Volume 14, No. 34 http://namc.pmd.gov.pk **1st Decade of December, 2014**

Decadal Agromet Bulletin of Pakistan

Highlights….

- Light rainfall reported in the agricultural plains of Punjab, K.P, G.B & Kashmir and dry weather reported from Sindh & Balochistan during the last decade.
- Highest amount of rainfall recorded as 4.1mm at Pattan during the last decade.
- Lowest minimum temperature recorded -6.6°C at Skardu during the last decade.
- Mainly cold and dry weather is expected in most parts of the country however, partly cloudy weather conditions with light to moderate rain (with light snowfall over the hills) is expected at K.P, G.B & Kashmir.
- Farmers are advised to cultivate winter vegetables in time so that 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 20-25 days after sowing.
- Wheat cultivation has been 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.
- Farmers of cotton crop areas are advised to prepare their field for incoming rabi crops and complete sowing in time.

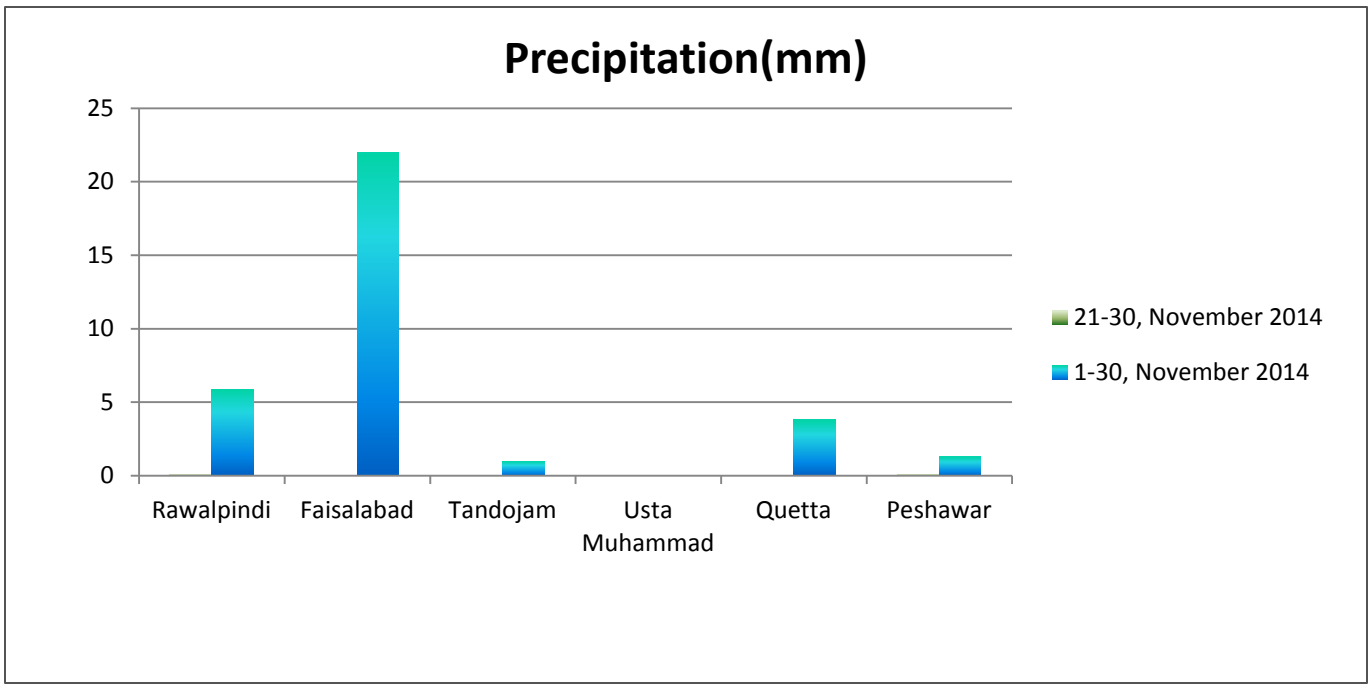
NATIONAL AGROMET CENTRE (NAMC)
PAKISTAN METEOROLOGICAL DEPARTMENT
SECTOR H-8/2, ISLAMABAD
Patron-in-Chief: *Hazrat Mir, Director General*
Editor-in-Chief: *Dr. Khalid M. Malik, Director*
Editor: *Khalida Noureen, Meteorologist*
Phone: +92-51-9250592 Email: info@namc.pmd.gov.pk

