

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light to moderate rainfall reported from few agricultural plains of Balochistan during the last decade.
- ❖ Lowest minimum temperature recorded as -7.7°C at Skardu during the last decade.
- ❖ Highest amount of rainfall recorded as 45.0mm at Gawadar during the last decade.
- ❖ Lower values of relative humidity reported from Upper Sindh & Skardu region and higher values reported from northeastern Punjab and northwestern parts of KP during the last decade.
- ❖ Higher values of ETo reported from upper Sindh and some parts of Balochistan & lower values reported from northern areas, GB & Kashmir region during the last decade.
- ❖ Day & night temperatures are expected to be below normal in most of the agricultural plains 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.
- ❖ Light to moderate rainfall (with light snowfall over the hills) is expected in upper parts of KP & GB region during the current decade.
- ❖ Misty/foggy conditions are expected to prevail over plain areas of Northeast Punjab (Gujranwala, Lahore and Sargodha divisions) 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*

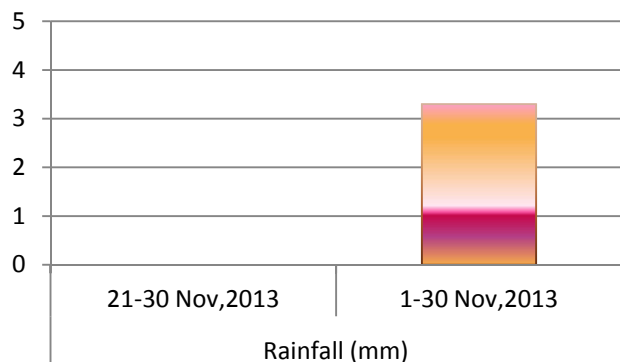
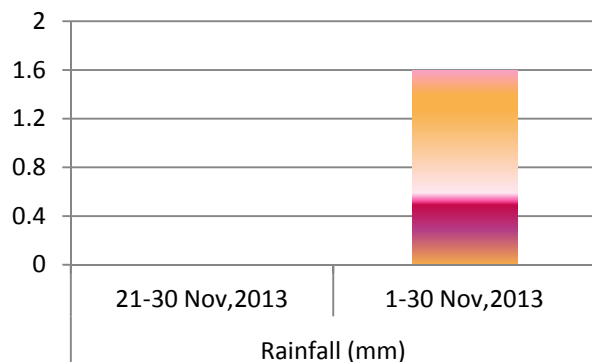
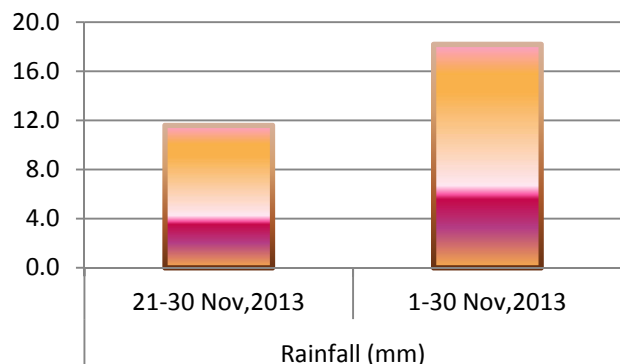
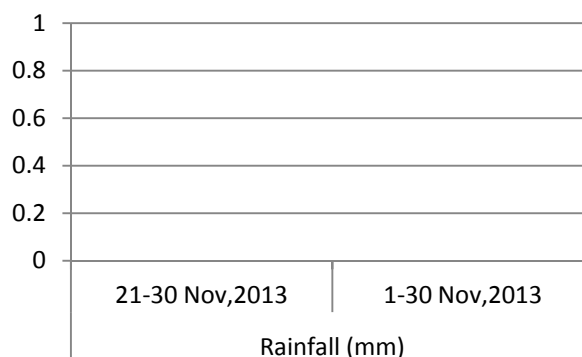
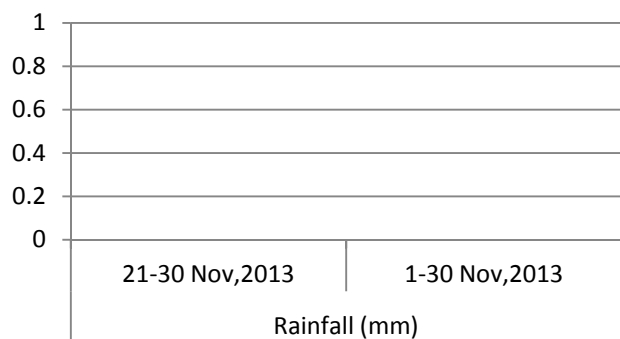
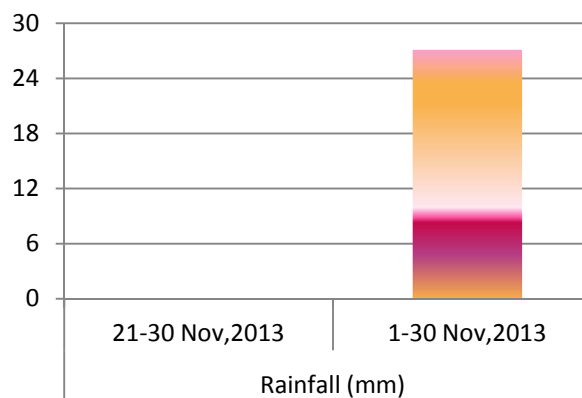
Editor: *Zeeshan Javed Hashmi, Assistant Meteorologist*

