

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light to moderate rainfall reported from most of the agricultural plains of the country during last decade.
- ❖ Highest amount of rainfall recorded as 210.0mm at Parachinar during the last decade.
- ❖ Highest maximum temperature recorded as 42.4°C at Chhor during the last decade.
- ❖ Lower values of relative humidity reported from Gilgit Baltistan and higher values reported from KP during the last decade.
- ❖ Higher values of ETo reported from the agricultural plains of Sindh, KP and Punjab and lower values reported from Gilgit Baltistan during the last decade.
- ❖ Day temperatures likely to raise 3-5°C in most of the agricultural plains of the country during the decade.
- ❖ Normal to gusty wind pattern may prevail in most of the agricultural plains of the country during the decade.
- ❖ Mainly hot/dry weather is expected in most of the agricultural plains of the country especially Sindh, Balochistan and Southern Parts of Punjab during the decade.
- ❖ Chances of rainfall/thunderstorm at isolated places of upper KP, upper Punjab on 5th / 6th May and at isolated places in GB & Kashmir during the rest of the decade.
- ❖ Farmers of wheat crop are advised to harvest their crops and safe the crop and fodder to avoid any loss in yield.

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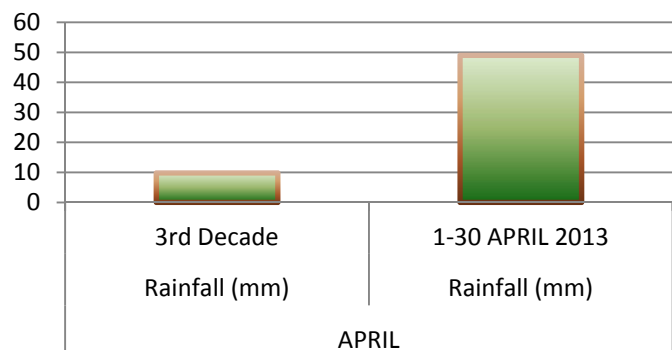
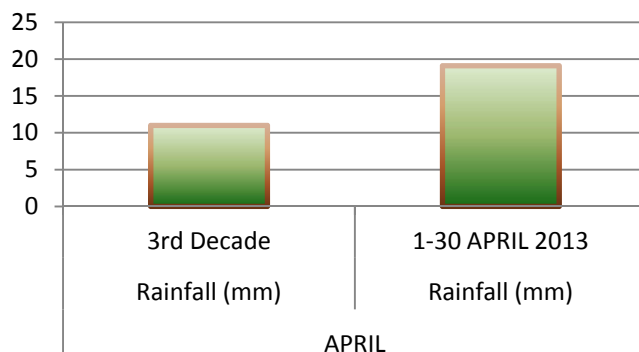
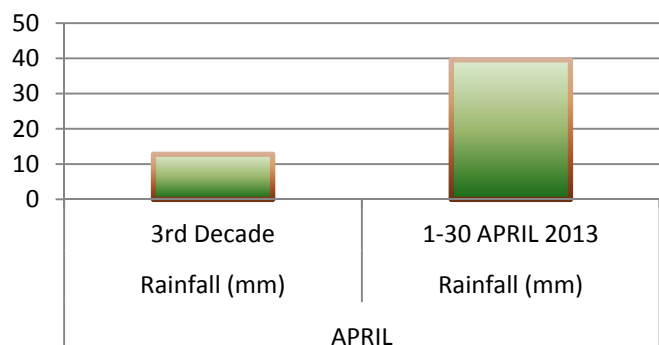
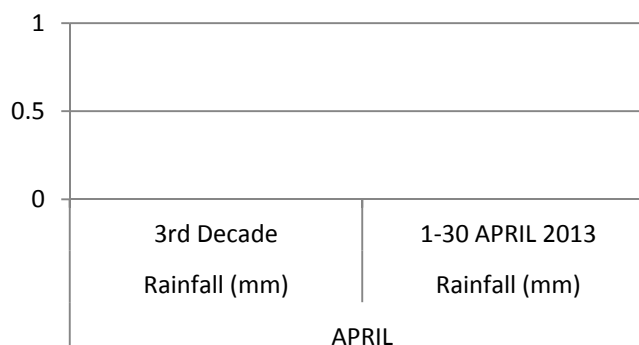
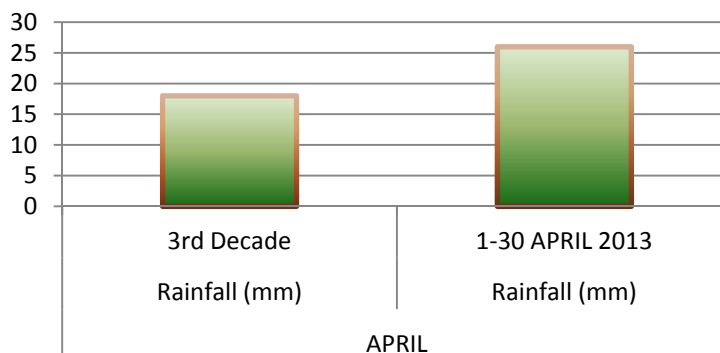
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Meteorological conditions during 3rd decade of April, 2013

