

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light rainfall (with snow over hills) reported from the few agricultural plains of KP, Punjab, Balochistan, GB & Kashmir during the last decade.
- ❖ Highest amount of rainfall recorded as 6.0 mm at Parachinar during the last decade.
- ❖ Lowest minimum temperature recorded as -14.3°C at Skardu during the last decade.
- ❖ Higher values of relative humidity (above 60%) reported from Upper and Central parts of the country during the last decade.
- ❖ Higher values of ETo reported from the southern half of the country whereas lowest values reported from Skardu region during the last decade.
- ❖ Day & night temperatures expected to be dropped 2-4°C & 3-5°C respectively 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.
- ❖ Mainly cold & dry weather expected in most parts of the country, However, rain with snow over the hills expected on 12th-13th & 16th-18th of January in Punjab, KP, Northern Balochistan and Gilgit Baltistan & Kashmir region during the next decade.
- ❖ Frost is expected in most of the plains areas of the country during the decade. Therefore precautionary measures should be taken for protection of crops/nurseries sensitive to frost.

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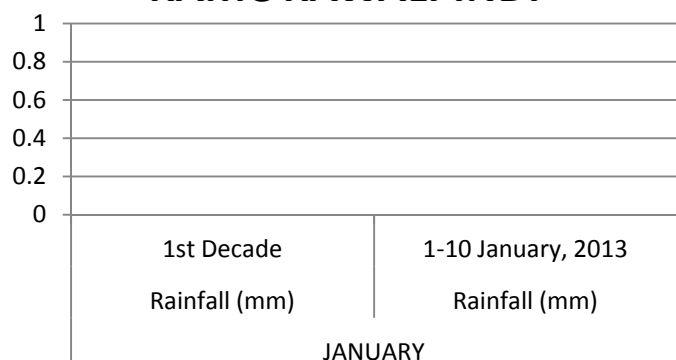
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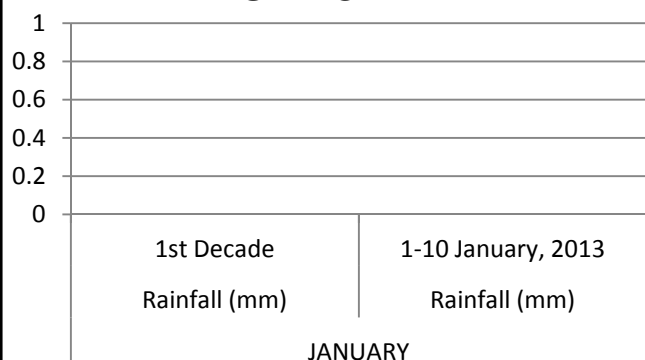
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Graphs for Rainfall (mm) during January 2013