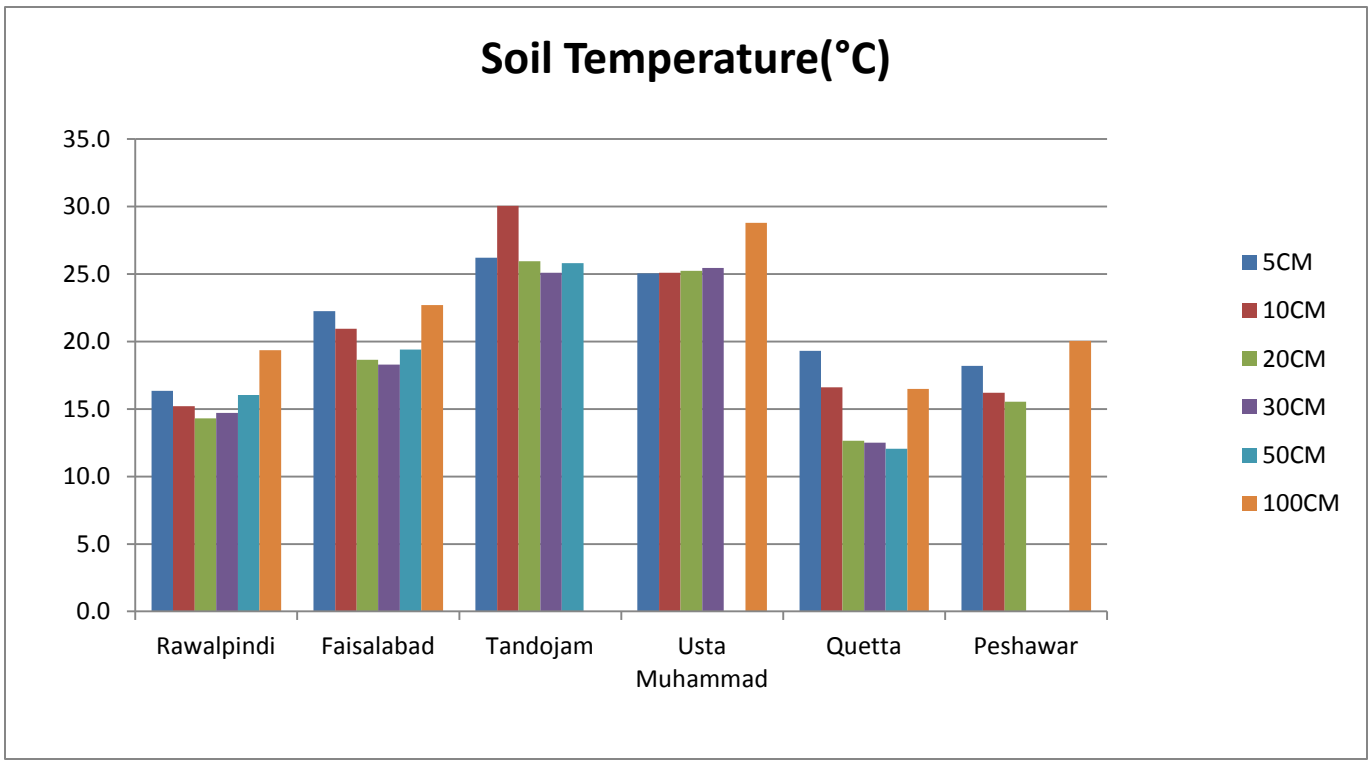
Meteorological conditions during 3rd decade of November, 2014