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	0.1	18.0	17.9	1.0	-3.4	30.2	40.2	37.0	34.0	31.6	30.8	27.6	93.2	2.1	46.0	5.0
2	SAKRAND ☆	0.0	0.0	0.0	-1.5	-5.6	28.6	41.5	39.4	33.1	32.1	32.4	29.7	89.0	6.1	44.0	5.0
3	ROHRI	0.0	8.0	8.0	-2.0	-6.6	29.8	41.2	38.3	32.6	31.4	29.1	29.0	69.7	6.3	43.0	5.6
4	USTA MUHAMMAD	0.2	0.0	-0.2	-1.6	-7.6	28.3	31.3	28.0	30.6	30.0	30.9	25.6	***	0.6	43.0	4.3
5	QUETTA	0.3	12.8	12.5	0.3	-7.1	17.0	24.0	22.4	19.2	17.8	16.8	17.4	76.5	6.9	48.0	4.2
6	KHANPUR	0.1	8.0	7.9	-2.9	-6.8	27.4	30.6	30.1	30.1	30.3	30.4	29.2	71.0	4.3	45.0	4.8
7	MULTAN	0.2	3.5	3.3	-2.4	-5.7	27.4	***	***	***	***	***	***	70.5	5.7	44.0	5.0
8	LAHORE	0.3	6.1	5.8	-3.4	-2.8	27.5	33.1	30.9	28.1	26.9	***	26.6	65.9	4.0	41.0	4.6
9	FAISALABAD	0.5	11.0	10.5	-0.6	-3.9	27.7	31.7	30.3	28.5	27.3	26.4	24.9	72.0	6.1	41.0	5.2
10	SARGODHA	0.7	20.1	19.4	-1.7	-2.6	28.1	32.4	30.4	27.9	27.0	26.9	25.0	77.1	2.1	49.0	4.4
11	JHELMUM	1.0	TR	-1.0	-1.0	-2.8	27.1	32.4	30.5	27.9	26.3	26.1	***	84.3	5.3	45.0	5.1
12	RAWALPINDI	1.9	9.8	7.9	0.0	-2.9	24.2	31.7	30.3	28.5	27.3	26.4	24.9	71.4	4.4	51.0	4.3
13	DI KHAN	0.3	1.0	0.7	-2.7	-4.3	25.9	***	***	***	***	***	***	72.2	8.0	46.0	5.4
14	PESHAWAR	1.0	65.2	64.2	-3.4	-3.6	23.3	26.0	24.8	23.7	22.7	22.2	21.1	61.3	2.6	59.0	4.3
15	SKARDU	0.7	TR	-0.7	1.4	0.7	15.2	***	***	***	***	***	***	46.4	9.2	32.0	4.3
16	GILGIT	0.7	3.2	2.5	2.6	-1.8	19.1	***	***	***	***	***	***	50.0	4.4	37.0	3.8

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 April 2013**RAMC RAWALPINDI****RAMC FAISALABAD****RAMC QUETTA****RAMC USTA MUHAMMAD****RAMC TANDOJAM**

Past Weather (21st to 30th April, 2013):

Light to moderate rainfall reported from the most of the agricultural plains of the country during the decade.

