

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light to moderate rainfall reported from agricultural plains of the Punjab, K.P, G.B & Kashmir, however light rainfall reported from Balochistan & dry weather reported from Sindh during the last decade.
- ❖ Highest amount of rainfall recorded as 119.3mm at Sialkot during the last decade.
- ❖ Highest maximum temperature recorded 50.5°C at Turbat during the last decade.
- ❖ Lower values of relative humidity reported from GB, Kashmir & Balochistan regions while higher values reported from Punjab, Lower parts of Sindh during the last decade.
- ❖ Lower values of ETo reported from Gilgit-Baltistan while higher values reported from Sindh & Balochistan during the last decade.
- ❖ Temperature is likely to be normal/slightly above normal in the agricultural plains of the country during the decade.
- ❖ Dust storm/ gusty wind conditions likely to prevail in the country during the decade.
- ❖ Due to expected onset of monsoon rains during the decade farmers are advised to take in time precautionary measures to protect their crops, livestock and other property from any expected heavy rain.
- ❖ Farmers of rainfed areas in upper parts are advised to cultivate maize crop due to recent rains. Farmers obtaining crop water through tube wells are also advised to schedule the irrigation according to the expected weather mentioned during the

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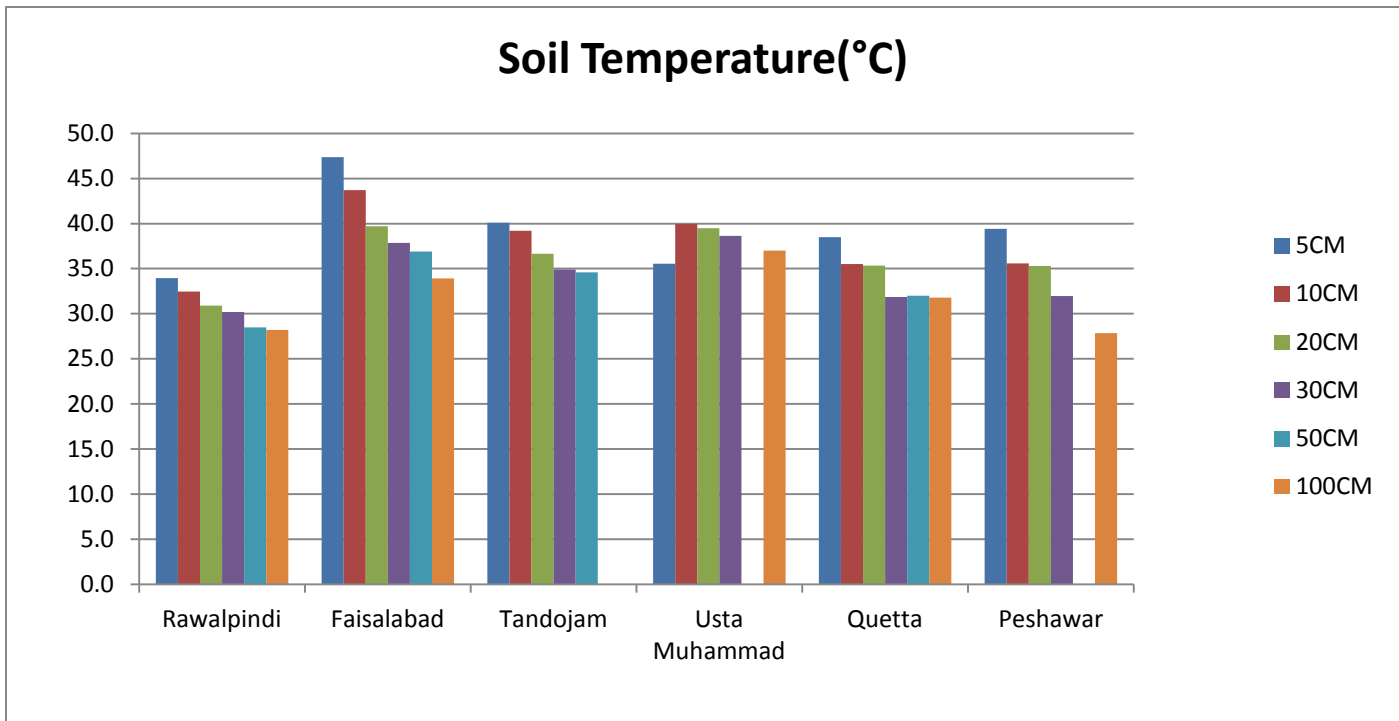
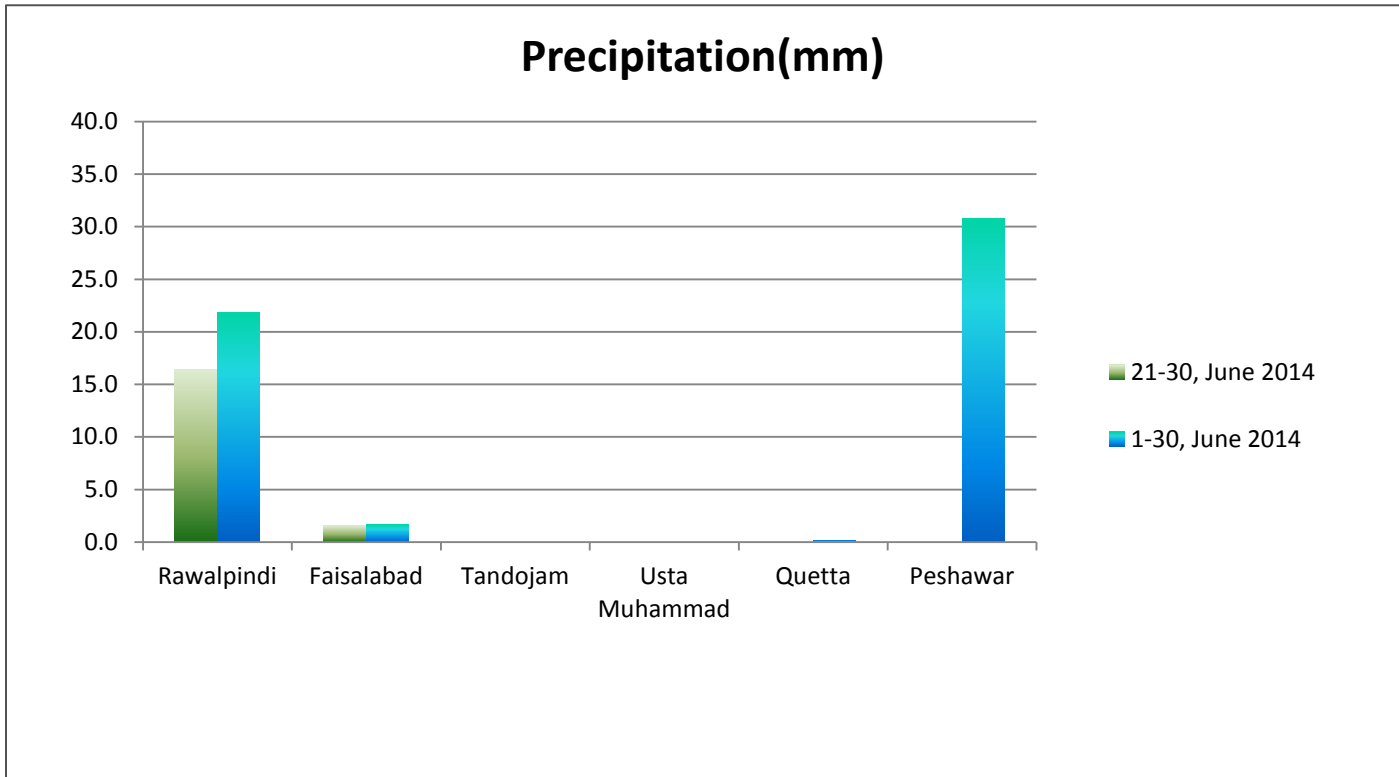
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Meteorological conditions during 3rd Decade of June, 2014