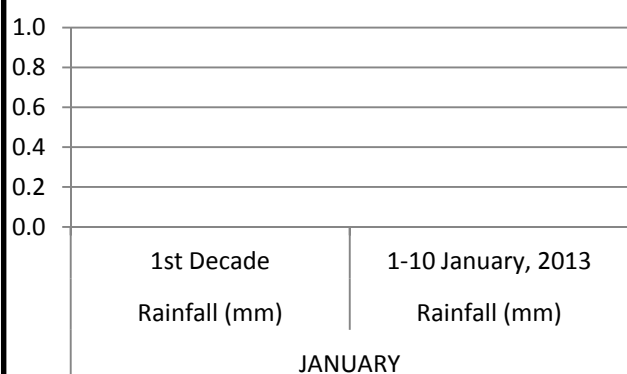
RAMC RAWALPINDI



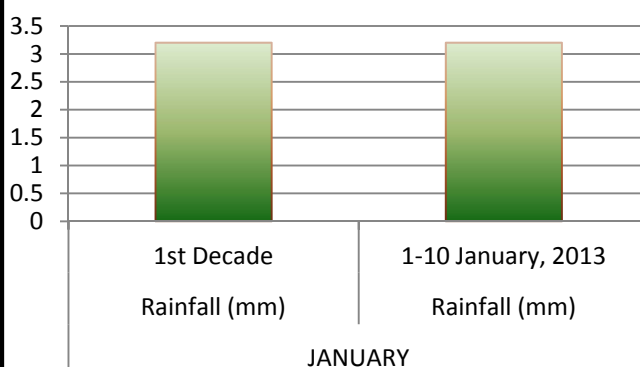
RAMC FAISALABAD



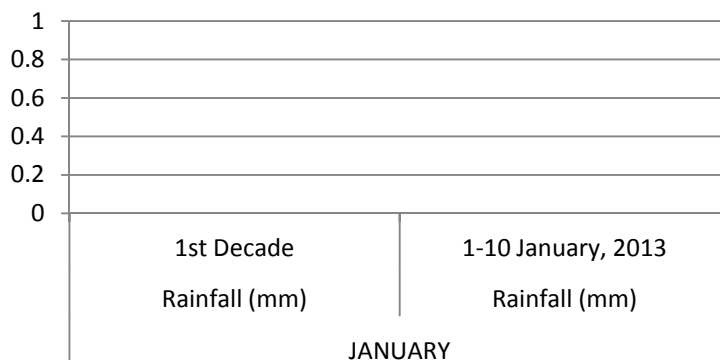
RAMC TANDOJAM



RAMC QUETTA



RAMC USTAMUHAMMAD



Note: Rainfall is recorded only at RAMC Quetta during the specified period.

Meteorological conditions during 1st decade of January, 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	M _{ean}	5cm	10cm	20cm	30cm	50cm	100cm				
1	TANDOJAM	0.1	0.0	-0.1	-0.5	0.7	15.5	20.5	18.2	***	17.7	19.4	21.7	85.5	1.2	53.0	1.8
2	SAKRAND ☆	0.1	0.0	-0.1	-2.1	4.4	12.7	20.7	18.9	***	18.1	19.9	23.2	84.9	1.7	56.0	1.7
3	ROHRI	0.1	0.0	-0.1	-2.3	-2.6	12.2	20.9	19.1	17.4	19.0	19.1	24.1	78.3	2.1	54.0	1.6
4	Usta Muhammad	0.1	0.0	-0.1	-0.8	-0.4	12.4	14.3	14.5	15.1	15.6	17.7	21.3	***	11.2	75.1	2.0
5	QUETTA	1.6	3.2	1.6	-0.2	-0.6	4.1	7.5	6.9	4.2	4.2	4.1	9.0	79.8	5.2	48.0	1.5
6	KHANPUR	0.1	0.0	-0.1	-1.9	-1.3	10.8	12.2	12.8	13.3	14.1	15.5	18.4	59.2	2.2	67.0	1.1
7	MULTAN	0.4	0.0	-0.4	-0.6	-3.8	9.5	***	***	***	***	***	***	39.9	0.6	75.0	0.9
8	LAHORE	0.7	0.2	-0.5	-3.1	-5.1	8.1	10.9	11.0	11.1	11.9	***	17.3	21.7	2.3	79.0	0.9
9	FAISALABAD	0.7	TR	***	-0.8	-4.8	7.8	12.5	11.5	10.7	11.0	12.6	16.6	22.4	3.6	77.0	1.0
10	SARGODHA	0.8	0.3	-0.5	-1.2	-5.7	7.7	12.5	12.3	12.1	13.1	15.0	18.0	20.4	1.3	90.0	0.7
11	JHELM	1.1	0.0	-1.1	-0.6	-3.9	9.2	12.4	12.1	12.2	12.7	14.2	***	33.1	3.2	76.0	1.0
12	RAWALPINDI	1.9	0.0	-1.9	2.8	-2.4	10.2	12.1	10.5	10.4	10.6	11.2	14.0	69.6	2.3	69.0	1.1
13	D I KHAN	0.8	TR	***	-2.5	-4.1	7.9	***	***	***	***	***	***	40.3	1.2	77.0	0.9
14	PESHAWAR	1.2	0.0	-1.2	-2.9	-0.3	9.1	12.3	10.2	9.7	12.2	12.9	15.0	57.6	1.1	64.0	0.8
15	SKARDU	1.0	0.0	-1.0	-5.5	-3.6	-6.7	***	***	***	***	***	***	41.5	0.3	58.0	0.5
16	GILGIT	0.2	0.0	-0.2	-3.0	0.5	2.1	***	***	***	***	***	***	47.1	1.3	53.0	0.9

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.

Past Weather (1st to 10th January, 2013):

Light rainfall reported from the few agricultural plains of KP, Punjab, Balochistan, Gilgit Baltistan & Kashmir, while dry weather reported from the agricultural plains of Sindh during the decade.