1.1 Punjab

Light to moderate rainfall reported at a number of places in the agricultural plains of Punjab; chief amount received at, Shorkot, Noorpur thal and Murree etc. Decadal maximum temperature & decadal minimum temperature both dropped below normal by 3.9°C & 1.7°C respectively in the province. Mean values of wind speed, relative humidity and ETo were recorded as 4.6 km/hr, 45 %, and 4.8 mm/day respectively.

1.2 Sindh

Light to moderate rainfall reported at a number of places in the agricultural plains of Sindh; chief amount received at Hyderabad, Jacobabad and Mithi. Decadal maximum temperature & decadal minimum temperature both dropped below normal by 5.2°C & 0.8°C respectively in the province. Mean values of wind speed, relative humidity and ETo were recorded as 4.8 km/hr, 44%, and 5.2 mm/day respectively.

1.3 Khyber Pakhtoonkhawa (KP)

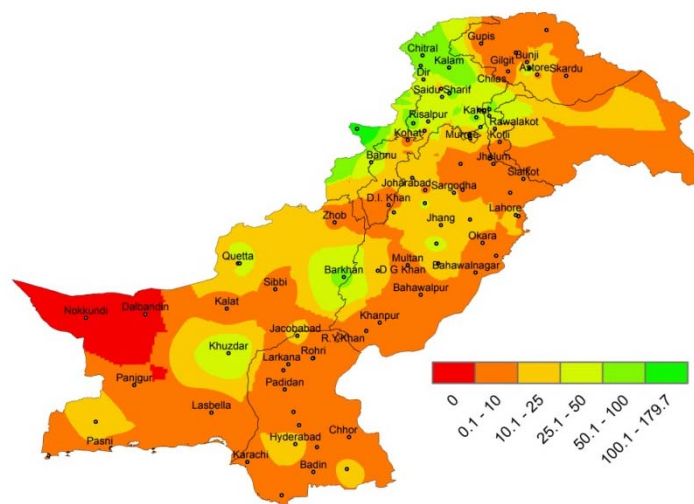
Light to moderate rainfall reported at a number of places in the agricultural plains of KP; chief amount received at Pattan, Parachinar, Kalam etc. In KP region; Decadal maximum dropped below normal by 0.5°C and decadal minimum raised above normal by 2.0°C in the province. Mean values of wind speed, relative humidity and ETo were recorded as 6.8 km/hr, 48%, and 4.1 mm/day respectively.

1.4 Balochistan

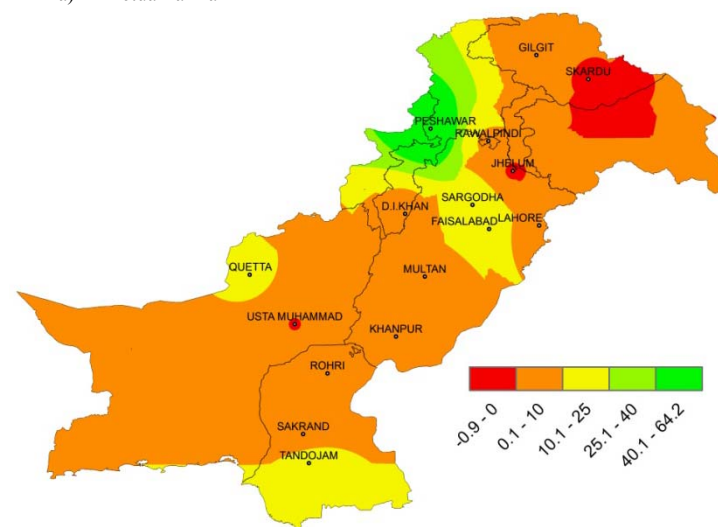
Light rainfall reported at a number of places in the agricultural plains of Balochistan; chief amount received at Barkhan, Khuzdar and Samungli (Quetta). Decadal maximum & minimum temperature both dropped below normal by 7.4°C & 0.7°C respectively, in the province. Whereas mean values of wind speed, relative humidity and ETo were 3.8 km/hr, 46%, and 4.3 mm/day respectively.

