Volume 13, No. 33 http://namc.pmd.gov.pk **3rd Decade of November, 2013**

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 -8.7°C at Skardu during the last decade.
- Highest amount of rainfall recorded as 13.0mm at MalamJabba during the last decade.
- Lower values of relative humidity reported from Sindh, 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 upper agricultural plains of the country and lower values reported from southern parts of the country during the last decade.
- Normal to below normal temperatures are expected in most of the agricultural plains of the country during the current decade.
- Normal wind pattern may prevail in most parts of the country during the current decade.
- Light to moderate rainfall (with light snowfall over the hills) is expected in upper parts of the country during the current decade.
- Mostly dry weather is expected in most of the central & southern agricultural plains of the country.

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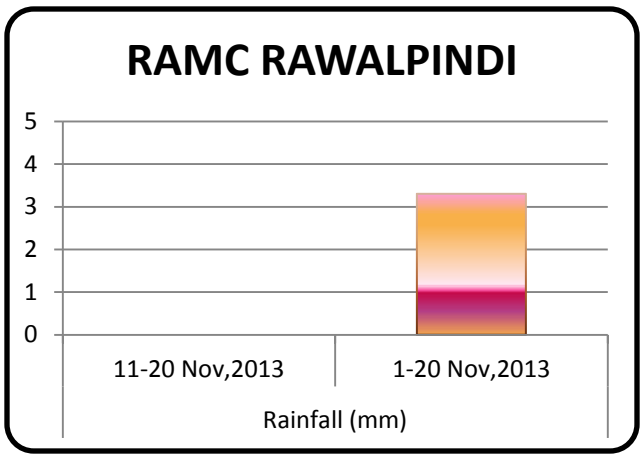
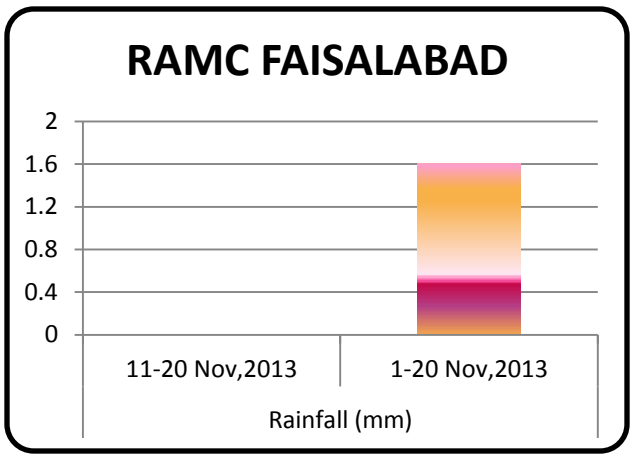
Meteorological conditions during 2nd decade of November, 2013

