

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light to moderate rainfall reported from the most of the agricultural plains of the country during the last decade.
- ❖ Highest amount of rainfall recorded 134.0 mm at Parachinar during the last decade.
- ❖ Highest maximum temperature recorded 42.0°C at Larkana during the last decade.
- ❖ Lower values of relative humidity reported from GB and higher values of ETo reported from the agricultural plains of KP.
- ❖ Day & night temperatures expected to rise 2-3°C in most of the agricultural plains of the country during the next decade.
- ❖ Normal to gusty wind pattern may prevail in most parts of the country during the next decade.
- ❖ Light to moderate rainfall is expected in upper parts of the country from 16th to 18th April 2013 during the decade.
- ❖ Farmers are advised prepare the fields for the coming Kharif crops in time.
- ❖ No irrigation is required in the upper half agricultural plains including KP and Punjab for wheat crop. Whereas farmers of lower half including Southern Punjab, Sindh and Balochistan should complete sowing of cotton, so that to fully utilize present soil moisture.

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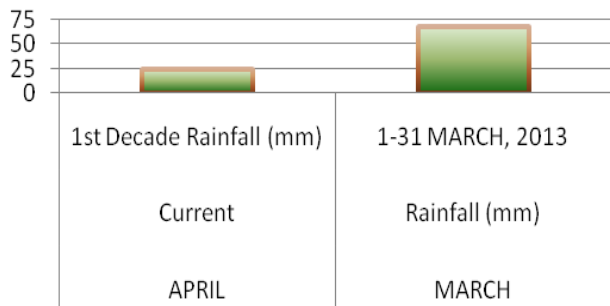
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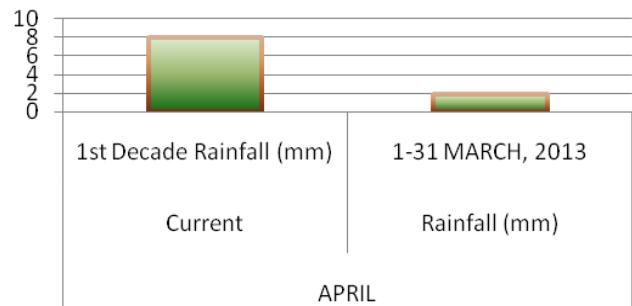
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Graphs for Rainfall (mm) during Present and Previous Decades

