

# DECADAL AGROMET BULLETIN OF PAKISTAN



**1<sup>st</sup> Decade August, 2012**

## **Highlights....**

- Light to moderate rainfall with thunder/shower occurred in most of the agricultural plains of the country except Sindh during the last decade, highest value recorded at Sialkot as 179 mm.
- Extreme temperatures (above 40°C) recorded in upper Sindh, Eastern/Western Balochistan & in Thal desert (Punjab).
- Highest values for the relative humidity (above 60%) recorded at scattered places in eastern Punjab and lower Sindh.
- Highest values for ETo (above 6.0 mm/day) recorded in Sindh and Southern Punjab.
- Maximum temperatures are expected to be in normal range in most of the agricultural plains of the country during the next decade.
- Mainly hot & humid weather is expected during the next decade all over the country except Kashmir & Gilgit Baltistan region.
- Rain/shower is expected in 1<sup>st</sup> half of the next decade in upper parts of the country.

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**Meteorological conditions during 3<sup>rd</sup> decade of July, 2012**

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	1.8	0.0	-1.8	0.6	1.7	32.0	40.7	37.2	35.8	34.5	34.1	31.7	88.6	8.4	61	6.2
2	SAKRAND ☆	4.2	0.0	-4.2	-0.9	-8.1	27.7	45.8	44.7	46.0	38.0	38.4	35.0	102.4	6.7	53	6.6
3	ROHRI	0.3	0.0	-0.3	1.6	5.5	38.3	47.8	44.0	39.2	38.4	37.4	36.3	106.0	6.2	53	7.4
4	USTA MUHAMMAD	3.5	0.0	-3.5	9.7	0.3	38.3	40.5	36.8	39.6	35.9	31.6	33.6	***	4.8	50	4.6
5	QUETTA	0.0	0.0	0.0	-2.8	-1.0	26.6	39.2	35.7	31.3	24.0	29.4	29.0	109.3	5.8	22	6.2
6	KHANPUR	2.0	13.6	11.6	-0.7	0.7	33.5	38.8	37.7	37.8	37.7	38.1	36.2	96.5	3.1	60	5.8
7	MULTAN	1.4	1.7	0.3	0.5	1.7	34.5	***	***	***	***	***	***	104.6	6.8	56	6.9
8	LAHORE	6.5	3.8	-2.7	0.5	2.7	32.7	38.9	37.6	34.9	33.9	***	31.2	87.2	4.2	62	5.6
9	FAISALABAD	2.7	0.0	-2.7	1.2	2.0	33.5	38.9	37.6	35.3	33.9	33.0	31.6	96.4	4.5	56	6.1
10	SARGODHA	5.4	0.0	-5.4	1.1	1.2	33.3	36.6	35.0	33.4	32.5	32.5	31.6	92.9	2.8	55	5.6
11	JHELUM	8.3	41.9	33.6	0.7	2.5	32.3	37.2	35.9	34.3	33.3	33.3	***	89.0	4.0	52	5.3
12	RAWALPINDI	13.1	14.0	0.9	3.7	5.1	33.3	37.3	35.7	33.5	33.5	32.0	30.6	95.4	2.2	51	5.5
13	DI KHAN	3.0	0.0	-3.0	0.4	1.4	33.0	***	***	***	***	***	***	108.0	4.5	60	6.3
14	PESHAWAR	4.4	0.0	-4.4	0.4	3.7	33.4	44.9	36.7	35.7	34.4	32.9	28.5	90.1	2.2	54	5.4
15	SKARDU	0.2	0.0	-0.2	0.9	4.0	26.4	***	***	***	***	***	***	62.8	5.6	39	5.1
16	GILGIT	0.6	0.6	0.0	0.7	1.2	27.4	***	***	***	***	***	***	69.5	3.5	47	5.0

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.

### **Past Weather (21<sup>st</sup> to 31<sup>st</sup> July, 2012):**

Light to moderate rainfall with few heavy showers reported from the agricultural plains of Punjab, KP, Balochistan and Kashmir, while meager rainfall reported from agricultural plains of Sindh during the decade.

