

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light to moderate rainfall reported from few agricultural plains of the country during the last decade.
- ❖ Lowest minimum temperature recorded as -1.6°C at Skardu during the last decade.
- ❖ Highest amount of rainfall recorded as 74.0mm at Parachinar during the last decade.
- ❖ Lower values of relative humidity reported from Quetta & Skardu region and higher values reported from upper and central parts of the country during the last decade.
- ❖ Higher values of ETo reported from lower parts of the country and lower values reported from upper parts of the country during the last decade.
- ❖ Day temperatures are expected to be normal but night temperatures decreases in most of the agricultural plains of the country during the decade.
- ❖ Normal wind pattern may prevail in most parts of the country during the current decade.
- ❖ Light to moderate rainfall is expected in upper parts of the country during the current decade.
- ❖ Mainly dry weather is expected in most of the central & southern agricultural plains of the country during the current decade.
- ❖ Night temperatures are likely to below normal in most of the upper parts of the country during the current decade.

NATIONAL AGROMET CENTRE (NAMC) PAKISTAN METEOROLOGICAL DEPARTMENT SECTOR H-8/2, ISLAMABAD

Patron-in-Chief: *Arif Mahmood, Director General*

Editor-in-Chief: *Dr. Khalid M. Malik, Director*

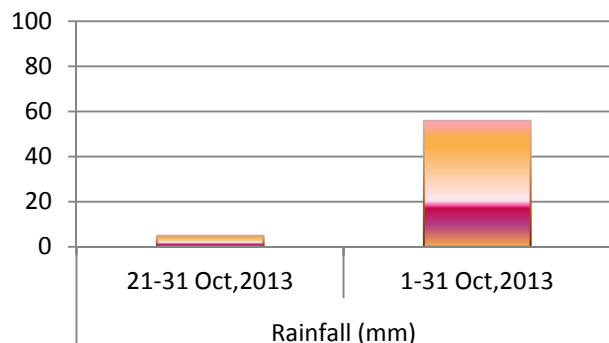
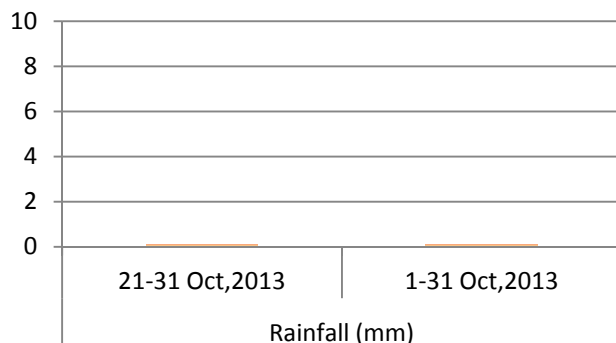
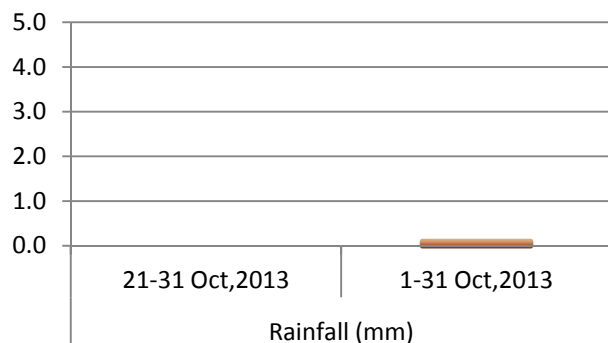
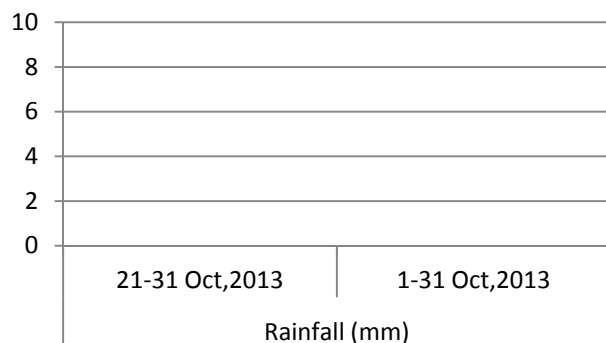
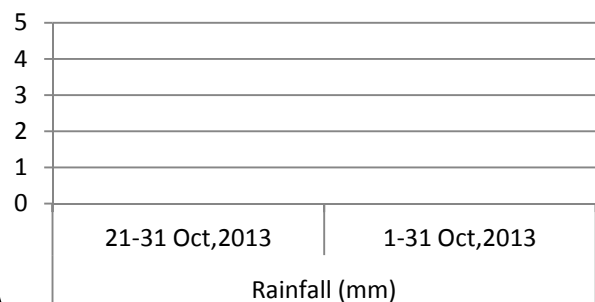
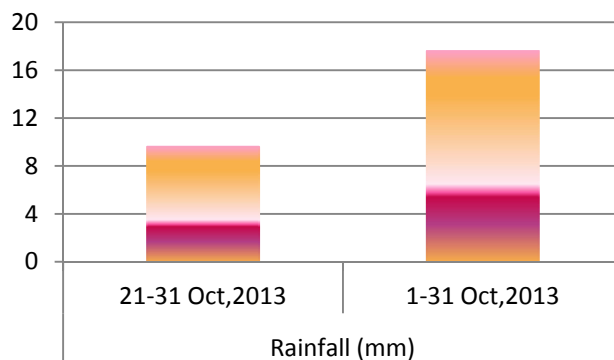
Editor: *Zeeshan Javed Hashmi, Assistant Meteorologist*