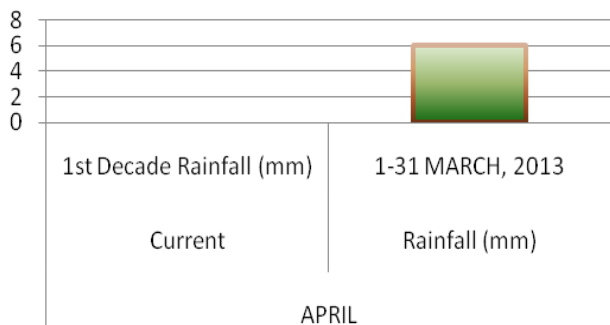
RAMC RAWALPINDI



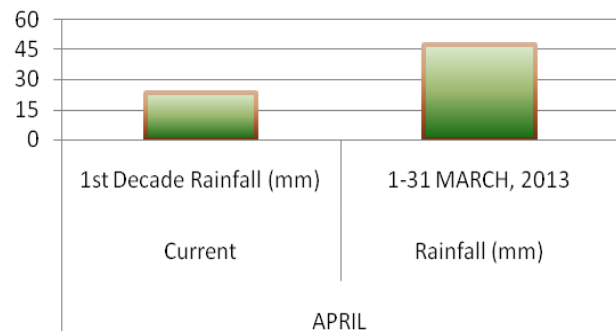
RAMC FAISALABAD



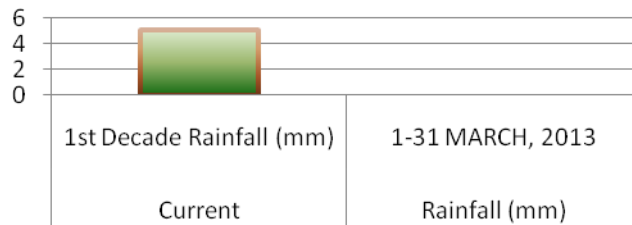
RAMC USTA MUHAMMAD



RAMC QUETTA



RAMC TANDOJAM



Meteorological conditions during 1st decade of April, 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	0.1	5.0	4.9	-0.1	-3.2	27.2	28.0	28.6	28.8	26.5	26.6	26.6	90.4	4.2	44.0	4.9
2	SAKRAND ☆	0.1	0.0	-0.1	-1.7	-1.7	26.4	37.8	35.8	38.5	29.3	29.6	27.6	100.5	5.7	36.0	5.5
3	ROHRI	0.6	TR	-0.5	0.4	-1.6	28.7	40.4	36.0	30.5	31.4	27.0	27.1	92.3	6.8	39.0	5.8
4	USTA MUHAMMAD	0.0	0.0	0.0	-2.0	-4.1	25.1	28.9	28.7	25.4	25.8	26.1	23.2	***	0.1	46.0	3.5
5	QUETTA	0.2	23.6	23.4	-1.1	-3.8	14.0	20.8	19.4	15.8	14.6	13.6	14.7	78.1	5.4	42.0	3.7
6	KHANPUR	0.6	4.0	3.4	0.2	-1.3	26.8	28.5	27.7	27.4	27.5	27.5	26.4	88.4	2.4	41.0	4.3
7	MULTAN	0.3	TR	-0.2	0.3	-1.7	26.1	***	***	***	***	***	***	75.0	5.0	42.0	4.6
8	LAHORE	0.5	1.2	0.7	-3.6	-0.2	24.8	29.9	28.4	25.8	24.1	***	22.1	79.8	3.7	37.0	4.3
9	FAISALABAD	0.4	8.0	7.6	0.8	-0.4	25.7	32.3	30.0	27.0	25.2	24.2	22.2	82.7	4.4	26.0	4.5
10	SARGODHA	1.3	24.0	22.7	0.3	-1.3	25.4	29.6	27.5	22.3	23.8	23.7	22.2	88.4	1.1	54.0	4.0
11	JHELUM	1.7	28.9	27.2	-1.3	-1.5	23.4	26.5	24.9	22.9	21.7	21.8	***	71.2	4.4	59.0	3.9
12	RAWALPINDI	2.6	24.6	22.0	-0.2	-0.7	21.7	24.7	22.8	20.7	20.5	19.7	18.8	76.8	2.6	50.0	3.6
13	DI KHAN	0.7	7.1	6.4	-0.5	-1.4	24.2	***	***	***	***	***	***	81.6	4.4	50.0	4.3
14	PESHAWAR	2.9	4.0	1.1	-1.0	0.1	22.4	23.8	22.0	21.2	20.7	20.3	19.2	64.2	2.1	53.0	3.3
15	SKARDU	2.7	0.0	-2.7	1.2	1.0	12.5	***	***	***	***	***	***	50.6	5.4	31.0	3.2
16	GILGIT	1.4	0.4	-1.0	0.6	0.7	16.3	***	***	***	***	***	***	40.3	4.1	37.0	3.2

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.

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

Light to moderate rainfall reported from the agricultural plains of Punjab, Balochistan, Gilgit Baltistan & Kashmir, KP and Sindh.

1.1 Punjab

Light to moderate rainfall reported from most of the agricultural plains of Punjab. Chief amount received at Mangla, Jhelum and Chakwal. Decadal maximum temperature and minimum temperature both dropped below normal by 1.0°C & 0.5°C respectively in the province. Mean values of wind speed, relative humidity and ETo were recorded as 3.4 km/hr, 44%, and 4.2 mm/day respectively (Fig 3-4).