1.5 Gilgit Baltistan and Azad Jammu & Kashmir

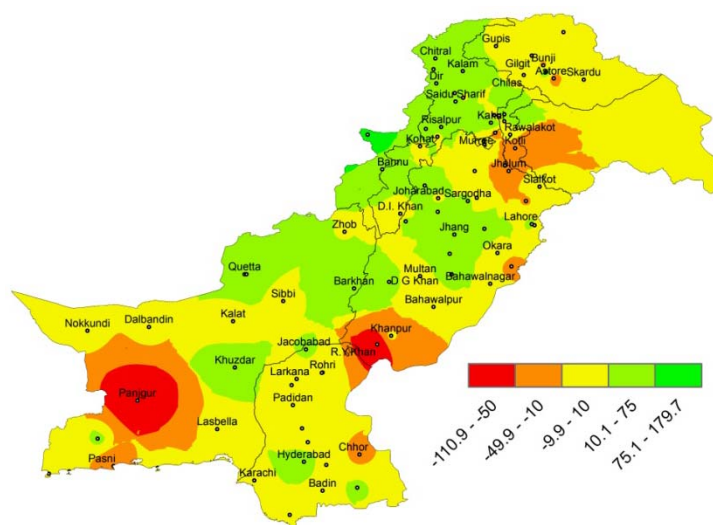
Light to moderate rainfall reported at a number of places in agricultural plains of GB & Kashmir; chief amount received at Pattan, Muzaffarabad/Garhidopatta and Rawalakot. In GB & AJK region; Decadal maximum & minimum temperature both dropped below normal by 4.0°C & 3.1°C respectively in the province. Whereas mean values of wind speed, relative humidity and ETo were recorded 5.3 km/hr, 53%, and 4.9 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 (21st to 30th April, 2013))

2.1 RAMC, Rawalpindi (Potohar region)

Rainfall reported as 9.8 mm during the decade, weather remained cloudy for 9 days, average relative humidity recorded as 51%. Mean night temperature was 17.7°C while day temperature recorded as 30.7°C with 71.4 hours bright sunshine duration. Wind speed recorded as 4.4 Km/hr with mean direction *westerly*. Presently one crop is grown at the station.

Wheat Chakwal 97: Good condition, Wax maturity stage.

2.2 RAMC, Faisalabad (Central Punjab)

Rainfall reported as 11.0 mm during the decade, weather remained cloudy for 10 days, average relative humidity recorded as 41%. Mean night temperature was 21.0°C while day temperature recorded as 34.3°C with 97.1 hours bright sunshine duration. Wind speed recorded as 6.1 Km/hr with mean direction *north westerly*.

Sugarcane: Very Good condition, Tillering completed.

Cotton: Very Good condition, Emergence 60%.

2.3 RAMC, Tandojam (Lower Sindh)

Rainfall reported as 18.0 mm during the decade, weather remained cloudy for 8 day during the decade, average relative humidity recorded as 46%. Mean night temperature was 23.1°C while day temperature recorded as 37.2°C with 93.2 hours bright sunshine duration. Wind speed recorded as 2.1 km/hr with mean direction *north westerly*.