Phone: [+92-51-9250592](tel:+92-51-9250592) Email: dirnamc@yahoo.com

Meteorological conditions during 3rd decade of October, 2013

Sr. No.	Station	Precipitation (mm)			Air Temperature (°C)			Soil Temperatures (°C)						Sunshine Duration (hours)	Wind Speed (km/hr)	R.H (%)	ET _o (mm/day)
		Normal	Actual	Dep	Tmin Dep	Tmax Dep	Mean	5cm	10cm	20cm	30cm	50cm	100cm				
1	TANDOJAM	0.0	0.0	0.0	1.9	1.0	28.1	34.5	32.2	31.2	30.1	30.8	***	101.7	1.0	49	3.4
2	SAKRAND ☆	0.0	0.0	0.0	-1.3	1.0	25.6	36.4	34.6	30.9	***	32.9	33.3	114.1	11.5	48	6.4
3	ROHRI	0.0	0.0	0.0	0.4	0.1	27.6	35.5	34.6	30.9	31.1	30.9	32.7	101.0	4.0	45	4.1
4	USTA MUHAMMAD	0.0	0.0	0.0	0.7	1.8	27.8	31.7	31.7	31.1	31.1	***	30.3	***	***	51.0	4.6
5	QUETTA	0.0	0.1	0.1	-2.9	-2.2	13.2	25.1	22.9	18.9	18.0	18.2	22.0	111.3	5.5	27	3.5
6	KHANPUR	0.0	0.0	0.0	0.0	0.9	25.3	***	28.7	29.0	29.7	30.7	31.3	102.2	1.9	52	3.2
7	MULTAN	0.0	0.0	0.0	2.6	-0.4	25.8	***	***	***	***	***	***	92.5	2.0	48	3.1
8	LAHORE	0.1	0.1	0.0	-1.1	0.4	24.1	28.3	27.8	26.1	26.2	***	28.3	85.1	1.7	65	2.7
9	FAISALABAD	0.0	0.1	0.1	2.5	0.5	24.9	31.9	29.9	27.8	27.4	28.2	29.7	82.9	1.6	52	2.6
10	SARGODHA	0.2	1.7	1.5	2.1	-0.4	25.0	28.2	27.0	26.2	26.5	27.5	28.1	70.3	0.9	61	2.3
11	JHELUM	0.3	0.1	-0.2	0.4	-0.6	23.5	26.3	26.2	22.7	24.7	25.7	***	82.3	1.1	58	2.4
12	RAWALPINDI	0.3	4.9	4.6	1.1	-1.1	20.8	23.0	22.6	21.9	22.9	23.5	25.8	80.3	1.1	59	2.2
13	DI KHAN	0.1	0.1	0.0	1.7	-1.1	24.2	***	***	***	***	***	***	84.7	1.5	57	2.6
14	PESHAWAR	0.1	9.6	9.5	-1.0	-1.5	20.9	25.5	24.0	23.0	24.9	***	26.4	60.9	0.7	64	1.9
15	SKARDU	0.0	0.0	0.0	-0.1	1.0	10.6	***	***	***	***	***	***	57.5	6.1	44	2.7
16	GILGIT	0.1	0.1	0.0	1.4	1.6	15.7	***	***	***	***	***	***	64.9	2.0	57	2.2