Sr. No.	Station	Precipitation (mm)			Air Temperature (°c)			Soil Temperatures (°c)						R.H (%)	Sunshine Duration(hours)	Wind Speed (km/hr)	ETo (mm/day)
		Normal	Actual	Dep	Tmax Dep	Tmin Dep	Mean	5cm	10cm	20cm	30cm	50cm	100cm				
1	RAWALPINDI	0.4	0.1	-0.3	0.3	-1.2	14.2	16.4	15.2	14.3	14.7	16.1	19.4	57	71.5	0.3	1.1
2	FAISALABAD	0.1	0.0	-0.1	1.0	0.6	17.9	22.3	21.0	18.7	18.3	19.4	22.7	55	75.5	1.2	1.5
3	JHELUM	0.2	0.1	-0.1	0.3	-0.9	16.9	17.9	16.8	15.9	16.1	17.5	***	61	75.0	1.1	1.4
4	LAHORE	0.2	0.1	-0.1	-0.1	-1.2	18.1	17.3	18.2	17.4	17.5	***	21.7	65	67.3	1.2	1.5
5	SARGODHA	0.0	0.1	0.1	0.3	1.0	18.3	20.4	17.3	18.2	18.9	20.4	22.6	64	67.2	0.5	1.3
6	MULTAN	0.0	0.0	0.0	-0.3	1.5	18.7	***	***	***	***	***	***	55	77.4	1.8	1.8
7	KHANPUR	0.0	0.0	0.0	1.1	0.2	19.1	***	20.7	21.2	21.9	23.0	25.1	59	70.9	2.4	2.2
8	TANDOJAM	0.0	0.0	0.0	2.3	2.7	23.4	26.2	30.1	26.0	25.1	25.8	***	58	85.4	0.8	2.2
9	SAKRAND ☆	0.0	0.0	0.0	0.3	-1.8	18.4	29.7	25.5	***	***	***	29.5	57	94.6	0.7	2.0
10	ROHRI	0.0	0.0	0.0	0.7	11.5	26.9	27.9	26.2	24.3	25.5	24.7	29.5	51	95.3	2.0	2.7
11	DI KHAN	0.0	0.0	0.0	0.3	-1.3	16.6	***	***	***	***	***	***	57	78.0	***	2.9
12	PESHAWAR	0.5	0.1	-0.4	1.0	-0.8	16.0	18.2	16.2	15.6	***	***	20.1	59	58.5	1.0	1.2
13	USTA MUHAMMAD	0.0	0.0	0.0	1.8	-3.3	20.6	25.1	25.1	25.3	25.5	***	28.8	54	***	***	3.4
14	QUETTA	0.2	0.0	-0.2	1.0	4.6	11.7	19.3	16.6	12.7	12.5	12.1	16.5	31	91.7	4.8	2.4
15	SKARDU	0.0	0.0	0.0	0.2	0.0	3.7	***	***	***	***	***	***	49	40.6	0.3	0.8
16	GILGIT	0.0	0.0	0.0	-0.6	0.3	7.7	***	***	***	***	***	***	56	37.3	1.9	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. **ETo** stands for reference crop evapotranspiration. *** stands for no data and (☆) indicates the station with five years climatic (normal) data for computing departures.

Graph at RAMC's during November, 2014





Past Weather (21st to 30th November, 2014)

Light rainfall reported in the agricultural plains of Punjab, K.P, G.B & Kashmir and dry weather reported from Sindh & Balochistan during the last decade.

1.1 Punjab

Light rainfall reported in the agricultural plains of Punjab. Chief amount of rainfall received in Islamabad, Mangla & Jhelum. Decadal maximum raised above normal by 0.4°C & minimum temperature remains normal, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 59%, 72.1hrs, 1.2km/hr and 1.5mm/day respectively.

1.2 Sindh

Dry weather reported in the agricultural plains of Sindh. Decadal maximum raised above normal by 1.1°C & minimum temperature dropped below normal by 4.1°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 55%, 91.8hrs, 1.2km/hr and 2.3mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

