

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light to moderate rainfall reported from the most of the agricultural plains of the country but dry and very hot weather reported from the agricultural plains of Sindh during the last decade.
- ❖ Highest maximum temperature recorded as 51.0°C at Jacobabad during the decade.
- ❖ Highest amount of rainfall recorded as 35.0mm at Parachinar during the last decade.
- ❖ Lower values of relative humidity reported from Balochistan and higher values reported from Sindh during the last decade.
- ❖ Higher values of ETo reported from the agricultural plains of Sindh and lower values reported from GB during the last decade.
- ❖ Normal temperatures are expected from most of the agricultural plains of the country during the next decade.
- ❖ Gusty wind pattern may prevail in most parts of the country during the next decade.
- ❖ 1st pre monsoon rain expected in different parts of the country during the current decade.
- ❖ Chances of scattered to widespread Dust-thunderstorm rain at different parts of the country.
- ❖ There is high probability of early onset & normal monsoon rains in Pakistan this year.

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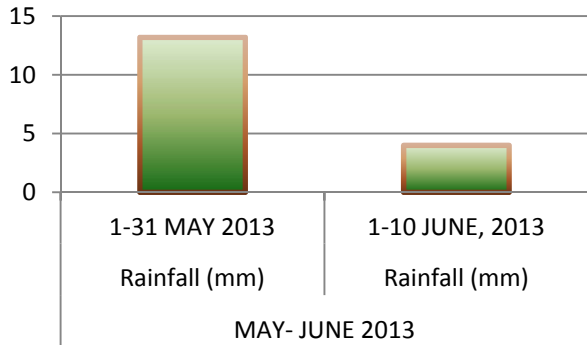
Meteorological conditions during 1st decade of June, 2013

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	0.9	0.0	-0.9	1.0	0.9	33.9	42.3	39.2	36.2	34.6	33.9	30.7	106.4	4.2	50	6.4
2	SAKRAND ☆	0.9	0.0	-0.9	0.2	1.8	34.8	48.1	46.0	48.6	37.4	37.5	35.0	126.7	10.0	40	7.6
3	ROHRI	0.0	0.0	0.0	1.4	2.4	37.8	52.8	48.3	40.1	38.4	35.6	34.0	121.0	6.0	34	7.9
4	USTA MUHAMMAD	0.5	0.0	-0.5	0.2	2.1	37.7	42.6	42.3	41.0	40.1	30.7	25.9	***	3.6	31	7.2
5	QUETTA	0.5	TR	-0.5	13.0	1.9	33.2	36.5	33.6	29.3	27.6	25.7	24.7	106.1	6.3	26	6.9
6	KHANPUR	0.6	0.0	-0.6	16.8	8.3	46.5	39.6	38.8	38.2	38.1	37.9	34.8	115.7	4.1	44	8.4
7	MULTAN	0.1	0.0	-0.1	2.0	2.3	37.4	***	***	***	***	***	***	105.7	7.8	30	8.2
8	LAHORE	1.2	0.0	-1.2	0.5	3.2	35.3	42.1	39.1	34.6	33.6	***	29.8	94.0	4.3	40	6.4
9	FAISALABAD	1.1	0.0	-1.1	1.9	2.5	35.7	42.3	39.7	36.6	34.7	33.2	30.0	106.3	6.3	38	7.4
10	SARGODHA	0.3	TR	-0.3	1.3	2.3	36.3	42.3	39.2	36.0	34.7	33.9	30.4	105.9	4.8	36	7.1
11	JHELUM	2.1	0.0	-2.1	2.5	2.3	35.5	42.3	39.2	36.2	34.6	33.9	***	106.7	6.9	35	6.7
12	RAWALPINDI	1.6	4.0	2.4	2.3	-1.6	31.0	37.1	34.6	30.3	30.7	29.3	27.2	118.0	4.9	40	5.9
13	DI KHAN	0.3	0.0	-0.3	1.2	2.9	35.2	***	***	***	***	***	***	109.0	4.2	31	6.8
14	PESHAWAR	0.6	6.5	5.9	-3.0	1.7	31.7	36.4	32.6	31.2	29.0	***	27.0	95.8	2.5	41	5.5
15	SKARDU	0.3	0.0	-0.3	1.1	3.3	22.1	***	***	***	***	***	***	97.4	3.7	26	5.2
16	GILGIT	0.6	TR	-0.6	2.2	3.7	26.2	***	***	***	***	***	***	108.5	2.3	35	5.7