#### **1.1 Punjab**

Light to moderate rainfall with few heavy falls reported from the agricultural plains of Punjab during the decade, chief amount received at Sialkot, Mandibahudin and Sargodha (Fig. 1.a). Decadal maximum temperature and minimum temperature both dropped above normal by 2.3 & 1.0°C respectively, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 3.9 km/hr, 56 %, and 5.8 mm/day respectively (Fig 3-4).

#### **1.2 Sindh**

No rainfall reported during the decade. Decadal maximum temperature raised below normal by 0.3°C and minimum temperature dropped above normal by 0.4°C respectively, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 7.1 km/hr, 56 %, and 6.7 mm/day respectively.

#### **1.3 Khyber Pakhtoon Khawa (KPK)**

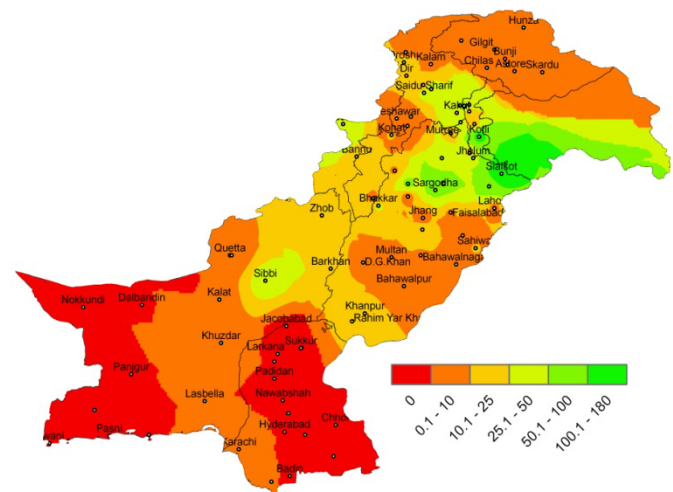
Light to moderate rainfall reported from most of the agricultural plains of KPK; chief amount received at Balakot, Parachinar and Malam Jabba etc. Decadal maximum and minimum temperature both raised above normal by 2.6 & 0.4°C respectively, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 3.4 km/hr, 57 %, and 6.3 mm/day respectively.

#### **1.4 Balochistan**

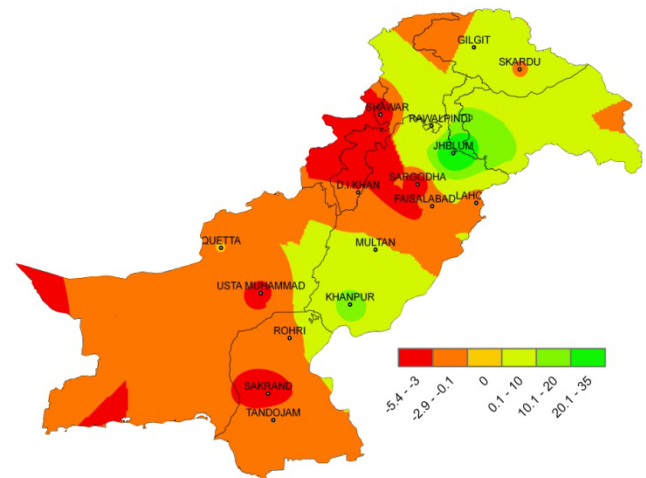
Light to moderate rainfall reported from few agricultural plains of Balochistan; chief amount received at Sibbi, Barkhan and Zhob etc. In the northern Balochistan, decadal maximum temperature raised below normal by 0.3°C and minimum temperature dropped above normal by 3.5°C respectively. Whereas mean values of wind speed, relative humidity and ETo were recorded 5.3 km/hr, 36 %, and 5.4 mm/day respectively.