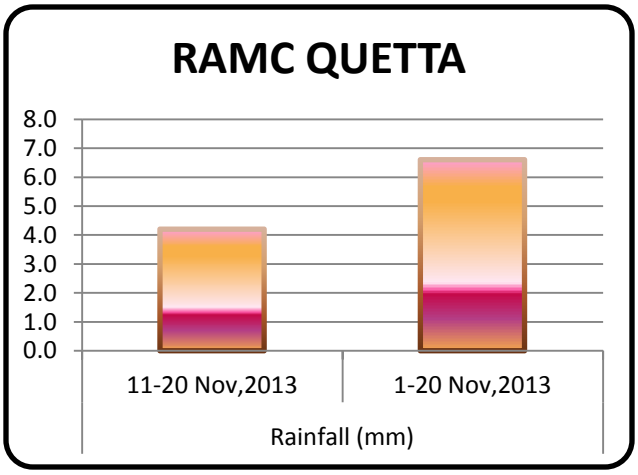
Sr. No.	Station	Precipitation (mm)			Air Temperature (°c)			Soil Temperatures (°c)						Sunshine Duration (hours)	Wind Speed (km/hr)	R.H (%)	ETo (mm/day)
		Normal	Actual	Dep	Tmin Dep	Tmax Dep	Mean	5cm	10cm	20cm	30cm	50cm	100cm				
1	TANDOJAM	0.0	0.0	0.0	-1.1	0.1	22.2	27.3	29.3	24.8	24.6	26.3	***	89.6	0.5	47	2.1
2	SAKRAND ☆	0.0	0.0	0.0	-3.5	1.7	19.9	29.7	27.7	32.2	***	27.4	29.9	99.0	1.1	51	2.3
3	ROHRI	0.0	0.0	0.0	-0.3	-2.2	20.8	29.2	27.3	25.6	26.6	26.5	30.5	94.9	1.7	45	2.3
4	USTA MUHAMMAD	0.0	0.0	0.0	-3.3	0.4	21.8	25.6	25.2	25.2	25.0	***	28.7	***	***	55	3.7
5	QUETTA	1.8	4.2	2.4	1.6	-0.4	10.9	18.6	17.2	13.6	12.4	12.9	17.7	90.8	4.1	42	2.2
6	KHANPUR	0.0	0.0	0.0	-1.3	1.7	20.5	***	22.1	22.7	23.7	24.7	26.6	89.1	1.7	52	2.3
7	MULTAN	0.0	0.0	0.0	0.4	0.1	20.3	***	***	***	***	***	***	89.3	1.5	52	2.0
8	LAHORE	0.2	0.0	-0.2	-5.1	-0.8	18.0	20.4	19.7	19.0	19.1	***	23.6	88.1	1.5	61	1.8
9	FAISALABAD	0.1	0.0	-0.1	-2.1	1.3	18.5	25.5	23.4	20.7	20.4	21.7	25.1	87.9	2.8	50	2.3
10	SARGODHA	0.4	0.0	-0.4	-1.2	1.1	19.4	22.5	21.2	20.3	21.1	22.7	24.6	76.4	0.3	58	1.5
11	JHELUM	0.5	0.0	-0.5	-2.9	0.3	17.7	18.6	17.7	17.1	17.4	19.1	***	90.6	0.6	57	1.6
12	RAWALPINDI	0.5	0.0	-0.5	-3.1	-0.3	15.1	17.9	16.7	15.6	16.1	17.5	20.5	91.4	1.4	54	1.6
13	DI KHAN	0.4	0.0	-0.4	-1.8	0.6	18.5	***	***	***	***	***	***	86.7	***	56	3.2
14	PESHAWAR	0.7	0.0	-0.7	-3.3	0.6	16.3	19.4	17.2	16.5	18.8	***	21.3	65.9	0.7	60	1.3
15	SKARDU	0.1	0.0	-0.1	-4.0	-0.8	3.3	***	***	***	***	***	***	64.1	1.6	43	1.1
16	GILGIT	0.1	0.0	-0.1	-0.9	-0.8	8.8	***	***	***	***	***	***	51.3	1.6	53	1.3

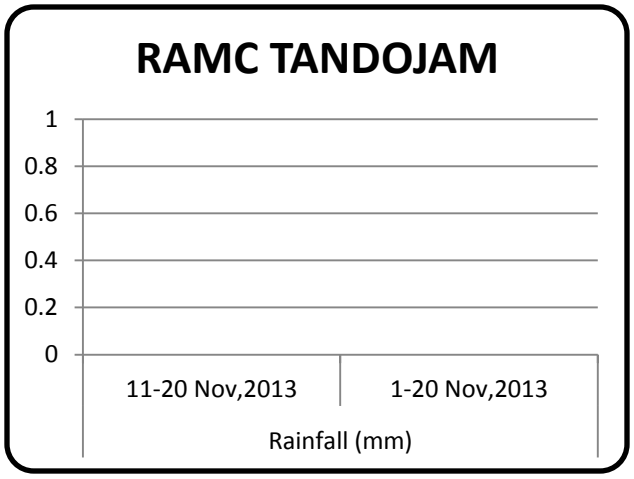
Table-1: Meteorological parameters for selected station of Pakistan. **"Dep"** in the table stands for difference from climatic normal, i.e. actual value minus normal. And **"% Dep "** is calculated by the formula; **Dep** *divided by* **Normal** *multiplied by* **100**. Tmin & Tmax stands for minimum 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.