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

Meteorological conditions during 3rd decade of November, 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	3.0	0.9	22.8	27.5	30.0	24.0	24.1	25.3	***	85.5	1.0	58	2.3
2	SAKRAND ☆	0.0	0.0	0.0	1.2	1.8	20.6	28.6	26.4	30.3	***	26.4	28.6	94.6	2.4	53	2.6
3	ROHRI	0.0	0.0	0.0	1.7	1.7	22.5	28.7	26.9	25.4	26.3	25.5	29.0	87.6	4.8	50	3.1
4	USTA MUHAMMAD	0.0	0.0	0.0	-1.8	1.8	21.4	24.7	24.2	24.8	24.9	***	27.4	***	***	60	3.4
5	QUETTA	0.2	11.6	11.4	2.2	-2.1	8.9	15.4	14.6	11.9	11.0	11.7	16.0	17.9	3.8	57	1.5
6	KHANPUR	0.0	0.0	0.0	2.6	2.6	21.0	***	21.7	22.2	22.8	23.7	25.4	81.4	2.7	57	2.3
7	MULTAN	0.0	0.0	0.0	3.1	1.2	20.2	***	***	***	***	***	***	75.0	1.1	56	1.7
8	LAHORE	0.2	0.0	-0.2	-1.3	2.0	19.1	20.7	19.7	18.7	18.7	***	22.1	82.3	1.6	65	1.7
9	FAISALABAD	0.1	0.0	-0.1	1.6	2.5	19.1	23.8	21.9	19.7	19.4	20.5	23.5	68.4	2.8	57	2.1
10	SARGODHA	0.0	0.0	0.0	2.2	2.4	20.0	21.9	20.6	20.0	20.5	21.9	23.5	71.0	0.7	63	1.5
11	JHELMUM	0.2	0.0	-0.2	0.3	1.3	18.0	18.6	17.6	16.7	16.9	18.5	***	81.2	0.8	59	1.4
12	RAWALPINDI	0.4	0.0	-0.4	0.5	1.2	15.5	17.1	15.8	15.0	15.3	16.5	19.5	82.0	0.8	55	1.2
13	DI KHAN	0.0	0.0	0.0	1.1	1.7	18.5	***	***	***	***	***	***	78.6	***	57	3.0
14	PESHAWAR	0.5	0.0	-0.5	-0.5	1.6	16.4	18.6	16.9	16.2	18.3	***	19.9	54.7	1.1	63	1.2
15	SKARDU	0.0	0.0	0.0	-0.6	1.7	4.2	***	***	***	***	***	***	57.2	0.1	48	0.7
16	GILGIT	0.0	0.0	0.0	0.5	1.3	8.7	***	***	***	***	***	***	44.4	1.4	56	1.2

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 November 2013**RAMC RAWALPINDI****RAMC FAISALABAD****RAMC QUETTA****RAMC TANDOJAM****RAMC USTA MUHAMMAD****RMC PESHAWAR**

Past Weather (21st to 30th November, 2013):

Light to moderate rainfall reported from few agricultural plains of Balochistan, while dry/cold weather reported from the rest part of the country during the period.

1.1 Punjab

No rainfall reported in the agricultural plains of Punjab. Decadal minimum & maximum temperature both raised above normal by 1.3°C & 1.9°C respectively, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity and ETo were recorded as 77.3hrs, 1.5km/hr, 59% and 1.7mm/day respectively.

