

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light to moderate rainfall reported from agricultural plains of the country during the last decade.
- ❖ Highest maximum temperature recorded 44.0°C at Shaheed Benzairabad during the last decade.
- ❖ Highest amount of rainfall recorded as 94.0mm at Lahore & Lower Dir during the last decade.
- ❖ Lower values of relative humidity reported from Lower Sindh & Rohri regions while higher values reported from Punjab & KP during the last decade.
- ❖ Lower values of ETo reported from Gilgit-Baltistan regions while higher values reported from Lower Punjab, Sindh & Balochistan during the last decade.
- ❖ Temperatures are likely to be normal/slightly above normal in most of the agricultural plains of the country during the decade.
- ❖ Wind conditions likely to prevail in most of the agricultural plains of the country in the afternoon with dust raising winds in the lower half of the country during the decade.
- ❖ Mainly dry weather is expected during the decade. However light to moderate rainfall with isolated heavy rainfall over the hills is expected during the decade.

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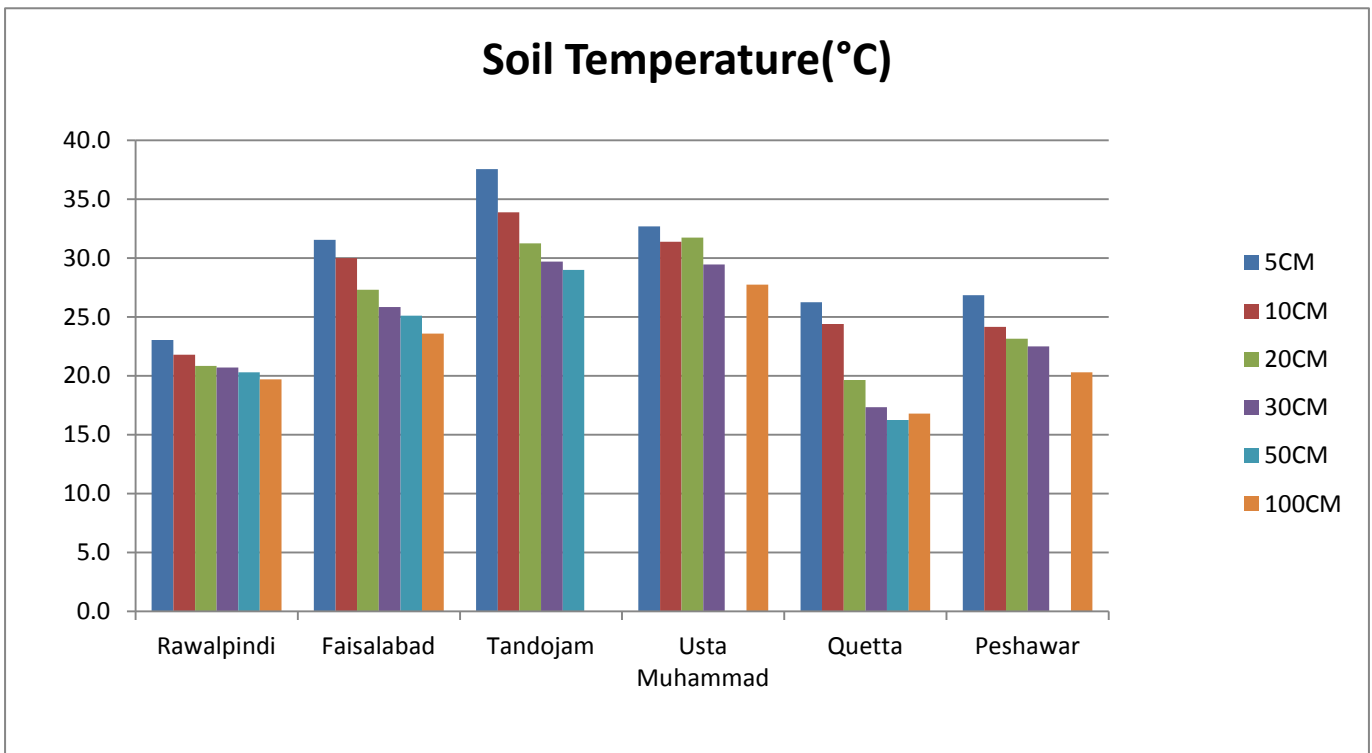
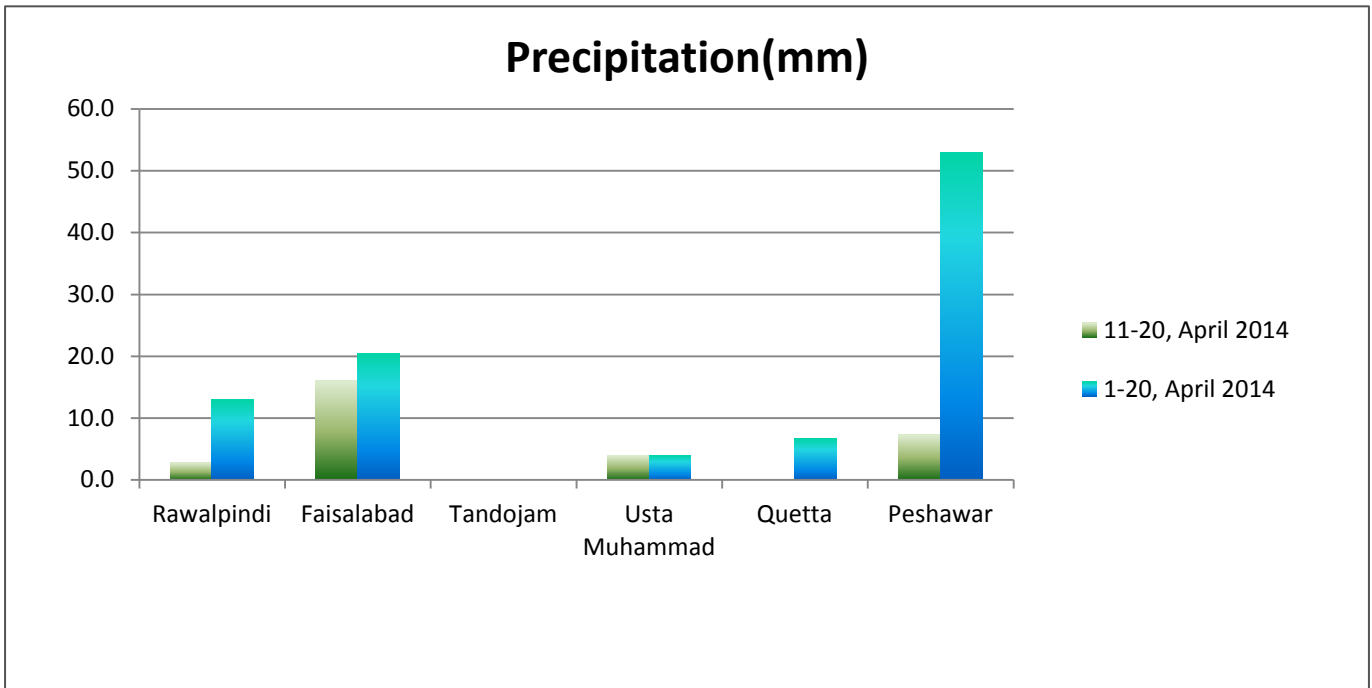
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Meteorological conditions during 2nd Decade of April, 2014