Sr. No.	Station	*Precipitation (mm)			Air Temperature (°C)			Soil Temperatures (°C)						R.H (%)	Sunshine Duration (hours)	Wind Speed (km/hr)	ETo (mm/day)
		Normal	Actual	Dep	Tmin Dep	Tmax Dep	Mean	5cm	10cm	20cm	30cm	50cm	100cm				
1	RAWALPINDI	5.4	16.4	11.0	-0.6	0.9	31.0	34.0	32.5	30.9	30.2	28.5	28.2	27	83.9	1.8	5.0
2	FAISALABAD	1.9	1.6	-0.3	0.8	0.2	33.5	47.4	43.7	39.7	37.9	36.9	33.9	48	84.3	6.3	6.7
3	JHELUM	4.2	49.2	45.0	-1.5	0.8	32.4	40.2	37.9	35.1	33.5	33.5	***	47	76.8	6.3	6.5
4	LAHORE	2.2	50.1	47.9	-3.8	0.5	31.2	36.5	35.9	33.1	31.7	***	29.9	55	73.4	4.0	5.5
5	SARGODHA	3.3	68.0	64.7	-0.6	0.0	33.8	38.6	36.4	34.3	33.9	33.9	32.1	50	89.6	3.8	6.7
6	MULTAN	1.0	0.1	-0.9	0.1	-1.1	35.0	***	***	***	***	***	***	48	79.2	1.5	5.2
7	KHANPUR	0.5	10.6	10.1	-0.5	-0.3	34.9	***	39.5	39.1	39.0	38.8	36.2	53	79.6	6.6	6.8
8	TANDOJAM	0.7	0.0	-0.7	1.1	0.9	33.6	40.1	39.2	36.7	34.9	34.6	***	65	93.0	9.8	7.1
9	SAKRAND ☆	1.7	0.0	-1.7	-1.6	3.8	34.9	48.0	43.6	***	***	***	36.2	48	109.8	12.4	9.8
10	ROHRI	0.0	0.0	0.0	1.0	2.8	22.8	51.1	47.0	39.8	38.2	36.1	34.6	41	108.0	5.2	5.8
11	D I KHAN	0.8	28.0	27.2	-1.0	0.3	32.9	***	***	***	***	***	***	52	84.8	***	7.0
12	PESHAWAR	1.3	0.0	-1.3	-1.2	1.9	33.7	39.4	35.6	35.3	32.0	***	27.9	43	96.0	3.6	6.4
13	USTA MUHAMMAD	1.8	0.0	-1.8	1.2	1.7	37.5	35.6	40.0	39.5	38.7	***	37.0	47	***	***	8.1
14	QUETTA	0.0	0.0	0.0	-1.0	-0.6	27.4	38.5	35.5	35.4	31.9	32.0	31.8	20	111.1	4.9	6.6
15	SKARDU	0.4	0.5	0.1	-1.1	0.0	21.9	***	***	***	***	***	***	28	81.2	5.6	5.8
16	GILGIT	0.7	0.1	-0.6	-0.1	2.9	26.5	***	***	***	***	***	***	35	94.3	2.8	5.7

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)

Precipitation at RAMC's during June, 2014



Past Weather (21st to 30th June, 2014)

Light to moderate rainfall reported from agricultural plains of the Punjab, K.P, G.B & Kashmir, however light rainfall reported from Balochistan & dry weather reported from Sindh during the last decade.

1.1 Punjab

Light to moderate rainfall reported in the agricultural plains of Punjab. Chief amount of rainfall received in Sialkot, Lahore & Mandi-Bahu-Din. Decadal minimum dropped below normal by 0.9°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 81.0hrs, 4.3km/hr, 47% and 6.1mm/day respectively.

1.2 Sindh

Dry weather reported during the decade. Decadal minimum raised above normal by 0.2°C & maximum temperature dropped below normal by 7.5°C, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity & ETo were recorded as 103.6hrs, 9.1km/hr, 51% and 7.6mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

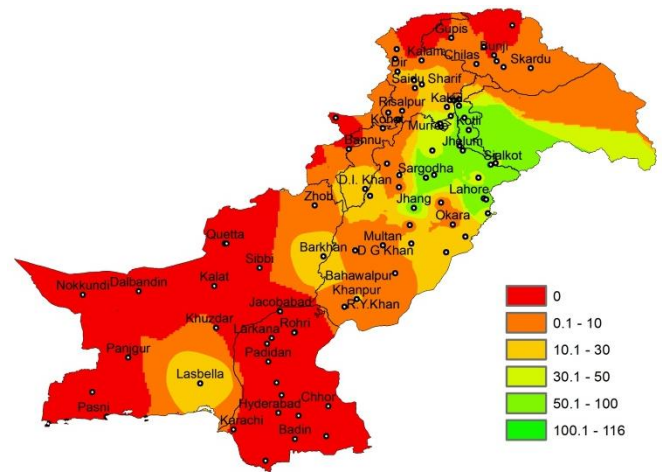
Light to moderate rainfall reported in the agricultural plains of KP. Chief amount of rainfall received in Malam Jabba, Dera Ismial Khan & Kakul. Decadal minimum dropped below normal by 1.1°C & maximum temperature raised above normal by 1.1°C, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity & ETo were recorded as 90.4hrs, 3.6km/hr, 48% and 6.7mm/day respectively.