1.2 Sindh

No rainfall reported in the agricultural plains of Sindh. Decadal minimum & maximum temperature both raised above normal by 2.0°C & 1.5°C respectively, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity and ETo were recorded as 89.2hrs, 2.7km/hr, 54% and 2.7mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

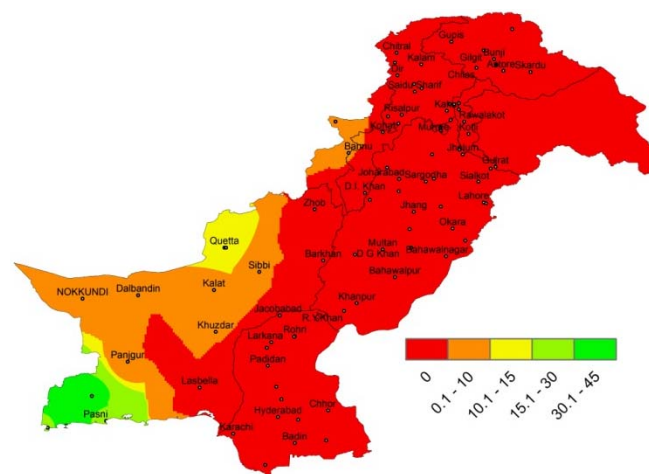
No rainfall reported in the agricultural plains of KP. Decadal minimum & maximum temperature both raised above normal by 0.3 & 1.7°C respectively, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity and ETo were recorded as 66.7hrs, 1.1km/hr, 60% and 2.1mm/day respectively.

1.4 Balochistan

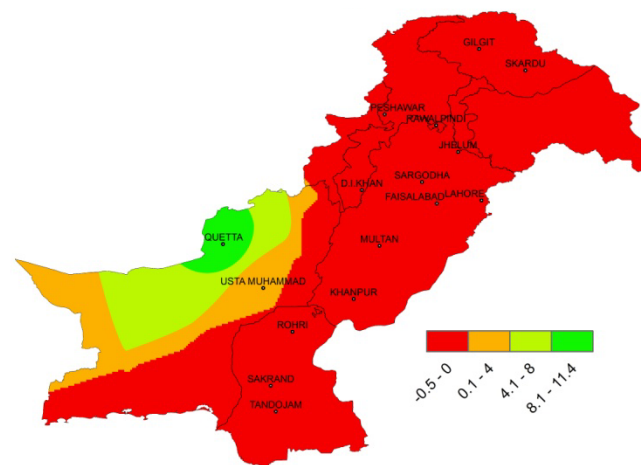
Light to moderate rainfall reported at few places in the agricultural plains of Balochistan; chief amount received at Gawadar, Turbat & Jiwani etc. Decadal minimum raised above normal by 0.2°C & maximum temperature dropped below normal by 0.2°C, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity and ETo were 17.9hrs, 3.8km/hr, 59% and 2.5mm/day respectively.

1.5 Gilgit Baltistan and Azad Jammu & Kashmir

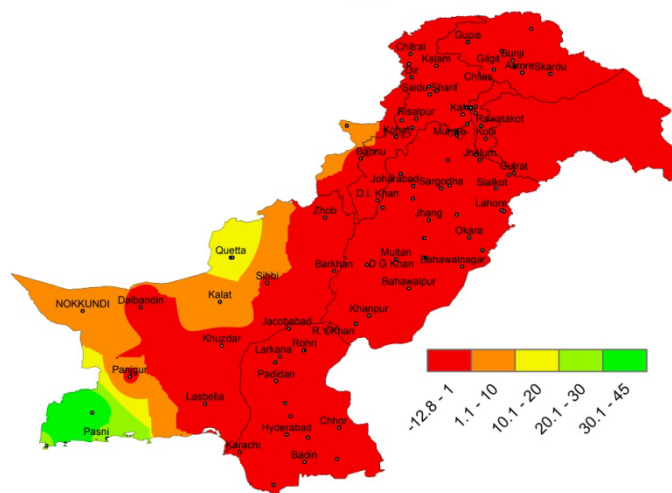
No rainfall reported in the agricultural plains of GB & Kashmir. Decadal minimum remain normal & maximum temperature raised above normal by 1.5°C, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity and ETo were recorded 50.8hrs, 0.8km/hr, 52% and 1.0mm/day respectively.



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 30th November, 2013):

2.1 RAMC, Rawalpindi (Potohar region)

No rainfall reported during the decade, weather remained cloudy for 04days, average relative humidity recorded as 55%. Mean night temperature was 6.2°C while day temperature recorded as 24.8°C with 82.0hours bright sunshine duration. Wind speed recorded as 0.8km/h with mean wind direction *westerly*.