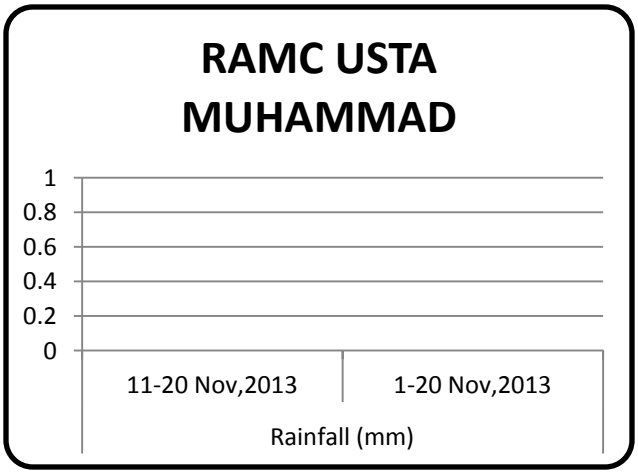
Graphs for Rainfall (mm) during November 2013

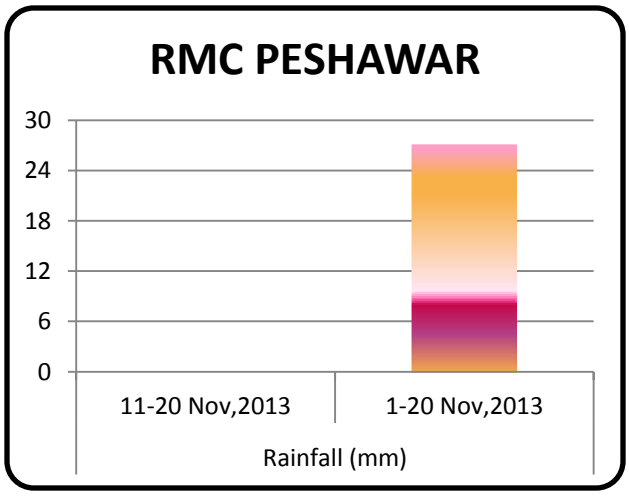












Past Weather (11th to 20th November, 2013):

Light to moderate rainfall reported from the agricultural plains of KP, Balochistan & GB, 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 dropped below normal by 2.2°C & maximum temperature raised above normal by 0.5°C, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity and ETo were recorded as 87.5hrs, 1.4km/hr, 55% and 1.9mm/day respectively.

1.2 Sindh

No rainfall reported in the agricultural plains of Sindh. Decadal minimum & maximum temperature both dropped below normal by 1.6°C & 0.1°C respectively, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity and ETo were recorded as 94.5hrs, 1.1km/hr, 48% and 2.2mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

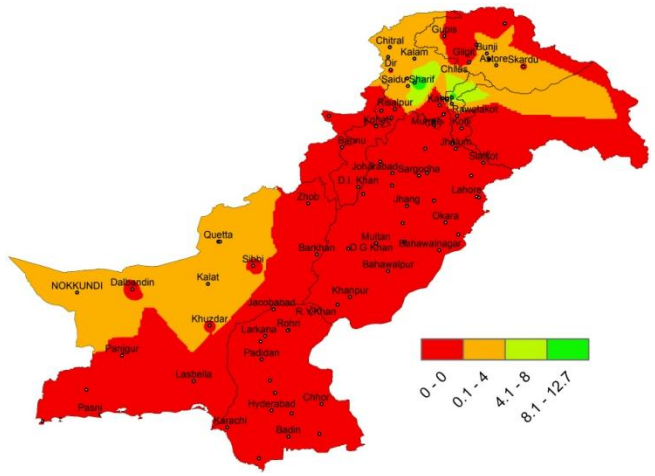
Light rainfall reported at few of places in the agricultural plains of KP; chief amount received at Malam Jabba, Mirkhani & Saidu Sharif etc. Decadal minimum dropped below normal by 2.6°C & maximum temperature raised above normal by 0.6°C, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity and ETo were recorded as 76.3hrs, 0.7km/hr, 58% and 2.3mm/day respectively.