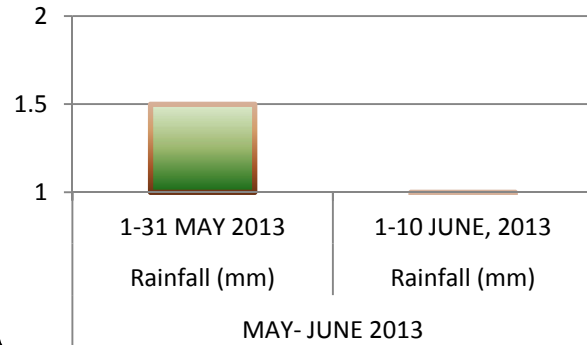
Table-1: Meteorological parameters for selected station of Pakistan. "Dep" in the table stands for difference from climatic normal, i.e. actual value minus normal. And "% Dep" is calculated by the formula; Dep divided by Normal multiplied by 100. Tmin & Tmax stands for minimum and maximum temperatures respectively. ETO stands for reference crop evapotranspiration. *** stands for no data and () indicates the station with five years climatic (normal) data for computing departures.

Graphs for Rainfall (mm) during May/June 2013

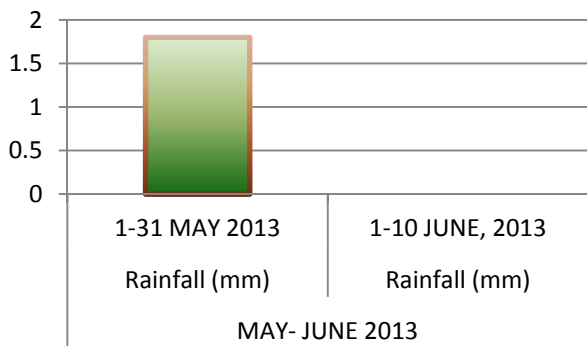
RAMC RAWALPINDI



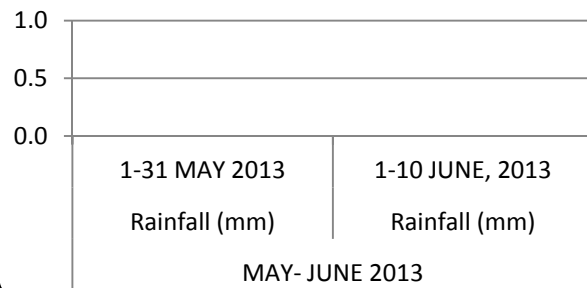
RAMC FAISALABAD



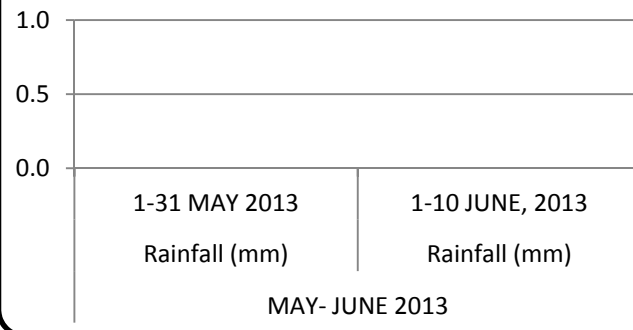
RAMC QUETTA



RAMC USTAMUHAMMAD



RAMC TANDOJAM



Past Weather (1st to 10th June, 2013):

Light to moderate rainfall reported from the agricultural plains of KP, GB & Kashmir, while light rainfall reported from the agricultural plains of Punjab & light rain only from two places from Balochistan during the decade. Dry and hot weather reported from the agricultural plains of Sindh.

