

DECADAL AGROMET BULLETIN OF PAKISTAN



3rd Decade January, 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 January, 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	2.0	2.0	-1.6	0.2	15.8	18.7	19.2	***	18.3	19.6	21.4	85.3	1.5	60.0	1.3
2	SAKRAND ☆	0.4	0.0	-0.4	-0.1	3.6	14.4	22.2	20.1	21.3	18.7	20.2	22.1	88.9	3.7	58.0	2.2
3	ROHRI	0.6	0.0	-0.6	-0.7	0.3	15.3	22.4	20.4	19.0	19.7	19.4	23.4	87.8	2.8	50.0	2.0
4	USTA MUHAMMAD	0.1	0.0	-0.1	-2.5	0.0	13.8	19.8	19.8	19.6	19.7	20.0	20.7	***	1.3	57.0	1.5
5	QUETTA	0.9	17.3	16.4	-1.9	-1.5	3.7	8.8	7.9	5.6	0.8	6.7	9.6	74.8	5.6	49.0	1.6
6	KHANPUR	1.0	0.0	-1.0	-1.1	0.5	12.6	14.0	13.6	13.8	13.6	15.3	17.6	65.9	3.5	56.0	1.8
7	MULTAN	0.2	3.0	2.8	-0.6	-1.1	12.0	***	***	***	***	***	***	68.7	2.1	62.0	1.4
8	LAHORE	0.3	16.2	15.9	-0.1	-1.3	12.3	13.0	12.7	12.5	12.8	***	16.4	55.6	2.2	69.0	1.3
9	FAISALABAD	0.3	1.2	0.9	-0.1	-0.1	11.5	16.0	14.8	12.6	12.3	13.4	16.2	63.0	3.7	64.0	1.5
10	SARGODHA	0.2	3.0	2.8	0.0	0.0	12.1	15.3	14.0	13.4	13.9	15.6	17.7	61.0	2.2	71.0	1.3
11	JHELUM	1.4	37.2	35.8	-2.1	-0.7	11.0	12.9	12.1	11.3	11.6	13.1	***	59.9	2.5	66.0	1.2
12	RAWALPINDI	1.1	26.0	24.9	-1.1	-2.6	9.1	10.9	9.8	9.0	9.4	10.3	13.1	59.0	1.3	64.0	1.0
13	DI KHAN	0.1	0.3	0.2	-1.2	-0.8	10.6	***	***	***	***	***	***	70.0	2.7	57.0	1.0
14	PESHAWAR	1.6	9.2	7.6	-3.3	-3.0	8.6	12.0	10.2	9.4	10.6	12.1	14.3	54.7	1.6	67.0	1.4
15	SKARDU	1.5	6.9	5.4	-2.9	-2.2	-4.2	***	***	***	***	***	***	24.8	0.6	68.0	1.0
16	GILGIT	0.3	TR	-0.2	-1.6	-1.3	2.8	***	***	***	***	***	***	27.0	3.2	51.0	1.3

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. 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 (11th January to 20th January, 2012):

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

1.1 Punjab

Above normal rainfall reported from most places of the agricultural plains of Punjab; mainly from Sialkot, Islamabad, Murree and Jhelum etc (Fig. 1.a). Decadal maximum temperature and minimum temperature both dropped below normal by 3.4 & 1.4°C respectively, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 2.5 km/hr, 65 %, and 1.4 mm/day respectively (Fig 3-4).

1.2 Sindh

Mainly cold and dry weather is reported from most of the agricultural plains of Sindh except Hyderabad. Decadal maximum temperature raised above normal by 1.4°C and minimum temperature dropped below normal by 0.8°C, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 2.7 km/hr, 56 %, and 1.8 mm/day respectively.