1.1 Punjab

Light rainfall reported from most of the agricultural plains of upper Punjab; chief amount received at Lahore, Sargodha, Faisalabad etc. Decadal maximum & minimum temperature dropped below normal by 3.9 & 0.8°C respectively, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 2.2 Km/h, 76%, and 1.0 mm/day respectively (Fig 3-4).

1.2 Sindh

Dry & cold weather reported from most of the agricultural plains of Sindh. Decadal maximum temperature normal raised above normal by 0.8°C and minimum temperature dropped below normal by 1.6°C, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 1.7 Km/h, 54%, and 1.7 mm/day respectively.

1.3 Khyber Pakhtoonkhawa (KP)

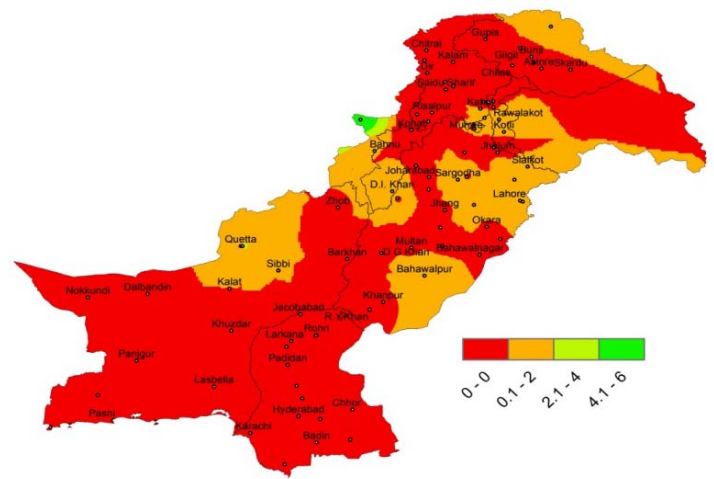
Light rainfall reported at a number of places in agricultural plains of KP; chief amount received at D.I.Khan. Decadal maximum & minimum temperature dropped below normal by 2.2 & 2.7°C respectively, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 1.2 Km/h, 71%, and 0.9 mm/day respectively.

1.4 Balochistan

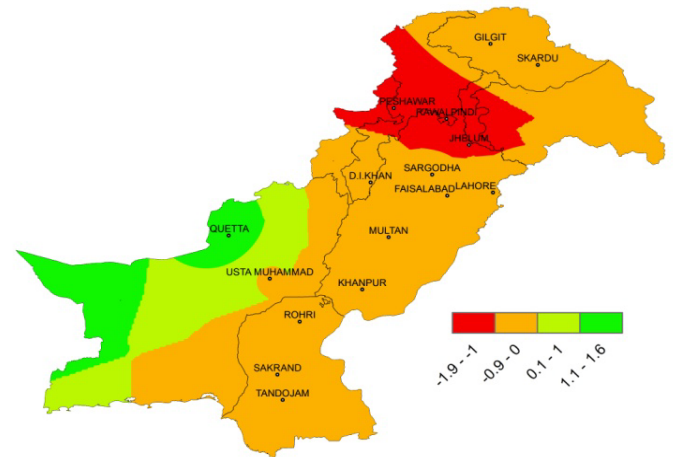
Rainfall in meager amount reported from few places of Quetta divisions. Decadal maximum & minimum temperature both dropped below normal by 0.5 °C, in the province. Whereas mean values of wind speed, relative humidity and ETo were 8.2 Km/h, 62%, and 1.8 mm/day respectively.

