

DECADAL AGROMET BULLETIN OF PAKISTAN



2nd Decade March, 2012



Regional Agromet Centre, Tandojam, located in lower Sindh

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

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Meteorological conditions during 1st decade of March, 2012

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	Mean	5cm	10cm	20cm	30cm	50cm	100cm				
1	TANDOJAM	0.0	0.0	0.0	0.2	-1.5	22.3	25.1	26.4	24.5	23.0	22.8	22.1	95.9	3.3	51	3.8
2	SAKRAND ☆	0.0	0.0	0.0	-1.4	-1.0	21.2	30.9	28.6	***	23.5	23.7	23.0	102.6	3.5	42	3.9
3	ROHRI	0.4	0.0	-0.4	-1.8	-1.3	22.0	29.8	26.5	23.6	23.6	22.4	23.7	102.0	7.9	36	4.8
4	USTA MUHAMMAD	0.0	0.0	0.0	-3.5	-1.6	20.5	27.8	27.1	23.5	22.6	21.6	22.1	***	3.5	35	3.7
5	QUETTA	0.6	TR	-0.6	-2.8	-1.7	8.4	14.7	13.2	9.8	4.0	8.6	9.6	89.6	10.6	28	3.7
6	KHANPUR	3.2	0.0	-3.2	-2.8	-0.7	19.6	21.6	20.8	20.8	20.9	21.2	21.1	90.9	7.0	42	4.2
7	MULTAN	0.6	0.0	-0.6	-1.8	-0.1	19.2	***	***	***	***	***	***	89.8	4.6	36	3.6
8	LAHORE	0.9	4.0	3.1	-2.4	-0.6	18.9	22.6	21.2	18.9	17.8	***	17.7	86.7	3.5	46	3.1
9	FAISALABAD	0.8	1.0	0.2	-1.1	-0.6	18.3	25.3	23.2	19.7	19.3	18.2	17.9	86.8	5.3	45	3.4
10	SARGODHA	0.5	2.8	2.3	-1.4	-0.5	19.0	24.2	22.4	19.6	19.2	19.3	19.0	85.8	3.0	54	2.9
11	JHELMUM	0.9	1.0	0.1	-1.5	-0.1	18.3	22.2	20.6	18.2	17.2	17.6	***	77.4	4.2	43	3.1
12	RAWALPINDI	2.0	9.8	7.8	-0.6	-1.0	15.9	19.7	17.6	15.2	15.1	14.5	14.6	72.7	2.1	59	2.4
13	D I KHAN	0.6	0.6	0.0	-1.5	-0.4	17.9	***	***	***	***	***	***	82.3	3.9	36	3.1
14	PESHAWAR	1.4	1.5	0.1	-3.4	-0.6	15.8	20.9	17.6	16.1	15.6	15.2	15.6	59.3	2.0	47	2.2
15	SKARDU	0.7	8.2	7.5	-0.1	-2.4	4.1	***	***	***	***	***	***	53.0	3.7	50	1.5
16	GILGIT	0.3	TR	-0.3	-1.0	-3.5	8.6	***	***	***	***	***	***	49.7	6.9	36	2.6

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 March to 10th March, 2012):

Light to moderate rain with snowfall over hills reported from the agricultural plains of KPK, Upper Punjab, Kashmir and Gilgit Baltistan during the period. Whereas dry weather reported from the agricultural plains of Sindh and Balochistan.

1.1 Punjab

Light rainfall reported from most of the agricultural plains of northern and central Punjab during the decade, chief amount received at Murree, Mangla Islamabad and Gujranwala (Fig. 1.a). Decadal maximum temperature and minimum temperature both dropped below normal by 0.5°C & 1.7°C respectively, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 4.2 km/hr, 46 %, and 3.2 mm/day respectively (Fig 3-4).

1.2 Sindh

Mainly dry weather is reported from the entire agricultural plains of Sindh during the decade. Decadal maximum temperature and minimum temperature both dropped below normal by 1.3°C & 1.0°C respectively, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 4.9 km/hr, 43 %, and 4.2 mm/day respectively.

1.3 Khyber Pakhtoon Khawa (KPK)

Rainfall in favourable amount reported from most of the agricultural plains of KPK; chief amount received at Parachinar, Dir, Mirkhani and Kalam etc. Decadal maximum temperature and minimum temperature both dropped below normal by 0.5°C & 2.5°C, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 3.0 km/hr, 42 %, and 2.7 mm/day respectively.

