

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 46.2°C at Shaheed Benzairabad during the last decade.
- ❖ Highest amount of rainfall recorded as 45.0mm at Parachinar during the last decade.
- ❖ Lower values of relative humidity reported from Gilgit, skardu region, Multan & Rohri regions while higher values reported from Peshawar region 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.
- ❖ Dust storm/ gusty wind conditions likely to prevail in the lower half of the country during the decade.
- ❖ Light to moderate rainfall with isolated heavy rainfall over the hills is expected during the decade. Light rainfall is expected at isolated places of lower parts of country during the decade.

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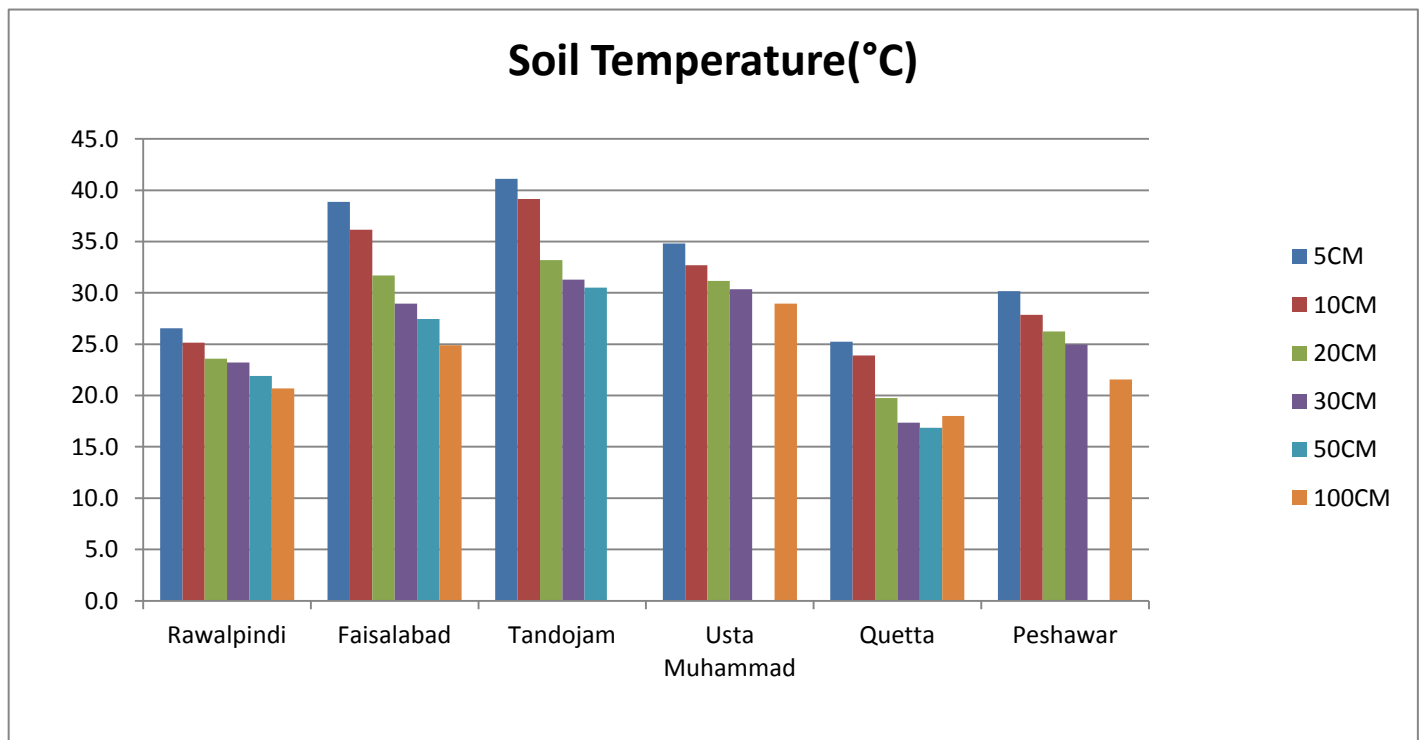
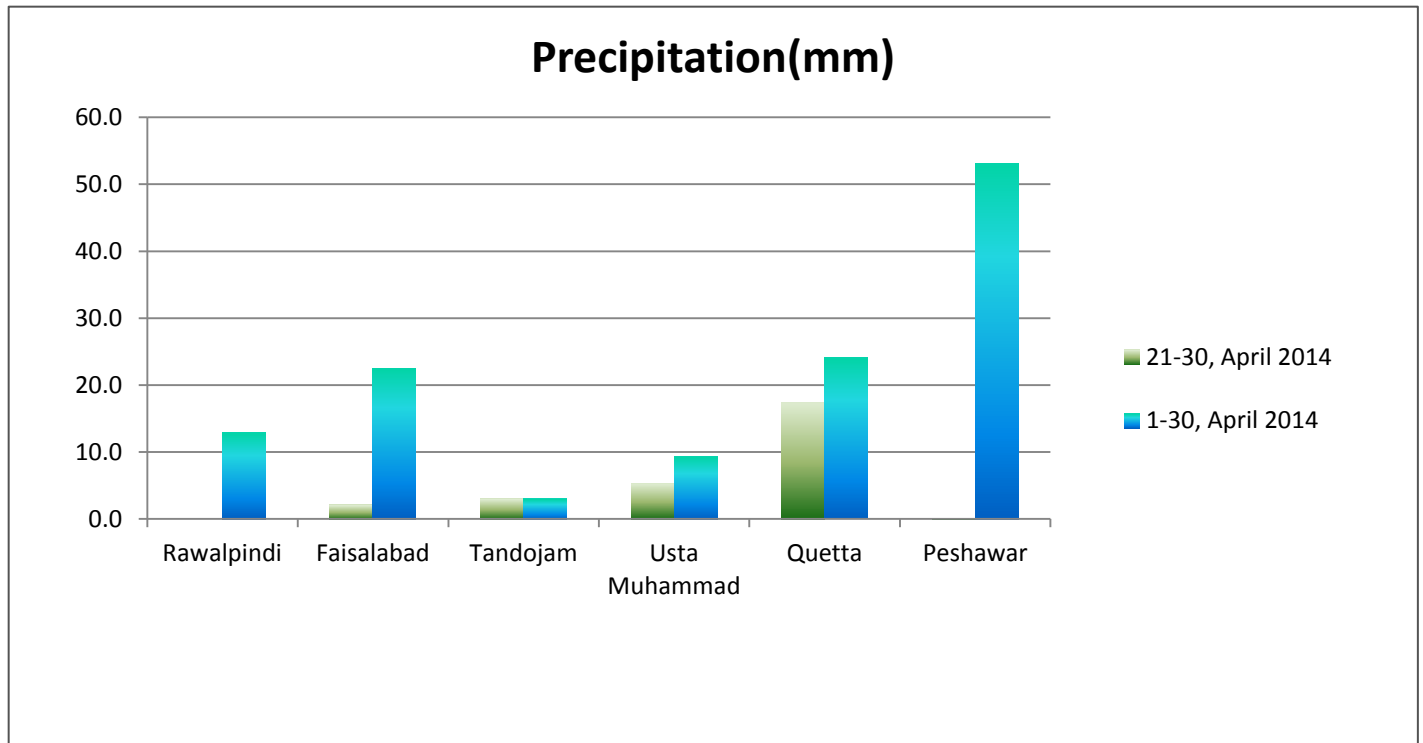
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Meteorological conditions during 3rd Decade of April, 2014

