

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light to moderate rainfall reported from most parts of the country except Sindh Province during the decade.
- ❖ Highest amount of rainfall recorded 23.0 mm at Pattan and Dir during the last decade.
- ❖ Lowest minimum temperature was recorded as -6.4°C in Skardu during the last decade.
- ❖ Lowest values of relative humidity recorded as 35% at Quetta.
- ❖ Highest values of ETo (above 2.0 mm/day) recorded in agricultural plains of Sindh.
- ❖ Day time temperatures are expected to drop $2-3^{\circ}\text{C}$ whereas night temperatures may drop $2-4^{\circ}\text{C}$ in most of the agricultural plains of the country during the next decade.
- ❖ Normal wind pattern may prevail in most parts of the country during the next decade.
- ❖ Generally dry weather with clear skies expected in most parts of the country except hilly areas of KP, Kashmir, GB, northern areas of Punjab and Balochistan province. However, light rain is expected during last 2-3 days of next decade in the northern half of the country.

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

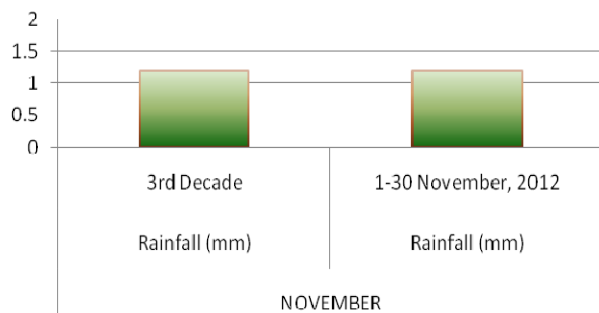
Phone: +92-51-9250592 email: dirnamc@yahoo.com

Chief Editor: Dr. Khalid M. Malik, Director, NAMC Islamabad

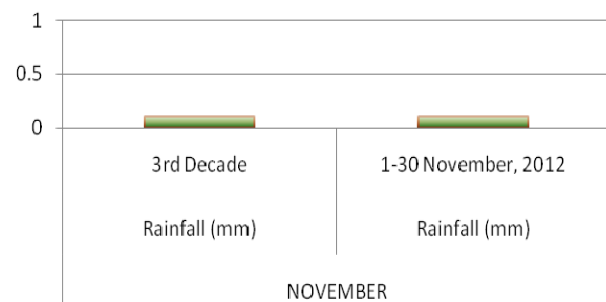
Editor: M. Zeeshan Javed, Assistant Meteorologist, NAMC Islamabad

Graphs for Rainfall (mm) during November 2012

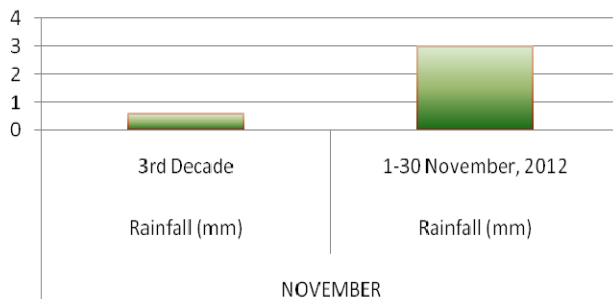
RAMC RAWALPINDI



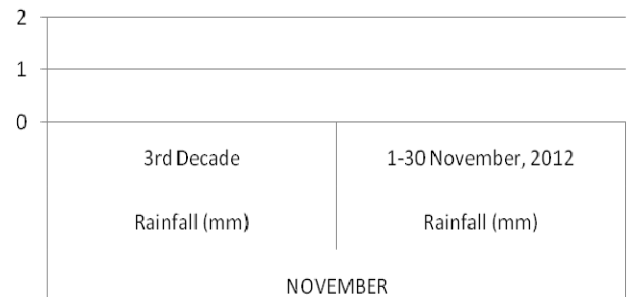
RAMC FAISALABAD



RAMC QUETTA



RAMC TANDOJAM



Meteorological conditions during 3rd decade of November, 2012.