1.4 Balochistan

Mainly dry weather is reported from most of the agricultural plains of the province except Kallat and Quetta where rainfall reported as Trace (indeterminate amount). In the northern Balochistan decadal maximum temperature and minimum temperature both dropped below normal by 1.7 & 3.2°C respectively. Whereas mean values of wind speed, relative humidity and ETo were recorded 7.1 km/hr, 32 %, and 3.7 mm/day respectively.

1.5 Gilgit Baltistan and Azad Jammu & Kashmir

Light to moderate rainfall reported from most of the agricultural plains of Gilgit Baltistan and Azad Jammu & Kashmir; chief amount received at Pattan, Rawalakot and Gurhi Dopatta etc. In Gilgit Baltistan region; decadal maximum temperature and minimum temperature both dropped below normal by 3.0°C & 0.6°C respectively. Whereas mean values of wind speed, relative humidity and ETo were recorded as 5.3 km/hr, 43 %, and 2.1 mm/day respectively.

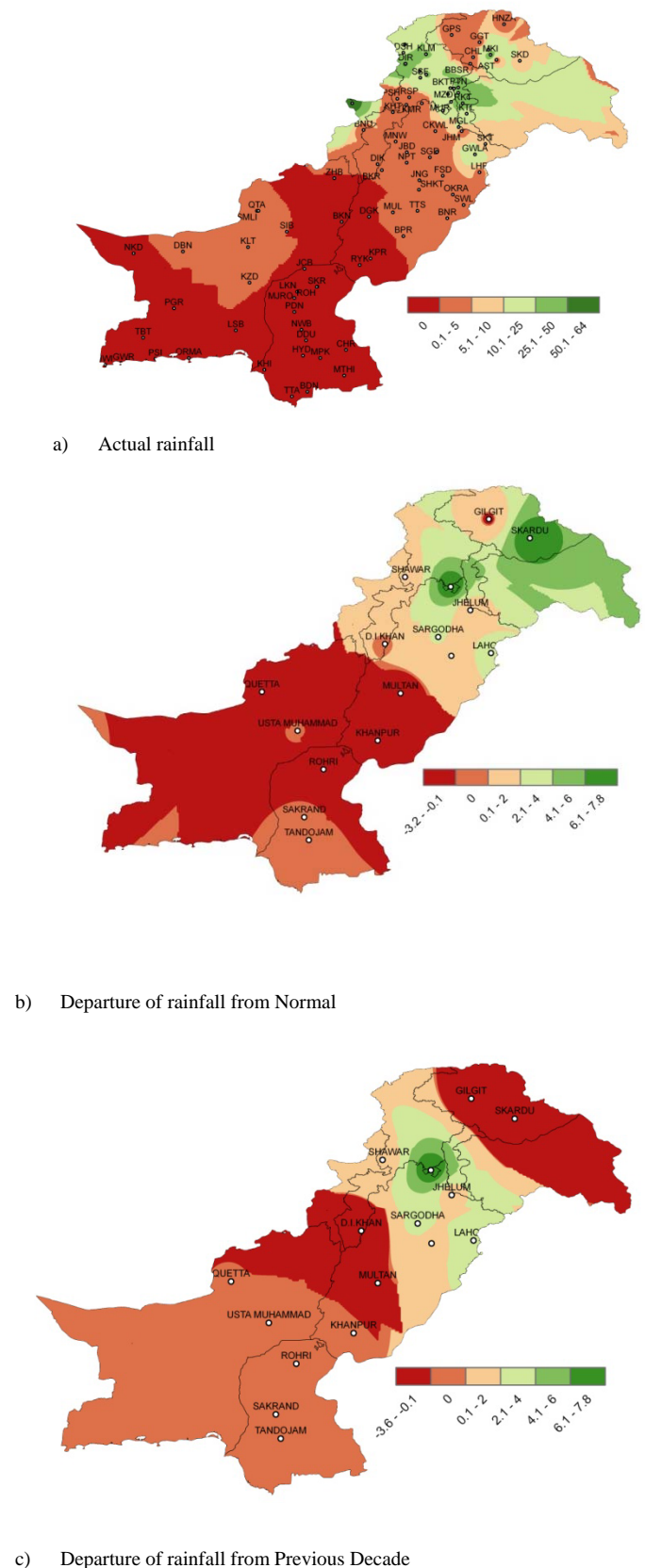


Figure.1: Rainfall distribution during previous decade in “mm”

2 (a) Past Weather for Major Agricultural Plains (1st March to 10th March, 2012) as per Table-1

2.1 RAMC, Rawalpindi (Potohar region)

Rainfall reported as 9.8 mm during the decade, weather remained cloudy for 6 days and average relative humidity recorded as 59%. Mean night temperature was 8.3°C while day temperature recorded as 23.4°C with 72.7 hours bright sunshine duration. Wind speed recorded as 2.1 Km/hr with mean direction westerly. Presently only one crop (rainfed conditions) is grown at the station as detailed below.