1.2 Sindh

Light to moderate rainfall reported from few agricultural plains of Sindh; chief amount received at Karachi Air port, Hyderabad, and Larkana. Decadal maximum temperature and decadal minimum both dropped below normal by 2.2°C & 0.5°C, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 5.6 km/hr, 40%, and 5.4mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

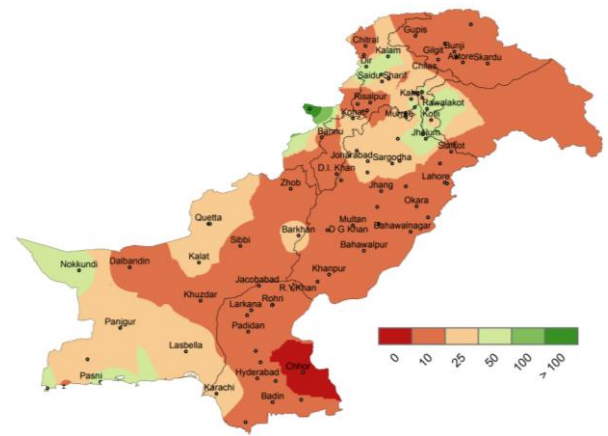
Light to moderate rainfall reported from most of places in the agricultural plains of KP; chief amount received at Parachinar, Lower dir, Dir, etc. In KP region; Decadal maximum & minimum temperature both dropped below normal by 0.6°C & 0.7°C respectively, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 3.3 km/hr, 52%, and 3.8 mm/day respectively.

1.4 Balochistan

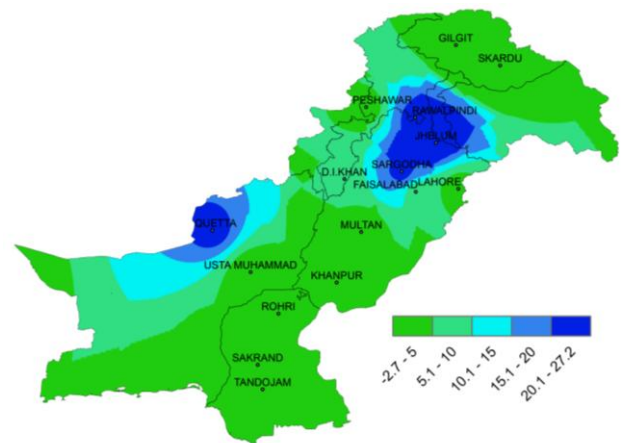
Light to moderate rainfall reported most of places in the agricultural plains of Balochistan; chief amount received at Ormara, Jiwani, Pasni. Decadal maximum & minimum temperature both dropped below temperature by 4.0°C & by 1.6°C respectively, in the province. Whereas mean values of wind speed, relative humidity and ETo were 2.8 km/hr, 44%, and 3.6 mm/day respectively.

1.5 Gilgit Baltistan and Azad Jammu & Kashmir

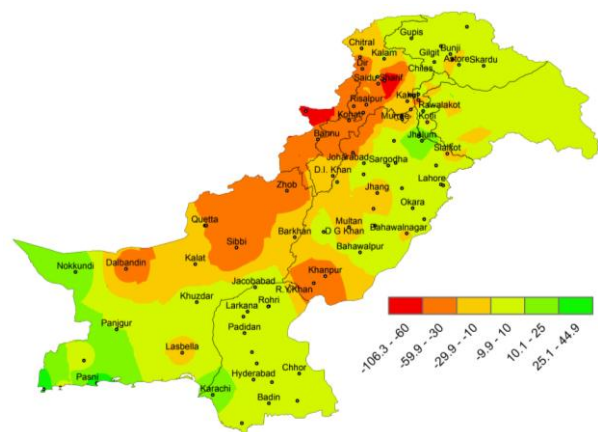
Light to moderate rainfall reported at a number of places in agricultural plains of GB & Kashmir; chief amount received at Rawalakot, Pattan, Kotli etc. In GB & AJK region; Decadal maximum temperature & Decadal minimum temperature both raised above normal by 0.9°C & 0.9°C in the province. Whereas mean values of wind speed, relative humidity and ETo were recorded 4.8 km/hr, 34%, and 3.2 mm/day respectively.



a) Actual rainfall



Departure of rainfall from Normal



b) 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 April, 2013): as per Table-1

2.1 RAMC, Rawalpindi (Potohar region)

Rainfall reported as 24.6 mm during the decade, weather remained cloudy for 8 days, average relative humidity recorded as 50%. Mean night temperature was 14.2°C while day temperature recorded as 29.2°C with 76.8 hours bright sunshine duration. Wind speed recorded as 2.6 Km/hr with mean direction *westerly*. Presently one crop is grown at the station.

