

# Decadal Agromet Bulletin of Pakistan



## Highlights....

- ❖ Light to moderate rainfall reported from the most of the agricultural plains of the country except Sindh and Balochistan during the last decade.
- ❖ Highest maximum temperature recorded as 46.8°C at Mirpur Khas during the last decade.
- ❖ Highest amount of rainfall recorded as 88.1 mm at Astore during the last decade.
- ❖ Lower values of relative humidity reported from Balochistan and higher values reported from Gilgit and Biltastan during the last decade.
- ❖ Higher values of ETo reported from the agricultural plains of Sindh, Punjab and lower values reported from KP during the last decade.
- ❖ Day temperatures likely to raise 2-5°C in upper and central parts and 3-7°C in southern parts of the country during the next decade.
- ❖ Normal to gusty wind pattern may prevail in most parts of the country during the next decade.
- ❖ Chances of rainfall/Dust-thunderstorm at isolated places of Punjab, KP, GB & Kashmir during the 1<sup>st</sup> half of the next decade.
- ❖ Chances of hot/dry weather in most of the agricultural plains of the country during the 2<sup>nd</sup> half of the next decade.
- ❖ Very hot/dry weather is expected in the agricultural plains of Sindh & Balochistan.

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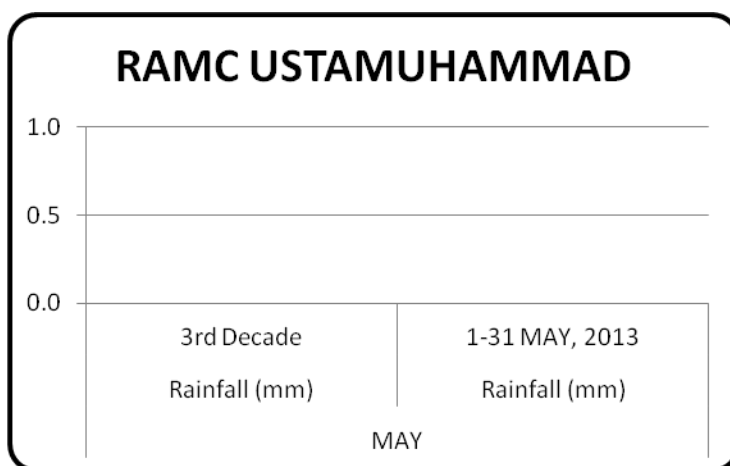
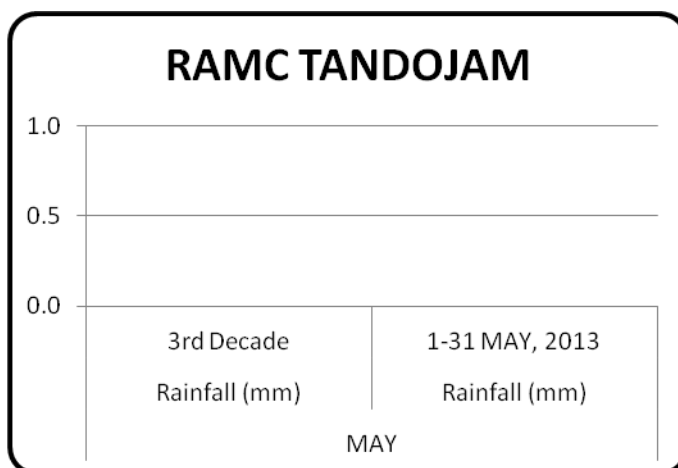
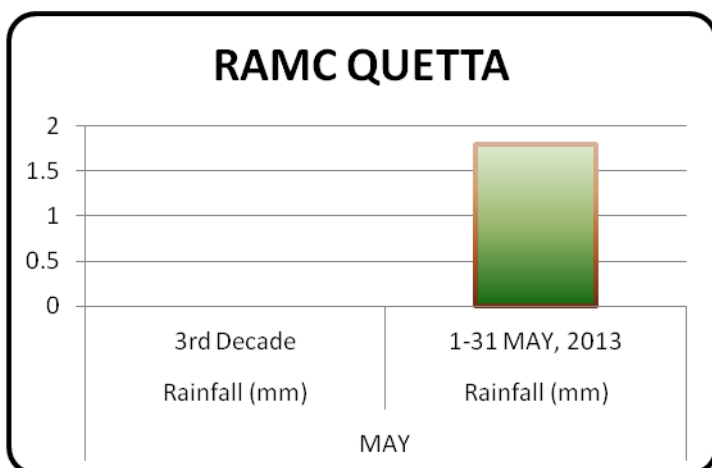
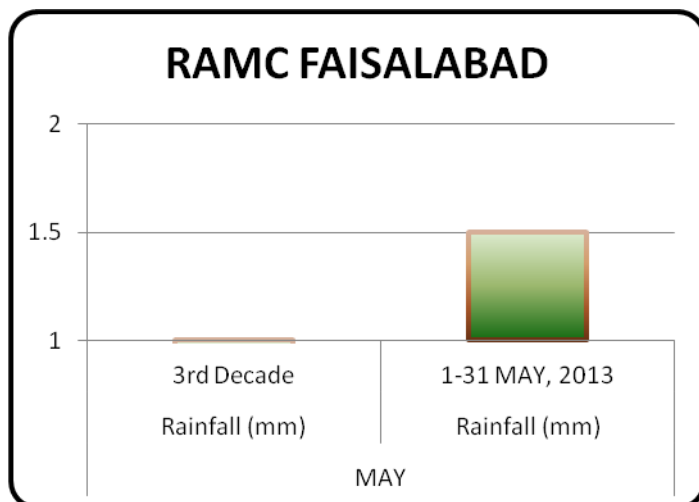
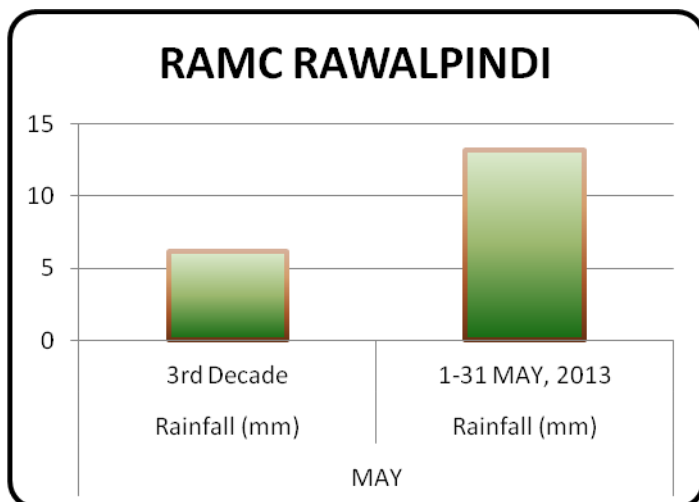
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Meteorological conditions during 3<sup>rd</sup> decade of May, 2013