Note: No crop is grown at the station.

2.2 RAMC, Faisalabad (Central Punjab)

No rainfall reported during the decade, weather remained cloudy for 03days, average relative humidity recorded as 57%. Mean night temperature was 10.0°C while day temperature recorded as 28.2°C with 68.4hours bright sunshine duration. Wind speed recorded as 2.8km/hr with mean wind direction *westerly*.

Wheat: Very Good condition, 3rd leaf stage.

2.3 RAMC, Tandojam (Lower Sindh)

No rainfall reported during the decade, weather remained cloudy for 01day, average relative humidity recorded as 58%. Mean night temperature was 15.2°C while day temperature recorded as 30.4°C with 85.5hours bright sunshine duration. Wind speed recorded as 1.0km/hr with mean wind direction *northerly*.

Wheat (TD-1): Good condition, Emergence stage.

2.4 RAMC, Quetta (Northern Balochistan)

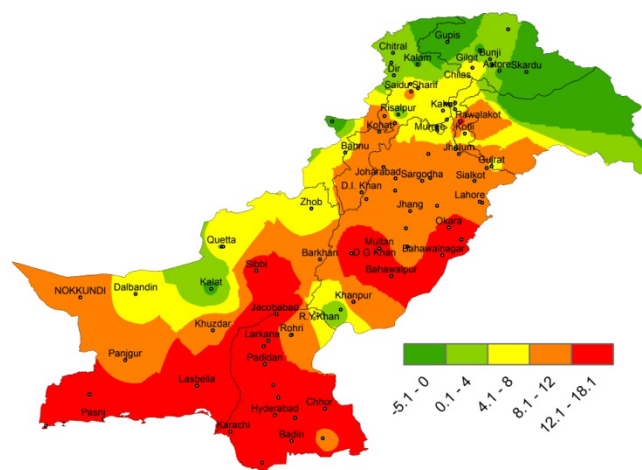
Rainfall reported as 11.6mm during the decade, weather remained cloudy for 08days, average relative humidity recorded as 57%. Mean night temperature was 2.3°C while day temperature recorded as 15.5°C with 17.9hours bright sunshine duration and wind speed recorded as 3.8km/hr with mean wind direction *northerly*.

Note: No crop is grown at the station.

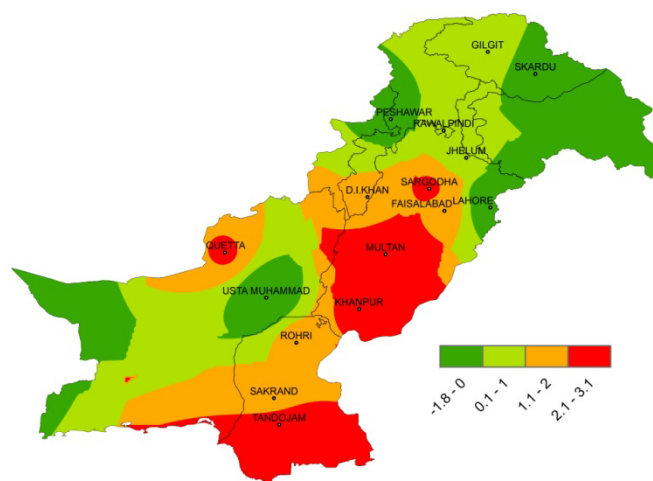
2.5 RAMC, Usta Muhammad (Eastern Balochistan)

No rainfall reported during the decade, weather remained cloudy for 01day, average relative humidity recorded as 60%. Mean night temperature was 13.9°C, while day temperature recorded as 28.8°C. The data of bright sunshine hour and wind speed was not available, while mean wind direction was *northerly*.

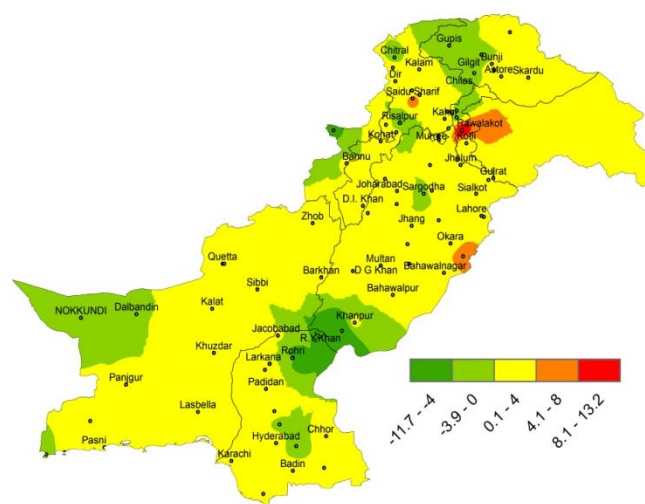
Rice: Good condition, Threshing started.



