

DECADAL AGROMET BULLETIN OF PAKISTAN



3rd 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 2nd decade of March, 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	0.9	0.0	-0.9	0.3	-1.8	24.7	27.7	27.6	25.2	24.2	24.0	22.8	102.0	3.5	51	4.4
2	SAKRAND ☆	0.8	0.0	-0.8	-0.3	-1.1	22.6	32.8	31.0	32.3	24.8	25.3	24.2	106.9	4.4	48	4.4
3	ROHRI	0.0	TR	0.0	-2.3	-2.9	23.1	32.2	28.6	25.1	25.0	23.4	24.6	93.9	6.8	37	4.8
4	USTA MUHAMMAD	0.7	0.0	-0.7	-2.7	-1.3	21.8	29.2	28.3	25.1	23.6	23.6	23.8	***	3.3	48	3.9
5	QUETTA	0.6	11.2	10.6	-2.6	-3.3	11.1	17.5	15.8	12.3	11.3	10.7	11.0	80.1	8.2	31	3.7
6	KHANPUR	0.4	0.0	-0.4	-3.5	-1.4	21.1	22.9	22.2	22.3	22.1	22.3	22.3	85.1	6.8	45	4.4
7	MULTAN	0.4	0.0	-0.4	-2.3	-2.3	20.8	***	***	***	***	***	***	63.0	3.7	44	3.3
8	LAHORE	0.7	6.0	5.3	-3.8	-2.0	20.3	24.6	23.0	20.3	18.7	***	18.6	77.5	3.8	46	3.3
9	FAISALABAD	0.6	TR	-0.6	-1.5	-2.4	19.8	25.5	23.2	20.0	19.2	18.9	19.0	66.0	3.6	44	3.2
10	SARGODHA	1.1	TR	-1.1	-1.5	-2.6	20.5	26.2	23.8	21.3	20.6	20.6	19.9	66.7	4.6	45	3.4
11	JHELUM	1.5	0.0	-1.5	-3.2	-1.8	19.0	23.3	21.5	19.5	18.4	18.7	***	52.6	3.1	42	2.9
12	RAWALPINDI	2.0	9.0	7.0	-2.5	-2.5	16.7	20.2	17.9	16.2	15.9	15.5	15.3	44.0	3.6	47	2.7
13	D I KHAN	1.1	TR	-1.1	-2.9	-2.1	19.0	***	***	***	***	***	***	66.5	5.0	43	3.5
14	PESHAWAR	2.0	2.0	0.0	-3.6	-2.6	17.3	21.5	18.9	17.5	16.9	16.3	16.2	44.5	2.2	54	2.4
15	SKARDU	0.8	48.1	47.3	0.0	-5.1	5.3	***	***	***	***	***	***	29.6	2.8	60	1.6
16	GILGIT	0.4	33.2	32.8	0.0	-4.0	11.2	***	***	***	***	***	***	16.1	4.5	39	2.3

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 (11th to 20th March, 2012):

Light to moderate rain with light snowfall over the hills reported from the agricultural plains of KPK, Upper Punjab, Northern Balochistan, Kashmir and Gilgit Baltistan during the period. However meager rain is reported from the agricultural plains of Upper Sindh.

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, Islamabad, Sialkot and Lahore (Fig. 1.a). Decadal maximum temperature and minimum temperature both dropped below normal by 2.1°C & 2.6°C respectively, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 4.2 km/hr, 45 %, and 3.3 mm/day respectively (Fig 3-4).

1.2 Sindh

Mainly dry weather is reported from the entire agricultural plains of Sindh during the decade, except northern parts including Jacobabad, Larkana and Sukkur etc where rainfall occurred in fewer amount. Decadal maximum temperature and minimum temperature both dropped below normal by 1.9°C & 0.8°C respectively, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 4.9 km/hr, 45 %, and 4.5 mm/day respectively.