Wheat Chakwal 97: Good condition, Shooting stage.

2.2 RAMC, Faisalabad (Central Punjab)

Rainfall reported as 8.0 mm during the decade, weather remained cloudy for 9 days, average relative humidity recorded as 26%. Mean night temperature was 18.2°C while day temperature recorded as 33.1°C with 82.7 hours bright sunshine duration. Wind speed recorded as 4.4 Km/hr with mean direction *westerly north westerly*.

Sugarcane: Very Good condition, Tillering stage completed.
Wheat: Very Good condition, Wax maturity stage.

2.3 RAMC, Tandojam (Lower Sindh)

Rainfall reported as 5.0 mm during the decade, weather remained cloudy for 3 day during the decade, average relative humidity recorded as 44%. Mean night temperature was 19.2°C while day temperature recorded as 35.1°C with 90.4 hours bright sunshine duration. Wind speed recorded as 4.2 km/hr with mean direction *south westerly*.

Field is prepared for next crop.

2.4 RAMC, Quetta (Northern Balochistan)

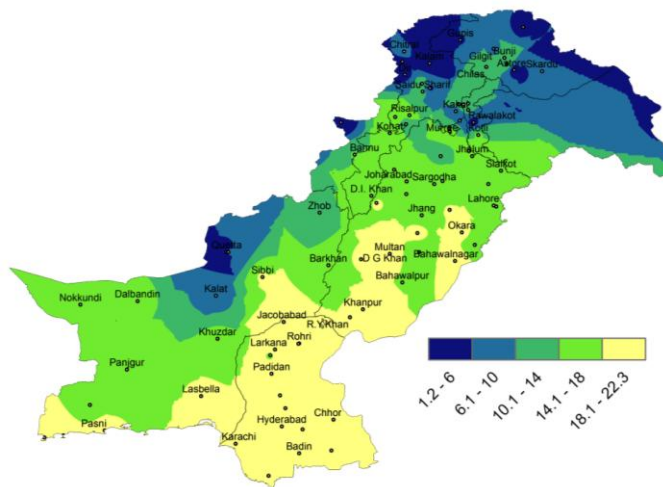
Rainfall reported as 23.6 mm during the decade, weather remained cloudy for 9 days, average relative humidity recorded as 42%. Mean night temperature was 7.5°C while day temperature recorded as 20.4°C with 78.1 hours bright sunshine duration and wind speed recorded as 5.4 Km/hr with mean direction *southerly*.

Wheat (Local white): Good condition, Heading stage.

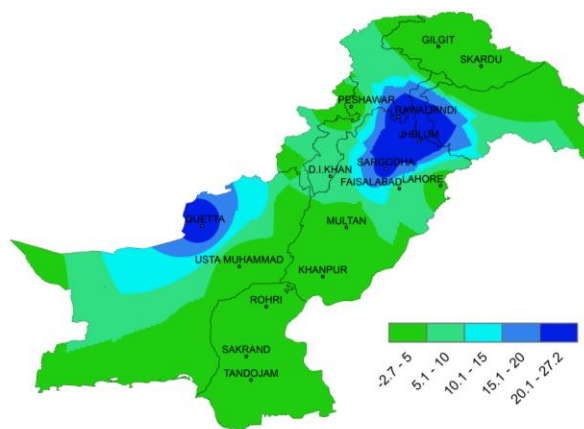
2.5 RAMC, Usta Muhammad (Eastern Balochistan)

No rainfall reported during the decade, weather remained cloudy for 5 days, average relative humidity recorded as 46%. Mean night temperature was 17.8°C while day temperature recorded as 32.4°C with wind speed recorded as 0.1 Km/hr with mean direction *easterly*.