1.4 Balochistan

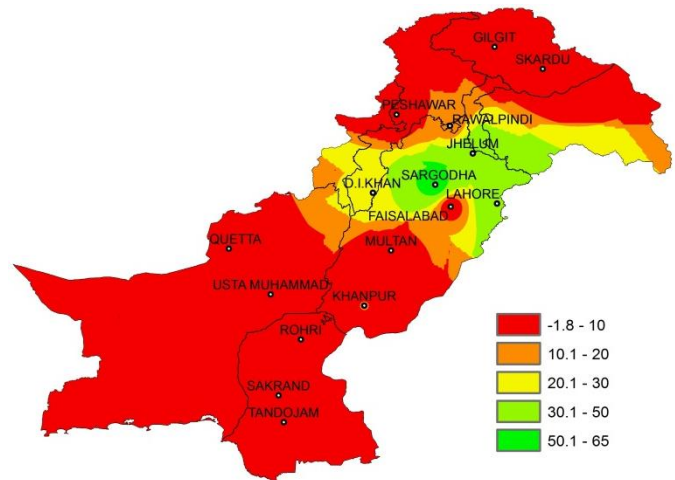
Light rainfall reported in the agricultural plains of Balochistan. Chief amount of rainfall received in Barkhan & Lasbellla. Decadal minimum & maximum temperature both raised above normal by 0.1°C & 0.6°C respectively, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity & ETo were 111.1hrs, 4.9km/hr, 34% and 7.4mm/day respectively.

1.5 Gilgit-Baltistan and Azad Jammu & Kashmir

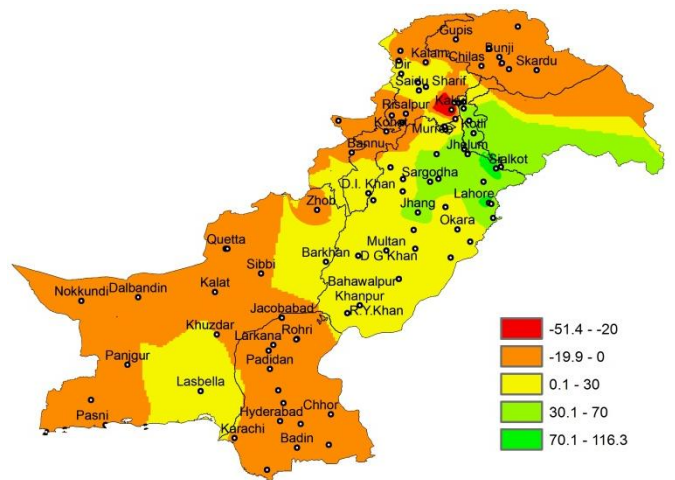
Light to moderate rainfall reported in the agricultural plains of GB & Kashmir. Chief amount of rainfall received in Kotli, Rawalakot & Garhi Doppata. Decadal minimum dropped below normal by 0.6°C & maximum temperature raised above normal by 1.5°C, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity and ETo were recorded 87.8hrs, 4.2km/hr, 32% and 5.8mm/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 June, 2014)

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

Rainfall reported as 16.4mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 27%. Mean night temperature was 23.6°C while day temperature recorded as 38.3°C with 83.9 hours bright sunshine duration. Wind speed recorded as 1.8km/h with mean wind direction *westerly*.

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

Rainfall reported as 1.6mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 48%. Mean night temperature was 27.8°C while day temperature recorded as 39.2°C with 84.2hours bright sunshine duration. Wind speed recorded as 6.3km/hr with mean wind direction *south easterly*.

Cotton: Good condition, flowering stage.