1.1 Punjab

Light rainfall reported at a few places in the agricultural plains of Punjab; chief amount received at, Islamabad Murree, and Sialkot etc. Decadal maximum temperature & decadal minimum temperature both raised above normal by 2.8°C and 3.9°C respectively in the province. Mean values of wind speed, relative humidity and ETo were recorded as 5.6 km/hr, 38%, and 7.2 mm/day respectively.

1.2 Sindh

No rainfall reported from the agricultural plains of Sindh during the decade; Decadal maximum temperature & decadal minimum temperature both raised above normal by 1.7°C and 0.9°C respectively, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 6.7 km/hr, 41%, and 7.3 mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

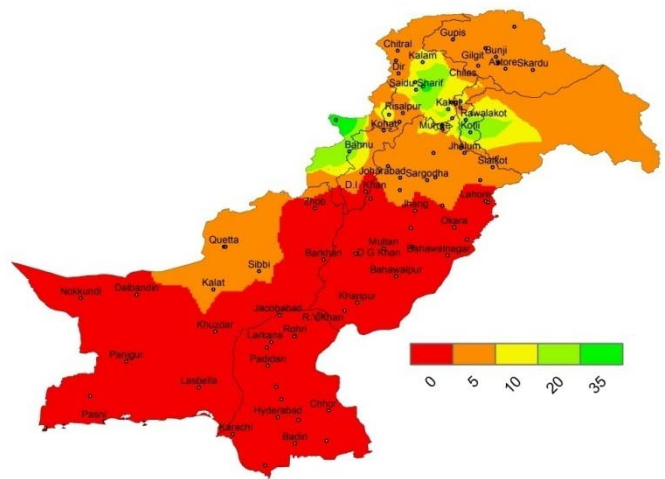
Light to moderate rainfall reported from most of the places in the agricultural plains of KP; chief amount received at Parachinar, Malamjabba, Kakul etc. In KP region; Decadal maximum raise above normal by 2.3°C & minimum dropped below normal by 0.9°C in the province. Mean values of wind speed, relative humidity and ETo were recorded as 3.4 km/hr, 36%, and 6.2 mm/day respectively.

1.4 Balochistan

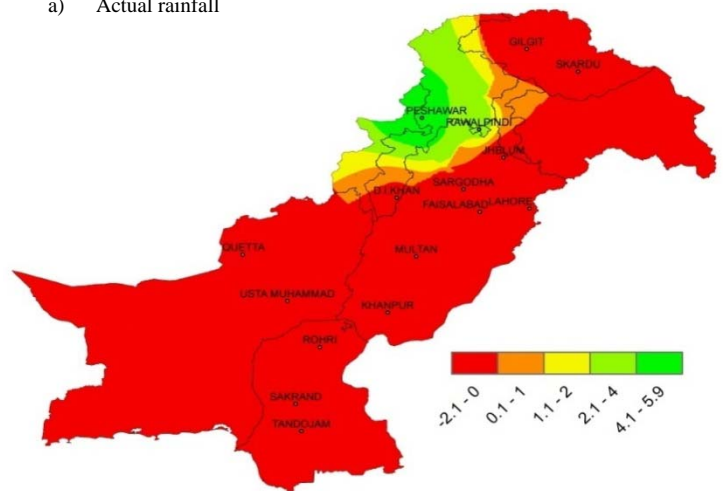
Light rainfall reported from only two places in the agricultural plains of Balochistan; chief amount received at Samunqli and Quetta. Decadal maximum & minimum temperature both raised above normal by 2.0°C & 6.6°C respectively, in the province. Whereas mean values of wind speed, relative humidity and ETo were 5.0 km/hr, 29%, and 7.1 mm/day respectively.