1.3 Khyber Pakhtoon Khawa (KPK)

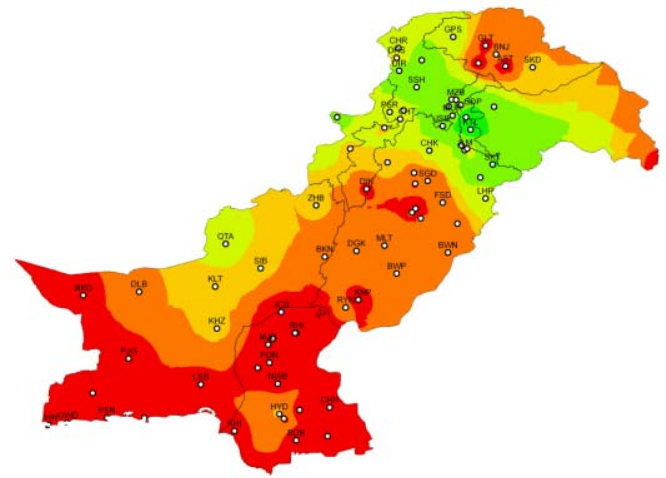
Above normal rainfalls reported from most of the agricultural plains of KPK; mainly from Malamjabba, Dir, Kalam and Saidu Sharif etc. Decadal maximum temperature and minimum temperature both dropped below normal by 1.9 & 2.3°C respectively, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 2.2 km/hr, 62 %, and 1.2 mm/day respectively.

1.4 Balochistan

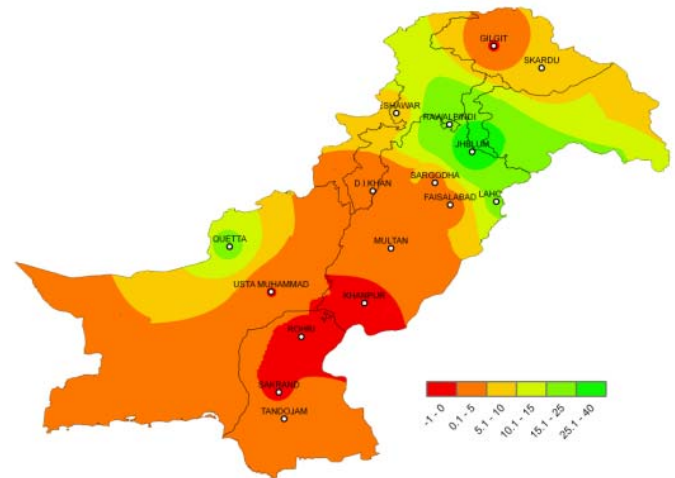
Below normal rainfall reported from some of the agricultural plains of Balochistan whereas dry weather reported from coastal areas. In the northern Balochistan decadal maximum temperature and minimum temperature both dropped below normal by 0.8 & 2.2°C respectively. Whereas mean values of wind speed, relative humidity and ETo were recorded 3.5 km/hr, 53 %, and 1.6 mm/day respectively.

1.5 Gilgit Baltistan and Azad Jammu & Kashmir

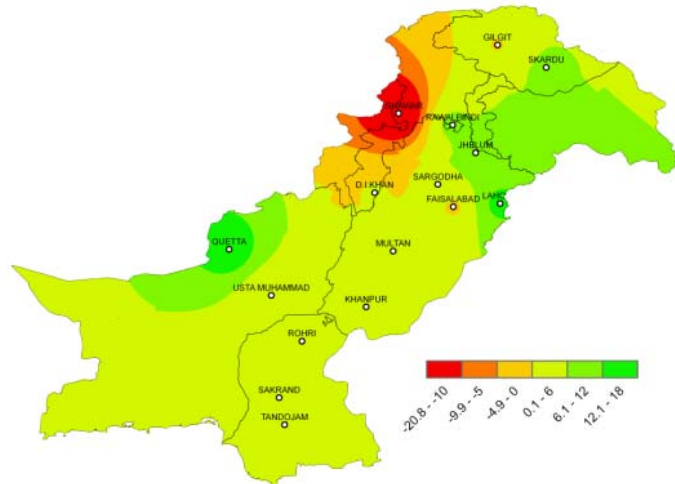
Normal to above rainfall reported from some of the agricultural plains of of Gilgit Baltistan and Azad Jammu & Kashmir mainly from Muzaffarabad, Kotli, Rawalakot and Garhi Dopatta. In Gilgit Baltistan region; decadal maximum temperature and minimum temperature both dropped below normal by 1.9 °C & 2.3 °C respectively. Whereas mean values of wind speed, relative humidity and ETo were recorded as 1.9 km/hr, 60 %, 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 (11th January to 20th January, 2012) as per Table-1

2.1 RAMC, Rawalpindi (Potohar region)

Rainfall reported as 26.0 mm during the decade, weather remained cloudy for 3 days and average average relative humidity recorded as 64%. Mean night temperature was 1.9°C while day temperature recorded as 16.2°C with 59.0 hours bright sunshine duration. Wind speed recorded as 1.3 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 *Tillering* stage

2.2 RAMC, Tandojam (Lower Sindh)

Rainfall reported as 2.0 mm during the decade, weather remained cloudy for 3 days and average average relative humidity recorded as 53%. Mean night temperature was 6.9°C while day temperature recorded as 24.7°C with 85.3 hours bright sunshine duration. Wind speed recorded as 1.5 Km/hr with mean direction north-westerly. Presently only one crop (irrigated conditions) is grown at the station as detailed below.