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

Dry weather reported during the decade however weather remained cloudy for 03days. Average relative humidity recorded as 65%. Mean night temperature was 28.0°C while day temperature recorded as 39.1°C with 93.0hours bright sunshine duration. Wind speed recorded as 9.8km/hr with mean wind direction *south westerly*.

Cotton (BT-3701): Good condition, flowering stage.

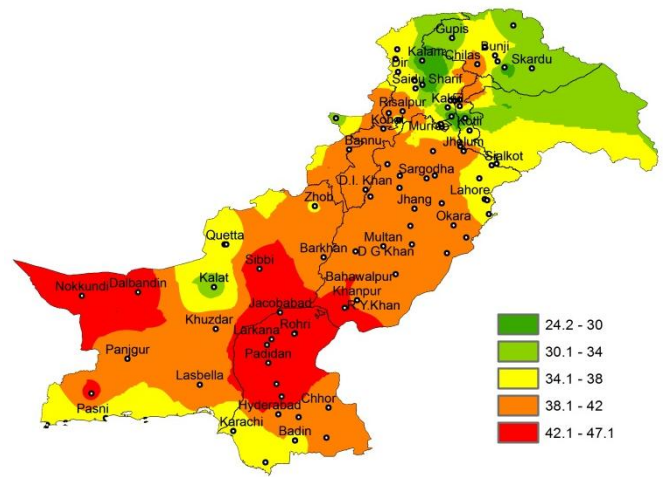
2.4 **RAMC, Usta Muhammad (Eastern Balochistan)**

Dry weather reported during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 47%. Mean night temperature was 30.2°C, while day temperature recorded as 44.7°C.

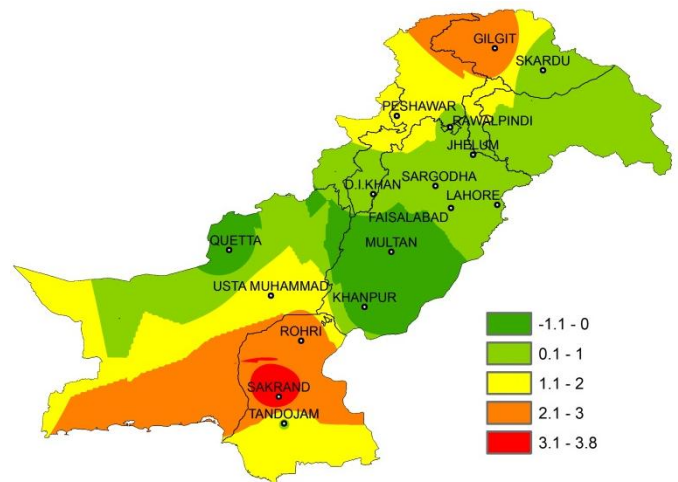
Rice: Good condition, 3rd Leaf maturity stage.

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

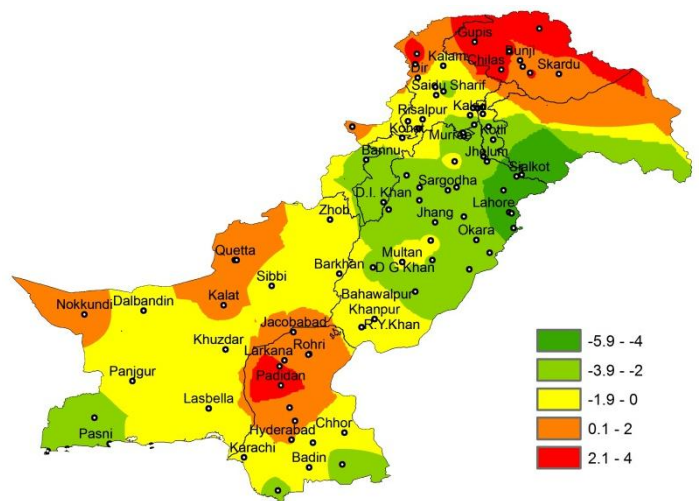
Dry weather reported during the decade however weather remained cloudy for 03days. Average relative humidity recorded as 20%. Mean night temperature was 19.5°C while day temperature recorded as 35.2°C with 111.1hours bright sunshine duration and wind speed recorded as 4.9km/hr with mean wind direction *north westerly*.



