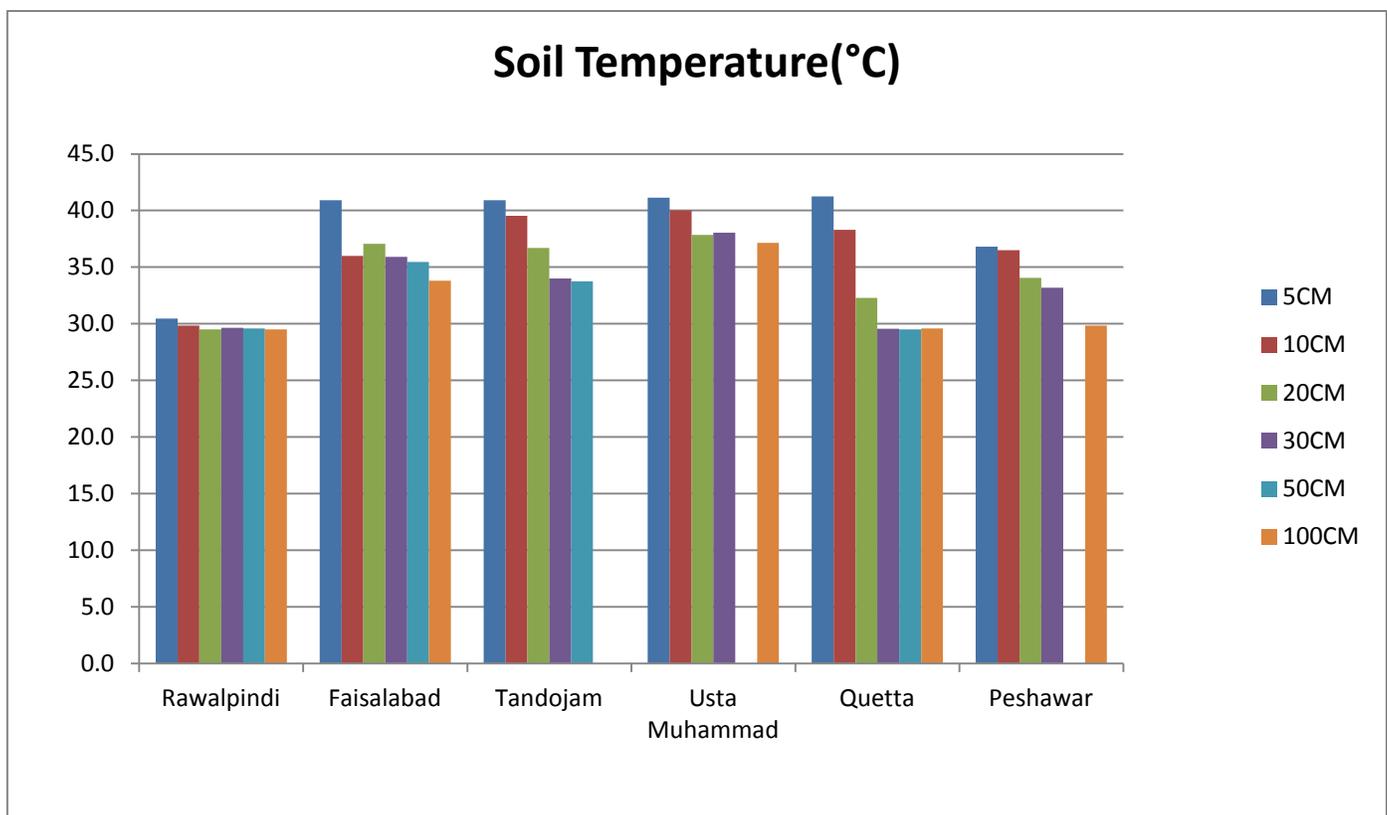
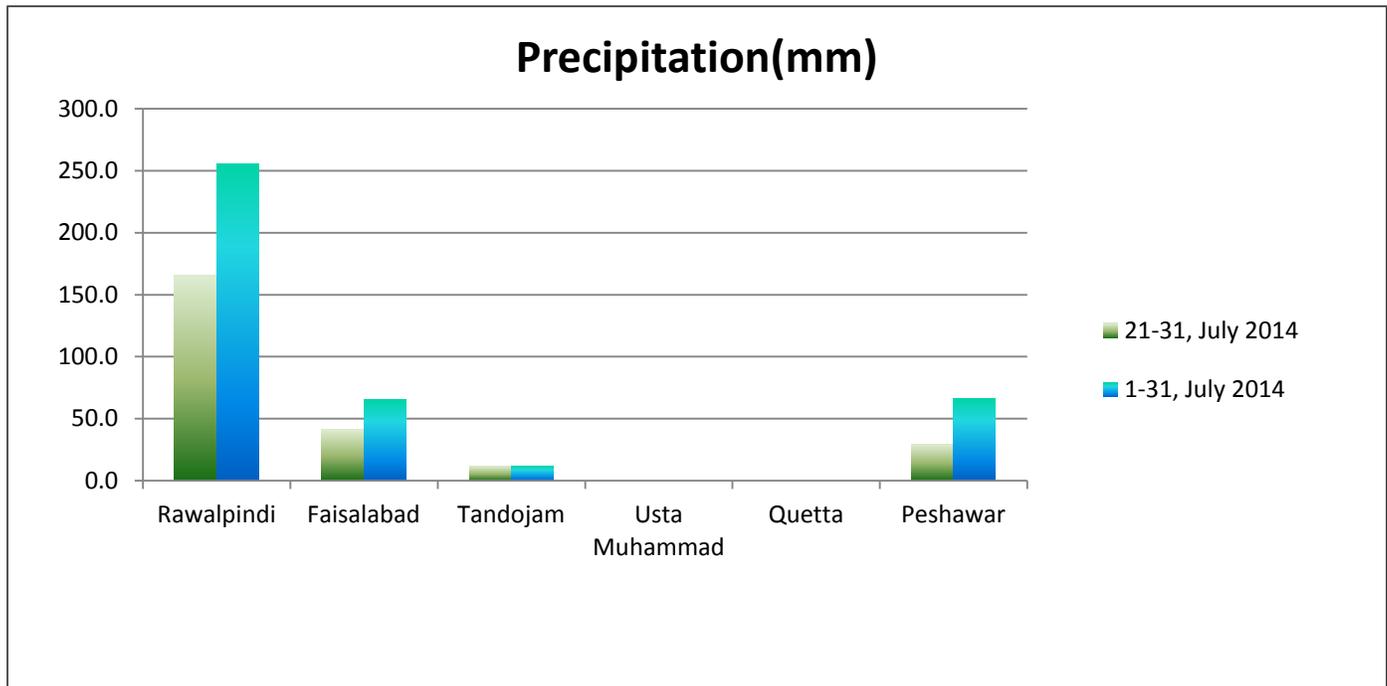
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Meteorological conditions during 3<sup>rd</sup> decade of July, 2014