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	Tmax	Mean	5cm	10cm	20cm	30cm	50cm	100cm				
1	RAWALPINDI	0.6	2.8	2.2	-2.2	-3.9	21.0	23.1	21.8	20.9	20.7	20.3	19.7	61.0	1.2	51	3.2
2	FAISALABAD	0.4	16.0	15.6	-1.1	-4.2	25.2	31.6	30.0	27.3	25.9	25.1	23.6	90.8	3.7	48	4.8
3	JHELUM	0.8	49.4	48.6	-0.5	-5.0	24.3	26.8	25.3	23.6	22.3	22.5	***	69.5	3.2	56	4.1
4	LAHORE	0.2	52.1	51.9	-5.7	-4.4	23.6	29.5	28.2	25.4	23.9	***	22.2	80.1	4.6	53	4.6
5	SARGODHA	0.5	27.0	26.5	-2.0	-5.7	24.4	29.5	27.5	25.1	24.8	24.8	23.5	74.9	1.9	61	3.9
6	MULTAN	0.6	2.6	2.0	-0.9	-3.7	26.9	***	***	***	***	***	***	87.7	6.0	42	5.8
7	KHANPUR	0.0	4.0	4.0	-1.2	-3.1	28.3	***	29.4	28.9	28.9	28.9	26.8	92.8	6.3	43	6.1
8	TANDOJAM	0.0	0.0	0.0	0.7	-4.0	30.1	37.6	33.9	31.3	29.7	29.0	***	98.8	3.0	46	5.5
9	SAKRAND ☆	0.0	9.0	9.0	-1.3	-1.2	29.1	43.1	37.2	***	***	31.1	28.7	105.5	5.2	43	6.3
10	ROHRI	0.0	1.0	1.0	0.6	-2.4	31.1	41.4	37.1	31.0	29.6	26.9	27.1	106.0	6.8	35	7.1
11	D I KHAN	0.8	19.6	18.8	-2.4	-4.1	23.9	***	***	***	***	***	***	87.6	***	55	5.2
12	PESHAWAR	2.6	7.3	4.7	-2.7	-2.8	22.1	26.9	24.2	23.2	22.5	***	20.3	67.3	1.4	55	3.4
13	USTA MUHAMMAD	0.0	4.0	4.0	0.9	-1.1	30.0	32.7	31.4	31.8	29.5	***	27.8	***	***	42	6.9
14	QUETTA	0.4	0.1	-0.3	1.4	-1.2	18.4	26.3	24.4	19.7	17.4	16.3	16.8	94.4	6.8	30	5.2
15	SKARDU	0.8	0.1	-0.7	-2.2	-3.9	10.1	***	***	***	***	***	***	29.6	6.0	41	3.0
16	GILGIT	0.6	1.4	0.8	-1.6	-5.7	13.6	***	***	***	***	***	***	38.8	3.8	46	3.2

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; **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. * stands for (rainfall + snowfall)

Graphs of RAMC's during April, 2014



Past Weather (11th to 20th April, 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 Lahore, Jhelum & Chakwal. Decadal minimum & maximum temperature both dropped below normal by 1.9°C & 4.3°C respectively, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity & ETo were recorded as 79.5hrs, 3.8km/hr, 51% and 4.6mm/day respectively.

1.2 Sindh

Light rainfall reported in the agricultural plains of Sindh. Chief amount of rainfall received in Nawabshah & Rohri. Decadal minimum remains normal. However maximum temperature dropped below normal by 2.5°C, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity & ETo were recorded as 103.4hrs, 5.0km/hr, 41% and 6.3mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

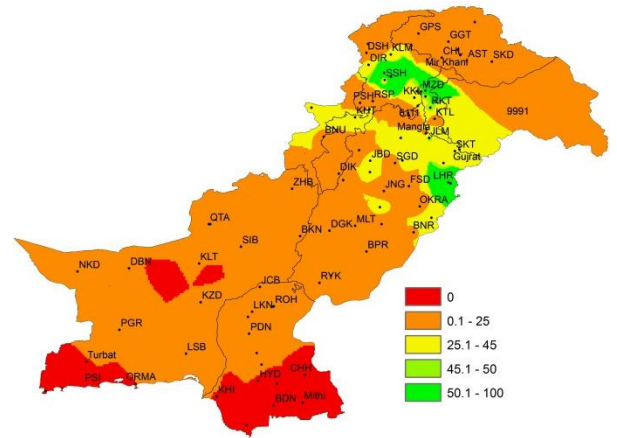
Light to moderate rainfall reported in the agricultural plains of KP. Chief amount of rainfall reported in Lower Dir, Parachinar & Balakot. Decadal minimum & maximum temperature both dropped below normal by 2.6°C & 3.5°C respectively, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity & ETo were recorded as 77.5hrs, 1.4km/hr, 55% and 4.3mm/day respectively.