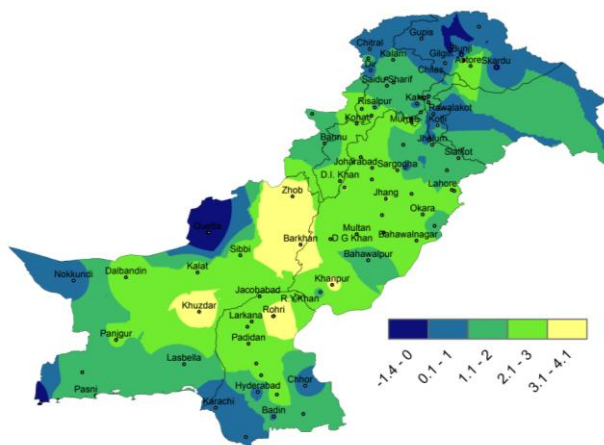
Wheat: Good condition, Flowering stage almost completed.



(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 previousdecade in “°C”

2(b) Past Weather for sub regional Agricultural Plains (1st to 10th April, 2013):

2.6 Jhelum

Rainfall reported as 28.9 mm during the decade, weather remained cloudy for 9 days and average relative humidity recorded as 59%. Mean night temperature was 15.9°C while day temperature recorded as 30.8°C with 71.2 hours bright sunshine duration. Wind speed recorded as 4.4 Km/hr with mean direction *north westerly*.

2.7 Lahore

Rainfall reported as 1.2 mm during the decade, weather remained cloudy for 8 days, average relative humidity recorded as 37%. Mean night temperature was 16.9°C while day temperature recorded as 32.6°C with 79.8 hours bright sunshine duration. Wind speed recorded as 3.7 Km/hr with mean direction *north westerly*.

2.8 Sargodha

Rainfall reported as 24.0 mm during the decade, weather remained cloudy for 9 days during the decade, average relative humidity recorded as 54%. Mean night temperature was 18.6°C while day temperature recorded as 32.1°C with 88.4 hours bright sunshine duration. Wind speed recorded as 2.0 Km/hr with mean direction *variable*.

2.9 Multan

Rainfall reported as Trace (non measureable) during the decade, weather remained cloudy for 9 days, average relative humidity recorded as 42%. Mean night temperature was 19.0°C while day temperature recorded as 33.1°C with 75.0 hours bright sunshine duration. Mean wind direction *south northly*.

2.10 Khanpur

Rainfall reported as 4.0 mm during the decade, weather remained cloudy for 6 days during the decade, average relative humidity recorded as 41%. Mean night temperature was 19.0°C while day temperature recorded as 34.5°C with 88.4 hours bright sunshine duration. Wind speed recorded as 2.4 Km/hr with mean direction *south westerly*.

2.11 Rohri

Rainfall reported as Trace (non measureable) during the decade, weather remained cloudy for 3 days, average relative humidity recorded as 39%. Mean night temperature was 22.5°C while day temperature recorded as 34.9°C with 92.3 hours bright sunshine duration. Wind speed recorded as 6.8 Km/hr with mean direction *north easterly*.

