

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light to moderate rainfall reported from the most of the agricultural plains of the country except Sindh, where very hot & dry weather reported during the decade.
- ❖ Highest amount of rainfall recorded as 136.0 mm at Parachinar during the last decade.
- ❖ Highest maximum temperature recorded as 51.0°C at Larkana during the last decade.
- ❖ Lower values of relative humidity reported from Quetta (Balochistan) during the last decade.
- ❖ Higher values of ETo reported from the agricultural plains of Sindh and lower values reported from GB and Upper KP areas during the last decade.
- ❖ Day temperatures likely to raise 3-6°C in upper and central parts and 4-8°C in southern parts of the country during the decade.
- ❖ Mostly Very hot & dry weather expected in most parts especially Southern and Central parts of the country.
- ❖ Dust-Thunderstorm may occur at few places of Upper parts of the country during the decade.
- ❖ Chances of rainfall/thunderstorm at isolated places of upper parts during the mid of the next decade.

**NATIONAL AGROMET CENTRE (NAMC)
PAKISTAN METEOROLOGICAL DEPARTMENT
SECTOR H-8/2, ISLAMABAD**

Pattern-in-Chief: *Arif Mahmood, Director General*

Editor-in-Chief: *Dr. Khalid M. Malik, Director*

Editor: *Zeeshan Javed Hashmi, Assistant Meteorologist*

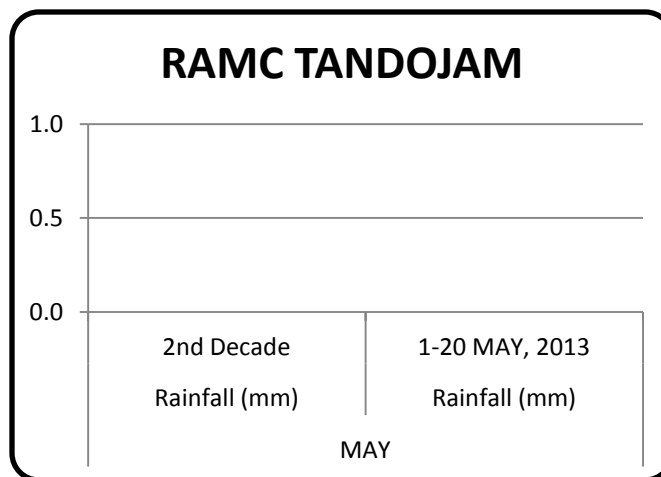
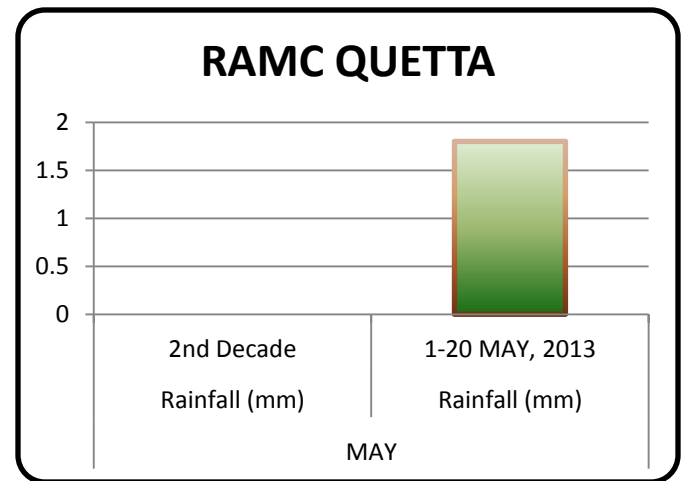
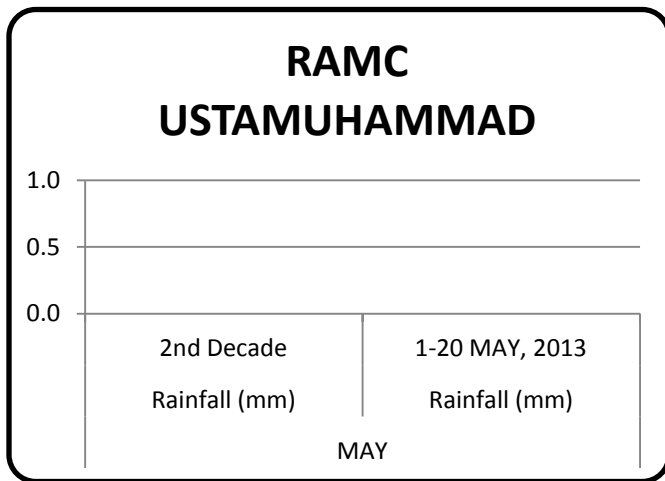
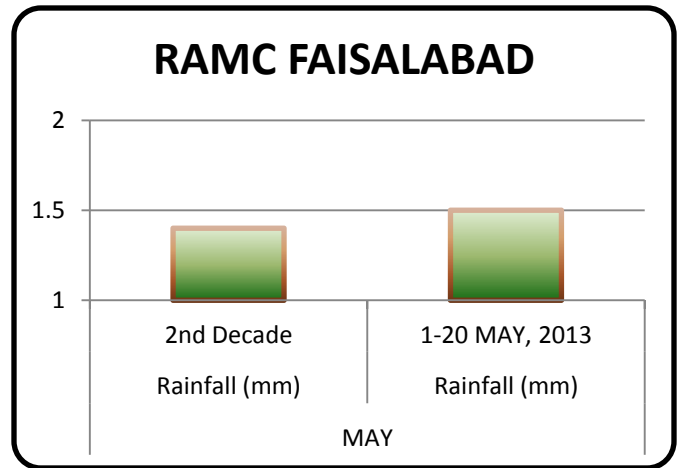
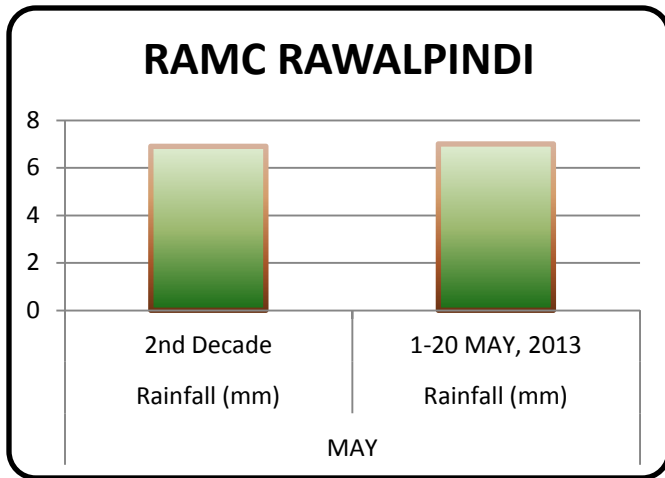
Phone: [+92-51-9250592](tel:+92-51-9250592) Email: dirnamc@yahoo.com