1.3 Khyber Pakhtoon Khawa (KPK)

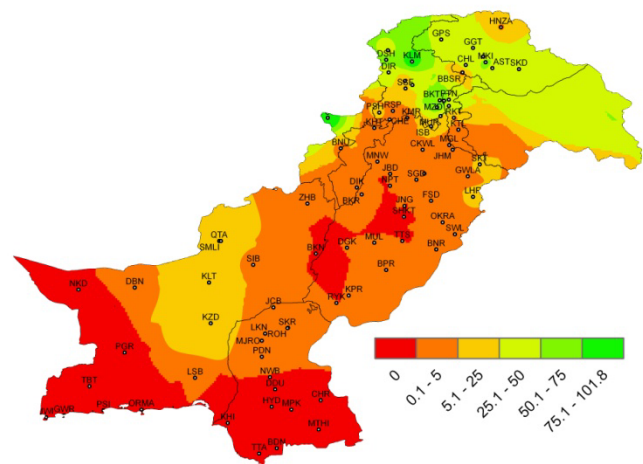
Rainfall in favourable amount reported from most of the agricultural plains of KPK; chief amount received at Parachinar, Mirkhani Kakul and Kalam etc. Decadal maximum temperature and minimum temperature both dropped below normal by 2.4°C & 3.3°C respectively, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 3.6 km/hr, 49 %, and 3.0 mm/day respectively.

1.4 Balochistan

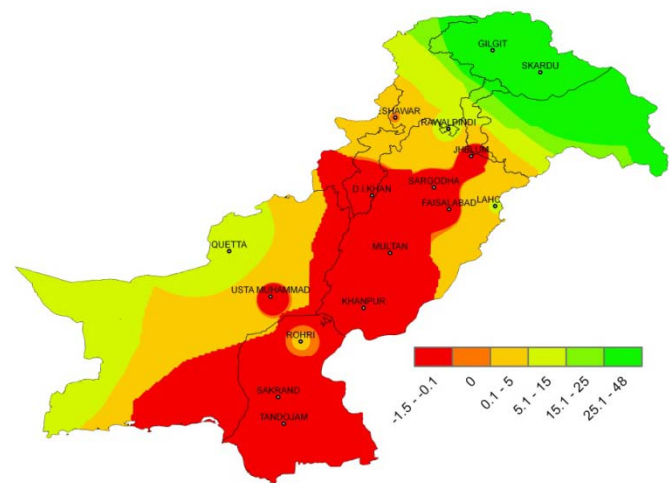
Mainly dry weather is reported from most of the agricultural plains of the province except Khuzdar, Kallat Quetta and Pasni where light to moderate rainfall reported. In the northern Balochistan decadal maximum temperature and minimum temperature both dropped below normal by 2.3 & 2.7°C respectively. Whereas mean values of wind speed, relative humidity and ETo were recorded 5.8 km/hr, 40 %, and 3.8 mm/day respectively.

1.5 Gilgit Baltistan and Azad Jammu & Kashmir

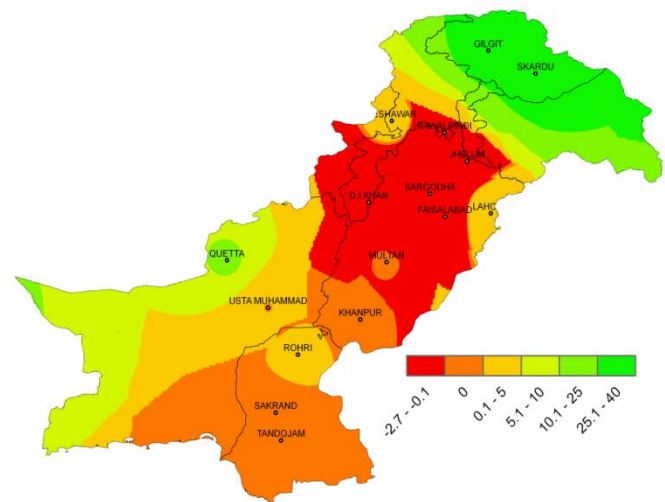
Rainfall is reported from most of the agricultural plains of Gilgit Baltistan and Azad Jammu & Kashmir; chief amount received at Pattan, Muzaffarabad and Skardu etc. In Gilgit Baltistan region; decadal maximum temperature dropped below normal by 4.6°C while decadal minimum temperature remained normal. Whereas mean values of wind speed, relative humidity and ETo were recorded as 3.7 km/hr, 50 %, and 2.0 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 (11th to 20th March, 2012) as per Table-1