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 Dep	Tmax Dep	Mean	5cm	10cm	20cm	30cm	50cm	100cm				
1	RAWALPINDI	1.9	0.0	-1.9	-1.3	0.3	25.2	26.6	25.2	23.6	23.2	21.9	20.7	95.1	1.0	43	4.3
2	FAISALABAD	0.5	2.1	1.6	-1.4	-0.1	29.2	38.9	36.2	31.7	29.0	27.5	24.9	100.0	2.0	34	5.1
3	JHELUM	1.0	0.0	-1.0	-2.2	-1.1	27.3	31.9	29.6	26.6	24.6	24.6	***	99.5	2.5	39	5.0
4	LAHORE	0.3	1.0	0.7	-3.1	-0.1	29.0	29.5	28.2	25.4	23.9	***	22.2	99.4	3.4	38	5.5
5	SARGODHA	0.7	0.4	-0.3	-0.9	-0.9	29.3	34.1	30.9	27.7	26.5	25.9	24.2	78.8	0.2	47	4.0
6	MULTAN	0.2	4.9	4.7	-1.1	-1.6	30.1	***	***	***	***	***	***	96.6	5.4	33	6.5
7	KHANPUR	0.1	31.0	30.9	-1.1	-11.8	25.8	***	32.1	31.3	31.6	31.2	29.2	104.1	4.0	37	5.3
8	TANDOJAM	0.1	3.0	2.9	0.8	-0.1	31.7	41.1	39.2	33.2	31.3	30.5	***	102.0	2.7	41	5.7
9	SAKRAND ☆	0.0	0.1	0.1	-0.9	-1.5	30.9	43.9	38.9	***	***	***	29.6	116.5	3.6	37	6.4
10	ROHRI	0.0	4.0	4.0	-0.6	-1.6	33.0	42.9	40.6	33.7	32.0	28.9	29.0	109.0	4.0	32	6.4
11	D I KHAN	0.3	2.5	2.2	-2.0	-0.5	28.2	***	***	***	***	***	***	98.6	***	49	6.6
12	PESHAWAR	1.0	0.1	-0.9	-2.0	0.7	26.1	30.2	27.9	26.3	25.0	***	21.6	77.9	1.8	63	4.3
13	USTA MUHAMMAD	0.2	5.3	5.1	-1.1	-3.2	30.8	34.8	32.7	31.2	30.4	***	29.0	***	***	48	7.4
14	QUETTA	0.3	17.4	17.1	-0.2	-2.5	19.0	25.3	23.9	19.8	17.4	16.9	18.0	99.3	5.1	41	5.0
15	SKARDU	0.7	0.0	-0.7	-0.1	2.0	15.1	***	***	***	***	***	***	76.4	3.8	27	4.1
16	GILGIT	0.7	0.1	-0.6	1.5	0.7	19.8	***	***	***	***	***	***	70.9	3.1	38	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; $\text{Dep} \div \text{Normal} \times 100$. 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. * stands for (rainfall + snowfall)

Graphs of RAMC's during April, 2014



Past Weather (21st to 30th 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 Khanpur, Joharabad & D.G Khan. Decadal minimum & maximum temperature both dropped below normal by 1.6°C & 2.2°C respectively, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity & ETo were recorded as 96.2hrs, 2.6km/hr, 39% and 5.1mm/day respectively.

1.2 Sindh

Light rainfall reported in the agricultural plains of Sindh. Chief amount of rainfall received in Chhor, Badin & Rohri. Decadal minimum & maximum temperature both dropped below normal by 0.2°C & 1.1°C respectively, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity & ETo were recorded as 109.2hrs, 3.4km/hr, 37% and 6.2mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