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	0.1	33.7	40.6	39.1	35.2	33.8	33.1	30.1	125.0	7.5	47	7.7
2	SAKRAND ☆	0.0	0.0	0.0	-1.6	0.1	34.9	49.4	46.9	48.8	36.9	37.1	33.8	136.6	10.4	34	9.5
3	ROHRI	0.0	0.0	0.0	0.4	0.8	37.5	51.3	46.0	39.2	36.1	34.3	32.8	127.5	6.4	31	8.1
4	USTA MUHAMMAD	0.0	0.0	0.0	-2.4	-0.3	37.0	46.2	43.4	41.5	42.0	27.6	26.8	***	1.9	34	7.2
5	QUETTA	0.3	0.0	-0.3	-1.8	-0.1	23.3	33.1	30.7	26.2	24.3	23.2	22.8	128.1	5.1	18	6.1
6	KHANPUR	0.0	0.0	0.0	0.2	1.8	35.6	38.1	37.5	36.9	36.8	35.3	35.8	118.0	4.8	33	7.2
7	MULTAN	0.5	0.0	-0.5	1.9	1.8	36.1	***	***	***	***	***	***	124.1	8.3	28	8.6
8	LAHORE	1.3	0.0	-1.3	1.2	3.6	35.2	41.7	38.3	33.6	32.2	***	28.5	113.8	5.1	24	7.0
9	FAISALABAD	0.8	0.0	-0.8	1.5	3.4	34.7	40.1	37.7	34.7	32.9	31.6	28.5	126.4	7.3	26	8.2
10	SARGODHA	2.1	7.3	5.2	1.3	3.0	35.1	40.5	37.7	34.2	32.9	32.3	29.0	111.7	4.9	35	7.1
11	JHELUM	0.8	10.8	10.0	0.3	3.0	34.0	38.3	35.6	32.8	31.4	31.3	***	105.4	7.1	24	7.5
12	RAWALPINDI	0.6	6.2	5.6	1.4	2.0	31.4	35.2	32.6	29.8	29.1	28.1	26.0	109.7	2.9	32	5.8
13	DI KHAN	0.3	TR	-0.2	1.0	3.8	34.8	***	***	***	***	***	***	120.8	4.1	29	6.9
14	PESHAWAR	0.4	12.2	11.8	-1.5	1.7	31.0	34.6	31.6	30.0	28.7	27.7	26.3	100.4	2.0	38	5.3
15	SKARDU	0.4	43.0	42.6	-1.3	-2.9	15.9	***	***	***	***	***	***	67.8	4.9	43	9.2
16	GILGIT	1.1	41.7	40.6	2.5	0.6	23.5	***	***	***	***	***	***	85.6	4.0	52	5.3