Wheat (TD-I): Good condition at *Shooting* stage

2.3 RAMC, Faisalabad (Central Punjab)

Rainfall reported as 1.2 mm during the decade, weather remained cloudy for 7 days and average relative humidity recorded as 64%. Mean night temperature was 4.6°C while day temperature recorded as 18.3°C with 63.0 hours bright sunshine duration. Wind speed recorded as 3.7 Km/hr with variable direction. Presently two crops (irrigated conditions) are grown at the station as detailed below.

Wheat: Excelent condition at *Tillering* stage

Sugarcane: Good condition.

2.4 RAMC, Quetta (Northern Balochistan)

Rainfall reported as 17.3 mm during the decade, weather remained cloudy for 4 days and average relative humidity recorded as 49%. Mean night temperature was -3.1 °C while day temperature recorded as 10.4 °C with 74.8 hours bright sunshine duration and wind speed recorded as 5.6 Km/hr with mean direction north-easterly. Presently only one crop (rainfed conditions) is grown at the station as detailed below.

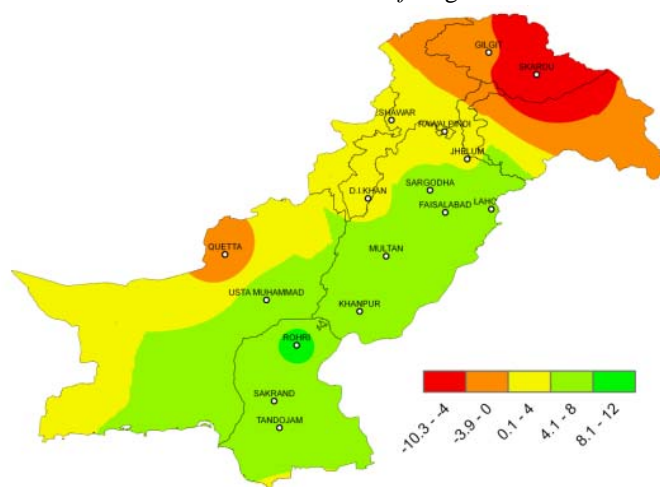
Wheat: Good condition at *Third Leaf* stage.

2.5 RAMC, Usta Muhammad (Eastern Balochistan)

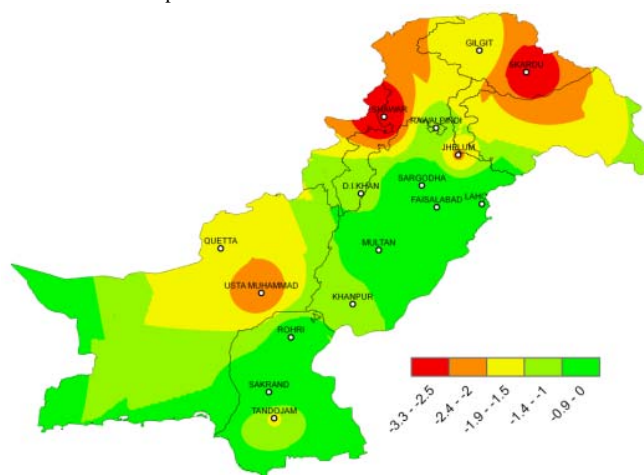
Dry weather with clear skies observed during the decade and average relative humidity recorded as 57 %. Mean night temperature was 6.2°C while day temperature recorded as 21.4°C. Wind speed recorded as 1.3 Km/hr with mean direction northerly. Presently two crops (irrigated conditions) are grown at the station as detailed below.

Wheat: Good condition at *Tillering* stage.