1.4 Balochistan

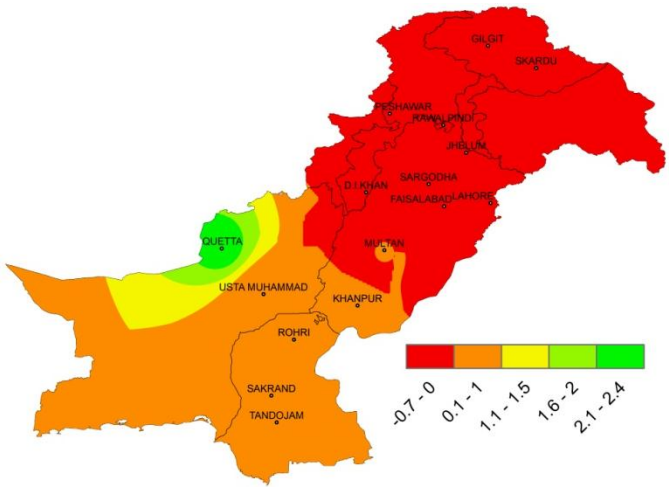
Light rainfall reported at few places in the agricultural plains of Balochistan; chief amount received at Kalat, Nokkundi & Samungli etc. Decadal minimum dropped below normal by 0.9°C & maximum temperature remain normal, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity and ETo were 90.8hrs, 4.1km/hr, 49% and 3.0mm/day respectively.

1.5 Gilgit Baltistan and Azad Jammu & Kashmir

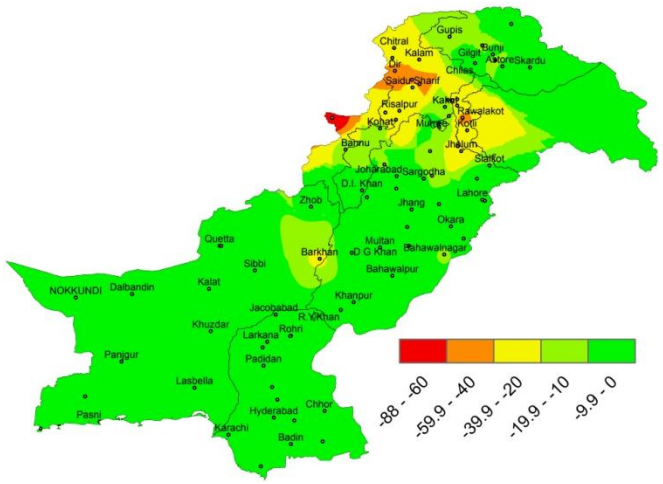
Light rainfall reported at one place of GB; i.e Pattan. Decadal minimum & maximum temperature both dropped below normal by 2.5°C & 0.8°C respectively, in the province. Whereas mean values of sunshine hour, wind speed, relative humidity and ETo were recorded 57.7hrs, 1.6km/hr, 48% and 1.2mm/day respectively.



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 (11th to 20th November, 2013):

2.1 RAMC, Rawalpindi (Potohar region)

No rainfall reported during the decade, weather remained cloudy for 02days, average relative humidity recorded as 54%. Mean night temperature was 5.5°C while day temperature recorded as 24.6°C with 91.4hours bright sunshine duration. Wind speed recorded as 1.4km/h with mean wind direction *easterly*.
Note: No crop is grown at the station.

2.2 RAMC, Faisalabad (Central Punjab)

No rainfall reported during the decade, weather remained cloudy for 02days, average relative humidity recorded as 50%. Mean night temperature was 8.8°C while day temperature recorded as 28.2°C with 87.9hours bright sunshine duration. Wind speed recorded as 2.8km/hr with mean wind direction *north westerly*.
Wheat: Very Good condition, Emergence stage.

2.3 RAMC, Tandojam (Lower Sindh)

No rainfall & cloudy days reported during the decade, average relative humidity recorded as 47%. Mean night temperature was 13.2°C while day temperature recorded as 31.2°C with 89.6hours bright sunshine duration. Wind speed recorded as 0.5km/hr with mean wind direction *northerly*.