(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 30th November, 2013):**

2.6 Jhelum

No rainfall reported during the decade, weather remained cloudy for 03days, average relative humidity recorded as 59%. Mean night temperature was 9.0°C while day temperature recorded as 27.2°C with 81.2hours bright sunshine duration. Wind speed recorded 0.8km/hr with mean wind direction *westerly*.

2.7 Lahore

No rainfall reported during the decade, weather remained cloudy for 03days, average relative humidity recorded as 65%. Mean night temperature was 11.0°C while day temperature recorded as 27.2°C with 82.3hours bright sunshine duration. Wind speed recorded as 1.6km/hr with mean direction *north westerly*.

2.8 Sargodha

No rainfall reported during the decade, weather remained cloudy for 04days, average relative humidity recorded as 63%. Mean night temperature was 12.0°C while day temperature recorded as 27.9°C with 71.0hours bright sunshine duration. Wind speed recorded as 0.7km/hr with mean direction *variable*.

2.9 Multan

No rainfall reported during the decade, weather remained cloudy for 04days, average relative humidity recorded as 56%. Mean night temperature was 12.6°C while day temperature recorded as 27.8°C with 75.0hours bright sunshine duration. Wind speed recorded as 1.1km/hr with mean wind direction *north easterly*.

2.10 Khanpur

No rainfall reported during the decade, weather remained cloudy for 06days, average relative humidity recorded as 57%. Mean night temperature was 12.3°C while day temperature recorded as 29.7°C with 81.4hours bright sunshine duration. Wind speed recorded as 2.7km/hr with mean wind direction *north easterly*.

2.11 Rohri

No rainfall & cloudy days reported during the decade, average relative humidity recorded as 50%. Mean night temperature was 15.4°C while day temperature recorded as 29.5°C with 87.6hours bright sunshine duration. Wind speed recorded 4.8km/hr with mean wind direction *north easterly*.