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. ET_o 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 October 2013**RAMC RAWALPINDI****RAMC FAISALABAD****RAMC QUETTA****RAMC TANDOJAM****RAMC USTA MUHAMMAD****RMC PESHAWAR**

Past Weather (21st to 31st October, 2013):

Light to moderate rainfall reported from few agricultural plains of upper Punjab, KP, GB & Kashmir, while dry weather reported from rest parts of the country during the period.

1.1 Punjab

Light to moderate rainfall reported at few places in the agricultural plains of Punjab; chief amount received at Islamabad, Murree & Sialkot etc. Decadal minimum raised above normal by 1.1°C & maximum temperature dropped below normal by 0.1°C, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity and ETo were recorded as 85.1hrs, 1.5km/hr, 56.4% and 2.6mm/day respectively.

1.2 Sindh

No rainfall reported in Sindh. Decadal minimum & maximum temperature both raised above normal by 0.3°C & 0.7°C, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity and ETo were recorded as 105.6hrs, 5.5km/hr, 47.3% and 4.6mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

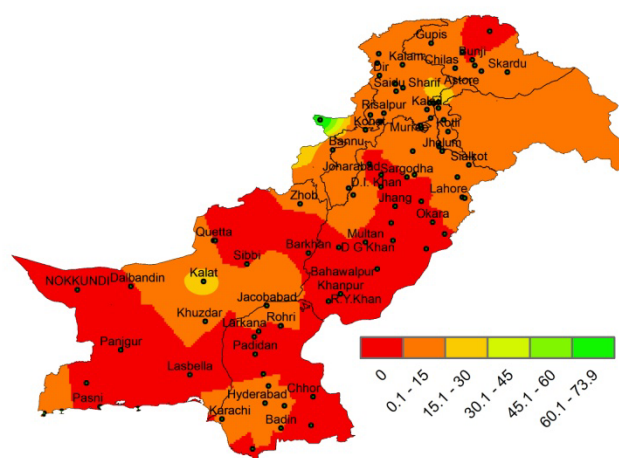
Light to moderate rainfall reported at number of places in the agricultural plains of KP; chief amount received at Parachinar, Kalam & Balakot etc. Decadal minimum raised above normal by 0.4°C & maximum temperature dropped below normal by 1.3°C, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity and ETo were recorded as 72.8hrs, 1.1km/hr, 60.5% and 2.3mm/day respectively.

1.4 Balochistan

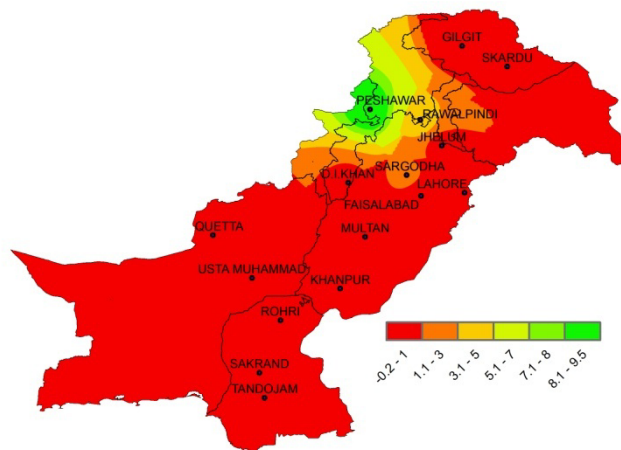
No rainfall reported in Balochistan. Decadal minimum & maximum temperature both dropped below normal by 1.1°C & 0.2°C, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity and ETo were 111.3hrs, 5.5km/hr, 39% and 4.1mm/day respectively.