Note: Field is being ready for wheat crop.

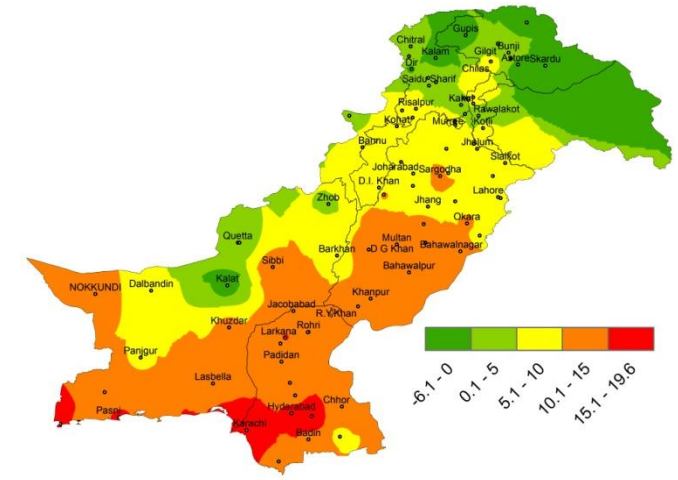
2.4 RAMC, Quetta (Northern Balochistan)

Rainfall reported as 4.2mm during the decade, weather remained cloudy for 06days, average relative humidity recorded as 42%. Mean night temperature was 3.5°C while day temperature recorded as 18.2°C with 90.8hours bright sunshine duration and wind speed recorded as 4.1km/hr with mean wind direction *northerly*.

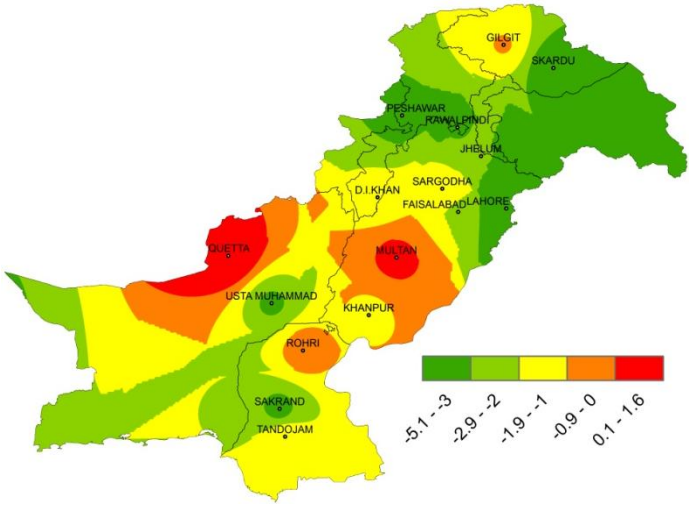
Note: No crop is grown at the station.

2.5 RAMC, Usta Muhammad (Eastern Balochistan)

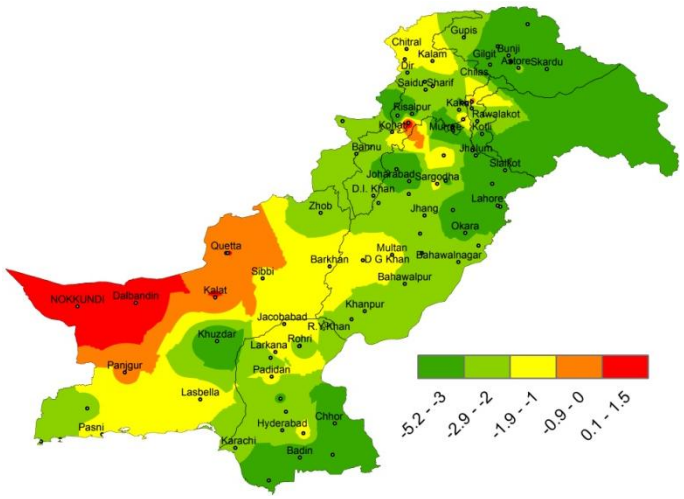
No rainfall reported during the decade, weather remained cloudy for 01day, average relative humidity recorded as 55%. Mean night temperature was 13.3°C, while day temperature recorded as 30.2°C. The data of bright sunshine hour and wind speed was not available, while mean wind direction was *westerly*.
Rice: Good condition, Threshing started.
Note: Field is being ready for wheat crop.