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.

**Graphs for Rainfall (mm) during May 2013**



**Past Weather (21<sup>st</sup> to 31<sup>st</sup> May, 2013):**

Light to moderate rainfall reported from the agricultural plains of Punjab, KP, GB & Kashmir. While dry and very hot weather reported from the agricultural plains of Sindh & Balochistan.

**1.1 Punjab**

Light rainfall reported at a few places in the agricultural plains of Punjab; chief amount received at, Murree, Jhelum, and Mandi bahuddin etc. Decadal maximum temperature & decadal minimum temperature both raised above normal by 2.7°C and 1.1°C respectively in the province. Mean values of wind speed, relative humidity and ETo were recorded as 5.8 km/hr, 29%, and 7.3 mm/day respectively.

**1.2 Sindh**

No rainfall reported from the agricultural plains of Sindh during the decade; Decadal maximum temperature raised above normal by 0.3°C & Decadal minimum dropped below normal by 0.2°C respectively, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 8.1 km/hr, 37%, and 8.4 mm/day respectively.

**1.3 Khyber Pakhtunkhwa (KP)**

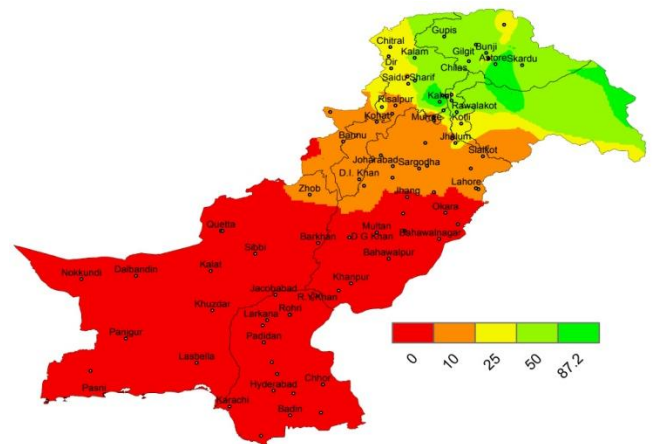
Light to moderate rainfall reported from most of the places in the agricultural plains of KP; chief amount received at Kakul, Balakot and Malamjabba, In KP region; Decadal maximum temperature raised above normal by 2.8°C & Decadal minimum dropped below by 0.3°C in the province. Mean values of wind speed, relative humidity and ETo were recorded as 3.1 km/hr, 34%, and 6.1 mm/day respectively.

**1.4 Balochistan**

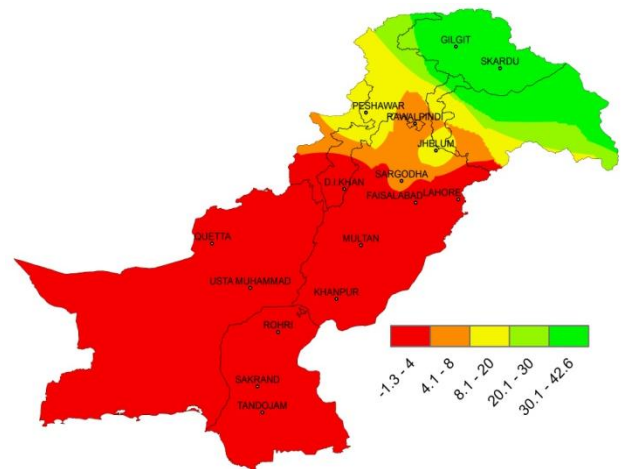
No rainfall reported from the agricultural plains of Sindh agricultural plains of Balochistan during the decade. Decadal maximum & minimum temperature both dropped below normal by 0.2°C & 2.1°C respectively, in the province. Whereas mean values of wind speed, relative humidity and ETo were 3.5 km/hr, 26%, and 6.7 mm/day respectively.