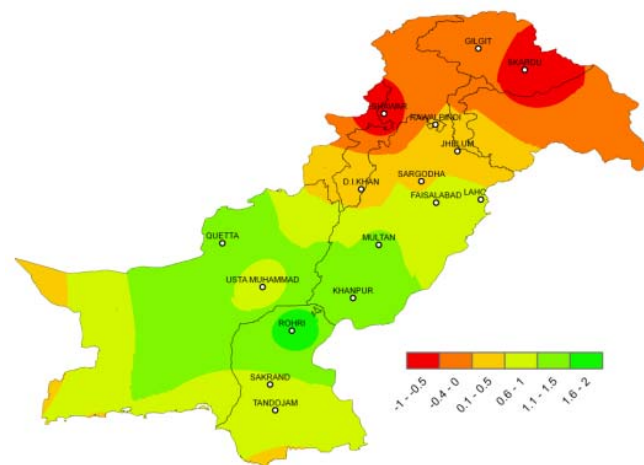
Mastard: Good condition at *Third Leaf* stage.



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 (11th January to 20th January, 2012)

2.6 Rohri

During the decade no rainfall occurred however weather remained cloudy for 3 days and average relative humidity recorded as 50 %. Mean night temperature was 8.6°C while day temperature recorded as 22.0°C with 87.8 hours bright sunshine duration. Wind speed recorded as 2.8 Km/hr with mean direction *north-easterly*.

2.7 Skardu

Rainfall reported as 6.9 mm during the decade, weather remained cloudy for 8 days and average relative humidity recorded as 68%. Mean night temperature was -10.3 °C while day temperature recorded as 1.9°C with 24.8 hours bright sunshine duration. Wind speed recorded as 0.6 Km/hr with mean direction *north-easterly*.

2.8 Multan

Rainfall reported as 3.0 mm during the decade, weather remained cloudy for 9 days and average relative humidity recorded as 62%. Mean night temperature was 5.1°C while day temperature recorded as 18.8°C with 68.7 hours bright sunshine duration. Wind speed recorded as 2.1 Km/hr with mean direction *northerly*.

2.9 Lahore

Rainfall reported as 16.2 mm during the decade, weather remained cloudy for 6 days and average relative humidity recorded as 69%. Mean night temperature was 7.6°C while day temperature recorded as 16.9°C with 55.6 hours bright sunshine duration. Wind speed recorded as 2.2 Km/hr with mean direction *north-westerly*.

2.10 Peshawar

Rainfall reported as 9.2 mm during the decade, weather remained cloudy for 5 days and average relative humidity recorded as 67%. Mean night temperature was 1.5 °C while day temperature recorded as 15.7 °C with 54.7 hours bright sunshine duration. Wind speed recorded as 1.6 Km/hr with mean direction *north-westerly*.

2.11 Khanpur

Weather remained dry during the decade however weather remained cloudy for 4 days and average relative humidity recorded as 56%. Mean night temperature was 4.4°C while day temperature recorded as 20.8°C with 65.9 hours bright sunshine duration. Wind speed recorded as 3.5 Km/hr with mean direction *north-easterly*.

2.12 Sargodha

Rainfall reported as 3.0 mm during the decade, weather remained cloudy for 6 days and average relative humidity recorded as 71%. Mean night temperature was 5.5°C while day temperature recorded as 18.6°C with 61.0 hours bright

sunshine duration. Wind speed recorded as 2.2 Km/hr with mean direction *north-easterly*.