| 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   | Tmin Dep             | Tmax Dep | Mean | 5cm                    | 10cm | 20cm | 30cm | 50cm | 100cm |         |                           |                    |              |
| 1       | RAWALPINDI    | 13.1               | 165.8  | 152.7 | 0.6                  | -0.7     | 28.9 | 30.5                   | 29.9 | 29.5 | 29.7 | 29.6 | 29.5  | 73      | 53.9                      | 0.5                | 3.9          |
| 2       | FAISLABAD     | 2.7                | 41.5   | 38.8  | 1.0                  | -0.5     | 32.1 | 40.9                   | 36.0 | 37.1 | 35.9 | 35.5 | 33.8  | 66      | 62.0                      | 4.7                | 5.0          |
| 3       | JHELUM        | 8.3                | 14.7   | 6.4   | 4.0                  | 1.3      | 32.3 | 33.9                   | 33.0 | 31.9 | 31.0 | 31.2 | ***   | 73      | 37.7                      | 5.4                | 4.3          |
| 4       | LAHORE        | 6.5                | 11.9   | 5.4   | -0.9                 | 1.5      | 32.4 | 36.1                   | 35.3 | 32.5 | 31.8 | ***  | 30.3  | 70      | 58.5                      | 3.9                | 4.9          |
| 5       | SARGODHA      | 5.4                | 81.1   | 75.7  | 0.7                  | -0.9     | 32.1 | 36.2                   | 35.1 | 33.5 | 33.7 | 33.7 | 32.5  | 71      | 57.6                      | 2.2                | 4.5          |
| 6       | MULTAN        | 1.4                | 0.0    | -1.4  | 1.5                  | 0.4      | 34.4 | ***                    | ***  | ***  | ***  | ***  | ***   | 54      | 77.6                      | 5.7                | 6.2          |
| 7       | KHANPUR       | 2.0                | 0.1    | -1.9  | 0.8                  | 1.3      | 34.5 | ***                    | 40.3 | 40.0 | 39.8 | 39.5 | 37.0  | 58      | 88.3                      | 4.8                | 6.2          |
| 8       | TANDOJAM      | 1.8                | 12.0   | 10.2  | 0.4                  | 3.3      | 31.7 | 40.9                   | 39.6 | 36.7 | 34.0 | 33.8 | ***   | 66      | 71.7                      | 5.6                | 5.5          |
| 9       | SAKRAND ☆     | 4.2                | 0.1    | -4.1  | -2.5                 | 1.0      | 31.4 | 46.2                   | 42.8 | ***  | ***  | ***  | 36.2  | 59      | 98.2                      | 9.9                | 7.3          |
| 10      | ROHRI         | 0.3                | 0.0    | -0.3  | 1.0                  | 1.5      | 36.0 | 49.1                   | 44.3 | 39.6 | 38.3 | 36.6 | 36.1  | 50      | 95.9                      | 3.6                | 6.4          |
| 11      | D.I KHAN      | 3.0                | 1.0    | -2.0  | -2.2                 | 0.7      | 31.3 | ***                    | ***  | ***  | ***  | ***  | ***   | 64      | 83.3                      | ***                | 6.2          |
| 12      | PESHAWAR      | 4.4                | 29.3   | 24.9  | 3.1                  | 2.9      | 34.3 | 36.8                   | 36.5 | 34.1 | 33.2 | ***  | 29.9  | 56      | 81.5                      | 4.3                | 5.9          |
| 13      | USTA MUHAMMAD | 3.5                | 0.0    | -3.5  | 3.5                  | 1.2      | 35.7 | 41.2                   | 40.0 | 37.9 | 38.1 | ***  | 37.2  | 46      | ***                       | ***                | 7.2          |
| 14      | QUETTA        | 0.0                | 0.0    | 0.0   | 0.6                  | 1.1      | 29.3 | 41.3                   | 38.3 | 32.3 | 29.6 | 29.5 | 29.6  | 27      | 102.7                     | 5.9                | 6.8          |
| 15      | SKARDU        | 0.2                | 0.1    | -0.1  | 1.6                  | 5.0      | 27.2 | ***                    | ***  | ***  | ***  | ***  | ***   | 35      | 87.7                      | 3.9                | 5.6          |
| 16      | GILGIT        | 0.6                | 0.0    | -0.6  | 1.8                  | 3.3      | 29.0 | ***                    | ***  | ***  | ***  | ***  | ***   | 43      | 106.8                     | 2.0                | 5.9          |