1.5 Gilgit Baltistan and Azad Jammu & Kashmir

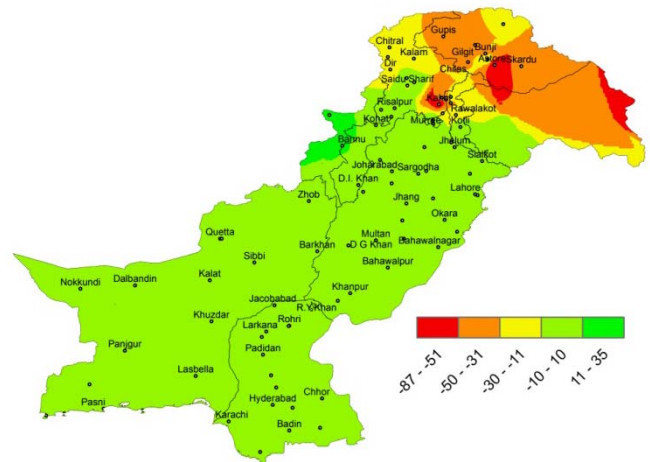
Light rainfall reported at a number of places in agricultural plains of GB & Kashmir; chief amount received at, Kotli., Rawalakot and Pattan etc. In GB & AJK region; Decadal maximum raised above normal by 3.5°C and 1.7°C in the province. Whereas mean values of wind speed, relative humidity and ETo were recorded 3.0 km/hr, 31%, and 5.5 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 (1st to 10th June, 2013)**

2.1 RAMC, Rawalpindi (Potohar region)

Rainfall reported as 4.0 mm during the decade, weather remained cloudy for 03 days, average relative humidity recorded as 40%. Mean night temperature was 24.9°C while day temperature recorded as 37.0°C with 118.0 hours bright sunshine duration. Wind speed recorded as 4.9 Km/hr with mean direction *westerly*.
Wheat crop already harvested.

2.2 RAMC, Faisalabad (Central Punjab)

No rainfall reported during the decade, weather remained cloudy for 3 days, average relative humidity recorded as 38%. Mean night temperature was 28.0°C while day temperature recorded as 43.3°C with 106.3 hours bright sunshine duration. Wind speed recorded as 6.3 Km/hr with mean direction *southerly*.

Sugarcane: Very Good condition, Tillering completed.
Cotton: Very Good condition, Budding stage.

2.3 RAMC, Tandojam (Lower Sindh)

No rainfall reported during the decade, weather remained clear during the decade, average relative humidity recorded as 50%. Mean night temperature was 27.4°C while day temperature recorded as 40.3°C with 106.4 hours bright sunshine duration. Wind speed recorded as 4.2 km/hr with mean direction *westerly*.

Cotton:BT 3701 Good condition, Budding stage.

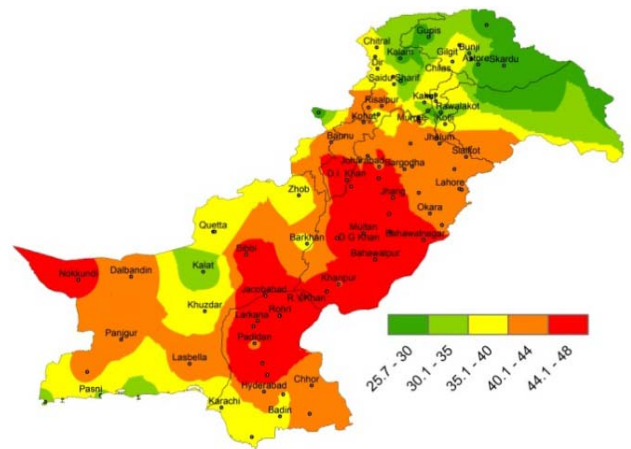
2.4 RAMC, Quetta (Northern Balochistan)

Rainfall reported as Trace (non measureable) during the decade, weather remained cloudy for 5 days, average relative humidity recorded as 26%. Mean night temperature was 30.6°C while day temperature recorded as 35.7°C with 106.1 hours bright sunshine duration and wind speed recorded as 6.3 Km/hr with mean direction *southerly*.