1.5 Gilgit Baltistan and Azad Jammu & Kashmir

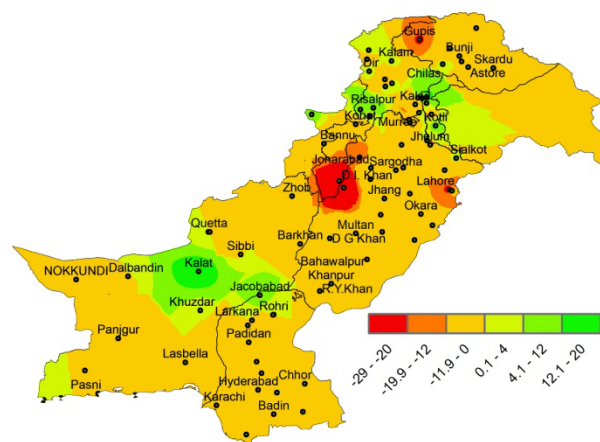
Light rainfall reported at a number of places in the agricultural plains of GB & Kashmir; chief amount received at Pattan, Muzaffarabad & Rawalakot etc. Decadal minimum & maximum temperature both raised above normal by 0.7°C & 1.3°C respectively, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity and ETo were recorded 61.2hrs, 4.1km/hr, 50.6% and 2.5mm/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 (21st to 31st October, 2013):

2.1 RAMC, Rawalpindi (Potohar region)

Rainfall reported as 4.9mm during the decade, weather remained cloudy for 04days, average relative humidity recorded as 59%. Mean night temperature was 13.4°C while day temperature recorded as 28.1°C with 80.3hours bright sunshine duration. Wind speed recorded as 1.1km/h with mean wind direction *westerly*.

Maize Agati 2002: Good condition, Milk maturity stage.

2.2 RAMC, Faisalabad (Central Punjab)

Rainfall reported as Trace (not measureable) during the decade, weather remained cloudy for 06days, average relative humidity recorded as 52%. Mean night temperature was 17.7°C while day temperature recorded as 32.1°C with 82.91hours bright sunshine duration. Wind speed recorded as 1.6km/hr with mean wind direction *north easterly*.

Sugarcane: Very Good condition, Tillering completed.

Cotton: Good condition, 1st picking stage.

2.3 RAMC, Tandojam (Lower Sindh)

No rainfall & cloudy day reported during the decade, average relative humidity recorded as 49%. Mean night temperature was 19.7°C while day temperature recorded as 36.5°C with 101.7hours bright sunshine duration. Wind speed recorded as 1.0km/hr with mean wind direction *south easterly*.

Cotton: BT 3701, Harvesting completed.

2.4 RAMC, Quetta (Northern Balochistan)

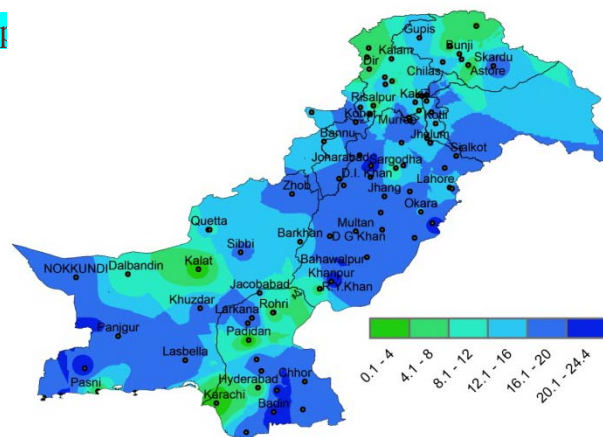
No rainfall reported during the decade, weather remained cloudy for 02days, average relative humidity recorded as 27%. Mean night temperature was 3.8°C while day temperature recorded as 22.5°C with 111.3hours bright sunshine duration and wind speed recorded as 5.5km/hr with mean wind direction *north westerly*.