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

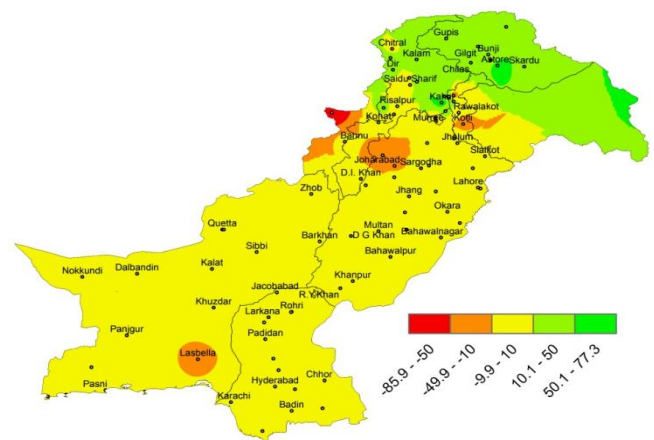
Light to moderate rainfall reported at a number of places in agricultural plains of GB & Kashmir; chief amount received at, Astore, Gupis, Sakrdu etc. In GB & AJK region; Decadal maximum dropped below normal by 2.7°C while decadal minimum raised above normal by 0.1°C in the province. Whereas mean values of wind speed, relative humidity and ETo were recorded 4.4 km/hr, 43%, and 7.3 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 (21<sup>st</sup> to 31<sup>st</sup> May, 2013):**

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

Rainfall reported as 6.2 mm during the decade, weather remained cloudy for 6 days, average relative humidity recorded as 32%. Mean night temperature was 22.9°C while day temperature recorded as 39.8°C with 109.7 hours bright sunshine duration. Wind speed recorded as 2.9 Km/hr with mean direction *westerly*. Presently no crop is grown at the station.

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

No rainfall reported during the decade, weather remained cloudy for 2 days, average relative humidity recorded as 26%. Mean night temperature was 26.1°C while day temperature recorded as 43.2°C with 126.4 hours bright sunshine duration. Wind speed recorded as 7.3 Km/hr with mean direction *variable*.

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 cloudy for 1 day during the decade, average relative humidity recorded as 47%. Mean night temperature was 26.7°C while day temperature recorded as 40.7°C with 125.0 hours bright sunshine duration. Wind speed recorded as 7.5 km/hr with mean direction *south westerly*.

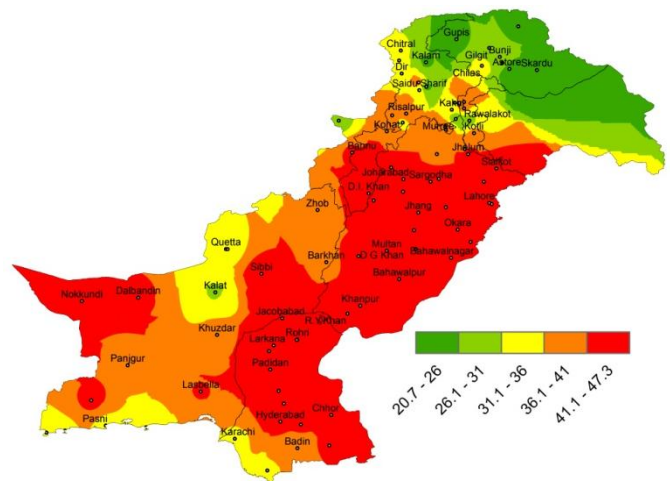
Cotton: BT 3701 Good condition, Third true leaf.

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

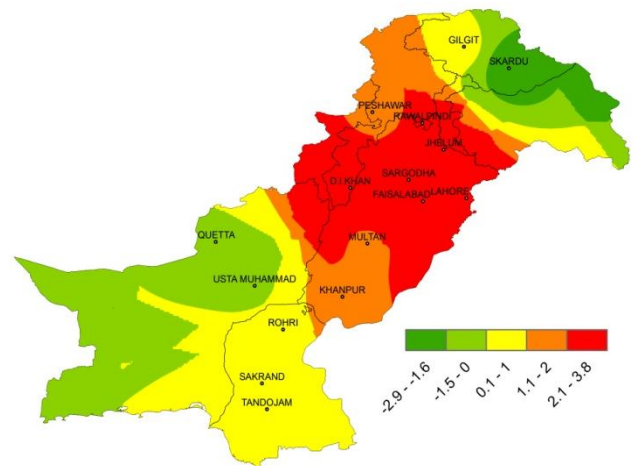
No rainfall reported during the decade, weather remained cloudy for 2 days, average relative humidity recorded as 18%. Mean night temperature was 14.2°C while day temperature recorded as 32.3°C with 128.1 hours bright sunshine duration and wind speed recorded as 5.1 Km/hr with mean direction *westerly*.  
Wheat (Local white) has been harvested.