2.1 RAMC, Rawalpindi (Potohar region)

Rainfall reported as 9.0 mm during the decade, weather remained cloudy for 7 days and average relative humidity recorded as 47%. Mean night temperature was 8.8°C while day temperature recorded as 24.6°C with 44.0 hours bright sunshine duration. Wind speed recorded as 3.6 Km/hr with mean direction north-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)

No rainfall reported during the decade however weather remained cloudy for 2 days average relative humidity recorded as 51%. Mean night temperature was 16.3°C while day temperature recorded as 33.1°C with 102.0 hours bright sunshine duration. Wind speed recorded as 3.5 Km/hr with mean direction *south-westerly*. 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 Trace (indeterminate amount) during the decade, weather remained cloudy for 9 days and average relative humidity recorded as 44%. Mean night temperature was 12.6°C while day temperature recorded as 27.0°C with 66.0 hours bright sunshine duration. Wind speed recorded as 3.6 Km/hr with mean direction *south-westerly*. Presently two crops (irrigated conditions) are grown at the station as detailed below.

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

2.4 RAMC, Quetta (Northern Balochistan)

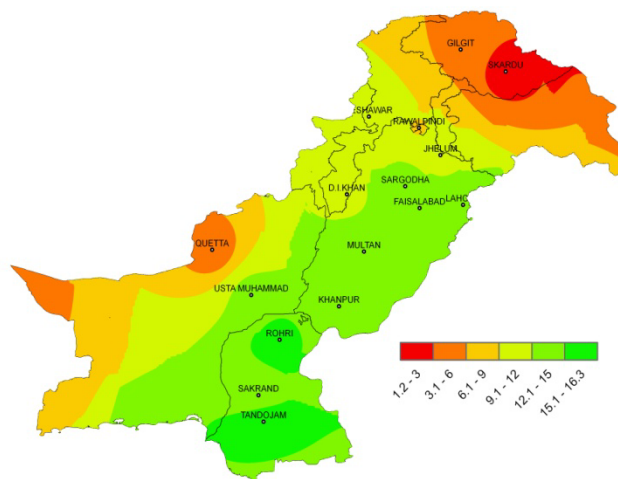
Rainfall reported as 11.2 mm during the decade, weather remained cloudy for 4 days and average relative humidity recorded as 31%. Mean night temperature was 3.6 °C while day temperature recorded as 18.5°C with 80.1 hours bright sunshine duration and wind speed recorded as 8.2 Km/hr with mean direction *north-westerly*. Presently only one crop (rainfed conditions) is grown at the station as detailed below.

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

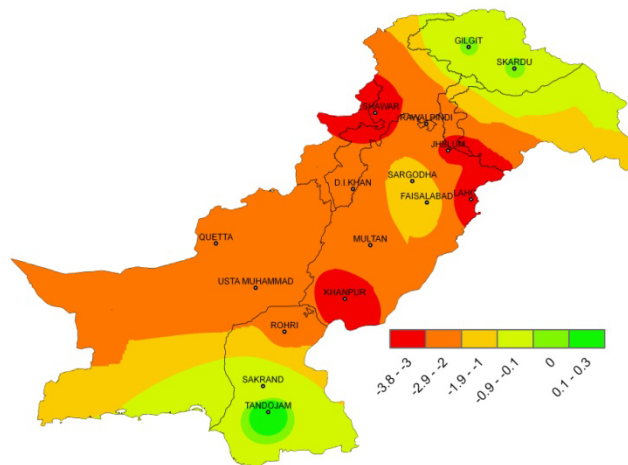
2.5 RAMC, Usta Muhammad (Eastern Balochistan)

No rainfall reported during the decade however weather remained cloudy for a single day and average relative humidity recorded as 48%. Mean night temperature was 13.1°C while day temperature recorded as 30.4°C. Wind speed recorded as 3.3 Km/hr with mean direction southerly. Presently two crops (irrigated conditions) are grown at the station as detailed below.