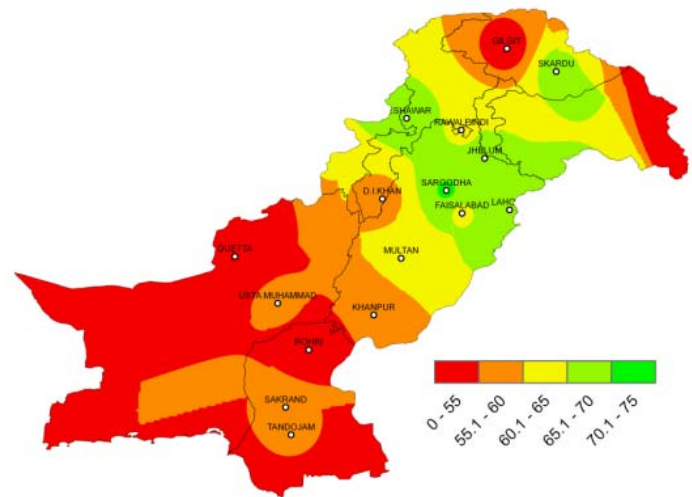


Figure.3: Relative Humidity in percentage

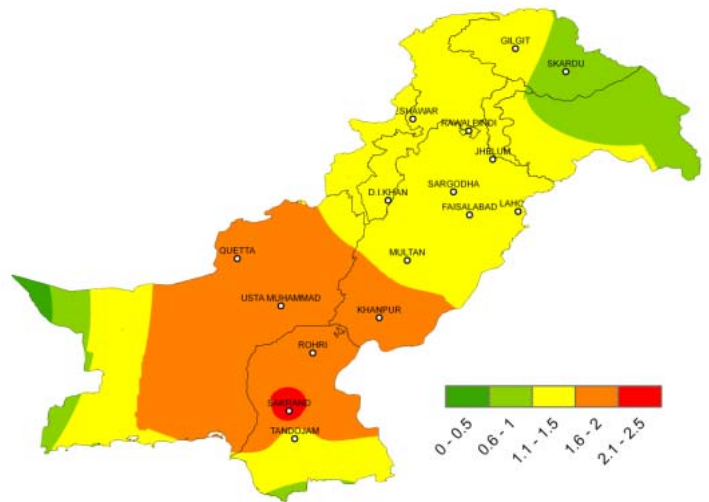


Figure.4: Reference Crop Evapotranspiration "ET₀" in mm/day

2.13 Gilgit.

Rainfall reported as Trace during the decade, weather remained cloudy for the entire period and average relative humidity recorded as 51%. Mean night temperature was -3.8 °C while day temperature recorded as 9.3 °C with 27.0 hours bright sunshine. Wind speed recorded as 2.0 Km/hr with mean direction *westerly*.

2.14 Jhelum

Rainfall reported as 37.2 mm during the decade, weather remained cloudy for 7 days and average relative humidity recorded as 66%. Mean night temperature was 3.8°C while day temperature recorded as 18.1°C with 59.9 hours bright sunshine duration. Wind speed recorded as 2.5 Km/hr with mean direction *north-westerly*.

2.15 D.I. Khan

Rainfall reported as 0.3 mm during the decade, weather remained cloudy for 3 days and average relative humidity recorded as 57%. Mean night temperature was 3.4°C while day temperature recorded as 17.7°C with 70.0 hours bright sunshine duration. Wind speed recorded as 2.7 Km/hr with mean direction *north-easterly*.

2.16 Sakrand

During the decade no rainfall occurred however weather remained cloudy for 5 days and average relative humidity recorded as 58%. Mean night temperature was 6.8°C while day temperature recorded as 22.0°C with 88.9 hours bright sunshine duration. Wind speed recorded as 3.7 Km/hr with mean direction *south-easterly*.

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

3.1 Temperature Forecast:

Below normal temperatures are expected in most parts of the country. Particularly parts of Quetta, Zhob, Kalat, Malakand Hazara, Rawalpindi divisions and areas of Gilgit Baltistan and Kashmir may experience 4-5°C below normal night temperatures.

3.2 Rain Forecast:

- ❖ **Punjab:** Rain with snow fall over the hills is also expected at scattered places in Rawalpindi/Islamabad, Lahore, Gujranwala, Sargodha and Faisalabad divisions on 22nd/23rd January and then on 25th/26th January 2012.
- ❖ **Khyber Pakhtoonkhawa:** Rain with snow fall over the hills is expected at scattered places in Malakand, Hazara, Peshawar, Kohat and DI Khan on 22nd/23rd January and then on 25th/26th January 2012.
- ❖ **Sindh:** Mainly dry weather is expected during the decade.
- ❖ **Balochistan:** Widespread rain with snowfall over the hills is expected in parts of Balochistan from 21st to 24th of January 2012.
- ❖ **Kashmir & Gilgit-Baltistan:** Mainly dry weather is expected during the decade. Mostly cloudy conditions with isolated light to moderate rain/light snowfall over the hills expected in Kashmir, Gilgit-Baltistan during the period 22nd/23rd January and then on 25th/26th January 2012.

3.3 Wind Forecast:

Normal wind pattern is likely in most parts of the country. However parts of Makran coast Quetta and Kalat divisions may experience gusty winds on 21st/22nd January 2012.

3.4 Advisory for Farmers:

Wheat crop is in tillering/shooting development stages in the agriculture plains of the country. Farmers should irrigate the crops as per requirement.