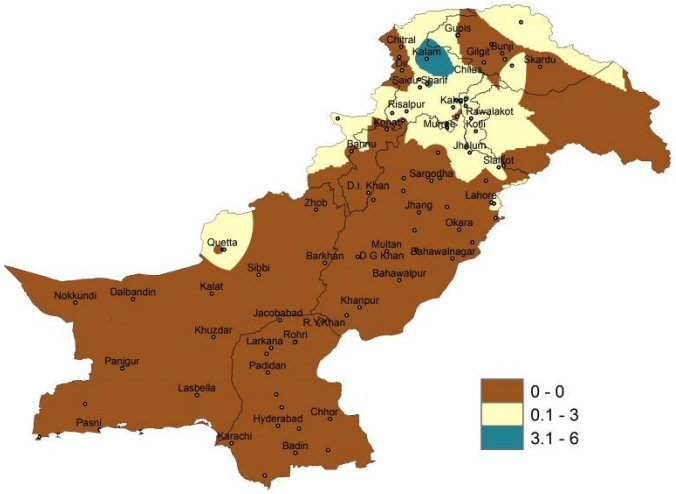
Light rainfall reported in the agricultural plains of KP. Chief amount of rainfall received in Pattan, Malam Jabba & Balakot. Decadal maximum raised above normal by 0.7°C & minimum temperature dropped below normal by 1.1°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 58%, 68.3hrs, 1.0km/hr and 2.1mm/day respectively.

1.4 Balochistan

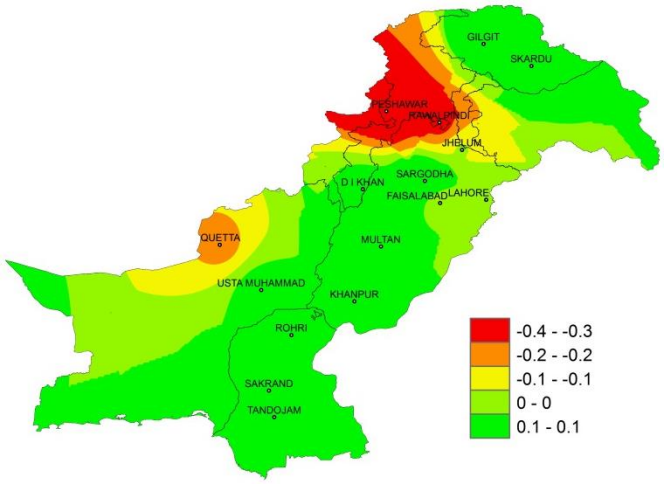
Dry weather reported in the agricultural plains of Balochitsan. Decadal maximum & minimum temperature both raised above normal by 1.4°C & 0.7°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 43%, 91.7hrs, 4.8km/hr and 2.9mm/day respectively.

1.5 Gilgit-Baltistan and Azad Jammu & Kashmir

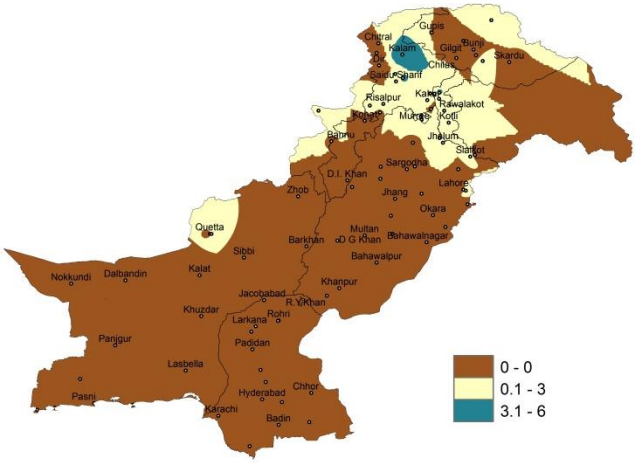
Light rainfall reported in the agricultural plains of GB & Kashmir. Chief amount of rainfall received in Rawalakot, Muzaffarabad & Hunza. Decadal maximum dropped below normal by 0.2°C & minimum temperature raised above normal by 0.2°C, in the province.. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 53%, 39.0hrs, 1.1km/hr and 1.0mm/day respectively.



I. Actual rainfall



II. Departure of rainfall from Normal



III. 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, 2014)

2.1 RAMC, Rawalpindi (Potohar region)

Rainfall reported as Trace (not measureable during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 57%. Mean day temperature was 24°C while night temperature recorded as 5°C with 71.5hours bright sunshine duration. Wind speed recorded as 0.3km/hr with mean wind direction *westerly*.
Wheat (Chakwal 97): Good condition, Emergence stage

2.2 RAMC, Faisalabad (Central Punjab)

Dry weather reported during the decade however weather remained cloudy for 02days. Average relative humidity recorded as 55%. Mean day temperature was 27°C while night temperature recorded as 9°C with 75.5hours bright sunshine duration. Wind speed recorded as 1.2 km/hr with mean wind direction *north westerly*.
Wheat: Excellent condition, Emergence stage