Meteorological conditions during 2nd decade of May, 2013

| Sr. No. | Station | Precipitation (mm) | | | Air Temperature (°C) | | | Soil Temperatures (°C) | | | | | | Sunshine Duration (hours) | Wind Speed (km/hr) | R.H (%) | ETo (mm/day) |
|---------|---------------|--------------------|--------|------|----------------------|----------|------|------------------------|------|------|------|------|-------|---------------------------|--------------------|---------|--------------|
| | | Normal | Actual | Dep | Tmin Dep | Tmax Dep | Mean | 5cm | 10cm | 20cm | 30cm | 50cm | 100cm | | | | |
| 1 | TANDOJAM | 0.0 | 0.0 | 0.0 | -0.6 | 0.2 | 33.3 | 37.6 | 35.0 | 31.7 | 30.4 | 30.2 | 29.4 | 106.2 | 4.6 | 50 | 6.5 |
| 2 | SAKRAND ☆ | 0.0 | 0.0 | 0.0 | -2.3 | -0.3 | 33.9 | 46.9 | 45.0 | 47.4 | 35.3 | 35.4 | 32.3 | 121.9 | 6.1 | 31 | 6.5 |
| 3 | ROHRI | 0.0 | 0.0 | 0.0 | 0.6 | -0.6 | 36.9 | 51.5 | 45.8 | 37.6 | 35.5 | 32.8 | 31.5 | 114.8 | 4.0 | 31 | 6.9 |
| 4 | USTA MUHAMMAD | 0.0 | 0.0 | 0.0 | -1.3 | -1.8 | 35.3 | 45.3 | 42.8 | 40.0 | 40.6 | 27.7 | 25.8 | *** | 1.5 | 41 | 6.0 |
| 5 | QUETTA | 0.1 | TR | -0.1 | -3.3 | -2.3 | 21.2 | 30.3 | 28.3 | 34.0 | 22.4 | 20.6 | 20.3 | 110.1 | 5.4 | 19 | 5.7 |
| 6 | KHANPUR | 0.0 | 0.0 | 0.0 | -1.1 | 0.5 | 34.0 | 36.3 | 35.4 | 35.0 | 34.9 | 34.8 | 32.0 | 197.8 | 3.0 | 35 | 6.3 |
| 7 | MULTAN | 0.0 | 0.0 | 0.0 | -0.9 | -1.8 | 33.7 | *** | *** | *** | *** | *** | *** | 107.9 | 5.7 | 32 | 6.8 |
| 8 | LAHORE | 0.2 | 1.2 | 1.0 | -2.7 | -1.0 | 31.4 | 36.2 | 33.5 | 30.2 | 28.9 | *** | 26.7 | 96.0 | 3.7 | 34 | 5.7 |
| 9 | FAISALABAD | 0.2 | 1.4 | 1.2 | -2.2 | -1.1 | 31.5 | 35.9 | 33.6 | 31.2 | 29.8 | 28.8 | 26.8 | 101.3 | 6.0 | 31 | 5.2 |
| 10 | SARGODHA | 0.6 | 20.1 | 19.5 | -2.5 | -2.7 | 31.1 | 36.8 | 33.9 | 32.5 | 30.0 | 29.7 | 27.4 | 96.9 | 3.5 | 43 | 5.2 |
| 11 | JHELUM | 0.9 | 2.0 | 1.1 | -1.9 | -0.4 | 31.3 | 37.6 | 35.0 | 31.7 | 30.4 | 30.2 | *** | 96.3 | 7.3 | 32 | 7.0 |
| 12 | RAWALPINDI | 1.5 | 6.9 | 5.4 | -0.6 | -0.9 | 28.7 | 32.7 | 30.3 | 27.5 | 27.1 | 25.9 | 24.1 | 94.2 | 2.2 | 39 | 5.0 |
| 13 | DI KHAN | 0.4 | 0.0 | -0.4 | -1.8 | -1.4 | 31.1 | *** | *** | *** | *** | *** | *** | 103.6 | 3.9 | 36 | 5.9 |
| 14 | PESHAWAR | 0.4 | 0.0 | -0.4 | -2.1 | -0.6 | 29.6 | 35.1 | 31.1 | 29.6 | 27.5 | 26.2 | 24.2 | 82.5 | 2.0 | 42 | 4.7 |
| 15 | SKARDU | 0.3 | 2.3 | 2.0 | -1.7 | -2.4 | 16.4 | *** | *** | *** | *** | *** | *** | 69.9 | 8.2 | 30 | 6.5 |
| 16 | GILGIT | 0.2 | 1.8 | 1.6 | -0.5 | -2.9 | 20.8 | *** | *** | *** | *** | *** | *** | 70.4 | 2.2 | 37 | 4.4 |

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 for Rainfall (mm) during May 2013



Past Weather (11th to 20th May, 2013):

Light to moderate rainfall reported from the agricultural plains of KP, GB & Kashmir, Punjab & Balochistan during the decade. Dry and Very hot weather reported from the agricultural plains of Sindh.

1.1 Punjab

Light rainfall reported from most of the places in the agricultural plains of Punjab; chief amount received at, Mianwali, Sargodha, and Joharabad etc. Decadal maximum temperature & decadal minimum temperature both dropped below normal by 1.1°C and 1.7°C respectively in the province. Mean values of wind speed, relative humidity and ETo were recorded as 4.5 km/hr, 35%, and 5.9 mm/day respectively.

1.2 Sindh

No rainfall reported from the agricultural plains of Sindh during the decade; Decadal maximum temperature & decadal minimum temperature both dropped below normal by 0.2°C and 0.8°C respectively in the province. Mean values of wind speed, relative humidity and ETo were recorded as 4.9 km/hr, 37%, and 6.6 mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