1.5 Gilgit Baltistan and Azad Jammu & Kashmir

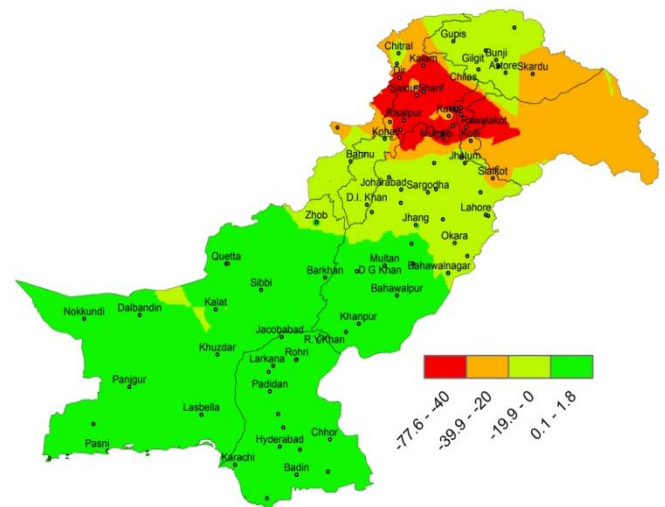
No rainfall reported from agricultural plains of Gilgit Baltistan & Kashmir region. In GB region decadal maximum and minimum temperature dropped below normal by 1.6 & 4.3°C respectively. Whereas mean values of wind speed, relative humidity and ETo were recorded 0.8 Km/h, 56%, and 0.7 mm/day respectively.



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 (1st to 10th January, 2013) as per Table-1

2.1 RAMC, Rawalpindi (Potohar region)

No Rainfall reported during the decade, weather remained cloudy for 4 days, average relative humidity recorded as 69%. Mean night temperature was 5.1°C while day temperature recorded as 15.2°C with 69.6 hours bright sunshine duration. Wind speed recorded as 2.3 Km/hr with mean direction *westerly*. Presently one crop is grown at the station.

Wheat Chakwal 97: Good condition, Tillering stage.

2.2 RAMC, Tandojam (Lower Sindh)

No rainfall reported during the decade, weather remained cloudy for 1 day during the decade, average relative humidity recorded as 53%. Mean night temperature was 7.2°C while day temperature recorded as 23.8°C with 85.5 hours bright sunshine duration. Wind speed recorded as 1.2 km/hr with mean direction *northerly*.

Wheat (TJ 83): Good condition, Heading stage.

2.3 RAMC, Faisalabad (Central Punjab)

Trace (not measurable) Rainfall reported during the decade, weather remained cloudy for 8 days, average relative humidity recorded as 77%. Mean night temperature was 3.1°C while day temperature recorded as 12.5°C with 22.6 hours bright sunshine duration. Wind speed recorded as 3.6 Km/hr with mean direction *westerly*.

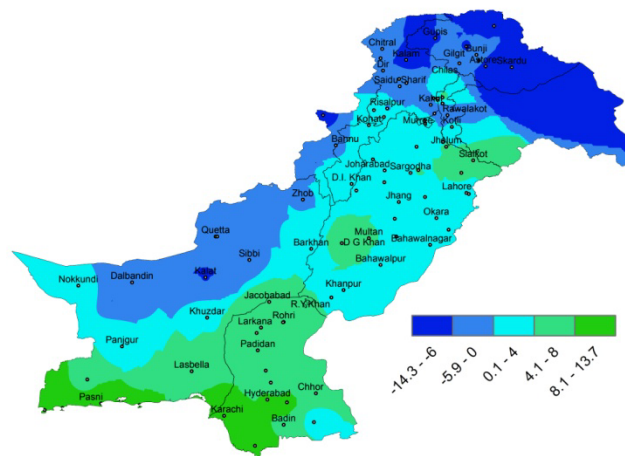
Sugarcane: Very Good condition, Tillering stage.

Wheat: Very Good condition, Tillering stage.

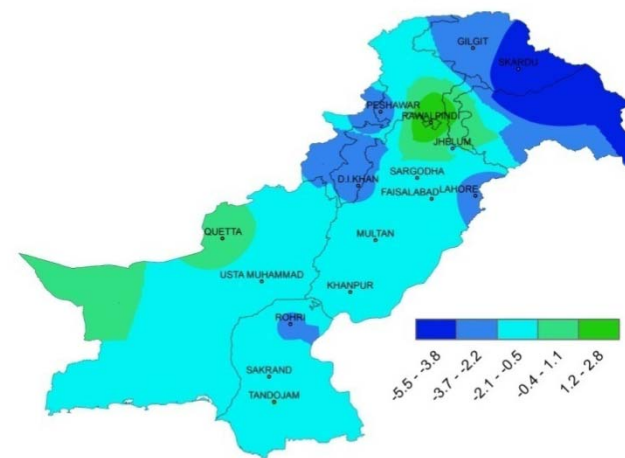
2.4 RAMC, Quetta (Northern Balochistan)

Rainfall reported as 3.2 mm during the decade, weather remained cloudy for 9 days, average relative humidity recorded as 48%. Mean night temperature was -2.5°C while day temperature recorded as 10.7°C with 79.8 hours bright sunshine duration and wind speed recorded as 5.2 Km/hr with mean direction *northerly*.