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.

## Precipitation at RAMC's during July, 2014



**Past Weather (21<sup>st</sup> to 31<sup>st</sup> July, 2014)**

Light to moderate rainfall reported from agricultural plains of the country 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 & Sialkot. Decadal minimum & maximum temperature both raised above normal by 1.1°C & 0.3°C respectively, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity & ETo were recorded as 66.2hrs, 3.9km/hr, 66% and 5.0mm/day respectively.

**1.2 Sindh**

Light to moderate rainfall reported in the agricultural plains of Sindh. Decadal minimum dropped below normal by 0.4°C & maximum temperature raised above normal by 1.9°C, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity & ETo were recorded as 88.6hrs, 6.4km/hr, 58% and 6.4mm/day respectively.

**1.3 Khyber Pakhtunkhwa (KP)**

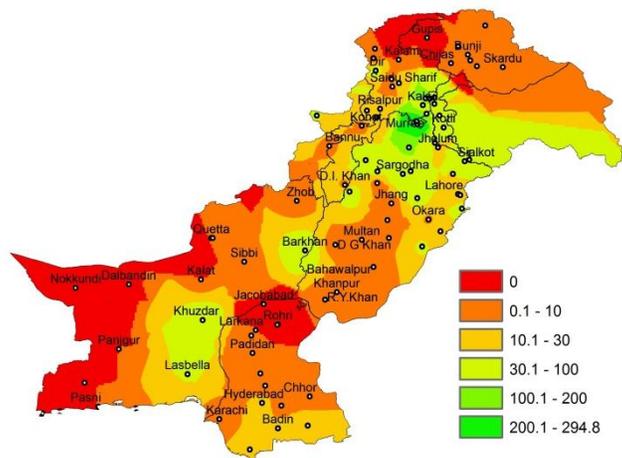
Light to moderate rainfall reported in the agricultural plains of KP. Chief amount of rainfall received in Balakot, Kakul & Peshawar. Decadal minimum & maximum temperature both raised above normal by 0.5°C & 1.8°C respectively, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity & ETo were recorded as 82.0hrs, 4.3km/hr, 60% and 6.1mm/day respectively.

**1.4 Balochistan**

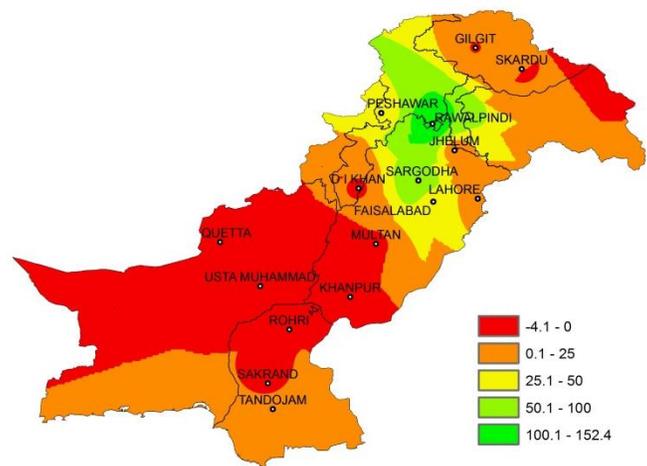
Light to moderate rainfall reported in the agricultural plains of Balochistan. Chief amount of rainfall received in Barkhan, Lasbella & Khuzdar. Decadal minimum & maximum temperature both raised above normal by 2.1°C & 1.2°C respectively, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity & ETo were recorded as 102.7hrs, 5.9km/hr, 37% and 7.0mm/day respectively.

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

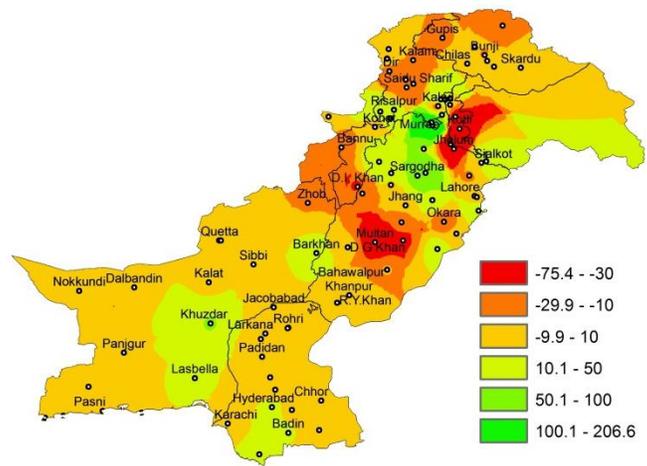
Light to moderate rainfall reported in the agricultural plains of GB & Kashmir. Chief amount of rainfall received in Rawalakot, Kotli & Muzaffarabad. Decadal & maximum temperature both raised above normal by 1.7°C & 4.2°C, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity and ETo were recorded 97.3hrs, 3.0km/hr, 39% and 5.8mm/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**  
(21<sup>st</sup> to 31<sup>st</sup> July, 2014)

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

Rainfall reported as 165.8mm during the decade however weather remained cloudy for 10 days. Average relative humidity recorded as 73%. Mean night temperature was 24.0°C while day temperature recorded as 33.7°C with 53.9hours bright sunshine duration. Wind speed recorded as 0.5km/h with mean wind direction *variable*.