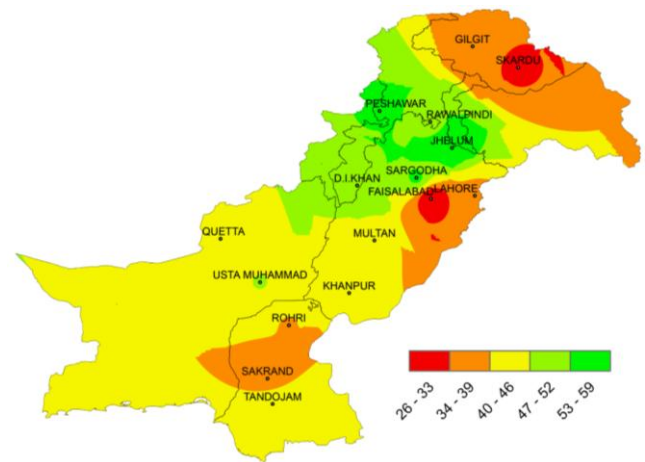


Figure.3: Relative Humidity in percentage

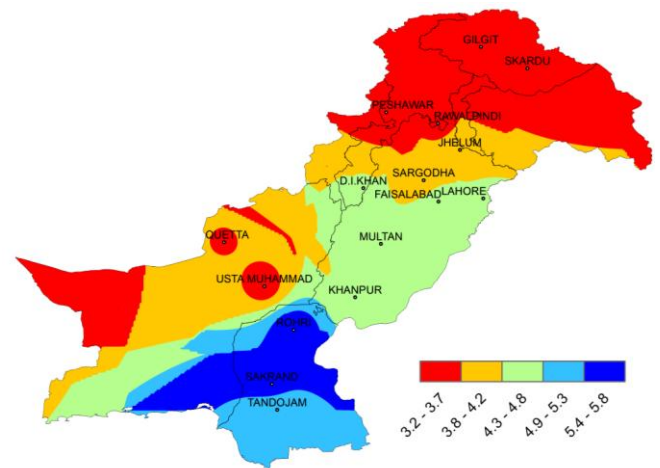


Figure.4: Reference Crop Evapotranspiration “ETo” in mm/day

2.12 Sakrand

No rainfall reported during the decade, weather remained cloudy for 4 days during the decade, average relative humidity recorded as 36%. Mean night temperature was 17.3°C while day temperature recorded as 35.4°C with 100.5 hours bright sunshine duration. Wind speed recorded as 5.7 Km/hr with mean direction *south westerly*.

2.13 Peshawar

Rainfall reported as 4.0 mm during the decade, weather remained cloudy for 10 days, average relative humidity recorded as 53%. Mean night temperature was 15.4°C while day temperature recorded as 29.3°C with 64.2 hours bright sunshine duration. Wind speed recorded as 2.1 Km/hr with mean direction *north north westerly*.

2.14 D.I. Khan

Rainfall reported as 7.1 mm during the decade, weather remained cloudy for 6 days, average relative humidity recorded as 50%. Mean night temperature was 16.8°C while day temperature recorded as 31.6°C with 81.6 hours bright sunshine duration. Wind speed recorded as 4.4 Km/hr with mean direction *variable*.

2.15 Gilgit

Rainfall reported as 0.4 mm during the decade. weather remained cloudy for 10 days and average relative humidity recorded as 37%. Mean night temperature was 8.7°C while day temperature recorded as 23.8°C with 40.3 hours bright sunshine. Wind speed recorded as 4.1 Km/hr with mean wind direction *westerly*.

2.16 Skardu

No rainfall reported during the decade, weather remained cloudy for 8 days, average relative humidity recorded as 31%. Mean night temperature was 6.1°C while day temperature recorded as 18.8°C with 50.6 hours bright sunshine duration with mean speed 5.4 Km/hr and mean direction *variable*.

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

3.1 Temperature Forecast:

Day & night temperatures expected to rise 2-3°C in most of the agricultural plains of the country during the decade.

3.2 Rain Forecast:

❖ **Punjab:**

Isolated Rainfall / Thunderstorm is expected in upper parts of the province (Rawlpindi and Sargodha Divisin) from 16th to 18th April.

❖ **Khyber Pakhtunkhwa:**

Scattered Rainfall / Thunderstorm is expected in the province from 16th to 18th April.

❖ **Sindh :**

Dry and Hot weather is expected during the decade.

❖ **Balochistan:**

Dry and Hot weather is expected during the decade. However isolated rainfall is expected over wester parts on 20th April.

❖ **Gilgit-Baltistan & Kashmir:**

Isolated Rainfall/ Thunderstorm is expected from 16th to 18th April.

3.3 Wind Forecast:

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

3.4 Advisory for Farmers:

- ❖ Farmers are advised prepare the fields for the coming Kharif crops in time.
- ❖ No irrigation is required in the upper half agricultural plains including KP and Punjab for wheat crop. Whereas farmers of lower half including Southern Punjab, Sindh and Balochistan should complete sowing of cotton, so that to fully utilize present soil moisture.