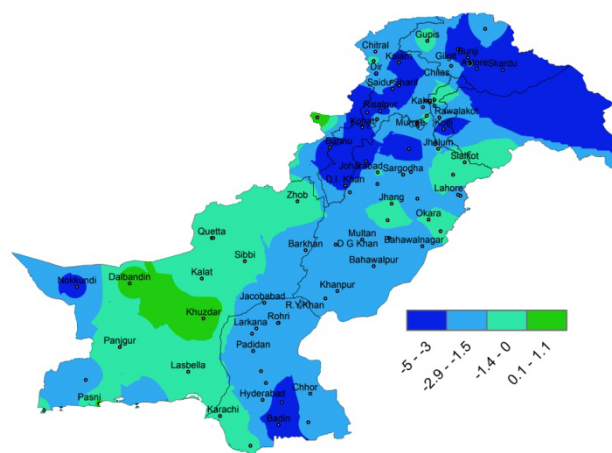
Wheat (Local white): Good condition, Third leaf stage.



(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 (1st to 10th January, 2013)

2.5 Rohri

No rainfall reported during the decade, weather remained cloudy for 5 days, average relative humidity recorded as 54%. Mean night temperature was 6.2°C while day temperature recorded as 18.2°C with 78.3 hours bright sunshine duration. Wind speed recorded as 2.1 Km/h with mean direction *north easterly*.

2.6 Skardu

No rainfall reported during the decade, weather remained cloudy for 4 days, average relative humidity recorded as 58%. Mean night temperature was -14.3°C while day temperature recorded as 0.9°C with 41.5 hours bright sunshine duration with mean speed 0.4 Km/h and mean direction *northerly*.

2.7 Multan

No rainfall reported during the decade, weather remained cloudy for 5 days, average relative humidity recorded as 75%. Mean night temperature was 4.5°C while day temperature recorded as 14.5°C with 39.9 hours bright sunshine duration. Wind speed recorded as 0.6 Km/h with Variable direction.

2.8 Lahore

Rainfall reported as 0.2 mm during the decade, weather remained cloudy for 9 days, average relative humidity recorded as 79%. Mean night temperature was 4.2°C while day temperature recorded as 11.9°C with 21.7 hours bright sunshine duration. Wind speed recorded as 2.3 Km/h with mean direction *north westerly*.

2.9 Peshawar

No rainfall reported during the decade, weather remained cloudy for 2 days, average relative humidity recorded as 64%. Mean night temperature was 1.1°C while day temperature recorded as 17.1°C with 57.6 hours bright sunshine duration. Wind speed recorded as 1.1 Km/h with mean direction *south easterly*.

2.10 Khanpur

No rainfall reported during the decade, weather remained cloudy for 4 days during the decade, average relative humidity recorded as 67%. Mean night temperature was 3.2°C while day temperature recorded as 18.4°C with 59.2 hours bright sunshine duration. Wind speed recorded as 2.2 Km/h with mean direction *north easterly*.