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

Rainfall reported as 41.5mm during the decade however weather remained cloudy for 11days. Average relative humidity recorded as 66%. Mean night temperature was 27.9°C while day temperature recorded as 36.3°C with 62.0hours bright sunshine duration. Wind speed recorded as 4.6km/hr with mean wind direction *south easterly*.

**Cotton:** Normal condition, flowering stage completed.

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

Rainfall reported as 12.0mm during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 66%. Mean night temperature was 26.6°C while day temperature recorded as 36.7°C with 71.7hours bright sunshine duration. Wind speed recorded as 5.6km/hr with mean wind direction *south westerly*.

**Cotton (BT-3701):** Good condition, flowering stage.

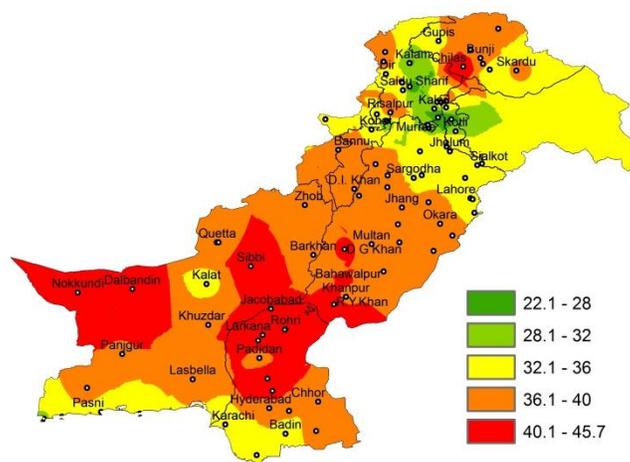
2.4 **RAMC, Usta Muhammad (Eastern Balochistan)**

Dry weather reported during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 46%. Mean night temperature was 29.8°C, while day temperature recorded as 41.5°C.

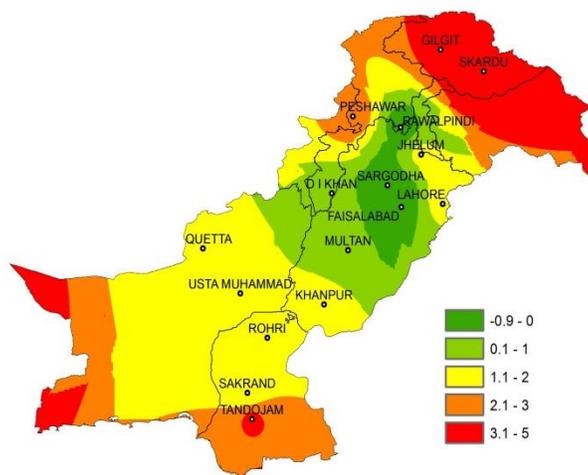
**Rice:** Good condition, 3<sup>rd</sup> Leaf maturity stage.

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

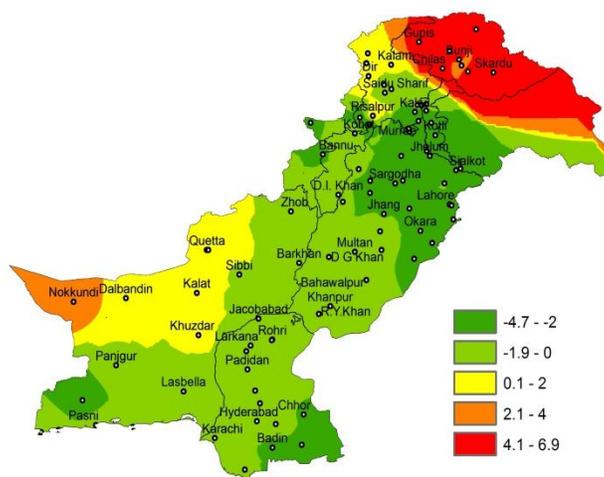
Dry weather reported during the decade however weather remained cloudy for 11days. Average relative humidity recorded as 23%. Mean night temperature was 21.9°C while day temperature recorded as 36.7°C with 102.7hours bright sunshine duration and wind speed recorded as 5.9km/hr with mean wind direction *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 (21<sup>st</sup> to 31<sup>st</sup> July, 2014)**