1.4 Balochistan

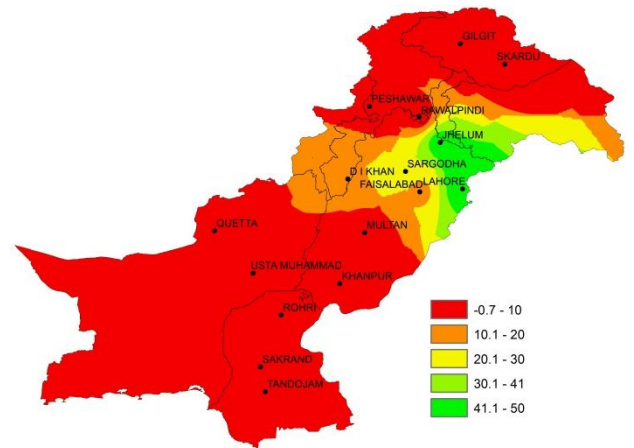
Light to moderate rainfall reported in the agricultural plains of Balochistan. Chief amount of rainfall received in Zhob, Barkhan & Nokkundi. Decadal minimum raised above normal by 1.2°C & maximum temperature dropped below normal by 1.2°C, in the province, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity & ETo were 94.4hrs, 6.8km/hr, 36% and 6.1mm/day respectively.

1.5 Gilgit-Baltistan and Azad Jammu & Kashmir

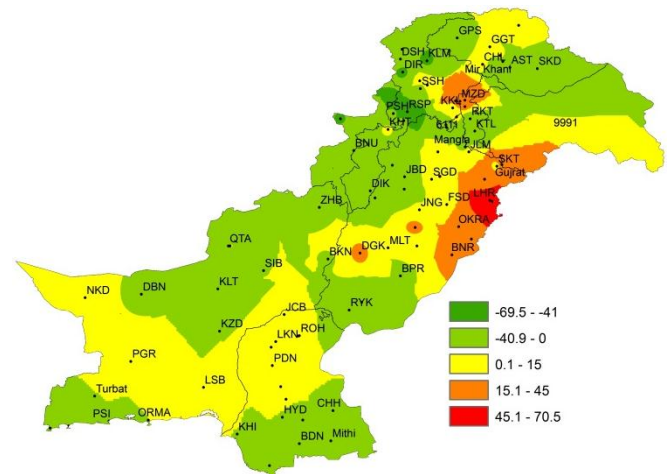
Light to moderate rainfall reported in the agricultural plains of GB & Kashmir. Chief amount of rainfall reported in Rawalakot, Muzaffarabad & Garhi Dopatta. Decadal minimum & maximum temperature both dropped below normal by 1.9°C & 4.8°C respectively, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity and ETo were recorded 34.2hrs, 4.9km/hr, 44% and 3.1mm/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
(11th to 20th April, 2014)**

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

Rainfall reported as 2.8mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 51%. Mean night temperature was 14.0°C while day temperature recorded as 28.0°C with 61.0hours bright sunshine duration. Wind speed recorded as 1.23km/h with mean wind direction *westerly*.

Wheat (Chakwal 97): Good condition, shooting stage.

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

Rainfall reported as 16.0mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 48%. Mean night temperature was 18.4°C while day temperature recorded as 32.0°C with 90.75hours bright sunshine duration. Wind speed recorded as 3.7km/hr with mean wind direction *north easterly*.