Wheat (Chakwal-97): Good condition at *Shooting* stage

2.2 RAMC, Tandojam (Lower Sindh)

Mainly dry weather with clear skies reported during the decade however average relative humidity recorded as 51%. Mean night temperature was 14.0°C while day temperature recorded as 30.6°C with 95.9 hours bright sunshine duration. Wind speed recorded as 3.3 Km/hr with mean direction northerly. Presently only one crop (irrigated conditions) is grown at the station as detailed below.

Wheat (TD-I): Good condition at *Wax-maturity* stage.

2.3 RAMC, Faisalabad (Central Punjab)

Rainfall reported as 1.0 mm during the decade, weather remained cloudy for 5 days and average relative humidity recorded as 45%. Mean night temperature was 10.6°C while day temperature recorded as 26.0°C with 86.7 hours bright sunshine duration. Wind speed recorded as 5.3 Km/hr with mean direction north-westerly. Presently two crops (irrigated conditions) are grown at the station as detailed below.

Wheat: Very good condition at *Heading* stage completed.
Sugarcane: Good condition, *Tillering* stage completed.

2.4 RAMC, Quetta (Northern Balochistan)

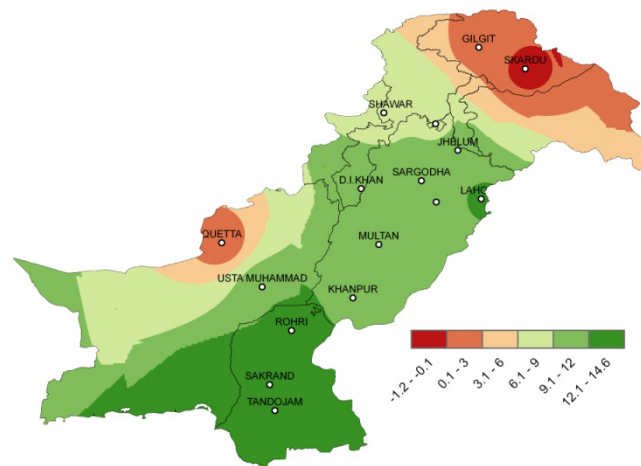
Rainfall reported as Trace (indeterminate amount) during the decade, weather remained cloudy for 4 days and average relative humidity recorded as 28%. Mean night temperature was 0.5 °C while day temperature recorded as 16.3°C with 89.6 hours bright sunshine duration and wind speed recorded as 10.6 Km/hr with mean direction north-westerly. Presently only one crop (rainfed conditions) is grown at the station as detailed below.

Wheat (Local): Good condition at *Tillering* stage.

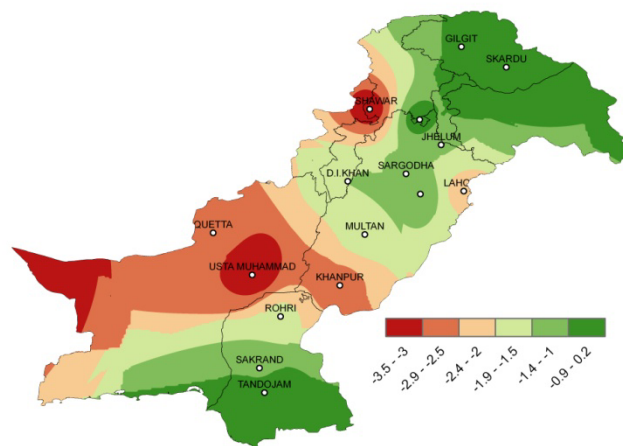
2.5 RAMC, Usta Muhammad (Eastern Balochistan)

No rainfall reported during the decade however weather remained cloudy for 2 days and average relative humidity recorded as 35%. Mean night temperature was 11.2°C while day temperature recorded as 29.8°C. Wind speed recorded as 3.5 Km/hr with mean direction southerly. Presently two crops (irrigated conditions) are grown at the station as detailed below.