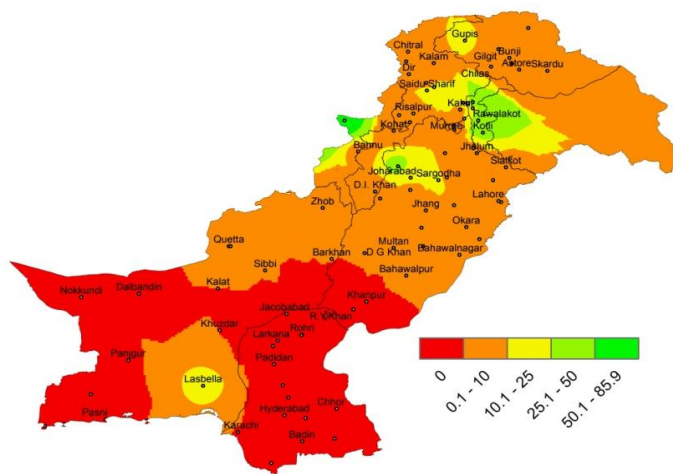
Light to moderate rainfall reported from most of the places in the agricultural plains of KP; chief amount received at Parachinar, Malamjabba, Balakot etc. In KP region; both Decadal maximum and decadal minimum dropped below normal by 1.0°C & 2.0°C in the province. Mean values of wind speed, relative humidity and ETo were recorded as 3.0 km/hr, 39%, and 5.3 mm/day respectively.

1.4 Balochistan

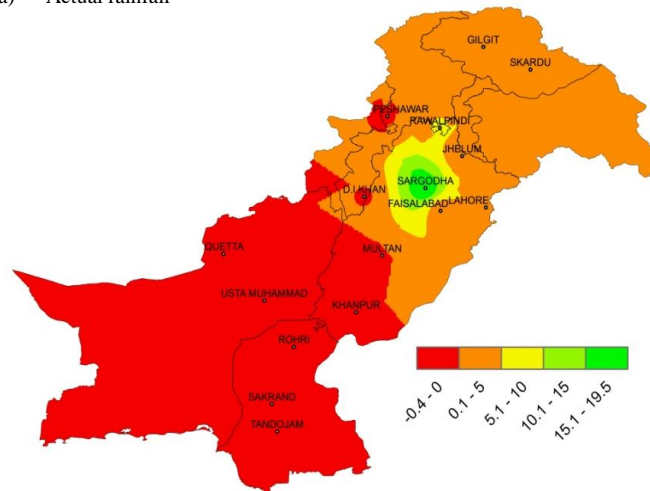
Light rainfall reported from few places in the agricultural plains of Balochistan; chief amount received at Lasbela, Zhob and Khuzdar. Decadal maximum & minimum temperature both dropped below normal by 2.1°C & 2.3°C respectively, in the province. Whereas mean values of wind speed, relative humidity and ETo were 3.5 km/hr, 30%, and 5.9 mm/day respectively.

1.5 Gilgit Baltistan and Azad Jammu & Kashmir

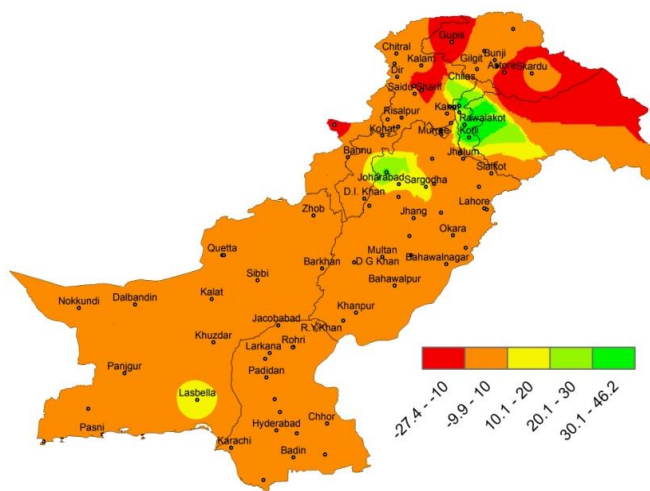
Light to moderate rainfall reported at a number of places in agricultural plains of GB & Kashmir; chief amount received at, Pattan, Rawalakot, Kotli etc. In GB & AJK region; Decadal maximum & minimum temperature both dropped below normal by 2.7°C & 1.1°C in the province. Whereas mean values of wind speed, relative humidity and ETo were recorded 5.2 km/hr, 52%, and 4.7 mm/day respectively.



a) Actual rainfall



b) Departure of rainfall from Normal



c) Departure of rainfall from Previous Decade

Figure.1: Rainfall distribution during previous decade in “mm”

2 (a) **Past Weather for Major Agricultural Plains**
Past Weather (11th to 20th May, 2013):

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

Rainfall reported as 6.9 mm during the decade, weather remained cloudy for 6 days, average relative humidity recorded as 39%. Mean night temperature was 20.6°C while day temperature recorded as 36.7°C with 94.2 hours bright sunshine duration. Wind speed recorded as 2.2 Km/hr with mean direction *westerly*. Presently one crop is grown at the station.