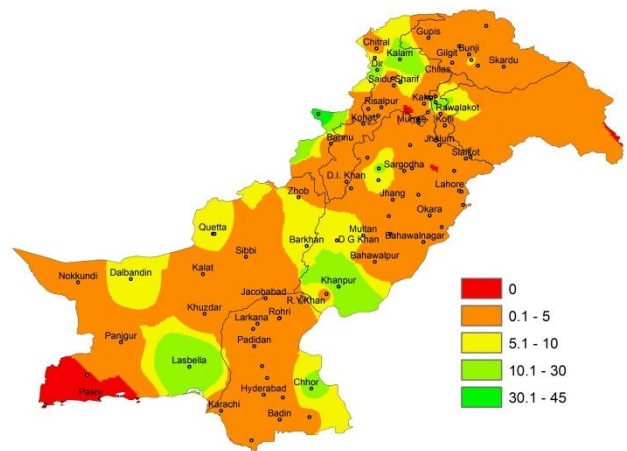
Light to moderate rainfall reported in the agricultural plains of KP. Chief amount of rainfall reported in Parachinar, Kalam & Malam Jabba. Decadal minimum dropped below normal by 2.0°C & maximum temperature raised above normal by 0.1°C, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity & ETo were recorded as 88.3hrs, 1.8km/hr, 56% and 5.5mm/day respectively.

1.4 Balochistan

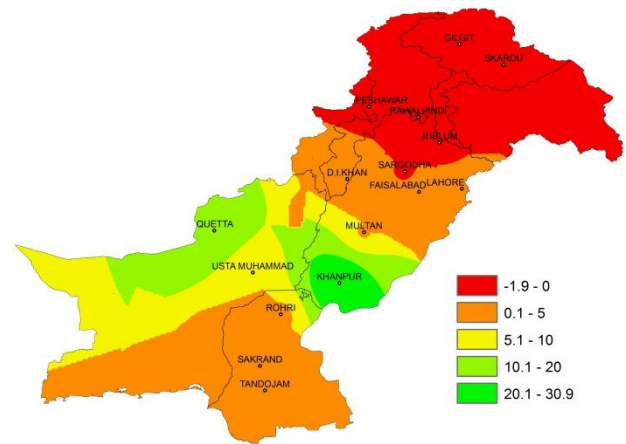
Light rainfall reported in the agricultural plains of Balochistan. Chief amount of rainfall received in Lasbella, Dalbandin & Quetta. Decadal minimum & maximum temperature both dropped below normal by 0.7°C & 2.9°C respectively, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity & ETo were 99.3hrs, 5.1km/hr, 45% and 6.2mm/day respectively.

1.5 Gilgit-Baltistan and Azad Jammu & Kashmir

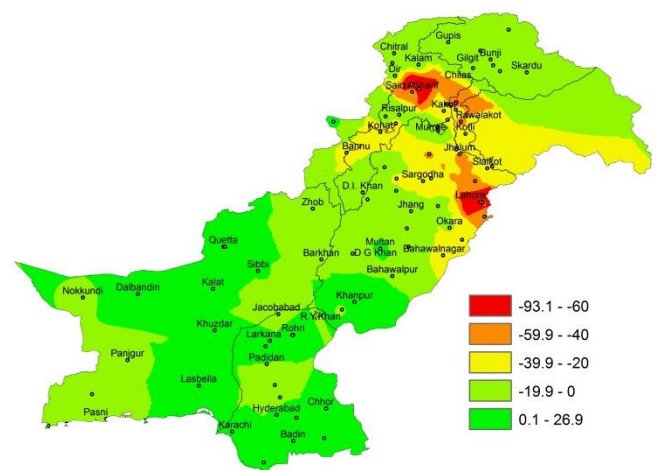
Light to moderate rainfall reported in the agricultural plains of GB & Kashmir. Chief amount of rainfall reported in, Garhi Dopatta, Astore & Rawalakot. Decadal minimum & maximum temperature both raised above normal by 0.7°C & 1.4°C respectively, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity and ETo were recorded 73.7hrs, 3.5km/hr, 33% and 4.3mm/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 (21st to 30th April, 2014)**

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

Dry weather reported during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 43%. Mean night temperature was 16.4°C while day temperature recorded as 33.9°C with 95.1hours bright sunshine duration. Wind speed recorded as 1.0km/h with mean wind direction *westerly*.