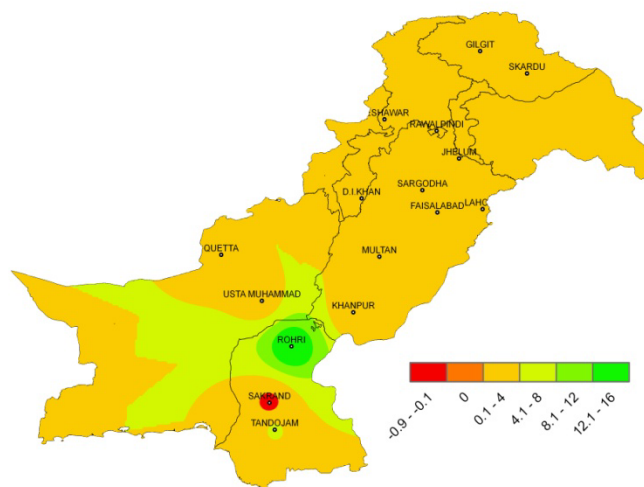
Wheat (Lasani): Good condition at *Wax-Maturity* stage.
Mustard: Good condition, *Harvesting* in process.



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 (11th to 20th March, 2012)

2.6 Rohri

Rainfall reported Trace (indeterminate amount) during the decade, weather remained cloudy for 4 days and average relative humidity recorded as 37%. Mean night temperature was 16.0°C while day temperature recorded as 30.1°C with 93.9 hours bright sunshine duration. Wind speed recorded as 6.8 Km/hr with mean direction *north-easterly*.

2.7 Skardu

During the decade rainfall occurred as 48.1 mm, weather remained cloudy for 7 days and average relative humidity recorded as 60 %. Mean night temperature was 1.2 °C while day temperature recorded as 9.4°C with 29.6 hours bright sunshine duration. Wind speed recorded as 2.8 Km/hr with mean direction *south-westerly*.

2.8 Multan

During the decade no rainfall occurred however weather remained cloudy for 3 days and average relative humidity recorded as 44 %. Mean night temperature was 13.2°C while day temperature recorded as 28.4°C with 63.0 hours bright sunshine duration. Wind speed recorded as 3.7 Km/hr with mean direction *north-easterly*.

2.9 Lahore

Rainfall reported as 6.0 mm during the decade, weather remained cloudy for 8 days and average relative humidity recorded as 46 %. Mean night temperature was 13.7°C while day temperature recorded as 26.8°C with 77.5 hours bright sunshine duration. Wind speed recorded as 3.8 Km/hr with mean direction *north-westerly*.

2.10 Peshawar

Rainfall reported as 2.0 mm during the decade, weather remained cloudy for the entire period and average relative humidity recorded as 54%. Mean night temperature was 10.2 °C while day temperature recorded as 24.4°C with 44.5 hours bright sunshine duration. Wind speed recorded as 2.2 Km/hr with mean direction *north-westerly*.

2.11 Khanpur

During the decade no rainfall occurred however weather remained cloudy for 5 days and average relative humidity recorded as 45 %. Mean night temperature was 12.0°C while day temperature recorded as 30.1°C with 85.1 hours bright sunshine duration. Wind speed recorded as 6.8 Km/hr with mean direction *north-easterly*.

2.12 Sargodha

Rainfall reported as Trace (indeterminate amount) during the decade, however weather remained cloudy for 9 days and average relative humidity recorded as 45 %. Mean night temperature was 13.6°C while day temperature recorded as

27.4°C with 66.7 hours bright sunshine duration. Wind speed recorded as 4.6 Km/hr with mean direction *north-easterly*.