**2.6 Jhelum**

Rainfall reported as 14.7mm during the decade however weather remained cloudy for 11 days. Average relative humidity recorded as 73%. Mean night temperature was 30.1°C while day temperature recorded as 34.5°C with 37.7 hours bright sunshine duration. Wind speed recorded 5.4 km/hr with mean wind direction *south easterly*.

**2.7 Lahore**

Rainfall reported as 11.9 mm during the decade however weather remained cloudy for 11 days. Average relative humidity recorded as 70%. Mean night temperature was 26.3°C while day temperature recorded as 38.5°C with 58.5 hours bright sunshine duration. Wind speed recorded as 3.9 km/hr with mean wind direction *south easterly*.

**2.8 Sargodha**

Rainfall reported as 81.1 mm during the decade however weather remained cloudy for 10 days. Average relative humidity recorded as 71%. Mean night temperature was 28.0°C while day temperature recorded as 36.1°C with 57.6 hours bright sunshine duration. Wind speed recorded as 2.2 km/hr with mean wind direction *easterly*.

**2.9 Multan**

Dry weather reported during the decade however weather remained cloudy for 11 days. Average relative humidity recorded as 54%. Mean night temperature was 30.2°C while day temperature recorded as 38.5°C with 77.6 hours bright sunshine duration. Wind speed recorded as 5.7 km/hr with mean wind direction *south easterly*.

**2.10 Khanpur**

Rainfall reported as Trace (not measureable) during the decade however weather remained cloudy for 07 days. Average relative humidity recorded as 58%. Mean night temperature was 29.3°C while day temperature recorded as 39.7°C with 88.3 hours bright sunshine duration. Wind speed recorded 4.8 km/hr with mean wind direction *south westerly*.

**2.11 Sakrand**

Rainfall reported as Trace (not measureable) however weather remained cloudy for 07 days. Average relative humidity recorded as 59%. Mean night temperature was 23.9°C while day temperature recorded as 38.9°C with 98.2 hours bright sunshine duration. Wind speed recorded 9.9 km/hr with mean wind direction *south westerly*.

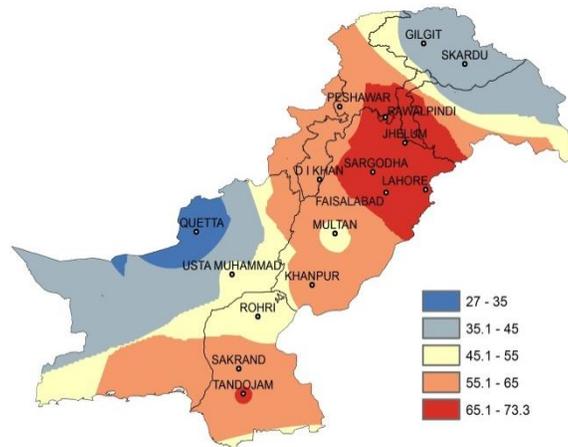


Figure.3: Relative Humidity in percentage (%)