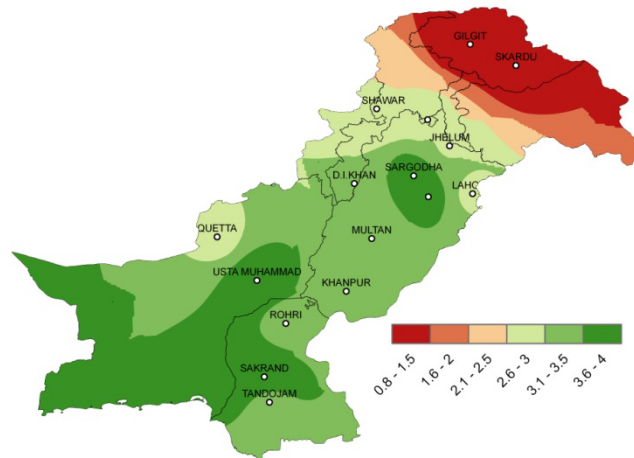
Wheat (Lasani): Good condition at *Milk-Maturity* stage.
Mustard: Good condition, *Harvesting* started.



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 March to 10th March, 2012)

2.6 Rohri

Mainly dry wheather with clear skies reported during the decade however average relative humidity recorded as 36%. Mean night temperature was 14.6°C while day temperature recorded as 29.4°C with 102.0 hours bright sunshine duration. Wind speed recorded as 7.9 Km/hr with mean direction *north-easterly*.

2.7 Skardu

During the decade rainfall occurred as 8.2 mm, weather remained cloudy for 8 days and average relative humidity recorded as 50 %. Mean night temperature was -1.2 °C while day temperature recorded as 9.4°C with 53.0 hours bright sunshine duration. Wind speed recorded as 3.7 Km/hr with mean direction *south-easterly*.

2.8 Multan

During the decade no rainfall occurred however weather remained cloudy for 4 days and average relative humidity recorded as 36 %. Mean night temperature was 10.9°C while day temperature recorded as 27.5°C with 89.8 hours bright sunshine duration. Wind speed recorded as 4.6 Km/hr with mean direction *northerly*.

2.9 Lahore

Rainfall reported as 4.0 mm during the decade, weather remained cloudy for 3 days and average relative humidity recorded as 46 %. Mean night temperature was 12.5°C while day temperature recorded as 25.3°C with 86.7 hours bright sunshine duration. Wind speed recorded as 3.5 Km/hr with mean direction *north-westerly*.

2.10 Peshawar

Rainfall reported as 1.5 mm during the decade, weather remained cloudy for 7 days and average relative humidity recorded as 47%. Mean night temperature was 8.1 °C while day temperature recorded as 23.5 °C with 59.3 hours bright sunshine duration. Wind speed recorded as 2.0 Km/hr with mean direction *north-westerly*.

2.11 Khanpur

Mainly dry wheather with clear skies reported during the decade however average relative humidity recorded as 42%. Mean night temperature was 10.6°C while day temperature recorded as 28.5°C with 90.9 hours bright sunshine duration. Wind speed recorded as 7.0 Km/hr with mean direction *north-easterly*.

2.12 Sargodha

Rainfall reported as 2.8 mm during the decade, however weather remained cloudy for 7 days and average relative humidity recorded as 54 %. Mean night temperature was 11.3°C while day temperature recorded as 26.7°C with 85.8

hours bright sunshine duration. Wind speed recorded as 3.0 Km/hr with mean direction *south-westerly*.