Note: No crop is grown at the station.

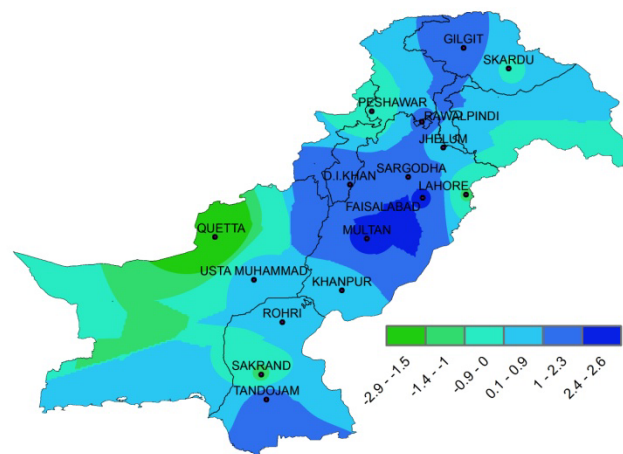
2.5 RAMC, Usta Muhammad (Eastern Balochistan)

No rainfall & cloudy day reported during the decade, average relative humidity recorded as 51%. Mean night temperature was 20.8°C, while day temperature recorded as 34.8°C. The data of bright sunshine hour and wind speed was not available, while mean wind direction was *north easterly*.

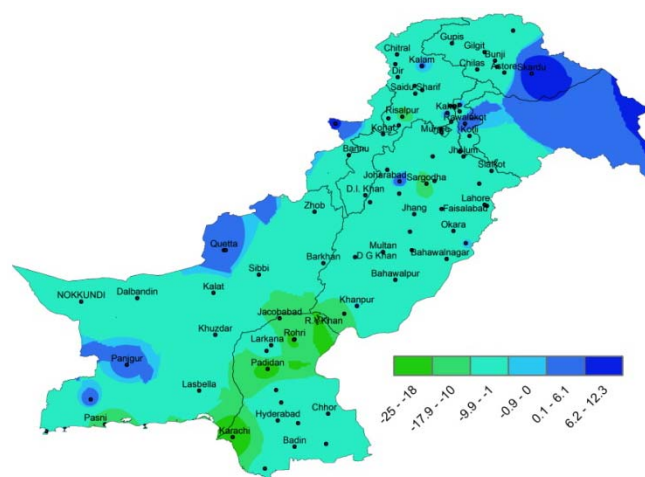
Rice: Good condition, harvesting started.



(a) Actual min-temp



(b) Departure of min-temp from Normal



(c) Departure of min-temp from Previous Decade

Figure.2: Minimum Temperature distribution during previous decade in "°C"

2(b) **Past Weather for sub regional Agricultural Plains (21st to 31st October, 2013):**

2.6 Jhelum

Rainfall reported as Trace (not measureable) during the decade, weather remained cloudy for 08days and average relative humidity recorded as 58%. Mean night temperature was 15.9°C while day temperature recorded as 31.0°C with 82.3hours bright sunshine duration. Wind speed recorded 1.1km/hr with mean wind direction *north westerly*.

2.7 Lahore

Rainfall reported as Trace (not measureable) during the decade, weather remained cloudy for 04days, average relative humidity recorded as 65%. Mean night temperature was 17.4°C while day temperature recorded as 30.8°C with 85.1hours bright sunshine duration. Wind speed recorded as 1.7km/hr with mean direction *north westerly*.