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

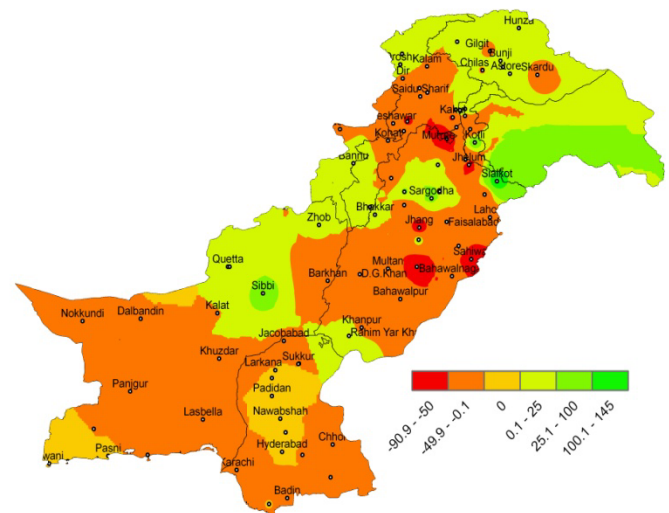
Light to moderate rainfall reported from most of the agricultural plains of Gilgit Baltistan and Azad Jammu & Kashmir; chief amount received at Kotli, Muzaffarabad and Pattan etc. In Gilgit Baltistan region; decadal maximum temperature and minimum temperature both dropped above normal by 2.6 & 0.8°C respectively. Whereas mean values of wind speed, relative humidity and ETo were recorded as 4.6 km/hr, 43 %, and 5.1 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 (21<sup>st</sup> to 31<sup>st</sup> July, 2012) as per Table-1

### 2.1 RAMC, Rawalpindi (Potohar region)

Rainfall reported as 14.0 mm during the decade, weather remained cloudy for 9 days and average relative humidity recorded as 51%. Mean night temperature was 27.1°C while day temperature recorded as 39.5°C with 95.4 hours bright sunshine duration. Wind speed recorded as 2.2 Km/hr with mean direction *westerly*. Presently one crop (rainfed conditions) is grown at the station as detailed below:

Maize: Good condition, Emergence stage.

### 2.2 RAMC, Tandojam (Lower Sindh)

No rainfall reported during the decade, weather remained cloudy for 5 days and average relative humidity recorded as 61%. Mean night temperature was 26.8°C while day temperature recorded as 37.1°C with 88.6 hours bright sunshine duration. Wind speed recorded as 8.4 Km/hr with mean direction *southerly*. Presently only one crop (irrigated conditions) is grown at the station as detailed below:

Cotton (BT-886): Good condition, Boll Formation stage.

### 2.3 RAMC, Faisalabad (Central Punjab)

No rainfall reported during the decade, weather remained cloudy for 11 days and average relative humidity recorded as 56%. Mean night temperature was 28.1°C while day temperature recorded as 38.8°C with 96.6 hours bright sunshine duration. Wind speed recorded as 4.5 Km/hr with mean direction *south easterly*. Presently one crop (irrigated conditions) is grown at the station as detailed below:

Sugarcane: Very Good condition, Tillering stage completed.

Cotton: Very Good condition, Flowering stage.

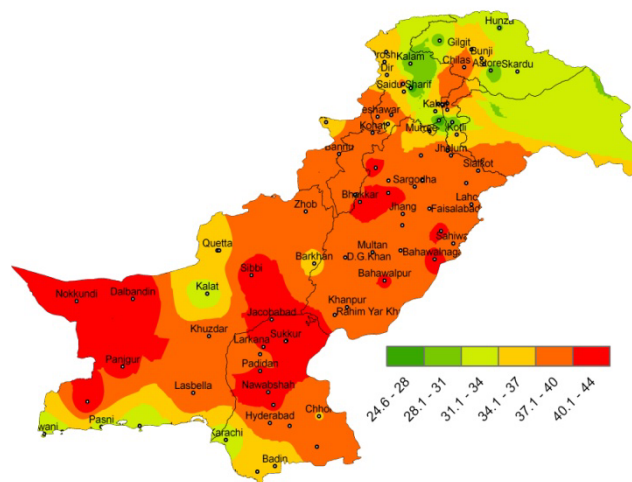
### 2.4 RAMC, Quetta (Northern Balochistan)

No rainfall reported during the decade, weather remained cloudy for 2 days and average relative humidity recorded as 22%. Mean night temperature was 18.5°C while day temperature recorded as 34.6°C with 109.3 hours bright sunshine duration and wind speed recorded as 5.8 Km/hr with mean direction *north westerly*. Presently no crop is grown at the station.