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	0.3	3.0	22.5	25.2	24.8	23.1	23.4	24.7	25.9	81.2	1.0	56	2.1
2	SAKRAND ☆	0.0	0.0	0.0	-3.2	4.0	19.5	27.2	25.1	29.5	23.8	25.8	28.2	94.8	1.5	55	2.1
3	ROHRI	0.0	0.0	0.0	-2.7	1.2	20.0	26.7	25.2	23.5	24.5	24.1	26.8	85.4	2.5	46	2.2
4	QUETTA	0.2	0.6	0.4	-1.6	2.4	9.3	14.9	13.6	11.0	10.5	11.2	15.7	80.7	5.7	35	2.0
5	KHANPUR	0.0	0.0	0.0	-1.6	2.4	18.8	19.9	19.8	20.1	20.8	21.8	23.7	90.3	1.9	50	1.9
6	MULTAN	0.0	0.0	0.0	-1.0	1.5	18.3	***	***	***	***	***	***	81.1	2.6	51	1.9
7	LAHORE	0.2	0.2	0.0	-3.8	0.6	17.2	19.1	18.5	17.9	17.9	***	21.8	79.0	2.0	52	1.6
8	FAISALABAD	0.1	TR	0.0	-1.7	1.0	16.7	21.5	20.2	18.2	18.0	19.3	22.2	69.0	3.6	55	1.9
9	SARGODHA	0.0	TR	TR	-1.7	1.7	17.7	20.5	19.2	18.6	19.2	21.2	23.0	64.0	0.7	58	1.3
10	JHELUM	0.2	5.7	5.5	-3.1	1.5	16.4	18.7	17.9	17.5	18.0	19.6	***	59.8	1.6	64	1.3
11	RAWALPINDI	0.4	1.2	0.8	3.8	0.9	17.0	136.5	16.6	4.8	12.5	1.1	8.9	69.2	1.1	58	1.1
12	DI KHAN	0.0	TR	TR	-2.3	0.2	16.0	***	***	***	***	***	***	79.4	2.3	59	1.6
13	PESHAWAR	0.5	0.8	0.3	-4.0	2.4	15.1	16.1	16.0	16.1	18.1	18.8	20.4	60.0	1.0	60	1.0
14	SKARDU	0.0	0.4	0.4	-1.9	0.6	3.0	***	***	***	***	***	***	28.8	0.7	53	0.8
15	GILGIT	0.0	TR	TR	-1.6	2.0	8.0	***	***	***	***	***	***	27.8	1.3	54	1.1

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.

Past Weather (21th to 30th November, 2012):

Light to moderate rainfall/snow reported from the agricultural plains of KP, Gilgit Baltistan, Upper Punjab and northern Balochistan region where as dry weather reported from rest of the country during the decade.

1.1 Punjab

Light rainfall reported from few places in the province .Chief amount received at Jhelum, Islamabad and Mandi-Bahu-Din. Maximum temperature raised above normal by 1.4 °C and minimum temperature dropped below normal by 1.3°C respectively, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 1.9 k/hr, 55 %, and 1.6 mm/day respectively (Fig 3-4).

1.2 Sindh

Dry weathe reported from all over the province during the decade. Decadal maximum temperature raised above normal by 2.7°C & and decadal minimum temperature dropped below normal by 1.9 °C respectively, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 1.7 km/hr, 52%, and 2.1 mm/day respectively.