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

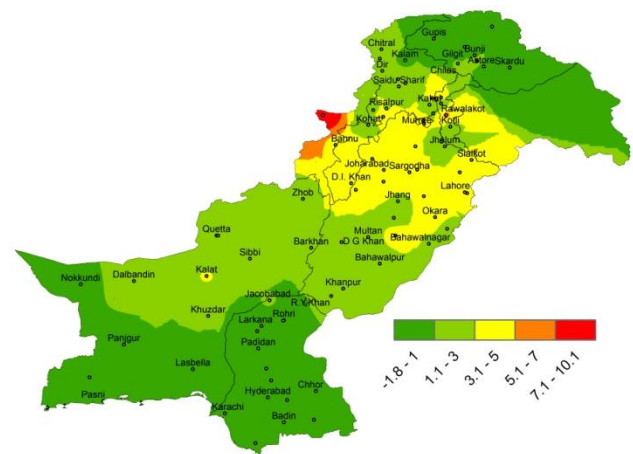
No rainfall reported during the decade, weather remained clear during the decade, average relative humidity recorded as 34%. Mean night temperature was 26.5°C while day temperature recorded as 47.5°C with wind speed recorded as 1.9 Km/hr with mean direction *northly*.  
Field is ready for rice crop.



(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 (21<sup>st</sup> to 31<sup>st</sup> May, 2013):**

**2.6 Jhelum**

Rainfall reported as 10.8 mm during the decade, weather remained cloudy for 6 days and average relative humidity recorded as 24%. Mean night temperature was 25.4°C while day temperature recorded as 42.5°C with 105.4 hours bright sunshine duration. Wind speed recorded 7.1 Km/hr with mean direction *variable*.

**2.7 Lahore**

No rainfall reported during the decade, weather remained cloudy for 3 days, average relative humidity recorded as 24%. Mean night temperature was 27.7°C while day temperature recorded as 42.7°C with 113.8 hours bright sunshine duration. Wind speed recorded as 5.1 Km/hr with mean direction *north westerly*.

**2.8 Sargodha**

Rainfall reported as 7.3 mm during the decade, weather remained cloudy for 4 days during the decade, average relative humidity recorded as 35%. Mean night temperature was 27.0°C while day temperature recorded as 43.1°C with 113.7 hours bright sunshine duration. Wind speed recorded as 4.9 Km/hr with mean direction *north easterly*.

**2.9 Multan**

No rainfall reported during the decade, weather remained cloudy for 1 days, average relative humidity recorded as 28%. Mean night temperature was 28.7°C while day temperature recorded as 43.5°C with 124.1 hours bright sunshine duration. Wind speed recorded as 8.3 Km/hr with mean direction *south westerly*.

**2.10 Khanpur**

No rainfall reported during the decade, weather remained clear during the decade, average relative humidity recorded as 33%. Mean night temperature was 27.0°C while day temperature recorded as 44.2°C with 118.0 hours bright sunshine duration. Wind speed recorded as 4.8 Km/hr with mean direction *south 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 45.4°C with 127.5 hours bright

sunshine duration. Wind speed recorded as 6.4 Km/hr with mean direction *south westerly*.