Wheat: Very Good condition, Full Maturity stage.

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

Dry weather reported during the decade however weather remained cloudy for 01day. Average relative humidity recorded as 46%. Mean night temperature was 21.7°C while day temperature recorded as 38.5°C with 98.8hours bright sunshine duration. Wind speed recorded as 3.0km/hr with mean wind direction *southerly*.

Wheat (TD-1): Good condition, harvesting stage.

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

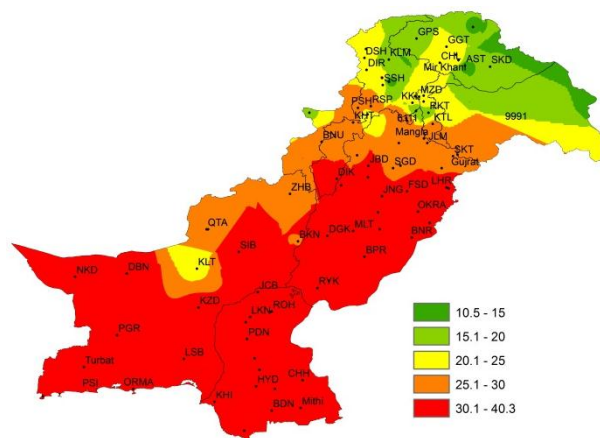
Rainfall reported as 4.0mm during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 42%. Mean night temperature was 21.8°C, while day temperature recorded as 38.2°C.

Wheat (Zardana): Good condition, harvesting stage.

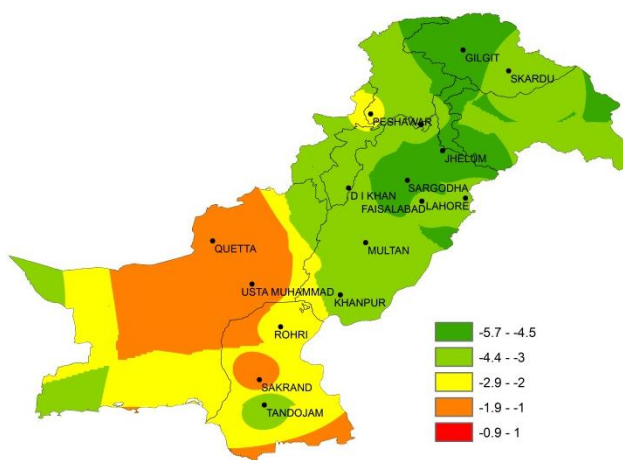
2.5 **RAMC, Quetta (Northern Balochistan)**

Rainfall reported as Trace (not measureable) during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 30%. Mean night temperature was 11.9°C while day temperature recorded as 24.8°C with 94.4hours bright sunshine duration and wind speed recorded as 6.8km/hr with mean wind direction *westerly*.

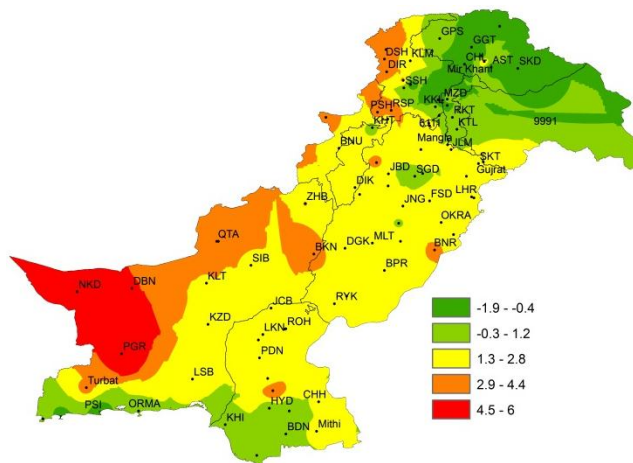
Wheat (Local White): Good condition, Shooting Stage.