Wheat Chakwal 97: Harvested on 19-05-2013.

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

Rainfall reported as 1.4 mm during the decade, weather remained cloudy for 4 days, average relative humidity recorded as 31%. Mean night temperature was 22.8°C while day temperature recorded as 40.1°C with 101.3 hours bright sunshine duration. Wind speed recorded as 6.0 Km/hr with mean direction *south easterly*.

Sugarcane: Very Good condition, Tillering completed.
 Cotton: Very Good condition, Third leaf completed.

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

No rainfall reported during the decade, weather remained clear during the decade, average relative humidity recorded as 50%. Mean night temperature was 25.1°C while day temperature recorded as 41.5°C with 106.2 hours bright sunshine duration. Wind speed recorded as 4.6 km/hr with mean direction *south westerly*.

Cotton: BT 3701 Good condition, True leaf stage.

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

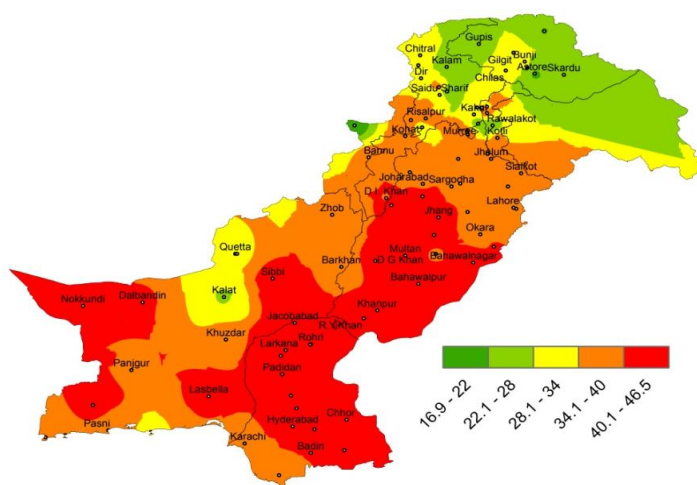
Rainfall reported as Trace (non measureable) during the decade, weather remained cloudy for 5 days, average relative humidity recorded as 19%. Mean night temperature was 12.1°C while day temperature recorded as 30.2°C with 110.1 hours bright sunshine duration and wind speed recorded as 5.4 Km/hr with mean direction *north westerly*.

Wheat (Local white): Good condition, Wax maturity stage.

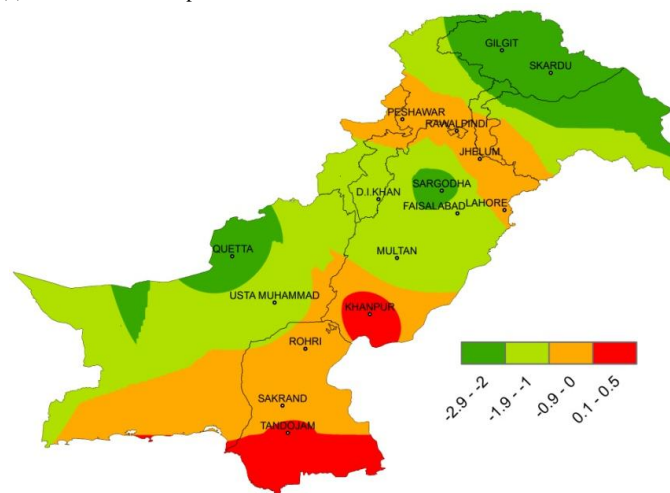
2.5 **RAMC, Usta Muhammad (Eastern Balochistan)**

No rainfall reported during the decade, weather remained clear during the decade, average relative humidity recorded as 41%. Mean night temperature was 26.0°C while day temperature recorded as 44.5°C with wind speed recorded as 1.5 Km/hr with mean direction *easterly*.