2.8 Sargodha

Rainfall reported as 1.7mm during the decade, weather remained cloudy for 05days during the decade, average relative humidity recorded as 61%. Mean night temperature was 18.9°C while day temperature recorded as 31.1°C with 70.3hours bright sunshine duration. Wind speed recorded as 0.9km/hr with mean direction *variable*.

2.9 Multan

No rainfall reported during the decade, weather remained cloudy for 03days, average relative humidity recorded as 48%. Mean night temperature was 19.4°C while day temperature recorded as 32.2°C with 92.5hours bright sunshine duration. Wind speed recorded as 2.0km/hr with mean wind direction *southerly*.

2.10 Khanpur

No rainfall & cloudy day reported during the decade, average relative humidity recorded as 52%. Mean night temperature was 16.7°C while day temperature recorded as 33.9°C with 102.2hours bright sunshine duration. Wind speed recorded as 1.9km/hr with mean wind direction *south westerly*.

2.11 Rohri

No rainfall & cloudy day reported during the decade, average relative humidity recorded as 45%. Mean night temperature was 20.9°C while day temperature recorded as 34.2°C with 101.0hours bright sunshine duration. Wind speed recorded 4.0km/hr with mean wind direction *north easterly*.

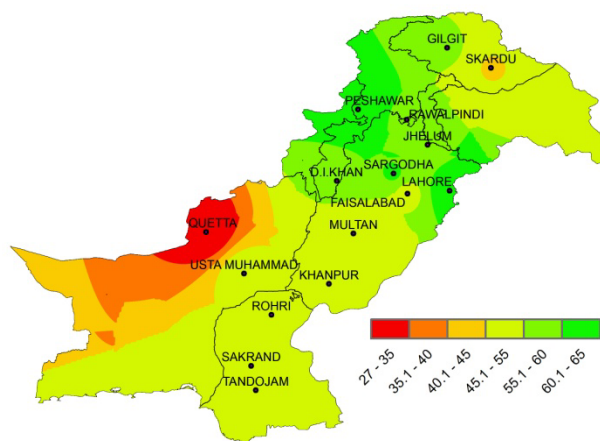


Figure.3: Relative Humidity in percentage

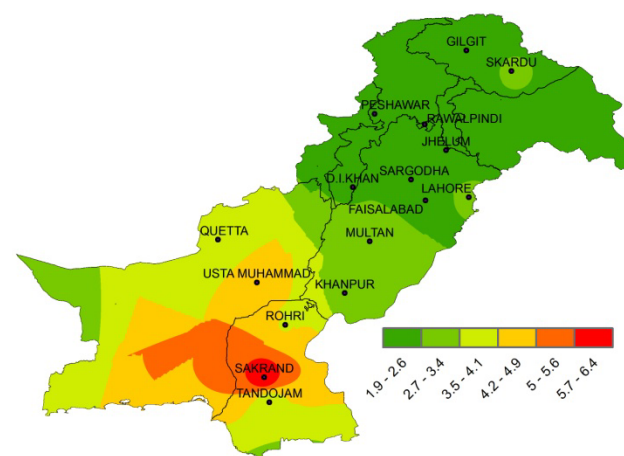


Figure.4: Reference Crop Evapotranspiration “ETo” in mm/day

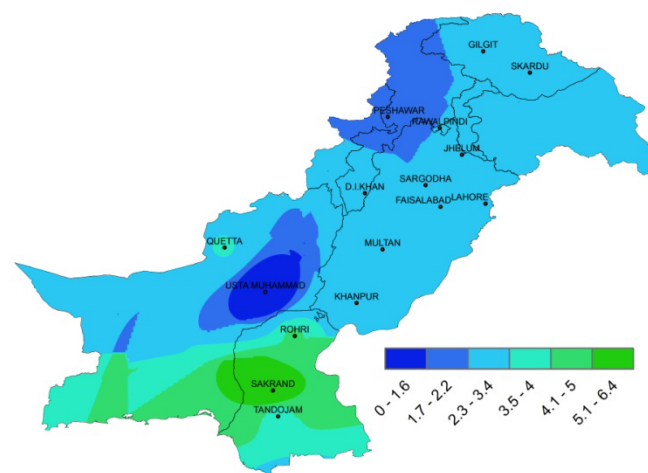


Figure 5: Wind Speed in kilometer per hour

2.12 Sakrand

No rainfall & cloudy day reported during the decade, average relative humidity recorded as 48%. Mean night temperature was 16.0°C while day temperature recorded as 35.1°C with 114.1 hours bright sunshine duration. Wind speed recorded as 11.5 km/hr with mean wind direction *northerly*.