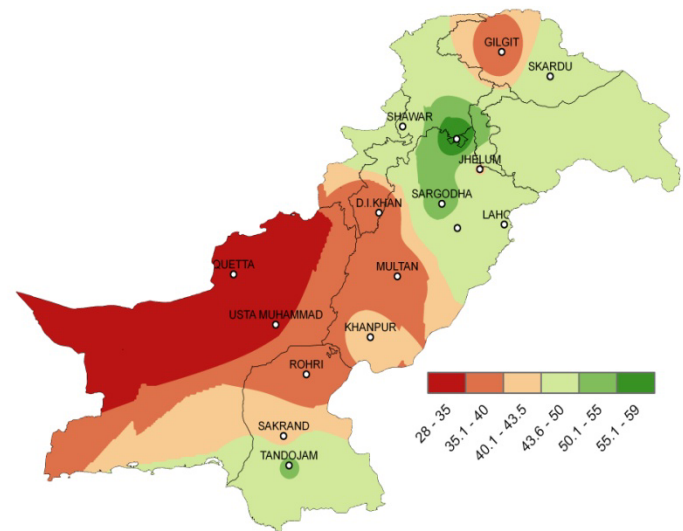


Figure.3: Relative Humidity in percentage

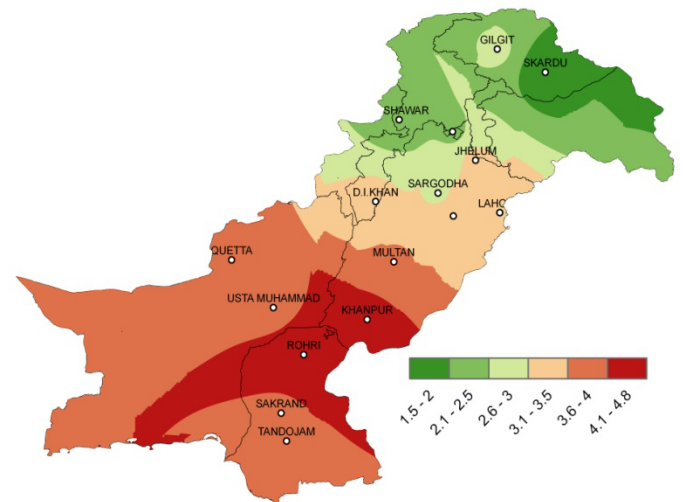


Figure.4: Reference Crop Evapotranspiration "ET₀" in mm/day

2.13 Gilgit.

Rainfall reported as Trace (indeterminate amount) during the decade however weather remained cloudy for the entire period and average relative humidity recorded as 36 %. Mean night temperature was 2.4°C while day temperature recorded as 14.7 °C with 49.7 hours bright sunshine. Wind speed recorded as 6.9 Km/hr with mean direction *easterly*.

2.14 Jhelum

Rainfall reported as 1.0 mm during the decade, weather remained cloudy for 8 days and average relative humidity recorded as 43%. Mean night temperature was 10.1°C while day temperature recorded as 26.4°C with 77.4 hours bright sunshine duration. Wind speed recorded as 4.2 Km/hr with mean direction *north-westerly*.

2.15 D.I. Khan

Rainfall reported as 0.6 mm during the decade, weather remained cloudy for a single day and average relative humidity recorded as 36%. Mean night temperature was 9.7°C while day temperature recorded as 26.1°C with 82.3 hours bright sunshine duration. Wind speed recorded as 3.9 Km/hr with mean direction *south-easterly*.

2.16 Sakrand

Mainly dry wheather with clear skies reported during the decade however average relative humidity recorded as 42%. Mean night temperature was 12.0°C while day temperature recorded as 30.3°C with 102.6 hours bright sunshine duration. Wind speed recorded as 3.5 Km/hr with mean direction *north-westerly*.

3. Ten days Weather advisory for Farmers (11th March to 20th March, 2012)

3.1 Temperature Forecast:

Above normal day temperatures are likely in parts of Punjab particularly in southern Punjab from 14th to 20th March 2012. Parts of Sindh may also experience high day temperatures during the period. While near normal temperature range is expected in other parts of the country.

3.2 Rain Forecast:

- ❖ **Punjab:** Isolated Thunderstorm-Rain is expected in Punjab on 12th March 2012.
- ❖ **Khyber Pakhtoonkhawa:** Isolated Thunderstorm-Rain is expected in KPK on 12th March 2012.
- ❖ **Sindh:** Mainly dry weather is expected during the decade.
- ❖ **Balochistan:** Isolated Thunderstorm-Rain is expected in Northeast Balochistan on 12th March 2012.
- ❖ **Kashmir & Gilgit-Baltistan:** Isolated Thunderstorm-Rain is expected in Gilgit Baltistan & Kashmir on 12th / 13th March 2012.

3.3 Wind Forecast:

Dust raising/gusty winds are expected in parts of Sindh and Balochistan from 12th to 14th March 2012. Thunderstorm along with strong gusty winds is expected in parts of Upper Punjab and Khyber Pakhtoonkhawa on 12th/13th March 2012.

3.4 Advisory for Farmers:

- ❖ Wheat crop is in milk/wax maturity development stages in the agriculture plains of the country. The crop water demand becomes maximum during these stages. Therefore farmers should irrigate the crops as per requirement keeping the above forecast of coming rains in mind.