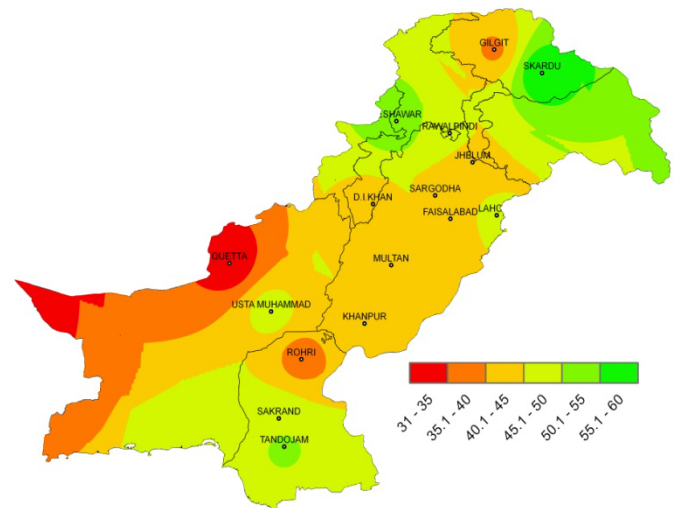


Figure.3: Relative Humidity in percentage

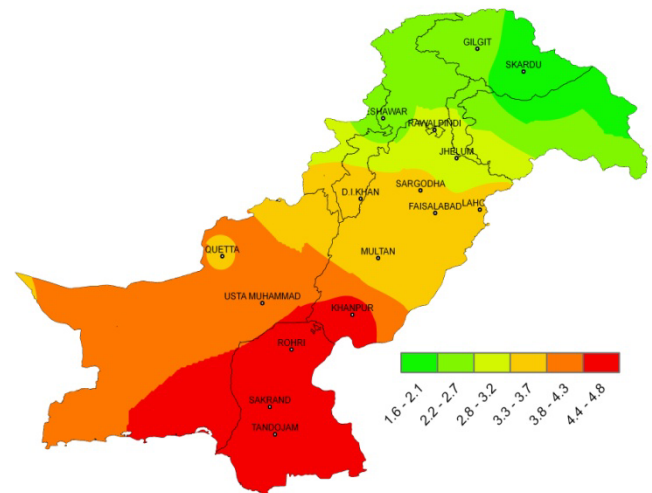


Figure.4: Reference Crop Evapotranspiration “ETo” in mm/day

2.13 Gilgit.

Rainfall reported as 33.2 mm during the decade however weather remained cloudy for the entire period and average relative humidity recorded as 39 %. Mean night temperature was 5.8°C while day temperature recorded as 16.5 °C with 16.1 hours bright sunshine. Wind speed recorded as 4.5 Km/hr with mean direction *north-westerly*.

2.14 Jhelum

During the decade no rainfall occurred however weather remained cloudy for the entire period and average relative humidity recorded as 42 %. Mean night temperature was 10.8°C while day temperature recorded as 27.2°C with 52.6 hours bright sunshine duration. Wind speed recorded as 3.1 Km/hr with mean direction *north-westerly*.

2.15 D.I. Khan

Rainfall reported Trace (indeterminate amount) during the decade, weather remained cloudy for 6 days and average relative humidity recorded as 43%. Mean night temperature was 11.3°C while day temperature recorded as 26.6°C with 66.5 hours bright sunshine duration. Wind speed recorded as 5.0 Km/hr with mean direction *north-easterly*.

2.16 Sakrand

No rainfall reported during the decade however weather remained cloudy for 2 days average relative humidity recorded as 48%. Mean night temperature was 13.7°C while day temperature recorded as 31.5°C with 106.9 hours bright sunshine duration. Wind speed recorded as 4.4 Km/hr with mean direction *northerly*.

3. Ten days Weather advisory for Farmers (21st to 31st March, 2012)

3.1 Temperature Forecast:

Below normal day temperatures are likely in most parts of the country from 21st to 24th March 2012. While normal temperature range is expected during rest of the period.

3.2 Rain Forecast:

- ❖ **Punjab:** Isolated to scattered Thunderstorm-Rain is expected in Punjab during 26th to 28th March 2012.
- ❖ **Khyber Pakhtoonkhawa:** Isolated to scattered Thunderstorm-Rain is expected in Khyber Pakhtoonkhawa during 26th to 28th March 2012.
- ❖ **Sindh:** Mainly dry weather is expected during the decade.
- ❖ **Balochistan:** Isolated to scattered Thunderstorm-Rain is expected in Northeast Balochistan during 25th to 27th March.
- ❖ **Kashmir & Gilgit-Baltistan:** Isolated to scattered Thunderstorm-Rain is expected in Gilgit-Baltistan & Kashmir during 26th to 28th March 2012.

3.3 Wind Forecast:

Most parts of the country are likely to remain engulfed in dusty winds from 21st to 23rd March 2012. Particularly dust raising/gusty winds are likely in parts of Sindh and Balochistan during 21st to 24th March 2012. Thunderstorm along with strong gusty winds may also occur in parts of Upper Punjab and Khyber Pakhtoonkhawa during 26th- 28th March 2012.

3.4 Advisory for Farmers:

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