Wheat (Chakwal 97): Good condition, Milk maturity stage.

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

Rainfall reported as 2.1mm during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 34%. Mean night temperature was 20.2°C while day temperature recorded as 38.1°C with 100.0hours bright sunshine duration. Wind speed recorded as 2.0km/hr with mean wind direction *north westerly*.

Cotton: Very Good condition, emergence stage.

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

Rainfall reported as 3.0mm during the decade however weather remained cloudy for 01day. Average relative humidity recorded as 41%. Mean night temperature was 22.0°C while day temperature recorded as 40.5°C with 102.0hours bright sunshine duration. Wind speed recorded as 2.7km/hr with mean wind direction *north westerly*.

Note: No crop in the field.

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

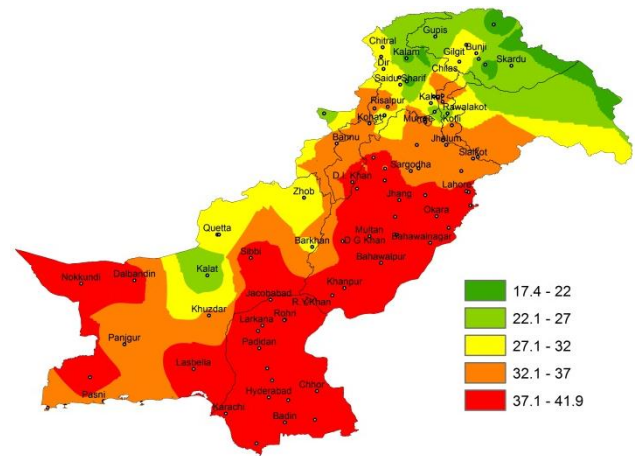
Rainfall reported as 5.3mm during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 48%. Mean night temperature was 21.5°C, while day temperature recorded as 40.0°C.

Note: No crop in the field.

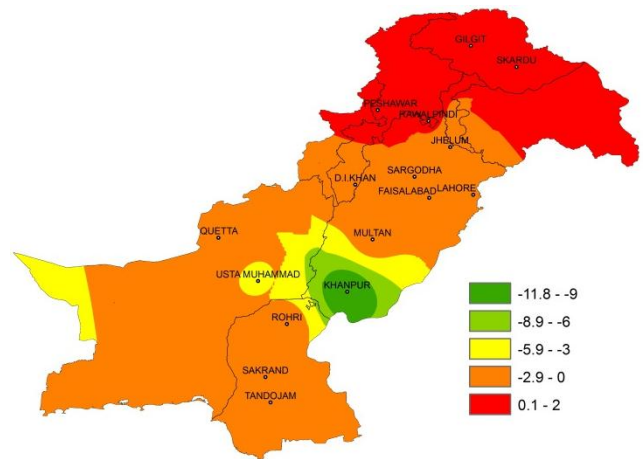
2.5 **RAMC, Quetta (Northern Balochistan)**

Rainfall reported as 17.4mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 41%. Mean night temperature was 11.7°C while day temperature recorded as 26.3°C with 99.3hours bright sunshine duration and wind speed recorded as 5.1km/hr with mean wind direction *westerly*.

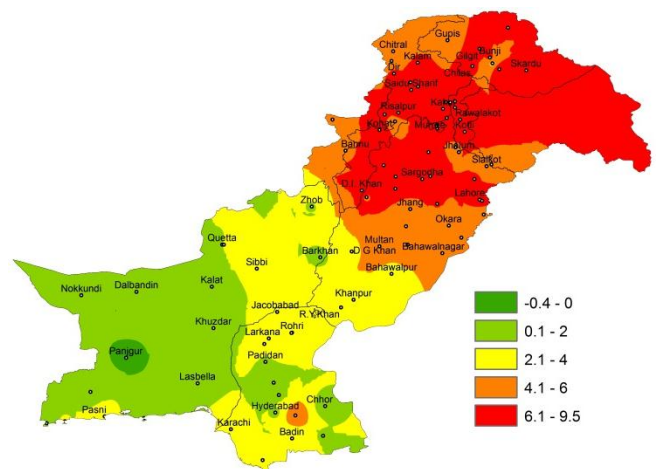
Wheat (Local White): Good condition, flowering Stage.