(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 (11th to 20th November, 2013):

2.6 Jhelum

No rainfall reported during the decade, weather remained cloudy for 03days, average relative humidity recorded as 57%. Mean night temperature was 8.2°C while day temperature recorded as 27.2°C with 90.6hours bright sunshine duration. Wind speed recorded 0.6km/hr with mean wind direction *easterly*.

2.7 Lahore

No rainfall reported during the decade, weather remained cloudy for 04days, average relative humidity recorded as 61%. Mean night temperature was 9.8°C while day temperature recorded as 26.2°C with 88.1hours bright sunshine duration. Wind speed recorded as 1.5km/hr with mean direction *north westerly*.

2.8 Sargodha

No rainfall reported during the decade, weather remained cloudy for 05days, average relative humidity recorded as 58%. Mean night temperature was 10.8°C while day temperature recorded as 27.9°C with 76.4hours bright sunshine duration. Wind speed recorded as 0.3km/hr with mean direction *variable*.

2.9 Multan

No rainfall reported during the decade, weather remained cloudy for 03days, average relative humidity recorded as 52%. Mean night temperature was 12.6°C while day temperature recorded as 27.9°C with 89.3hours bright sunshine duration. Wind speed recorded as 1.5km/hr with mean wind direction *southerly*.

2.10 Khanpur

No rainfall & cloudy days reported during the decade, average relative humidity recorded as 52%. Mean night temperature was 11.1°C while day temperature recorded as 29.8°C with 89.1hours bright sunshine duration. Wind speed recorded as 1.7km/hr with mean wind direction *south westerly*.

2.11 Rohri

No rainfall & cloudy days reported during the decade, average relative humidity recorded as 45%. Mean night temperature was 15.1°C while day temperature recorded as 26.5°C with 94.9hours bright sunshine duration. Wind speed recorded 1.7km/hr with mean wind direction *north easterly*.