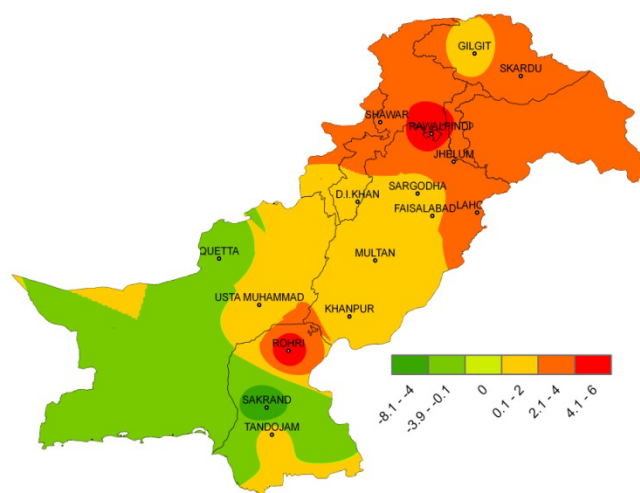
### 2.5 RAMC, Usta Muhammad (Eastern Balochistan)

No rainfall reported during the decade, weather remained cloudy for 1 day and average relative humidity recorded as 50%. Mean night temperature was 36.0°C while day temperature recorded as 40.6°C. Wind speed recorded as 4.8 Km/hr with mean direction *southerly*. Presently one crop (Irrigated conditions) is grown at the station as detailed below:

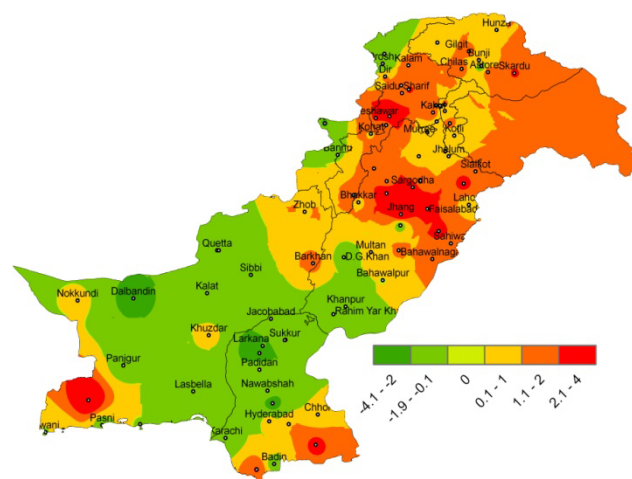
Rice: Good condition, Third Leaf stage.



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 (21<sup>st</sup> to 31<sup>st</sup> July, 2012)

### 2.6 Rohri

No rainfall reported during the decade, weather remained cloudy for 5 days and average relative humidity recorded as 53%. Mean night temperature was 30.9°C while day temperature recorded as 45.6°C with 110.6 hours bright sunshine duration. Wind speed recorded as 6.2 Km/hr with mean direction *southerly*.

### 2.7 Skardu

No rainfall reported during the decade, weather remained cloudy for 8 days and average relative humidity recorded as 39%. Mean night temperature was 17.4°C while day temperature recorded as 35.3°C with 62.8 hours bright sunshine duration. Wind speed recorded as 5.6 Km/hr with mean direction *south easterly*.

### 2.8 Multan

Rainfall reported as 1.7 mm during the decade, weather remained cloudy for 10 days and average relative humidity recorded as 56%. Mean night temperature was 29.2°C while day temperature recorded as 39.8°C with 104.6 hours bright sunshine duration. Wind speed recorded as 6.8 Km/hr with mean direction *southerly*.