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 (21st to 30th April, 2014)**

2.6 **Jhelum**

Dry weather reported during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 39%. Mean night temperature was 18.7°C while day temperature recorded as 35.9°C with 69.5hours bright sunshine duration. Wind speed recorded 2.5km/hr with mean wind direction *westerly*.

2.7 **Lahore**

Rainfall reported as 1.0mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 38%. Mean night temperature was 21.0°C while day temperature recorded as 37.0°C with 99.4hours bright sunshine duration. Wind speed recorded as 3.4km/hr with mean wind direction *south westerly*.

2.8 **Sargodha**

Rainfall reported as 0.4mm during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 47%. Mean night temperature was 21.4°C while day temperature recorded as 37.2°C with 78.8hours bright sunshine duration. Wind speed recorded as 0.23km/hr with mean wind direction *variable*.

2.9 **Multan**

Rainfall reported as 4.9mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 33%. Mean night temperature was 22.2°C while day temperature recorded as 37.9°C with 96.6hours bright sunshine duration. Wind speed recorded as 5.4km/hr with mean wind direction *south westerly*.

2.10 **Khanpur**

Rainfall reported as 31.0mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 37%. Mean night temperature was 22.0°C while day temperature recorded as 39.5°C with 104.1hours bright sunshine duration. Wind speed recorded as 4.0km/hr with mean wind direction *north easterly*.

2.11 **Sakrand**

Rainfall reported as Trace (not measurable) during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 37%. Mean night temperature was 21.5°C while day temperature recorded as 40.3°C with 116.5hours bright sunshine duration. Wind speed recorded 3.6km/hr with mean wind direction *easterly*.

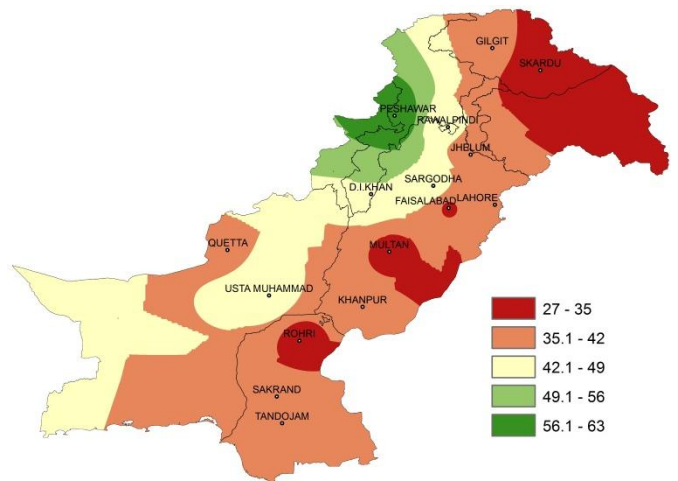


Figure.3: Relative Humidity in percentage (%)