2.3 RAMC, Tandojam (Lower Sindh)

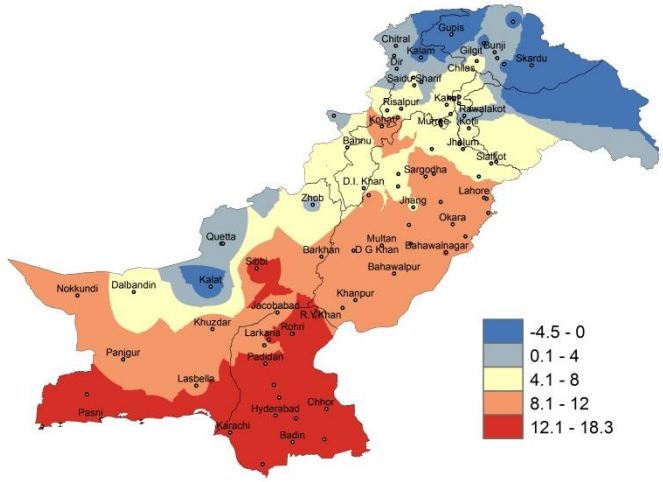
Dry weather reported during the decade however weather remained clear throughout the decade. Average relative humidity recorded as 58%. Mean day temperature was 32°C while night temperature recorded as 15°C with 85.4 hours bright sunshine duration. Wind speed recorded as 0.8km/hr with mean wind direction *north easterly*.
Wheat (TJ-83): Good condition, Emergence stage

2.4 RAMC, Usta Muhammad (Eastern Balochistan)

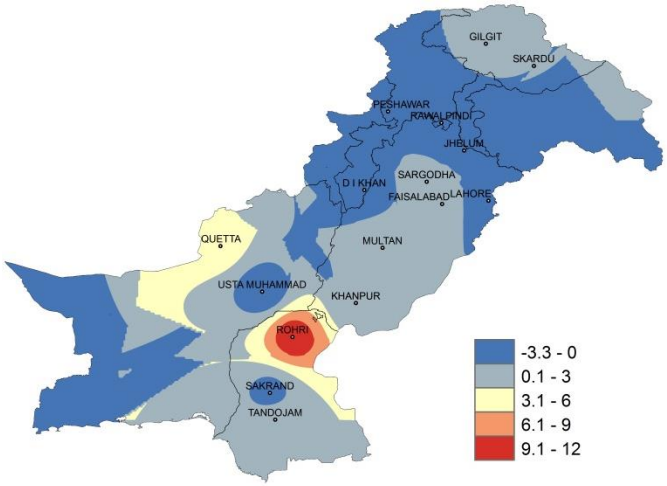
Dry weather reported during the decade however weather remained cloudy for 01days. Average relative humidity recorded as 54%. Mean day temperature was 29°C while night temperature recorded as 12°C.
Wheat (Zardana): Good condition, Emergence stage

2.5 RAMC, Quetta (Northern Balochistan)

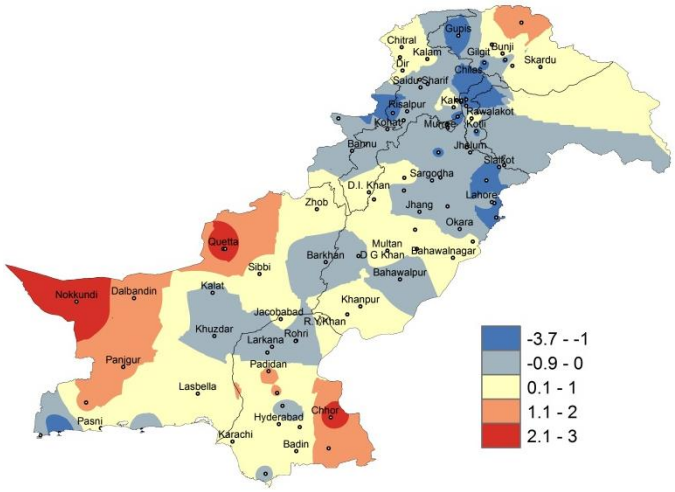
Dry weather reported during the decade however weather remained cloudy for 08days. Average relative humidity recorded as 31%. Mean day temperature was 19°C while night temperature recorded as 5°C with 91.7 hours bright sunshine duration and wind speed recorded as 4.8km/hr with mean wind direction *southerly*.