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 June, 2014)**

2.6 **Jhelum**

Rainfall reported as 49.2mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 47%. Mean night temperature was 25.5°C while day temperature recorded as 39.2°C with 76.8hours bright sunshine duration. Wind speed recorded 6.3km/hr with mean wind direction *southerly*.

2.7 **Lahore**

Rainfall reported as 50.1mm during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 55%. Mean night temperature was 24.6°C while day temperature recorded as 37.8°C with 73.4hours bright sunshine duration. Wind speed recorded as 4.0km/hr with mean wind direction *south westerly*.

2.8 **Sargodha**

Rainfall reported as 68.0mm during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 50%. Mean night temperature was 27.4°C while day temperature recorded as 40.2°C with 89.6hours bright sunshine duration. Wind speed recorded as 3.8km/hr with mean wind direction *variable*.

2.9 **Multan**

Rainfall reported as Trace (not measureable) reported during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 48%. Mean night temperature was 30.0°C while day temperature recorded as 39.9°C with 98.8hours bright sunshine duration. Wind speed recorded as 1.5km/hr with mean wind direction *variable*.

2.10 **Khanpur**

Rainfall reported as 10.6mm during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 53%. Mean night temperature was 28.5°C while day temperature recorded as 41.2°C with 79.6hours bright sunshine duration. Wind speed recorded as 6.6km/hr with mean wind direction *south westerly*.

2.11 **Sakrand**

Dry weather reported during the decade however weather remained cloudy for 02days. Average relative humidity recorded as 48%. Mean night temperature was 25.6°C while day temperature recorded as 44.2°C with 109.8hours bright sunshine duration. Wind speed recorded 12.3km/hr with mean wind direction *south westerly*.

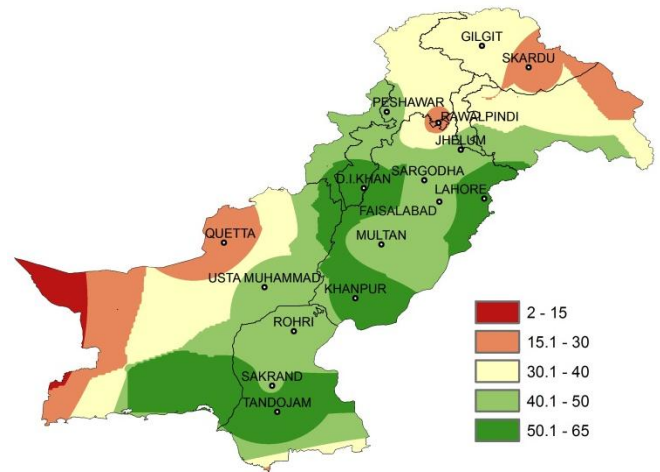


Figure.3: Relative Humidity in percentage (%)