### 2.9 Lahore

Rainfall reported as 3.8 mm during the decade, weather remained cloudy for 11 days and average relative humidity recorded as 62%. Mean night temperature was 27.7°C while day temperature recorded as 37.7°C with 87.2 hours bright sunshine duration. Wind speed recorded as 4.2 Km/hr with mean direction *south easterly*.

### 2.10 Peshawar

No rainfall reported during the decade, weather remained cloudy for 8 days and average relative humidity recorded as 54%. Mean night temperature was 26.9 °C while day temperature recorded as 39.8°C with 90.1 hours bright sunshine duration. Wind speed recorded as 2.2 Km/hr with mean direction *north westerly*.

### 2.11 Khanpur

Rainfall reported as 13.6 mm during the decade, weather remained cloudy for 11 days and average relative humidity recorded as 60 %. Mean night temperature was 27.8°C while day temperature recorded as 39.1°C with 96.5 hours bright sunshine duration. Wind speed recorded as 3.1 Km/hr with mean direction *south westerly*.

### 2.12 Sargodha

No rainfall reported during the decade, weather remained cloudy for 10 days and average relative humidity recorded as 62%. Mean night temperature was 28.4°C while day

temperature recorded as 38.2°C with 92.9 hours bright sunshine duration. Wind speed recorded as 2.8 Km/hr with mean direction *north easterly*.

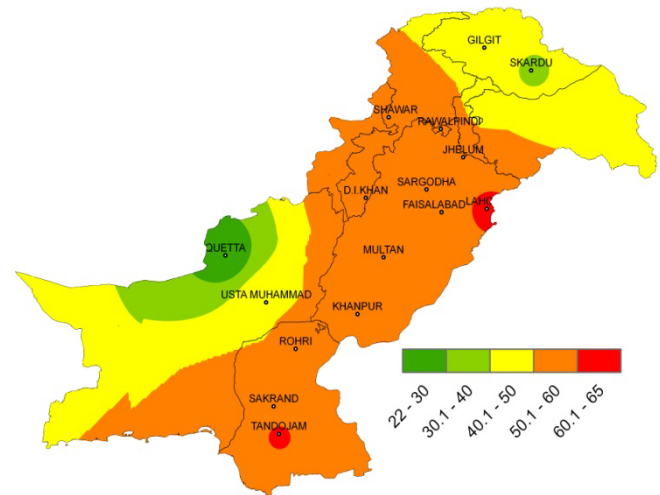


Figure.3: Relative Humidity in percentage

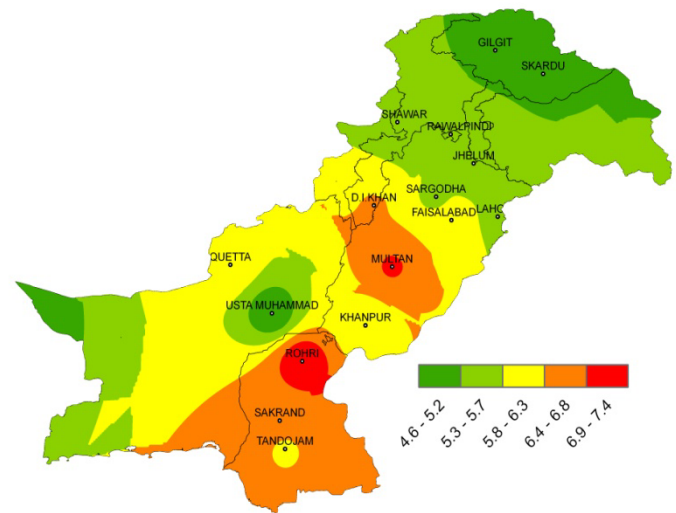


Figure.4: Reference Crop Evapotranspiration “ET<sub>0</sub>” in mm/day

### 2.13 Gilgit.

Rainfall reported as 0.6 mm during the decade however weather remained cloudy for 11 days and average relative humidity recorded as 47%. Mean night temperature was 17.9°C while day temperature recorded as 36.9 °C with 69.5 hours bright sunshine. Wind speed recorded as 3.5 Km/hr with mean direction *westerly*.