I. Actual min-temp



II. Departure of min-temp from Normal



III. 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, 2014)

2.6 Jhelum

Rainfall reported as Trace (Non measureable) during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 61%. Mean day temperature was 26°C while night temperature recorded as 8°C with 75.0hours bright sunshine duration. Wind speed recorded 1.1km/hr with wind direction *variable*.

2.7 Lahore

Rainfall reported as Trace (not measureable) during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 65%. Mean day temperature was 25°C while night temperature recorded as11°C with 67.3hours bright sunshine duration. Wind speed recorded as 1.2 km/hr with mean wind direction *north westerly*.

2.8 Sargodha

Rainfall reported as Trace (not measureable) during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 64%. Mean day temperature was 26°C while night temperature recorded as 11°C with 67.2hours bright sunshine duration Wind speed recorded as 0.5km/h with mean wind direction as *north easterly.*

2.9 Multan

Dry weather reported during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 55%. Mean day temperature was 26°C while night temperature recorded as 11°C with 77.4hours bright sunshine duration. Wind speed recorded 1.8km/hr with mean wind direction *north easterly.*

2.10 Khanpur

Dry weather reported during the decade however Weather remained clear throughout the decade. Average relative humidity recorded as 59%. Mean day temperature was 28°C while night temperature recorded as 10°C with 70.9hours bright sunshine duration. Wind speed recorded 2.4 km/hr with mean wind direction *north easterly.*

2.11 Sakrand

Dry weather reported during the decade however weather remained clear throughout the decade. Average relative humidity recorded as 57%. Mean day temperature was 28°C while night temperature recorded as 9°C with 94.6hours bright sunshine duration. Wind speed recorded 0.7km/hr with wind direction *northerly*.

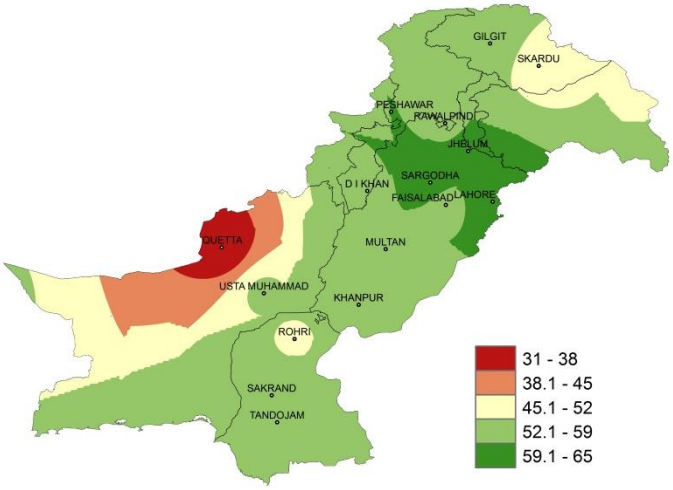


Figure.3: Relative Humidity in percentage (%)