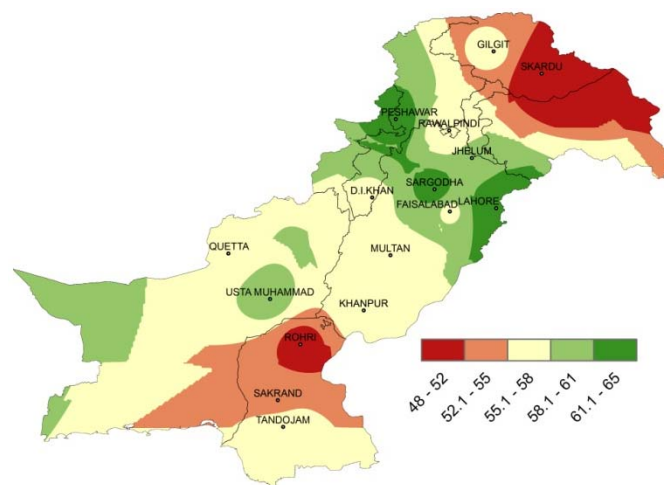


Figure.3: Relative Humidity in percentage

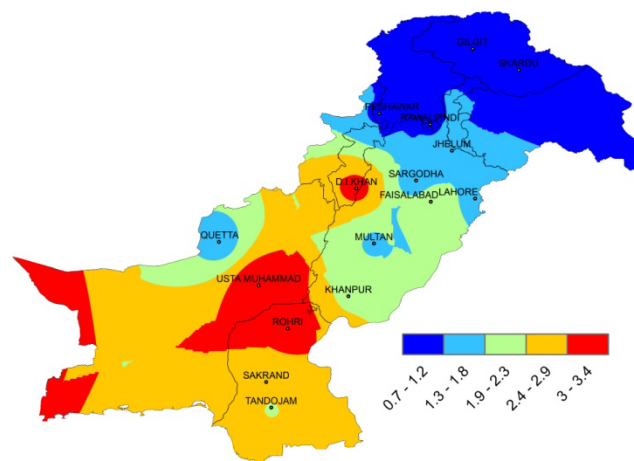


Figure.4: Reference Crop Evapotranspiration "ETo" in mm/day

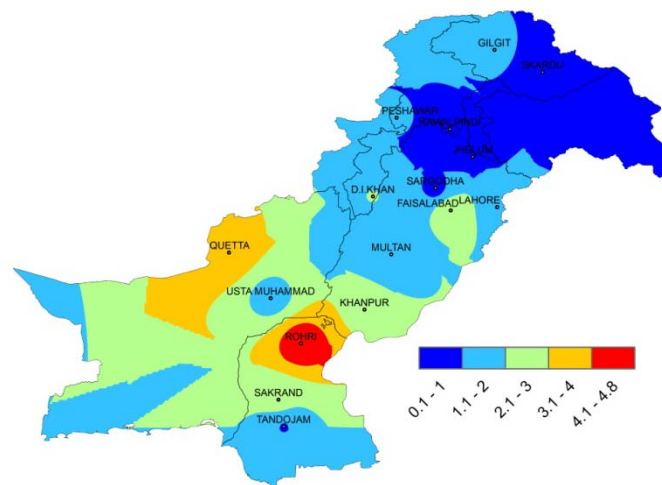


Figure 5: Wind Speed in kilometer per hour

2.12 Sakrand

No rainfall reported during the decade, weather remained cloudy for 04days, average relative humidity recorded as 53%. Mean night temperature was 11.9°C while day temperature recorded as 29.3°C with 94.6hours bright sunshine duration. Wind speed recorded as 2.4km/hr with mean wind direction *northerly*.

2.13 Peshawar

No rainfall reported during the decade, weather remained cloudy for 05days, average relative humidity recorded as 63%. Mean night temperature was 7.5°C while day temperature recorded as 25.3°C with 54.7hours bright sunshine duration. Wind speed recorded as 1.1km/hr with mean wind direction *south westerly*.

2.14 D.I. Khan

No rainfall reported during the decade, weather remained cloudy for 02days, average relative humidity recorded as 57%. Mean night temperature was 9.4°C while day temperature recorded as 27.5°C with 78.6hours bright sunshine duration. Wind speed was not available with mean direction *north westerly*.

2.15 Skardu

No rainfall reported during the decade, weather remained cloudy for 03days, average relative humidity recorded as 48%. Mean night temperature was -5.1°C while day temperature recorded as 13.4°C with 57.2hours bright sunshine duration. Wind speed recorded as 0.1km/hr with mean wind direction *north westerly*.

2.16 Gilgit

No rainfall reported during the decade, weather remained cloudy for 06days, average relative humidity recorded as 56%. Mean night temperature was -0.9°C while day temperature recorded as 18.3°C with 44.4hours bright sunshine duration. Wind speed recorded as 1.4km/hr with mean wind direction *westerly*.

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

Day & night temperatures are expected to fall in most of the agricultural plains of the country especially upper parts of the country during the decade.

3.2 Rain Forecast:

- ❖ **Punjab:** Mainly dry & cold weather is expected in most parts of the province especially in upper parts during the decade.
- ❖ **Khyber Pakhtunkhwa:** : Mainly dry & cold weather (very cold in upper parts) is expected in most parts of the province during the decade, however, rain/thunderstorm with light snow over the hills may occur at a few places of Malakand division on 2nd Dec and again during the end days 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.
- ❖ **Gilgit-Baltistan:** Mainly dry/partly cloudy & very cold weather is expected in most parts of the province during the decade. However; rain/thunderstorm with light snow over the hills may occur at isolated places on 2nd Dec and again during the end days of the decade.
- ❖ **Kashmir:** Mainly dry/partly cloudy & very cold weather is expected in most parts of 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:

- ❖ Wheat crop is growing at early stages in most of the barani areas of the country. Farmers of barani areas, obtaining crop water through tube wells are advised to schedule the irrigation according to the expected weather mentioned above during the decade.
- ❖ Wheat cultivation is in progress in most of the irrigated areas. Farmers of irrigated areas should irrigate the crop as per requirement due to dry weather prevailing in most of the irrigated agricultural plains of the country. Normally first irrigation is given after 20-25 days after sowing.
- ❖ 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 in December, the recommended varieties should be cultivated to minimize the expected loss in yield.
- ❖ Farmers of barani areas are advised to remove weeds from the fields, so that the present soil moisture may fully be utilized.
- ❖ Falling of leaves has started from trees beside wheat & other Rabi crops. Farmers should collect leaves from the crops as early as possible so that crop normal growth may not be disturbed.