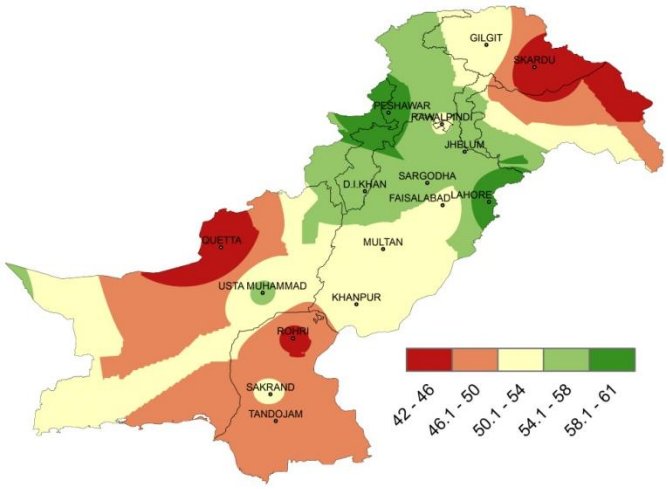


Figure.3: Relative Humidity in percentage

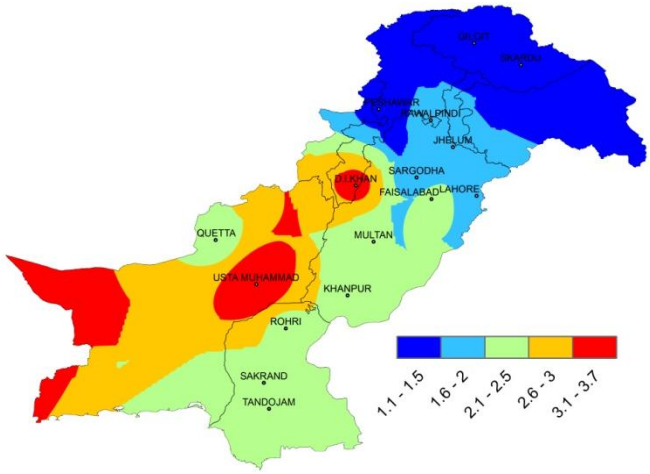


Figure.4: Reference Crop Evapotranspiration "ETo" in mm/day

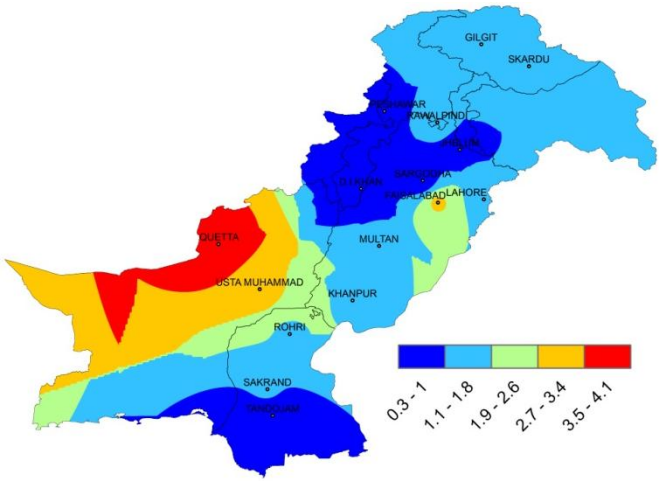


Figure 5: Wind Speed in kilometer per hour

2.12 Sakrand

No rainfall reported during the decade, weather remained cloudy for 01day, average relative humidity recorded as 51%. Mean night temperature was 9.1°C while day temperature recorded as 30.6°C with 99.0hours bright sunshine duration. Wind speed recorded as 1.11km/hr with mean wind direction *northerly*.

2.13 Peshawar

No rainfall reported during the decade, weather remained cloudy for 04days, average relative humidity recorded as 60%. Mean night temperature was 7.2°C while day temperature recorded as 25.3°C with 65.9hours bright sunshine duration. Wind speed recorded as 0.7km/hr with mean wind direction *north westerly*.

2.14 D.I. Khan

No rainfall reported during the decade, weather remained cloudy for 01day, average relative humidity recorded as 56%. Mean night temperature was 9.2°C while day temperature recorded as 27.7°C with 86.7hours bright sunshine duration. wind speed was not available with mean direction *calm*.

2.15 Gilgit

No rainfall reported during the decade, weather remained cloudy for 07days, average relative humidity recorded as 53%. Mean night temperature was -0.3°C while day temperature recorded as 17.9°C with 51.3hours bright sunshine duration. Wind speed recorded as 1.6km/hr with mean wind direction *variable.*

2.16 Skardu

No rainfall reported during the decade, weather remained cloudy for 03days, average relative humidity recorded as 43%. Mean night temperature was -6.1°C while day temperature recorded as 12.6°C with 64.1hours bright sunshine duration. Wind speed recorded as 1.6km/hr with mean wind direction *variable.*

3. Ten days Weather advisory for Farmers (21st to 30th November, 2013):

3.1 Temperature Forecast:

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

3.2 Rain Forecast:

- **Punjab**: Mainly dry/cold weather is expected in most parts of the province during the decade.
- **Khyber Pakhtunkhwa:** Mainly dry & cold weather is expected in most parts of the province during the decade, however light rainfall (with light snowfall over the hills) is expected at isolated places in upper parts of the province during the 1st 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 southwestern & northeastern parts of the province during the 1st half of the decade.
- **Gilgit-Baltistan:** Mainly dry/partly cloudy & very cold weather is expected in most parts of the province during the decade; however light rainfall (with light snowfall over the hills) is expected at isolated places in GB during the 1st half of the decade.
- **Kashmir:** Mainly dry/partly cloudy & cold weather is expected in most parts of Kashmir during the decade; however light rainfall is expected at isolated places in Kashmir during the 1st half of 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 cultivation is completed in most of the barani areas of the country. Farmers of barani areas are advised to remove weeds from the fields, so that the present soil moisture may fully be utilized.
- 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 varities should be cultivated to minimize the expected loss in yield.