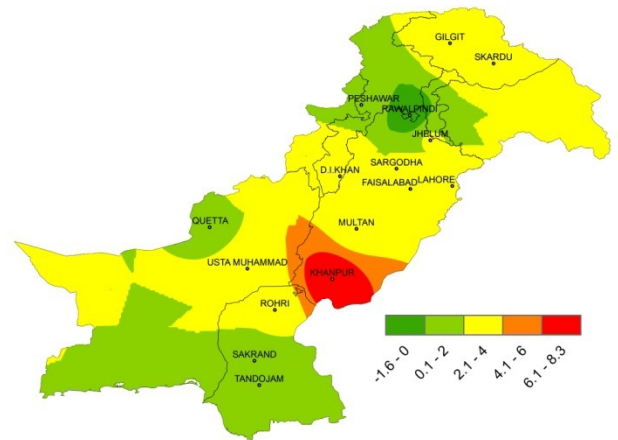
Wheat (Local white): Good condition, Wax maturity stage.

2.5 RAMC, Usta Muhammad (Eastern Balochistan)

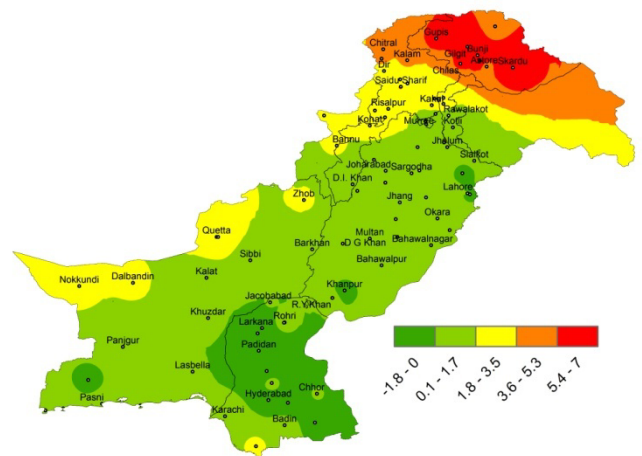
No rainfall reported during the decade, weather remained clear during the decade ,average relative humidity recorded as 31%. Mean night temperature was 27.9°C while day temperature recorded as 47.4°C with wind speed recorded as 3.6 Km/hr with mean direction *southerly*.
Wheat: Field is being ready for rice crop.



(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 (1st to 10th June, 2013):

2.6 Jhelum

Rainfall reported as 1.4 mm during the decade, weather remained cloudy for 5 days and average relative humidity recorded as 35%. Mean night temperature was 28.1°C while day temperature recorded as 42.9°C with 106.7 hours bright sunshine duration. Wind speed recorded 6.9 Km/hr with mean direction *south easterly*.

2.7 Lahore

No rainfall reported during the decade, weather remained cloudy for 2 days, average relative humidity recorded as 40%. Mean night temperature was 28.2°C while day temperature recorded as 42.4°C with 94.0 hours bright sunshine duration. Wind speed recorded as 4.3 Km/hr with mean direction *north westerly*.

2.8 Sargodha

Rainfall reported as Trace (non measureable) during the decade, weather remained cloudy for 4 days during the decade, average relative humidity recorded as 36%. Mean night temperature was 28.6°C while day temperature recorded as 44.0°C with 105.9 hours bright sunshine duration. Wind speed recorded as 4.8 Km/hr with mean direction *north easterly*.

2.9 Multan

No rainfall reported during the decade, weather remained cloudy for 3 days, average relative humidity recorded as 30%. Mean night temperature was 30.4°C while day temperature recorded as 44.4°C with 105.7 hours bright sunshine duration. Wind speed recorded as 7.8 Km/hr with wind direction *southerly*.