Cotton(BT-3701) Good condition, Germination stage

2.4 RAMC, Quetta (Northern Balochistan)

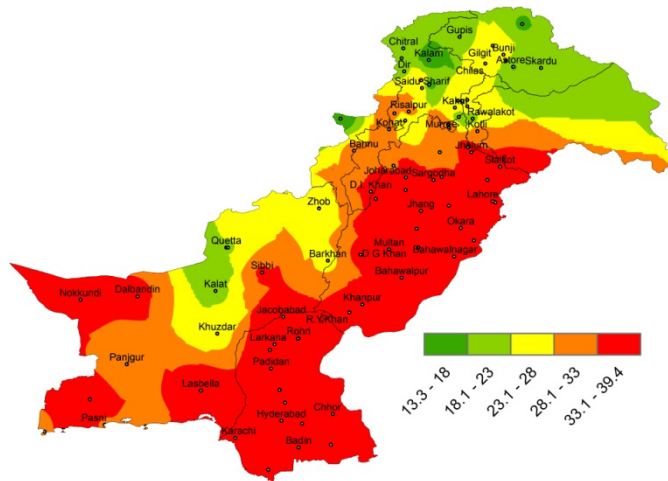
Rainfall reported as 12.8 mm during the decade, weather remained cloudy for 9 days, average relative humidity recorded as 48%. Mean night temperature was 12.2°C while day temperature recorded as 21.7°C with 76.5 hours bright sunshine duration and wind speed recorded as 6.9Km/hr with mean direction *southerly*.

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

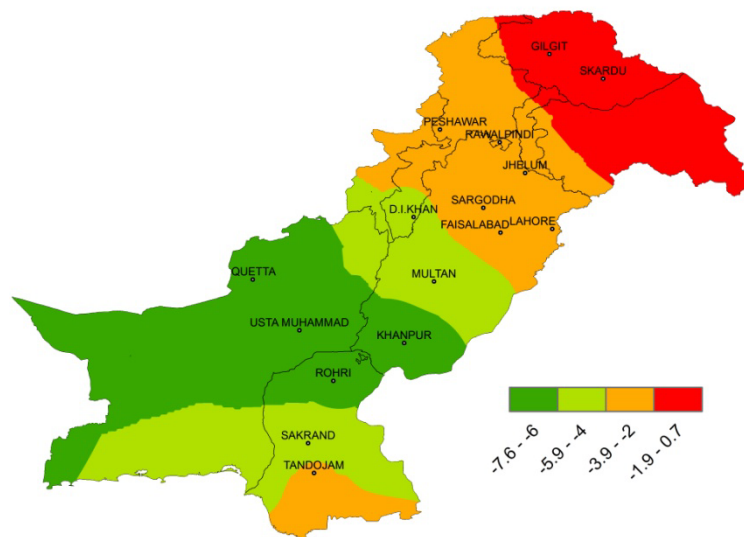
2.5 RAMC, Usta Muhammad (Eastern Balochistan)

No rainfall reported during the decade, weather remained cloudy for 8 days, average relative humidity recorded as 43%. Mean night temperature was 21.1°C while day temperature recorded as 35.6°C with wind speed recorded as 0.6 Km/hr with mean direction *easterly*.

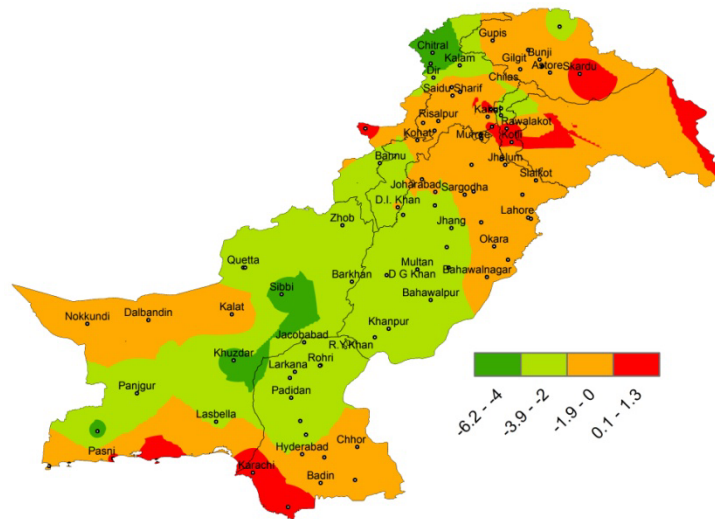
Wheat: Good condition, Wax maturity stage.