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 (11th to 20th April, 2014)**

2.6 **Jhelum**

Rainfall reported as 49.4mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 56%. Mean night temperature was 18.6°C while day temperature recorded as 29.9°C with 69.5hours bright sunshine duration. Wind speed recorded 3.2km/hr with mean wind direction *south easterly*.

2.7 **Lahore**

Rainfall reported as 52.1mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 53%. Mean night temperature was 16.4°C while day temperature recorded as 30.8°C with 80.1hours bright sunshine duration. Wind speed recorded as 4.6km/hr with mean wind direction *north westerly*.

2.8 **Sargodha**

Rainfall reported as 27.0mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 61%. Mean night temperature was 18.5°C while day temperature recorded as 30.3°C with 74.9hours bright sunshine duration. Wind speed recorded as 1.9km/hr with mean wind direction *variable*.

2.9 **Multan**

Rainfall reported as 2.6mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 42%. Mean night temperature was 20.0°C while day temperature recorded as 33.7°C with 87.7hours bright sunshine duration. Wind speed recorded as 6.0km/hr with mean wind direction *north easterly*.

2.10 **Khanpur**

Rainfall reported as 4.0mm during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 43%. Mean night temperature was 20.3°C while day temperature recorded as 36.2°C with 92.8hours bright sunshine duration. Wind speed recorded as 6.3km/hr with mean wind direction *north easterly*.

2.11 **Sakrand**

Rainfall reported as 9.0mm during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 43%. Mean night temperature was 19.3°C while day temperature recorded as 38.8°C with 105.5hours bright sunshine duration. Wind speed recorded 5.18km/hr with mean wind direction *north easterly*.

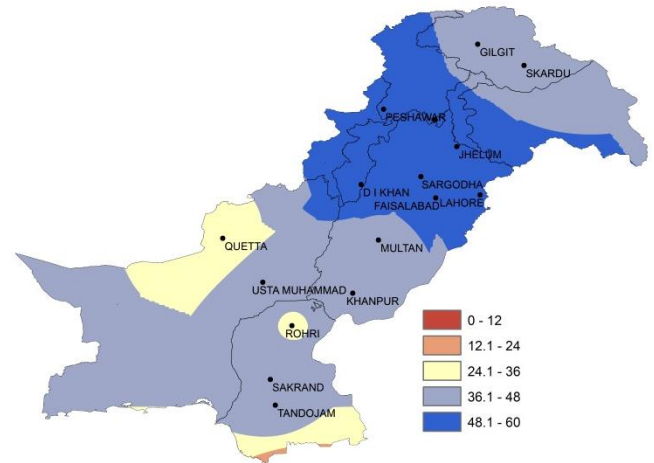


Figure.3: Relative Humidity in percentage (%)