2.13 Peshawar

Rainfall reported as 9.6 mm during the decade, weather remained cloudy for 07 days, average relative humidity recorded as 64%. Mean night temperature was 14.1°C while day temperature recorded as 27.6°C with 60.9 hours bright sunshine duration. Wind speed recorded as 0.7 km/hr with mean wind direction *north north- westerly*.

2.14 D.I. Khan

Rainfall reported as Trace (not measureable) during the decade, average relative humidity recorded as 57%. Mean night temperature was 17.5°C while day temperature recorded as 30.9°C with 84.7 hours bright sunshine duration. Wind speed recorded as 1.5 km/hr with mean direction *north easterly*.

2.15 Gilgit

Rainfall reported as Trace (not measureable) during the decade, weather remained cloudy for 10 days, average relative humidity recorded as 57%. Mean night temperature was 4.8°C while day temperature recorded as 26.6°C with 64.9 hours bright sunshine duration. Wind speed recorded as 2.0 km/hr with mean wind direction *variable*.

2.16 Skardu

No rainfall reported during the decade, weather remained cloudy for 06 days, average relative humidity recorded as 44.1%. Mean night temperature was 0.8°C while day temperature recorded as 20.3°C with 57.5 hours bright sunshine duration with mean speed 6.1 km/hr with mean direction *variable*.

**3. Ten days Weather advisory for Farmers
(1st to 10th November, 2013):****3.1 Temperature Forecast:**

Day temperatures are expected to be normal but night temperatures decrease in most of the agricultural plains of the country during the decade.

3.2 Rain Forecast:

- ❖ **Punjab:** Mainly dry weather is expected in most parts of the province during the decade; however rainfall is expected at isolated places in upper parts of the province during the 2nd half of the decade.
- ❖ **Khyber Pakhtunkhwa:** Mainly dry & cold weather is expected in most parts of the province during the decade; however rainfall is expected at isolated places in upper parts of the province during the 2nd half of the decade.
- ❖ **Sindh:** Mainly dry weather is expected in most parts of the province during the decade.
- ❖ **Balochistan:** Mainly dry & cold weather is expected in most parts of the province during the decade; however rainfall is expected at isolated places in northeastern parts of the province during the 2nd half of the decade.
- ❖ **Gilgit-Baltistan & Kashmir:** Mainly dry/partly cloudy & cold weather is expected in most parts of the GB & Kashmir during the decade; however rainfall is expected at isolated places in GB & Kashmir during the decade.

3.3 Wind Forecast:

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

3.4 Advisory for Farmers:

- ❖ Farmers of wheat growing areas are advised to sow their crops in time to get the optimum yield. The best suitable time for wheat cultivation is 1st November to 20th November.
- ❖ Wheat cultivation is in progress in most of the rainfed areas. Farmers of rainfed areas are advised to sow their Rabi crops before 15th November to get maximum yield. After this time the yield of wheat crop decreases gradually.
- ❖ Farmers of rainfed areas are advised to sow wheat crop by keeping in mind the above mentioned weather conditions during the current decade.
- ❖ Farmers of irrigated areas are advised to harvest Kharif crops including cotton in time so that timely sowing of Rabi crops especially wheat crop may be possible without any delay.
- ❖ Farmers of irrigated plains of Punjab, Sindh & KP are advised to complete sowing of wheat crop before 15th December to get maximum yield. In case of late sowing, the recommended varieties should be cultivated to minimize the loss in yield.