(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 (21st to 30th April, 2013):

2.6 Jhelum

Rainfall reported as Trace(non measureable) during the decade, weather remained cloudy for 10 days and average relative humidity recorded as 45%. Mean night temperature was 19.9°C while day temperature recorded as 34.2°C with 84.3 hours bright sunshine duration. Wind speed recorded 5.3 Km/hr with mean direction *north westerly*.

2.7 Lahore

Rainfall reported as 6.1 mm during the decade, weather remained cloudy for 10 days, average relative humidity recorded as 41%. Mean night temperature was 20.7°C while day temperature recorded as 34.3°C with 65.9 hours bright sunshine duration. Wind speed recorded as 4.0 Km/hr with mean direction *north westerly*.

2.8 Sargodha

Rainfall reported as 20.1 mm during the decade, weather remained cloudy for 10 days during the decade, average relative humidity recorded as 49%. Mean night temperature was 20.6°C while day temperature recorded as 35.5°C with 77.1 hours bright sunshine duration. Wind speed recorded as 2.1 Km/hr with mean direction *variable*.

2.9 Multan

Rainfall reported as 3.5 mm during the decade, weather remained cloudy for 10 days, average relative humidity recorded as 33%. Mean night temperature was 20.9°C while day temperature recorded as 33.8°C with 70.5 hours bright sunshine duration. Mean wind direction *northerly*

2.10 Khanpur

Rainfall reported as 8.0 mm during the decade, weather remained cloudy for 9 days during the decade, average relative humidity recorded as 45%. Mean night temperature was 20.2°C while day temperature recorded as 34.5°C with 71.0 hours bright sunshine duration. Wind speed recorded as 4.3 Km/hr with mean direction *north easterly*.

2.11 Rohri

No rainfall reported during the decade, weather remained cloudy for 10 days, average relative humidity recorded as 32%. Mean night temperature was 25.0°C while day temperature recorded as 39.2°C with 112.0 hours bright sunshine duration. Wind speed recorded as 6.0 Km/hr with mean direction *south westerly*.