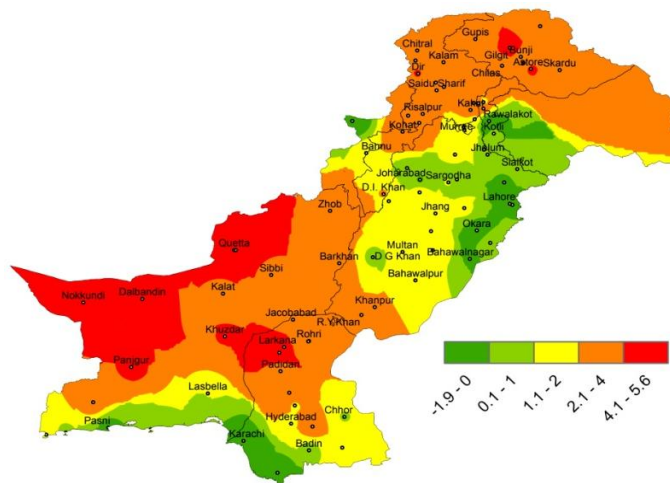
Wheat: Threshing going on.



(a) Actual max-temp



(b) Departure of max-temp from Normal



(c) 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 May, 2013):

2.6 Jhelum

Rainfall reported as 2.1 mm during the decade, weather remained cloudy for 6 days and average relative humidity recorded as 32%. Mean night temperature was 22.6°C while day temperature recorded as 39.9°C with 96.3 hours bright sunshine duration. Wind speed recorded 7.3 Km/hr with mean direction *south easterly*.

2.7 Lahore

Rainfall reported as 1.2 mm during the decade, weather remained cloudy for 4 days, average relative humidity recorded as 34%. Mean night temperature was 23.5°C while day temperature recorded as 39.2°C with 96.0 hours bright sunshine duration. Wind speed recorded as 3.7 Km/hr with mean direction *north westerly*.

2.8 Sargodha

Rainfall reported as 20.1 mm during the decade, weather remained cloudy for 4 days during the decade, average relative humidity recorded as 43%. Mean night temperature was 23.1°C while day temperature recorded as 39.1°C with 96.9 hours bright sunshine duration. Wind speed recorded as 3.5 Km/hr with mean direction *variable*.

2.9 Multan

No rainfall reported during the decade, weather remained cloudy for 3 days, average relative humidity recorded as 32%. Mean night temperature was 26.2°C while day temperature recorded as 41.1°C with 107.9 hours bright sunshine duration. Wind speed recorded as 5.7 Km/hr with variable direction.

2.10 Khanpur

No rainfall reported during the decade, weather remained cloudy for 1 days during the decade, average relative humidity recorded as 35%. Mean night temperature was 25.3°C while day temperature recorded as 42.6°C with 197.8 hours bright sunshine duration. Wind speed recorded as 3.0 Km/hr with mean direction *westerly*.

2.11 Rohri

No rainfall reported during the decade, weather remained cloudy for 1 days, average relative humidity recorded as 31%. Mean night temperature was 29.5°C while day temperature recorded as 44.3°C with 114.8 hours bright

sunshine duration. Wind speed recorded as 4.0 Km/hr with mean direction *variable*.