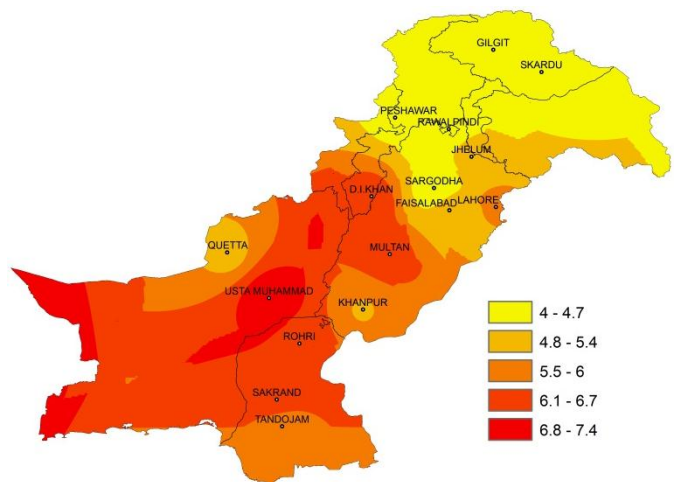


Figure.4: Reference Crop Evapotranspiration "ETo" in mm/day

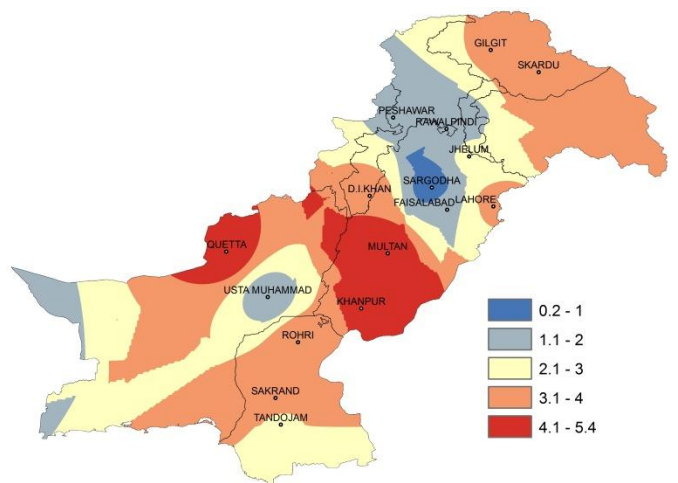


Figure 5: Wind Speed in kilometer per hour (km/h)

2.12 Rohri

Rainfall reported as 4.0mm during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 32%. Mean night temperature was 25.5°C while day temperature recorded as 40.4°C with 109.0hours bright sunshine duration. Wind speed recorded as 4.0km/hr with mean wind direction *north easterly*.

2.13 D.I. Khan

Rainfall reported as 2.5mm during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 49%. Mean night temperature was 19.3°C while day temperature recorded as 37.0°C with 98.6hours bright sunshine duration.

2.14 Peshawar

Rainfall reported as Trace (not measurable) during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 63%. Mean night temperature was 17.8°C while day temperature recorded as 34.4°C with 77.9hours bright sunshine duration. Wind speed recorded as 1.8km/hr with mean wind direction *north westerly*.

2.15 Skardu

Dry weather reported during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 27%. Mean night temperature was 7.3°C while day temperature recorded as 22.9°C with 76.4hours bright sunshine duration. Wind speed recorded as 3.8km/hr with mean wind direction *north west westerly*.

2.16 Gilgit

Rainfall reported as Trace (not measurable) during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 38%. Mean night temperature was 11.1°C while day temperature recorded as 28.5°C with 70.9bright sunshine duration. Wind speed recorded as 3.1km/hr with mean wind direction *variable*.

**3. Ten Days Weather Advisory for Farmers
(1st to 10th May, 2014)****3.1 Temperature Forecast**

Temperatures are likely to be above normal (1-3°C) in the agricultural plains of the country during the decade.

3.2 Wind Forecast

Dust storm/ gusty wind conditions likely to prevail 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

- ❖ Wheat crop is growing in wax to full maturity in the agricultural plains of KP & Balochistan. Whereas harvesting/ threshing of wheat crop has been completed in agricultural plains of Sindh & adjoining areas of southern Punjab. Farmers are therefore advised to harvest the full matured crop so that cultivation of the coming cotton crop may be possible in time.
- ❖ During the harvesting process, farmers are advised to be aware about the weather conditions & keep listening & watching carefully the weather advisories issued through radio & television.
- ❖ Due to rising day time temperature, cotton & sugarcane farmers should irrigate the crops as per requirement in Southern Punjab & Sindh.