2.10 Khanpur

No rainfall reported during the decade, weather remained cloudy for 1 day during the decade, average relative humidity recorded as 44%. Mean night temperature was 43.9°C while day temperature recorded as 49.1°C with 115.7 hours bright sunshine duration. Wind speed recorded as 4.1 Km/hr with mean direction *south westerly*.

2.11 Rohri

No rainfall reported during the decade, weather remained cloudy for 1 days, average relative humidity recorded as 34%. Mean night temperature was 30.5C while day temperature recorded as 45.0°C with 121.0 hours bright

sunshine duration. Wind speed recorded as 6.0 Km/hr with mean direction *southerly*.

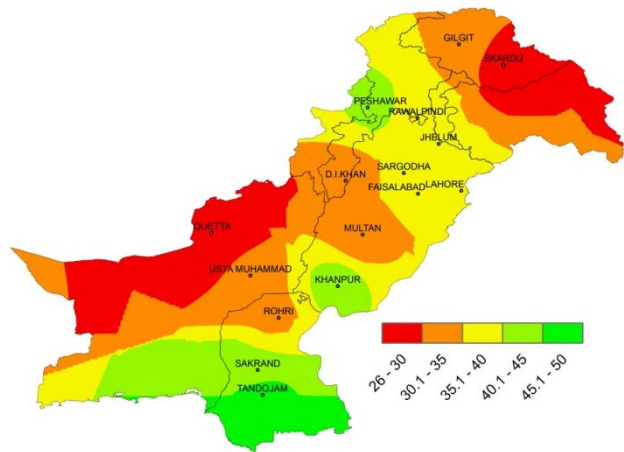


Figure.3: Relative Humidity in percentage

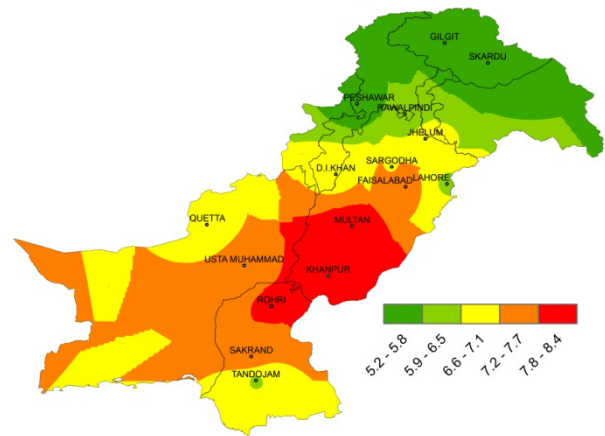


Figure.4: Reference Crop Evapotranspiration “ETo” in mm/day

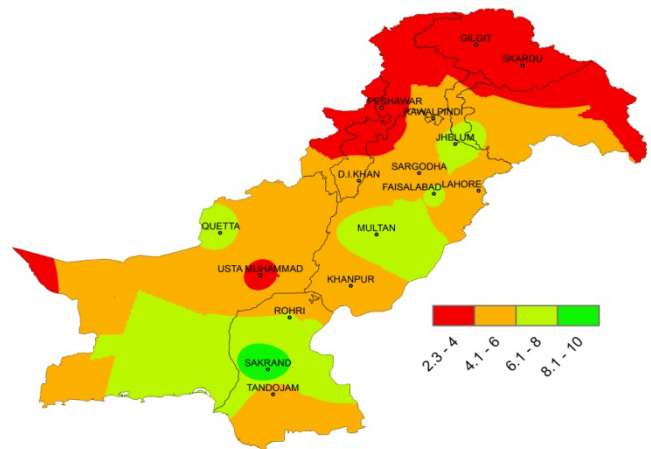


Figure 5: Wind Speed in kilometer per hour

2.12 Sakrand

No rainfall reported during the decade, weather remained cloudy for 01 day during the decade, average relative humidity recorded as 40%. Mean night temperature was 26.2°C while day temperature recorded as 43.4°C with 126.7 hours bright sunshine duration. Wind speed recorded as 10.0 Km/hr with mean direction *south westerly*.