1.3 Khyber Pakhtoonkhawa (KP)

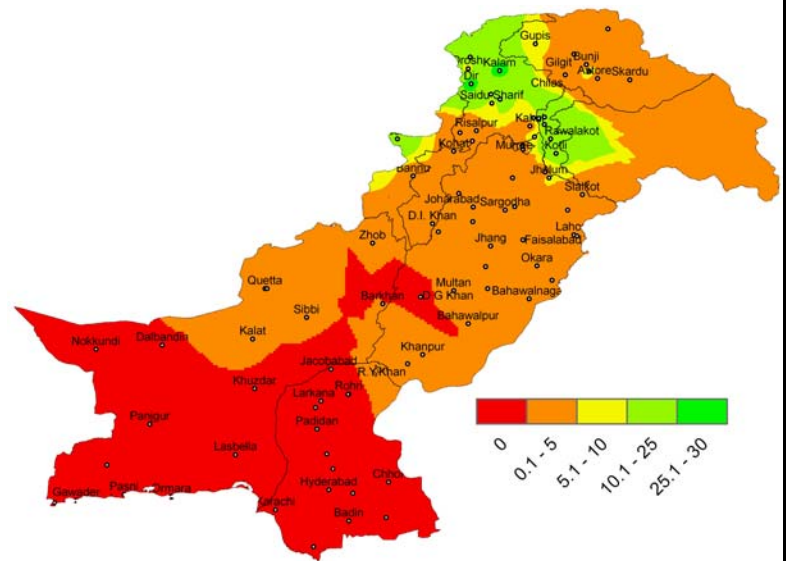
Light to moderate rainfall reported at a few places in agricultural plains of KP; chief amount received at Parachinar, Dir and Kalam. In KP region; Decadal maximum temperature raised above normal by 1.3 °C and decadal minimum temperature dropped below normal by 3.2°C, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 1.7 km/hr, 60%, and 1.3 mm/day respectively.

1.4 Balochistan

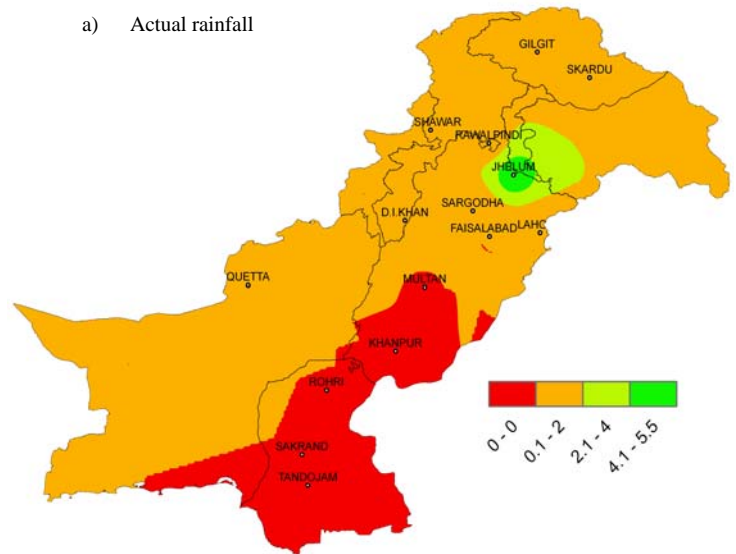
Dry weathe reported from most of the places in the province. However light rainfall reported at Quetta and Samungli. Decadal maximum temperature raised above normal by 2.4°C and decadal minimum temperature dropped below normal by 1.6°C, Whereas mean values of wind speed, relative humidity and ETo were 5.7km/hr, 35%, and 2.0 mm/day respectively.