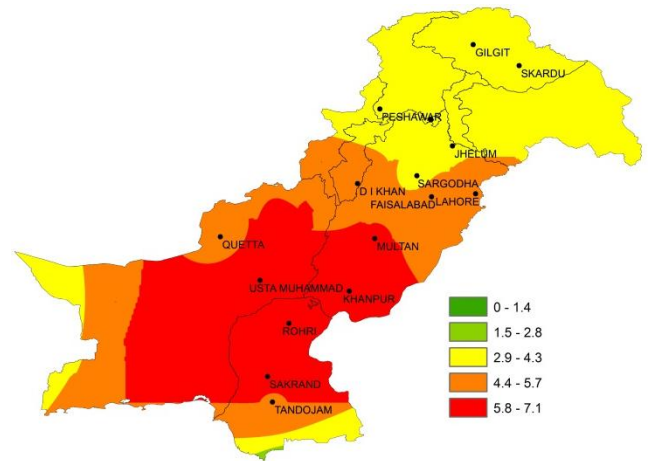


Figure.4: Reference Crop Evapotranspiration “ETo” in mm/day

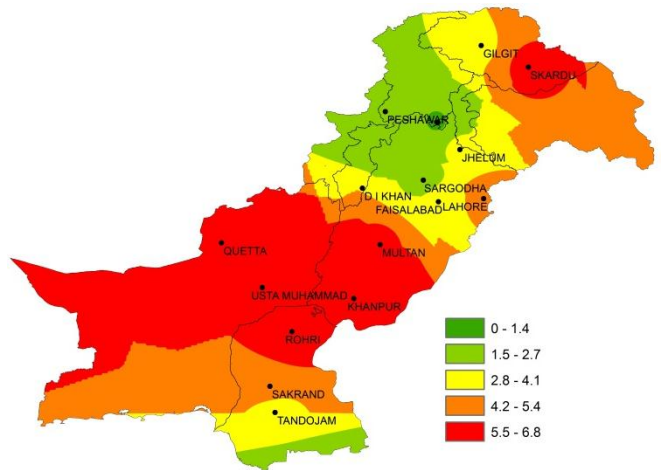


Figure 5: Wind Speed in kilometer per hour (km/h)

2.12 Rohri

Rainfall reported as 1.0mm during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 35%. Mean night temperature was 24.6°C while day temperature recorded as 37.6°C with 106.0hours bright sunshine duration. Wind speed recorded as 6.8km/hr with mean wind direction *north easterly*.

2.13 D.I. Khan

Rainfall reported as 19.6mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 55%. Mean night temperature was 16.9°C while day temperature recorded as 30.8°C with 87.6hours bright sunshine duration.

2.14 Peshawar

Rainfall reported as 7.3mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 55%. Mean night temperature was 15.4°C while day temperature recorded as 28.7°C with 67.3hours bright sunshine duration. Wind speed recorded as 1.4km/hr with mean wind direction *north westerly*.

2.15 Skardu

Rainfall reported as Trace (not measureable) during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 41%. Mean night temperature was 4.2°C while day temperature recorded as 15.9°C with 29.6hours bright sunshine duration. Wind speed recorded as 6.0km/hr with mean wind direction *north westerly*.

2.16 Gilgit

Rainfall reported as 1.4mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 46%. Mean night temperature was 8.0°C while day temperature recorded as 19.2°C with 38.8bright sunshine duration. Wind speed recorded as 3.8km/hr with mean wind direction *variable*.

**3. Ten Days Weather Advisory for Farmers
(21st to 30th April, 2014)****3.1 Temperature Forecast**

Temperatures are likely to be normal/slightly above normal in most of the agricultural plains of the country during the decade.

3.2 Wind Forecast

Wind conditions likely to prevail in most of the agricultural plains of the country in the afternoon with dust raising winds in the lower half of the country during the decade.

3.3 Rain Forecast

- ❖ **Punjab:** Mainly dry weather is expected during the decade. However light to moderate rainfall is expected mostly over upper & central parts are expected during the decade.
- ❖ **Khyber Pakhtunkhwa:** Light to moderate rainfall over the hills is expected mostly over upper hilly areas and central parts during the decade.
- ❖ **Sindh:** Mainly dry weather is expected in the province however light rainfall expected at isolated places during the decade.
- ❖ **Balochistan:** Mainly dry weather is expected during the decade. However light to moderate rainfall is expected in North West Baluchistan during the decade.
- ❖ **Gilgit-Baltistan:** Light to moderate with isolated heavy rainfall over hills is expected in most parts of GB during the decade.
- ❖ **Kashmir:** Light to moderate/ heavy rainfall over hills is expected in most parts of Kashmir during the decade.

3.4 Advisory for Farmers

- ❖ Harvesting has started in agricultural plains of the country; farmers are advised to start/continue harvesting as per weather forecast.
- ❖ Farmers are advised to ensure field sanitation and spray prophylactic fungicidal & viral sprays to prevent spread of diseases on standing crops.
- ❖ Farmers of southern Punjab & Sindh are advised to prepare land for cotton in time so that best grains conditions may be fully utilized during the whole crop life.