2.13 Peshawar

Rainfall reported 6.5 mm during the decade, weather remained cloudy for 4 days, average relative humidity recorded as 41%. Mean night temperature was 22.2°C while day temperature recorded as 41.1°C with 95.8 hours bright sunshine duration. Wind speed recorded as 2.5 Km/hr with mean direction *north westerly*.

2.14 D.I. Khan

No rainfall reported during the decade, weather remained cloudy for 02 days, average relative humidity recorded as 31%. Mean night temperature was 26.4°C while day temperature recorded as 44.0°C with 109.0 hours bright sunshine duration. Wind speed recorded as 4.2 Km/hr with mean direction *north easterly*.

2.15 Gilgit

Rainfall reported as Trace (non measureable) during the decade. weather remained cloudy for 2 days and average relative humidity recorded as 35%. Mean night temperature was 15.4°C while day temperature recorded as 36.9°C with 108.5 hours bright sunshine. Wind speed recorded as 2.3 Km/hr with *variable* direction.

2.16 Skardu

No rainfall reported during the decade, weather remained cloudy for 2 days, average relative humidity recorded as 26%. Mean night temperature was 13.2°C while day temperature recorded as 31.0°C with 97.4 hours bright sunshine duration with mean speed 3.2 Km/hr with *variable* direction .

**3. Ten days Weather advisory for Farmers
11th to 20th June, 2013****3.1 Temperature Forecast:**

Normal day & night temperatures are expected in most of the agricultural plains of the country during the decade.

3.2 Rain Forecast:

- ❖ **Punjab:** Scattered Rain dust-thundershowers is expected in Islamabad, upper Punjab (Rawalpindi, Sargodha, Gujranwala, Lahore and Faisalabad divisions), while at isolated places of southern Punjab from 11th to 18th June with occasional gaps. Isolated heavy falls associated strong gusty winds are also expected in Islamabad, Rawalpindi, Sargodha, Lahore and Gujranwala divisions from 14th to 16th June.
- ❖ **Khyber Pakhtunkhwa:** Widespread rain dust-thundershowers is expected in upper/central KP (Malakand, Hazara, Peshawar, Kohat Divisions), while at isolated places of Bannu and D.I. Khan divisions from 12th to 18th June with occasional gaps. Isolated heavy falls associated strong gusty winds are also expected in Malakand, Hazara, Peshawar and Kohat divisions from 14th to 16th June.
- ❖ **Sindh :** Scattered rain dust-thundershowers with gusty winds are expected in lower Sindh (Mirpur Khas, Karachi and Hyderabad divisions), while at isolated places in upper Sindh from 11th to 14th June and again from 16th to 18th June.
- ❖ **Balochistan:** Isolated to Scattered rain dust-thundershowers is expected with occasional gaps in Balochistan (Makran, Kalat, Nasirabad and Sibbi divisions) from 11th to 18th June.
- ❖ **Gilgit-Baltistan & Kashmir:** Isolated to Scattered rain thundershowers is expected in Gilgit-Baltistan with occasional gaps during the decade. While widespread rain-thundershowers (with isolated heavy falls associated with strong gusty winds) are expected with occasional gaps in Kashmir during the decade.

3.3 Wind Forecast:

Gusty wind pattern may prevail in most of the agricultural plains of the country during the decade.

3.4 Advisory for Farmers:

- ❖ 1st pre monsoon rain is expected from 11th June and it spreads in most parts of the country in next few days. Farmers are advised to take in time precautionary measures to protect their crops, livestock and other property.
- ❖ Due to expected weather and start of pre monsoon rains in different parts of the country, farmers of cotton and sugarcane crops should stop irrigate the crops during the decade.
- ❖ There is high probability of early onset & normal monsoon rains in Pakistan this year.
- ❖ Farmers of upper half of the country are advised to prepare the fields for the coming Kharif crops in time.
- ❖ Farmers of rainfed areas obtaining crop water through tube wells are also advised to schedule the irrigation according to the expected weather mentioned during the decade.