1.5 Gilgit Baltistan and Azad Jammu & Kashmir

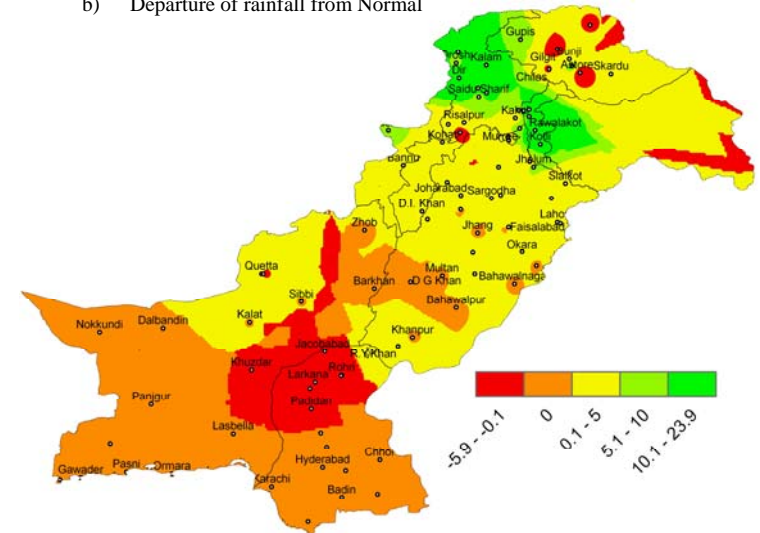
Moderate rainfall reported at a few places in agricultural plains of Kashmir & Gilgit Baltistan region; chief amount received at Pattan, Rawalakot and Muzaffarabad. In GB & AJK region; decadal maximum raised above normal by 1.3°C, & decadal minimum below normal 1.8 °C respectively. Whereas mean values of wind speed, relative humidity and ETo were recorded 1.0 km/hr, 54 %, and 1.0 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 (21th to 30th November, 2012) as per Table-1**

2.1 **RAMC, Rawalpindi (Potohar region)**

Rainfall reported amounting to 1.2 mm during the decade, weather remained cloudy for 7 days, average relative humidity recorded as 58%. Mean night temperature was 9.5°C while day temperature recorded as 24.5°C with 69.2 hours bright sunshine duration. Wind speed recorded as 1.1 Km/hr with mean direction *westerly*. *Presently no crop is grown at the station.*

2.2 **RAMC, Tandojam (Lower Sindh)**

No rainfall reported during the decade, weather remained cloudy for 3 days during the decade, average relative humidity recorded as 56%. Mean night temperature was 12.5°C while day temperature recorded as 32.5°C with 81.2 hours bright sunshine duration. Wind speed recorded as 1.0 km/hr with mean direction South easterly.

Cotton: Good condition, Third leaf stage.

2.3 **RAMC, Faisalabad (Central Punjab)**

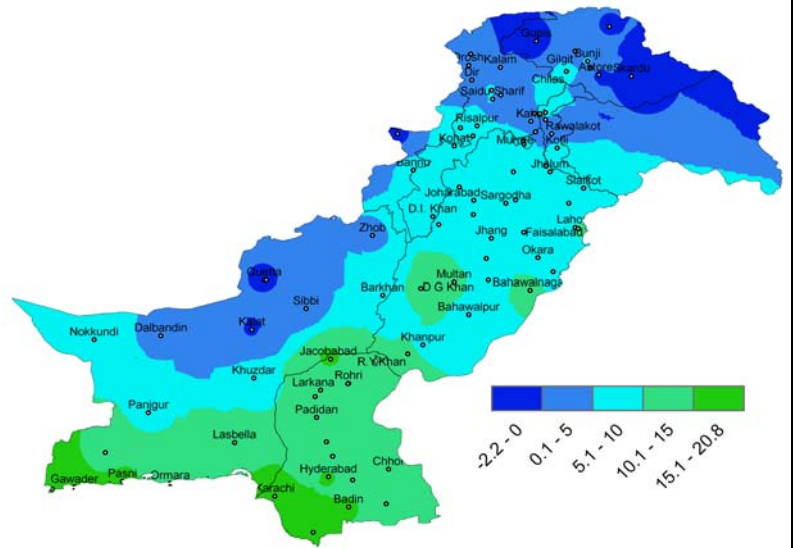
Rainfall reported amounting to Trace (non-measurable) during the decade. weather remained cloudy for 6 days, average relative humidity recorded as 55%. Mean night temperature was 6.7°C while day temperature recorded as 26.7°C with 69.0 hours bright sunshine duration. Wind speed recorded as 3.6 Km/hr with mean direction *Westerly*.