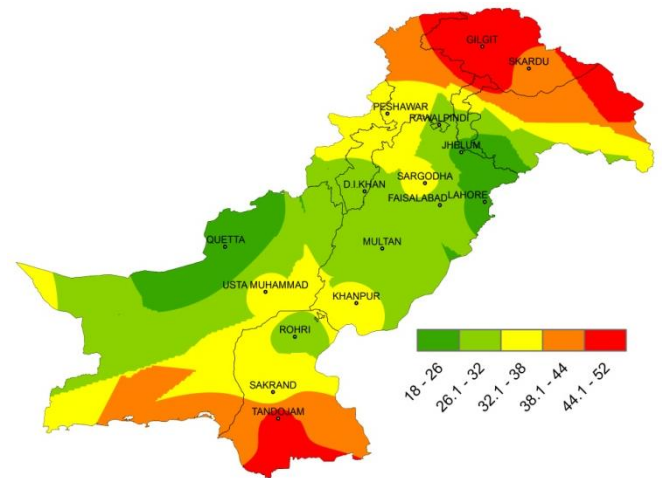


Figure.3: Relative Humidity in percentage

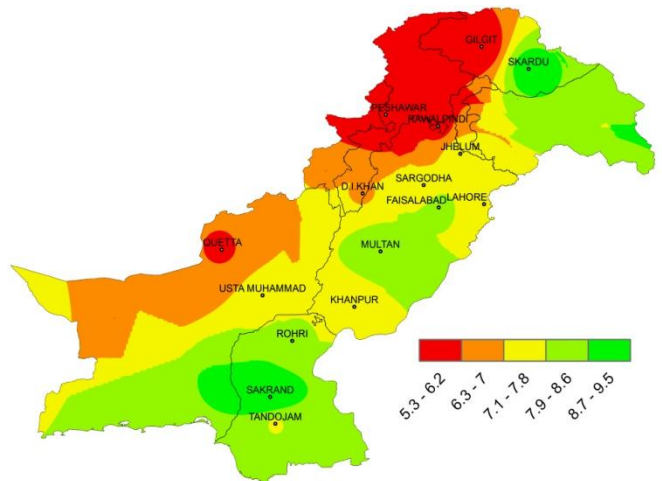


Figure.4: Reference Crop Evapotranspiration “ET<sub>0</sub>” in mm/day

**2.12 Sakrand**

No rainfall reported during the decade, weather remained clear during the decade, average relative humidity recorded as 34%. Mean night temperature was 25.0°C while day temperature recorded as 44.7°C with 136.6 hours bright sunshine duration. Wind speed recorded as 10.4 Km/hr with mean direction *south easterly*.

**2.13 Peshawar**

Rainfall reported as 12.2 mm during the decade, weather remained cloudy for 7 days, average relative humidity recorded as 38%. Mean night temperature was 22.5°C while day temperature recorded as 39.5°C with 100.4 hours bright sunshine duration. Wind speed recorded as 2.0 Km/hr with mean direction *north north westerly*.

**2.14 D.I. Khan**

Rainfall reported as Trace (non measureable) during the decade weather remained cloudy for 1 days, average relative humidity recorded as 29%. Mean night temperature was 25.4°C while day temperature recorded as 44.1°C with 120.8 hours bright sunshine duration. Wind speed recorded as 4.1 Km/hr with mean direction *south easterly*.

**2.15 Gilgit**

Rainfall reported as 41.7 mm during the decade. weather remained cloudy for 9 days and average relative humidity recorded as 52%. Mean night temperature was 15.0°C while day temperature recorded as 32.0°C with 85.6 hours bright sunshine. Wind speed recorded as 4.0 Km/hr with mean wind direction *easterly*.

**2.16 Skardu**

Rainfall reported as 43.0 mm during the decade, weather remained cloudy for 5 days, average relative humidity recorded as 43%. Mean night temperature was 8.9°C while day temperature recorded as 22.8°C with 67.8 hours bright sunshine duration with mean speed 4.9 Km/hr with mean wind direction *north westerly*

**3. Ten days Weather advisory for Farmers  
1<sup>st</sup> to 10<sup>th</sup> June, 2013****3.1 Temperature Forecast:**

Day temperatures likely to raise 2-5°C in upper and central parts and 3-7°C in southern parts of the country during the decade.

**3.2 Rain Forecast:**

- ❖ **Punjab:** Mainly 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 3<sup>rd</sup>/4<sup>th</sup> June. □
- ❖ **Khyber Pakhtunkhwa:** Mainly dry weather is expected in most parts of the province. However, Rainfall/Thunderstorm is expected at isolated places in upper and lower parts during 3<sup>rd</sup>/4<sup>th</sup> June. □
- ❖ **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 isolated 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:**

- ❖ Harvesting/Threshing of wheat crop has been completed in the most of the agricultural areas of the country. Due to prevailing dry weather and rising day time temperature, cotton and sugarcane farmers should irrigate the crops as per requirement.
- ❖ Farmers of upper half of the country are advised to prepare the fields for the coming Kharif crops in time.
- ❖ Excepted rise in day time temperature and heat waves during most of the days in the decade may increase water discharge in the river and canals of the country, which may ultimately rise canal water for standing Kharif crops in the coming days.
- ❖ Farmers of rainfed areas obtaining crop water through tube wells are also advised to schedule the irrigation according to the expected weather mentioned during the decade.