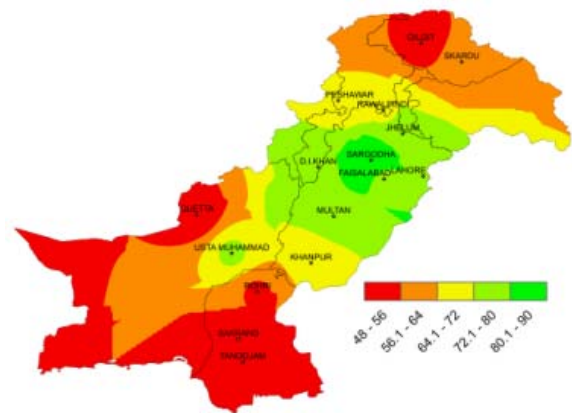


Figure.3: Relative Humidity in percentage

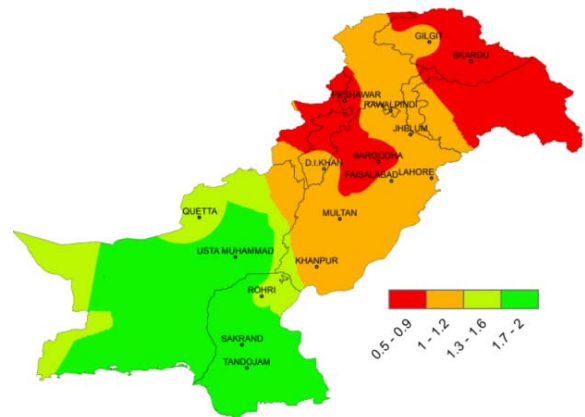


Figure.4: Reference Crop Evapotranspiration “ET₀” in mm/day

2.11 Sargodha

Rainfall reported as 0.3 mm during the decade, weather remained cloudy for 8 days during the decade, average relative humidity recorded as 90%. Mean night temperature was 3.7°C while day temperature recorded as 11.6°C with 20.4 hours bright sunshine duration. Wind speed recorded as 1.3 Km/h with Variable direction.

2.12 Gilgit.

No rainfall reported during the decade, weather remained cloudy for 8 days and average relative humidity recorded as 53%. Mean night temperature was -6.8°C while day temperature recorded as 10.9°C with 47.1 hours bright sunshine. Wind speed recorded as 1.3 Km/h with mean direction *easterly*.

2.13 Jhelum

No rainfall reported during the decade, weather remained cloudy for 9 days and average relative humidity recorded as 76%. Mean night temperature was 4.4°C while day temperature recorded as 13.9°C with 33.1 hours bright sunshine duration. Wind speed recorded as 3.2 Km/h with mean direction *south westerly*.

2.14 D.I. Khan

Rainfall reported as Trace (not measurable) during the decade, weather remained cloudy for 8 days, average relative humidity recorded as 77%. Mean night temperature was 1.7°C while day temperature recorded as 14.0°C with 40.3 hours bright sunshine duration. Wind speed recorded as 1.2 Km/h with mean direction *north westerly*.

2.15 Sakrand

Dry weather with clear skies reported during the decade, average relative humidity recorded as 56%. Mean night temperature was 3.5°C while day temperature recorded as 21.8°C with 84.9 hours bright sunshine duration. Wind speed recorded as 1.7 Km/h with mean direction *north easterly*.

3. Ten days Weather advisory for Farmers (11th to 20th January, 2013)

Temperature Forecast:

Day & night temperatures expected to be dropped 2-4°C & 3-5°C respectively in most of the agricultural plains of the country during the decade.

Rain Forecast:

- **Punjab:** Mainly cold & dry weather is expected in most parts of the province during the decade. However, scattered rain is likely in Punjab including Islamabad from 16th to 18th & widespread rain/showers may occur in Upper Punjab (Lahore, Gujranwala, Sahiwal divisions) on 17th / 18th January. Snowfall is also expected over the hills of Murree & Galliat on 17th / 18th January.
- **Khyber Pakhtoonkhawa:** : Mainly cold & dry weather is expected in most parts of the province during the decade. However rain (with snowfall over the hills) is expected at scattered places of KP from 16th to 18th January.
- **Sindh:** Mainly cold & dry weather is expected in most parts of the province during the decade. However, light rain is likely at isolated places Sindh coast on 15th / 16th & light rain may also occur in Upper Sindh on 17th January.
- **Balochistan:** Mainly cold & dry weather is expected in most parts of the province during the decade. However, light rain is likely at isolated places along Makran coast on 15th / 16th & rain is also expected in Northern Balochistan on 17th / 18th January.
- **Gilgit-Baltistan & Kashmir:** Mainly cold & dry weather is expected in most parts of the province during the decade. However, rain (with snowfall over the hills) is expected at scattered places of GB from 16th to 18th January and widespread rain/showers (with snowfall over the hills) is expected in Kashmir from 16th to 18th January.

Wind Forecast:

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

Advisory for Farmers:

- Wheat crop is now growing mostly at shooting stage. Farmers should keep attention on intime precautionary measures against weeds so that expected loss in yield may be minimized due to weeds growth.
- Farmers may irrigate the crop as per requirement keeping the expected weather in the agricultural plains of the country.
- Frost is expected in most of the plains areas of the country during the decade especially during clear skies with shining sun in day time and relatively calm/gentle air with clear skies in the night. Precautionary measures should be done so that crops/nurseries sensitive to frost may be protected from frost.