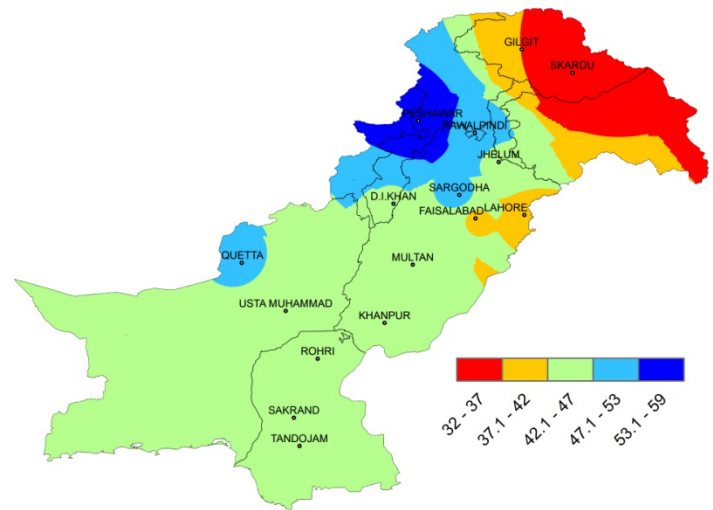


Figure.3: Relative Humidity in percentage

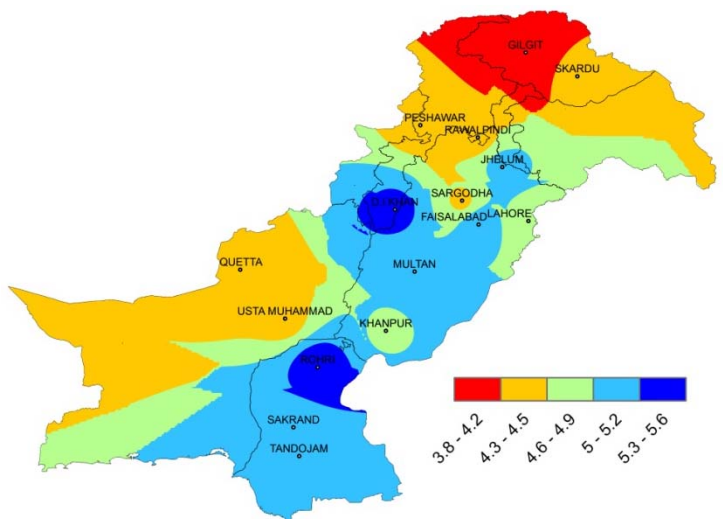


Figure.4: Reference Crop Evapotranspiration "ET₀" in mm/day

2.12 Sakrand

No rainfall reported during the decade, weather remained cloudy for 10 days during the decade, average relative humidity recorded as 44%. Mean night temperature was 20.9°C while day temperature recorded as 36.2°C with 89.0 hours bright sunshine duration. Wind speed recorded as 6.1 Km/hr with mean direction *north easterly*.

2.13 Peshawar

Rainfall reported as 65.2 mm during the decade, weather remained cloudy for 10 days, average relative humidity recorded as 59 %. Mean night temperature was 16.4°C while day temperature recorded as 30.1°C with 61.3 hours bright sunshine duration. Wind speed recorded as 2.6 Km/hr with mean direction *northerly*.

2.14 D.I. Khan

Rainfall reported as 1.0 mm during the decade weather remained cloudy for 8 days, average relative humidity recorded as 46%. Mean night temperature was 18.6°C while day temperature recorded as 33.2°C with 72.2 hours bright sunshine duration. Wind speed recorded as 8.0 Km/hr with mean direction *north westerly*.

2.15 Gilgit

Rainfall reported as 3.2 mm during the decade. weather remained cloudy for 10 days and average relative humidity recorded as 37%. Mean night temperature was 12.2°C while day temperature recorded as 26.0°C with 50.0 hours bright sunshine. Wind speed recorded as 4.4 Km/hr with mean direction *easterly*.

2.16 Skardu

Rainfall reported as Trace (non measureable) during the decade, weather remained cloudy for 8 days, average relative humidity recorded as 32%. Mean night temperature was 8.8°C while day temperature recorded as 21.6°C with 46.4 hours bright sunshine duration with mean speed 9.2 Km/hr and mean direction *variable*.

3. Ten days Weather advisory for Farmers (1st to 10th May, 2013)

3.1 Temperature Forecast:

Day temperatures likely to raise 3-5°C in most of the agricultural plains 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 on 5th / 6th May.
- ❖ **Khyber Pakhtoonkhawa:** 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 on 5th / 6th May.
- ❖ **Sindh :** Mainly hot/dry weather is expected in most parts of the province during the decade.
- ❖ **Balochistan:** Mainly 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:

- ❖ 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.
- ❖ During the rainy days, stop the harvested crop and safe the crop and fodder to avoid any loss.
- ❖ Farmers of lower half of the country are advised to prepare the fields for the coming Kharif crops in time.
- ❖ Farmers of lower half including Southern Punjab, Sindh and Balochistan should early complete sowing of cotton, so that to fully utilize present soil moisture.