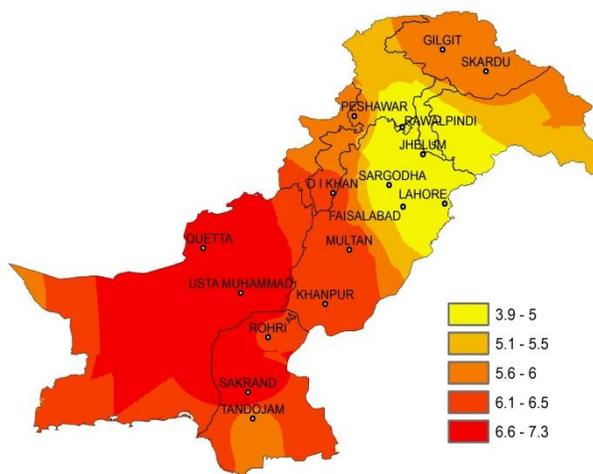


Figure.4: Reference Crop Evapotranspiration “ETo” in mm/day

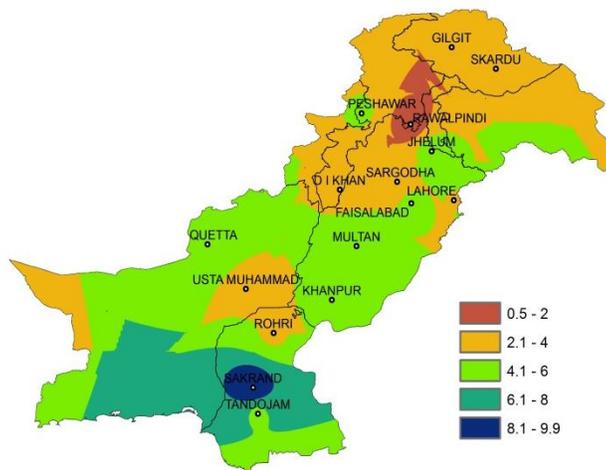


Figure 5: Wind Speed in kilometer per hour (km/h)

**2.12 Rohri**

Dry weather reported during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 50%. Mean night temperature was 30.3°C while day temperature recorded as 41.6°C with 95.5hours bright sunshine duration. Wind speed recorded as 3.6km/hr with mean wind direction *southerly*.

**2.13 D.I. Khan**

Rainfall reported as 1.0mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 64%. Mean night temperature was 24.2°C while day temperature recorded as 38.4°C with 83.3hours bright sunshine duration.

**2.14 Peshawar**

Rainfall reported as 29.3mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 56%. Mean night temperature was 29.6°C while day temperature recorded as 39.0°C with 81.5hours bright sunshine duration. Wind speed recorded as 4.3km/hr with mean wind direction *north westerly*.

**2.15 Skardu**

Rainfall reported as Trace (not measureable) during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 35%. Mean night temperature was 18.1°C while day temperature recorded as 36.3°C with 87.7hours bright sunshine duration. Wind speed recorded as 3.9km/hr with mean wind direction *south south-westerly*.

**2.16 Gilgit**

Dry weather reported during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 43%. Mean night temperature was 19.0°C while day temperature recorded as 39.0°C with 106.8bright sunshine duration. Wind speed recorded as 2.0km/hr with mean wind direction *easterly*.

### **3. Ten Days Weather Advisory for Farmers (1<sup>st</sup> to 10<sup>th</sup> August, 2014)**

**3.1 Temperature Forecast**

Temperatures are likely to be normal/above normal in the agricultural plains of the country and heat wave will also envelop northern areas during the decade.

**3.2 Wind Forecast**

Dust storm/ gusty wind conditions likely to prevail in the country during the decade.

**3.3 Rain Forecast**

- ❖ **Punjab:** Light to moderate rainfalls at isolated places is expected over most of the agricultural plains of the province during the decade.
- ❖ **Khyber Pakhtunkhwa:** Heavy falls at isolated places is expected over most of the agricultural plains of the province during the decade.
- ❖ **Sindh:** Light rainfall expected at isolated places of Sindh during end of decade.
- ❖ **Balochistan:** Mainly dry weather is expected in the province. However light rainfall expected in North western parts of Balochistan during the 2nd half of decade.
- ❖ **Gilgit Baltistan:** Mostly cloudy weather with light to moderate rainfall over hills is expected in most parts of GB during the whole decade.
- ❖ **Kashmir:** Mainly cloudy weather with light to moderate rainfall over hills is expected in isolated parts of Kashmir during the whole decade.

**3.4 Advisory for Farmers**

- ❖ Pest/viral attacks and more weeds growth are expected after recent monsoon rains in sugarcane and other standing crops in upper parts of the country. Farmers are therefore advised to take in time precautionary measures in this regard.
- ❖ 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.
- ❖ Due to expected monsoon rains during the decade farmers are advised to take in time precautionary measures to protect their crops, livestock and other property from any expected heavy rain.