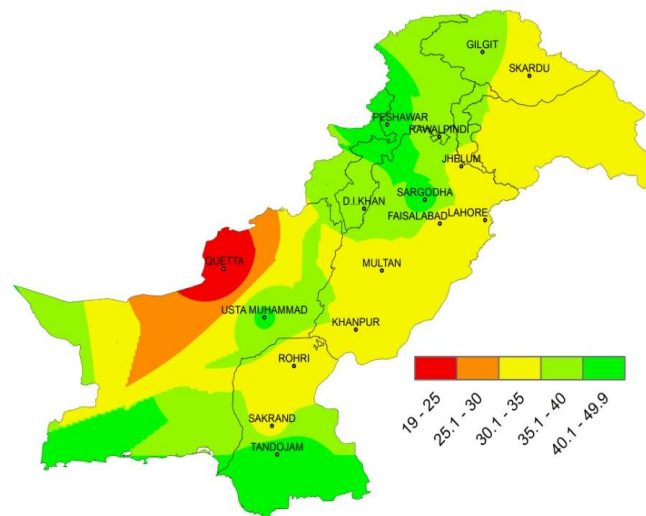


Figure.3: Relative Humidity in percentage

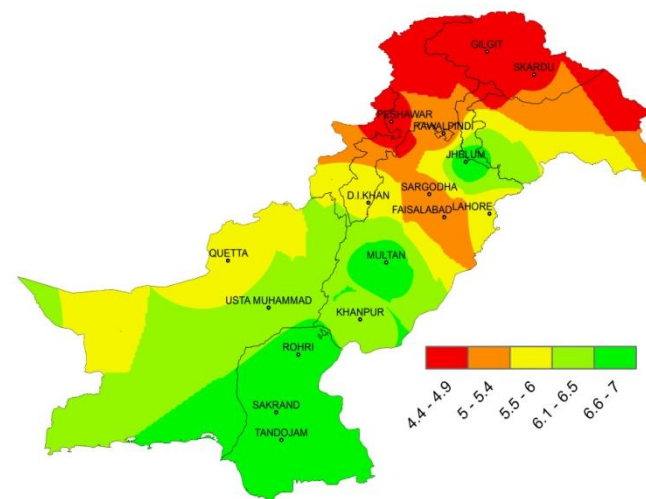


Figure.4: Reference Crop Evapotranspiration "ET₀" in mm/day

2.12 Sakrand

No rainfall reported during the decade, weather remained cloudy for 3 days during the decade, average relative humidity recorded as 31%. Mean night temperature was 23.6°C while day temperature recorded as 44.2°C with 121.9 hours bright sunshine duration. Wind speed recorded as 6.1 Km/hr with mean direction *southly*.

2.13 Peshawar

No rainfall reported during the decade, weather remained cloudy for 6 days, average relative humidity recorded as 42%. Mean night temperature was 21.5°C while day temperature recorded as 37.7°C with 82.5 hours bright sunshine duration. Wind speed recorded as 2.0 Km/hr with mean direction *north westerly*.

2.14 D.I. Khan

No rainfall reported during the decade, weather remained cloudy for 3 days, average relative humidity recorded as 36%. Mean night temperature was 22.4°C while day temperature recorded as 39.8°C with 103.6 hours bright sunshine duration. Wind speed recorded as 3.9 Km/hr with mean direction *north easterly*.

2.15 Gilgit

Rainfall reported as 1.8 mm during the decade. weather remained cloudy for 10 days and average relative humidity recorded as 37%. Mean night temperature was 11.4°C while day temperature recorded as 30.2°C with 70.4 hours bright sunshine. Wind speed recorded as 2.2 Km/hr with variable direction.

2.16 Skardu

Rainfall reported as 2.3 mm during the decade, weather remained cloudy for 5 days, average relative humidity recorded as 30%. Mean night temperature was 8.3°C while day temperature recorded as 24.4°C with 69.9 hours bright sunshine duration with mean speed 8.2 Km/hr with *variable* direction.

**3. Ten days Weather advisory for Farmers
(21st to 31st May, 2013)****3.1 Temperature Forecast:**

Day temperatures likely to raise 3-6°C in upper and central parts and 4-8°C in southern parts of the country during the decade.

3.2 Rain Forecast:

- ❖ **Punjab:** Mainly Very hot/dry weather is expected in most parts of the province during the decade. However, Rainfall/Thunderstorm is expected at isolated places in upper parts during 25th to 27th May.
- ❖ **Khyber Pakhtunkhwa:** Mainly dry weather is expected in most parts of the province. However, Rainfall/Thunderstorm is expected at isolated places in upper parts during 25th to 27th May.
- ❖ **Sindh :** Mainly Very hot/dry weather is expected in most parts of the province during the decade.
- ❖ **Balochistan:** Mainly Very hot/dry weather is expected in most parts of the province during the decade.
- ❖ **Gilgit-Baltistan & Kashmir:** Mainly dry weather is expected in most parts of the province. However, Rainfall/Thunderstorm is expected at isolate places during the decade.

3.3 Wind Forecast:

Normal to gusty wind pattern may prevail in most of the agricultural plains of the country during the decade.

3.4 Advisory for Farmers:

- ❖ Farmers of upper & central parts are advised to complete harvesting process at earliest possible and safe the crop and fodder to avoid any loss.
- ❖ During the harvesting process, farmers are advised to be aware about the weather conditions and keep listening & watching carefully the weather advisories issued through radio and televisions.
- ❖ Farmers of lower half of the country are advised to prepare the fields for the coming Kharif crops in time.
- ❖ Due to prevailing dry weather and rising day time temperature, cotton and sugarcane farmers should irrigate the crops as per requirement.