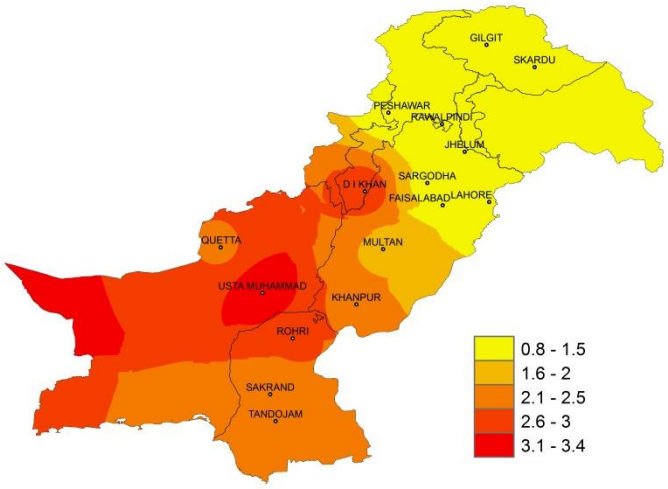


Figure.4: Reference Crop Evapotranspiration "ETo" in mm/day

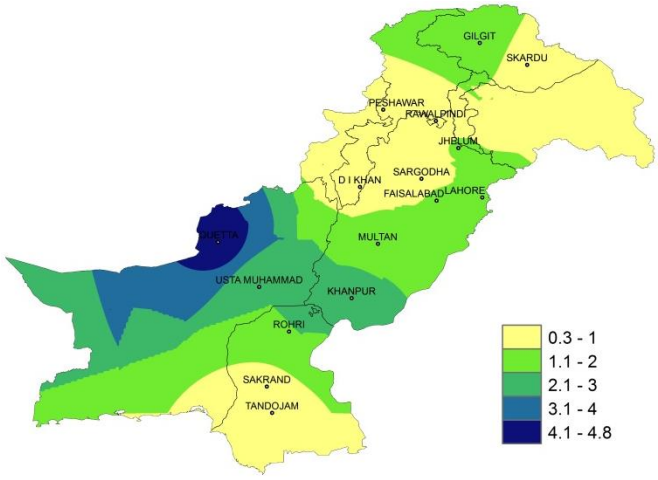


Figure 5: Wind Speed in kilometer per hour (km/h)

2.12 Rohri

Dry weather reported during the decade however weather remained clear throughout the decade. Average relative humidity recorded as 51%. Mean day temperature was 29°C while night temperature recorded as 25°C with 95.1.0hours bright sunshine duration. Wind speed recorded as 2.0 km/hr with mean wind direction *north easterly.*

2.13 D.I. Khan

Dry weather reported during the decade however weather remained cloudy for 02days. Average relative humidity recorded as 57%. Mean day temperature was 26°C while night temperature recorded as 7°C with 78.0hours bright sunshine duration.

2.14 Peshawar

Rainfall reported as Trace (not measureable) during the decade however weather remained cloudy for 07days. Average relative humidity recorded as 59%. Mean day temperature was 25°C while night temperature recorded as 7°C with 58.5hours bright sunshine duration. Wind speed recorded as 1.0km/hr with mean wind direction *south westerly*.

2.15 Skardu

Dry weather reported during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 49%. Mean day temperature was 12°C while night temperature recorded as -5.0°C with 40.6hours bright sunshine duration. Wind speed recorded as 0.3km/hr with mean wind direction *north westerly*

2.16 Gilgit

Dry weather reported during the decade however weather remained cloudy for 10days. Average relative humidity recorded as 56%. Mean day temperature was 16°C while night temperature recorded as -1°C with 37.3hours bright sunshine duration. Wind speed recorded as 1.9km/hr with mean wind direction *easterly.*

3. Ten Days Weather Advisory for Farmers (1st to 10th December, 2014)

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 Wind Forecast

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

3.3 Rain Forecast

- **Punjab:** Mostly cold and dry weather is expected during the decade.
- **Khyber Pakhtunkhwa:** Mainly cold and dry weather is expected in the province. However light rainfall (with light snowfall over the hills) is expected over few parts mid of this decade.
- **Sindh:** Dry weather expected in most of the parts of Sindh during the decade.
- **Balochistan:** Mainly cold and dry weather is expected in the province.
- **Gilgit Baltistan:** Mainly cold and cloudy weather is expected in most parts of the G.B however light to moderate rain (with light snowfall over the hills) is expected in 2nd half of decade.
- **Kashmir:** Mainly cold and dry weather is expected in most parts of the Kashmir however partly cloudy weather conditions with light to moderate rain (with light snowfall over the hills) is expected in end of 2nd half of decade.

3.4 Advisory for Farmers

- Farmers are advised to cultivate winter vegetables in time so that 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 20-25 days after sowing.
- Wheat cultivation has been 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.
- Farmers of cotton crop areas are advised to prepare their field for incoming rabi crops and complete sowing in time.
- Farmers of irrigated plains of Punjab, Sindh & K.P 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.
- Removing weeds from the standing crops is very important as weeds utilize moisture and food which may be utilized by the crop. As a result considerable loss in yield occurs every year. However operations against weeds should be started using weedicides or manually when the crop completely covers the fields.