Sugarcane: Very Good condition, Third leaf completed.
Wheat: Very Good condition, Emergence stage.

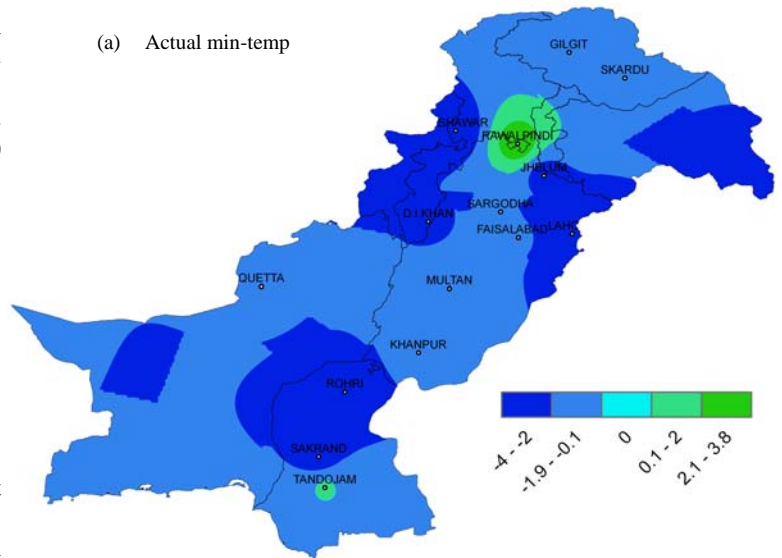
2.4 **RAMC, Quetta (Northern Balochistan)**

Rainfall reported amounting to 0.6 mm during the decade, weather remained cloudy for 8 days during the decade, average relative humidity recorded as 35%. Mean night temperature was -1.5°C while day temperature recorded as 20.0°C with 80.7 hours bright sunshine duration and wind speed recorded as 5.7 Km/hr with mean direction *Northly*.

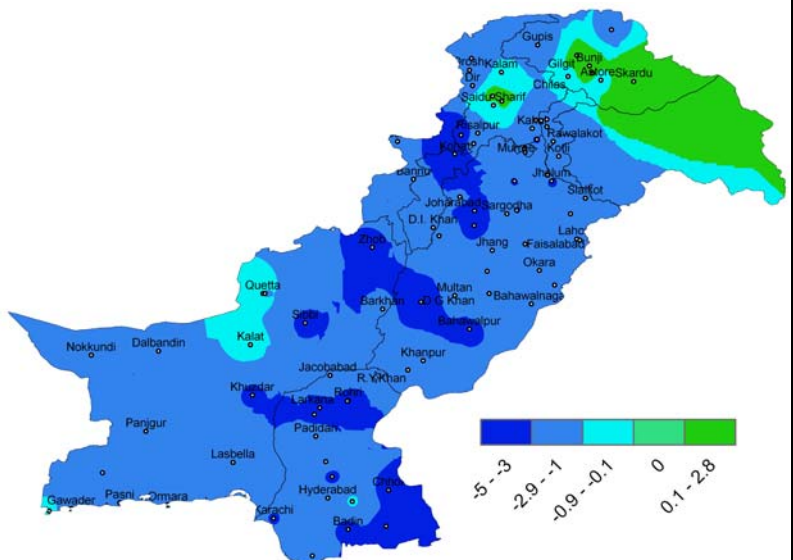
Wheat: Good condition, Germination stage.



(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 (21th to 30th November, 2012)

2.6 Rohri

No rainfall reported during the decade, weather remained cloudy for 8 days, Average relative humidity recorded as 46%. Mean night temperature was 11.0°C while day temperature recorded as 29.0°C with 85.4 hours bright sunshine duration. Wind speed recorded as 2.5 Km/hr with mean direction *North easterly*.