### 2.14 Jhelum

Rainfall reported as 41.9 mm during the decade however weather remained cloudy for 11 days and average relative humidity recorded as 52%. Mean night temperature was 26.8°C while day temperature recorded as 37.7°C with 89.0 hours bright sunshine duration. Wind speed recorded as 4.0 Km/hr with mean direction *south westerly*.

## 2.15 D.I. Khan

No rainfall reported during the decade, weather remained cloudy for 4 days and average relative humidity recorded as 60%. Mean night temperature was 26.8°C while day temperature recorded as 39.1°C with 108.0 hours bright sunshine duration. Wind speed recorded as 4.5 Km/hr with mean direction *south easterly*.

## 2.16 Sakrand

No rainfall reported during the decade however weather remained cloudy for 8 days average relative humidity recorded as 53%. Mean night temperature was 25.5°C while day temperature recorded as 39.8°C with 102.4 hours bright sunshine duration. Wind speed recorded as 6.7 Km/hr with mean direction *south easterly*.

## 3. Ten days Weather advisory for Farmers (1<sup>st</sup> to 10<sup>th</sup> August, 2012)

### 3.1 Temperature Forecast:

Day time temperatures expected to be normal in most of the agricultural plains of the country during the decade.

### 3.2 Rain Forecast:

- ❖ **Punjab:** Mainly hot & humid weather is expected during the decade over southern agricultural plains of the province. However isolated rain/thundershower is expected in Northeast Punjab during 1<sup>st</sup>/2<sup>nd</sup> August and scattered rain/thundershower is expected in upper & central agricultural plains of the province during 3<sup>rd</sup> to 5<sup>th</sup> August. Rain/thundershower is also expected at isolated places of upper Punjab on 10<sup>th</sup> August.
- ❖ **Khyber Pakhtoonkhawa:** Mainly hot & humid weather is expected during the decade. However isolated rain/thundershower is expected in upper parts of the province during 1<sup>st</sup>/2<sup>nd</sup> August and isolated to scattered rain/thundershower is expected in the most of the agricultural plains of the province during 3<sup>rd</sup> to 5<sup>th</sup> August and on 10<sup>th</sup> August.
- ❖ **Sindh:** Mainly hot & humid weather is expected during the decade. However light to moderate rain/dust thunderstorm is expected in southeastern parts of the province during the end of the decade.
- ❖ **Balochistan:** Mainly dry weather is expected during the decade. However rain/dust-thunderstorm is expected at isolated places in the Northeastern parts the province during 4<sup>th</sup> & 5<sup>th</sup> August.
- ❖ **Kashmir & Gilgit-Baltistan:** Mainly partly cloudy to cloudy weather is expected during the decade. However rain/thundershower with few heavy falls is expected at isolated to scattered places of Kashmir and rainfall expected at isolated places of Gilgit Baltistan during the 1<sup>st</sup> half of the decade.

### 3.3 Wind Forecast:

Gusty winds may prevail occasionally in the monsoon belt and adjoining areas during the decade.

### 3.4 Advisory for Farmers:

- ❖ Monsoon currents become weaken causes less rain over monsoonal belt during next two to three weeks. This situation may produce agriculture drought over agriculture plains of the country.
- ❖ Farmers are advised to take in time necessary precautionary measures to protect their crops, livestock and other property to keep in mind with current situation of monsoon.
- ❖ Due to hot & humid weather expected in southern half of the country, farmers are advised to irrigate the crops as per requirement.
- ❖ Farmers of rainfed areas, obtaining crop water through tube wells are also advised to schedule the irrigation according to the expected weather mentioned above during the decade.
- ❖ During the dry & humid weather in monsoon season, farmers of cotton belt are advised to take in time precautionary measures to protect the crop from the pest attacks especially attack of Melay Bug, Jassid, Thrips & Whitefly during the period.