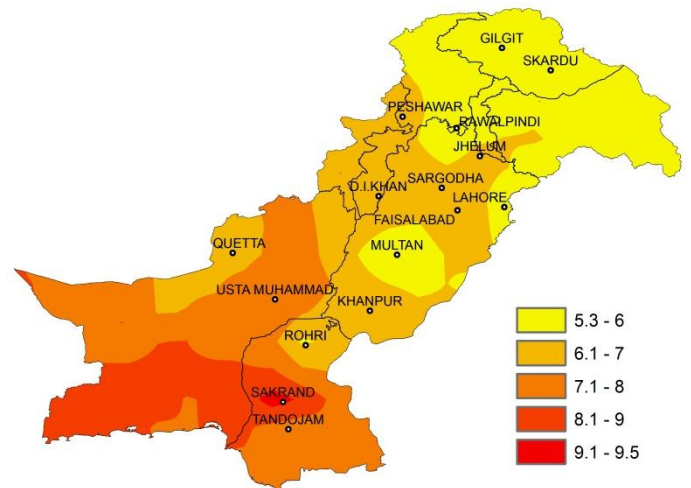


Figure.4: Reference Crop Evapotranspiration “ETo” in mm/day

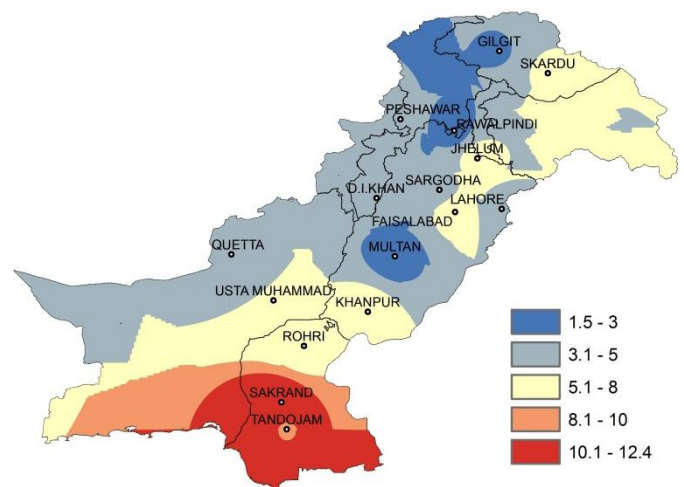


Figure 5: Wind Speed in kilometer per hour (km/h)

2.12 Rohri

Dry weather reported during the decade however weather remained cloudy for 01day. Average relative humidity recorded as 41%. Mean night temperature was 30.8°C while day temperature recorded as 44.7°C with 108.0hours bright sunshine duration. Wind speed recorded as 5.2km/hr with mean wind direction *southerly*.

2.13 D.I. Khan

Rainfall reported as 28.0mm during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 52%. Mean night temperature was 25.1°C while day temperature recorded as 40.7°C with 84.8hours bright sunshine duration.

2.14 Peshawar

Dry weather reported during the decade however weather remained cloudy for 02days. Average relative humidity recorded as 43%. Mean night temperature was 25.9 °C while day temperature recorded as 41.4°C with 96.0hours bright sunshine duration. Wind speed recorded as 3.6km/hr with mean wind direction *north westerly*.

2.15 Skardu

Rainfall reported as 0.5mm during the decade however weather remained cloudy for 03days. Average relative humidity recorded as 28%. Mean night temperature was 12.7°C while day temperature recorded as 31.0°C with 81.2hours bright sunshine duration. Wind speed recorded as 5.6km/hr with mean wind direction *southerly*.

2.16 Gilgit

Rainfall reported as Trace (not measurable) during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 35%. Mean night temperature was 15.5°C while day temperature recorded as 37.5°C with 94.3bright sunshine duration. Wind speed recorded as 2.8km/hr with mean wind direction *easterly*.

3. Ten Days Weather Advisory for Farmers (1st to 10th July, 2014)

3.1 Temperature Forecast

Temperatures are likely to be normal/above normal in the agricultural plains of the country and heat wave will also envelop northern areas during the decade.

3.2 Wind Forecast

Dust storm/ gusty wind conditions likely to prevail in the country during the decade.

3.3 Rain Forecast

- ❖ **Punjab:** Scattered rain/thunder showers over hills is expected during the 1st half of the decade.
- ❖ **Khyber Pakhtunkhwa:** Heavy falls at isolated places is expected over most of the agricultural plains of the province during the 1st half of decade
- ❖ **Sindh:** Mainly dry weather is expected in the province. However light rainfall expected in Lower Sindh i.e. Karachi, Thatta etc. during 1st half of decade.
- ❖ **Balochistan:** Mainly dry weather is expected in the province. However light rainfall expected over coastal areas of Balochistan during the end of decade.
- ❖ **Gilgit Baltistan:** Mostly cloudy weather with light to moderate rainfall over hills is expected in most parts of GB during the decade.
- ❖ **Kashmir:** Mainly cloudy weather with light to moderate rainfall over hills is expected in isolated parts of Kashmir during the decade.

3.4 Advisory for Farmers

- ❖ Pest/viral attacks and more weeds growth are expected after expected monsoon rains in sugarcane and other standing crops in upper parts of the country. Farmers are therefore advised to take in time precautionary measures in this regard.
- ❖ Farmers of rainfed areas obtaining water through tube wells and irrigated areas in upper parts are advised to schedule the irrigation according to the expected weather mentioned during the decade. Rainfall/gusty winds after irrigation cause water logging of standing crops like maize, sugarcane and cotton.
- ❖ Due to expected onset of monsoon rains during the decade farmers are advised to take in time precautionary measures to protect their crops, livestock and other property from any expected heavy rain.