2.7 Skardu

Rainfall reported amounting to 0.4 mm during the decade, weather remained cloudy for 7 days, average relative humidity recorded as 53%. Mean night temperature was 6.4°C while day temperature recorded as 12.3°C with 28.8 hours bright sunshine duration with mean speed 0.7 Km/hr and mean direction *Easterly*.

2.8 Multan

No rainfall reported during the decade, weather remained cloudy for 7 days decade, average relative humidity recorded as 51%. Mean night temperature was 8.5°C while day temperature recorded as 28.1°C with 81.1 hours bright sunshine duration. Wind speed recorded as 2.6 Km/hr with mean direction *Southerly*.

2.9 Lahore

Rainfall reported amounting to 0.2 mm during the decade, weather remained cloudy for 4 days decade decade, average relative humidity recorded as 52%. Mean night temperature was 8.5°C while day temperature recorded as 25.8°C with 79.0 hours bright sunshine duration. Wind speed recorded as 2.0 Km/hr with mean direction *North westerly*.

2.10 Peshawar

Rainfall reported amounting to 0.8 mm during the decade, weather remained cloudy for 8 day, average relative humidity recorded as 60%. Mean night temperature was 4.0°C while day temperature recorded as 26.1°C with 45.0 hours bright sunshine duration. Wind speed recorded as 1.0 Km/hr with mean direction *South westerly*.

2.11 Khanpur

No rainfall reported during the decade, weather remained cloudy for 5 days during the decade, average relative humidity recorded as 50%. Mean night temperature was 8.1°C while day temperature recorded as 29.5°C with 90.3 hours bright sunshine duration. Wind speed recorded as 1.9 Km/hr with mean direction *South westerly*.

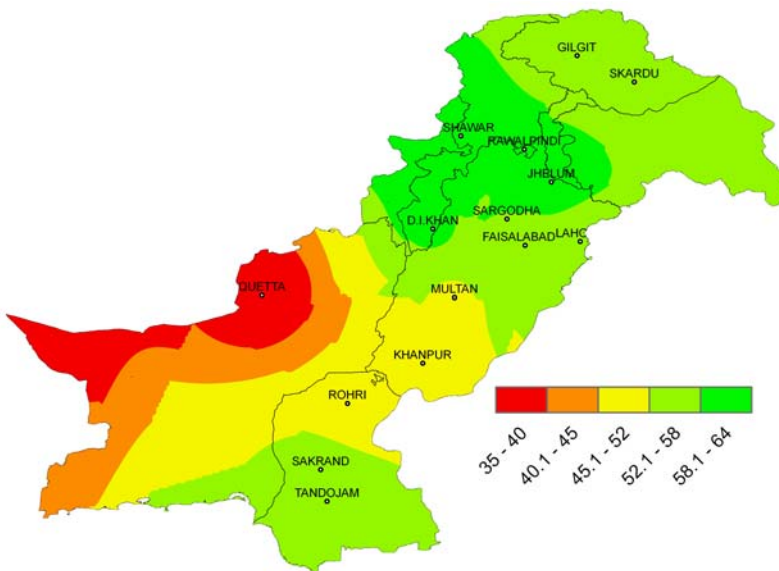


Figure.3: Relative Humidity in percentage

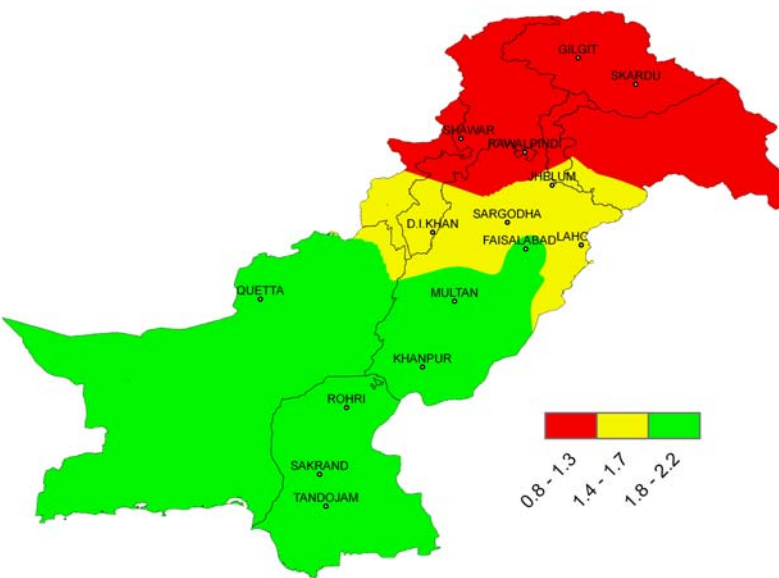


Figure.4: Reference Crop Evapotranspiration “ET₀” in mm/day

2.12 Sargodha

Rainfall reported amounting to Trace (non measureable) during the decade, weather remained cloudy for 2 days during the decade, average relative humidity recorded as 58%. Mean night temperature was 8.1°C while day temperature recorded as 27.2°C with 64.0 hours bright sunshine duration. Wind speed recorded as 0.7Km/hr with mean direction Variable.

2.13 Gilgit.

Rainfall reported amounting to Trace (non measureable) during the decade. weather remained cloudy for 10 days and average relative humidity recorded as 54%. Mean night temperature was -3.0°C while day temperature recorded as 19.0°C with 27.8 hours bright sunshine. Wind speed recorded as 1.3 Km/hr with mean direction *Variable*.

2.14 Jhelum

Rainfall reported amounting to 5.7 mm during the decade. weather remained cloudy for 9 days and average relative humidity recorded as 64%. Mean night temperature was 5.6°C while day temperature recorded as 27.2°C with 59.8 hours bright sunshine duration. Wind speed recorded as 1.6 Km/hr with mean direction *Westerly*.

2.15 D.I. Khan

Rainfall reported amounting to Trace (non measureable) during the decade, weather remained cloudy for 3 days, average relative humidity recorded as 59%. Mean night temperature was 6.0°C while day temperature recorded as 26.0°C with 79.4 hours bright sunshine duration. Wind speed recorded as 2.3 Km/hr with mean direction *Easterly*.

2.16 Sakrand

No rainfall reported during the decade, weather remained cloudy for 1 day during the decade and average relative humidity recorded as 55%. Mean night temperature was 7.5°C while day temperature recorded as 31.5°C with 94.8 hours bright sunshine duration. Wind speed recorded as 1.5 Km/hr with mean direction *North easterly*.

3. Ten days Weather advisory for Farmers (1st to 10th December, 2012)

3.1 Temperature Forecast:

Day time temperatures expected to be dropped 2-3°C but night temperatures may drop 2-4°C 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. However light rain may occur at northern parts during the last days of the decade.
- ❖ **Khyber Pakhtoonkhawa:** Mainly dry weather is expected in most parts of the province. However light rain/snow over hills may occur at upper parts during the last days of the decade.
- ❖ **Sindh:** Mainly dry weather is expected in most parts of the province during the decade.
- ❖ **Balochistan:** Mainly dry weather is expected in most parts of the province. However light rain may occur at northeastern parts during the last days of the decade.
- ❖ **Gilgit-Baltistan & Kashmir:** Mainly dry weather is expected in most parts of the province. However light rain/snow over hills may occur during the last days 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:

- ❖ Most of the fields in Barani areas are under moisture stress condition. Farmers of rainfed areas, obtaining crop water through tube wells are advised to schedule the irrigation according to the expected weather mentioned above during the decade.
- ❖ Farmers of irrigated areas are advised to complete sowing before the mid of December to get the optimum yield.
- ❖ Wheat cultivation mostly completed in upper plains and in progress in lower plains of the country. Farmers may irrigate the crop as per requirement due to dry weather in most of the agricultural plains of the country. Normally first irrigation is given 20-25 days after sowing.