

DECADAL AGROMET BULLETIN OF PAKISTAN



2nd 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 1st decade of January, 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	1.9	0.0	-1.0	-1.3	0.1	14.8	17.3	17.7	***	17.4	19.2	21.7	83.8	1.1	58	1.7
2	SAKRAND ☆	0.1	0.0	0.0	0.2	3.8	13.5	20.4	18.0	***	17.6	19.5	22.7	95.8	2.4	61	1.8
3	ROHRI	0.1	0.0	0.0	-1.7	0.5	14.1	20.9	19.3	18.0	19.2	19.4	24.1	88.7	3.8	46	2.0
4	USTA MUHAMMAD	0.1	0.0	0.0	-0.9	1.4	13.2	19.2	19.4	19.3	19.4	20.1	21.1	***	1.1	52	1.3
5	QUETTA	1.6	1.2	-0.3	-2.2	-1.2	2.8	9.5	7.9	5.1	0.3	6.4	9.9	72.0	6.5	39	1.7
6	KHANPUR	0.1	0.0	0.0	-2.1	1.1	11.9	13.1	12.8	13.1	13.7	14.9	17.8	74.7	4.1	53	1.8
7	MULTAN	0.4	0.0	-1.0	-1.1	1.4	11.9	***	***	***	***	***	***	67.1	1.9	57	1.3
8	LAHORE	0.7	2.4	2.4	-0.2	0.5	12.3	13.1	12.9	12.7	13.2	***	17.0	62.2	1.6	66	1.1
9	FAISALABAD	0.7	2.0	1.9	-0.2	2.3	11.7	15.6	14.1	11.7	11.8	13.3	16.9	55.2	2.4	60	1.3
10	SARGODHA	0.8	TR	-0.9	0.2	2.0	12.2	14.9	13.8	13.4	14.0	15.8	18.3	58.5	2.0	68	1.2
11	JHELUM	1.1	26.6	23.2	-1.6	1.3	11.3	13.4	12.4	11.7	12.2	13.9	***	55.5	1.9	56	1.1
12	RAWALPINDI	1.9	18.6	8.8	-0.4	-1.0	9.3	11.2	9.9	9.3	9.7	11.3	14.1	54.4	1.0	63	0.9
13	D I KHAN	0.8	0.0	-1.0	-1.1	1.2	11.2	***	***	***	***	***	***	71.5	3.0	53	1.4
14	PESHAWAR	1.2	30.0	24.0	-1.6	-1.1	9.4	12.0	10.7	10.2	11.3	12.7	15.2	48.3	0.8	75	0.8
15	SKARDU	1.0	0.0	-1.0	-0.5	0.0	-2.4	***	***	***	***	***	***	23.0	1.0	51	0.6
16	GILGIT	0.2	TR	-0.5	0.0	-0.2	3.2	***	***	***	***	***	***	26.5	2.0	58	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. **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 January to 10th January, 2012):

Light to moderate rain with snowfall over hills for 3 to 4 days is reported from the agricultural plains of KPK, Punjab and Kashmir during the period. Whereas mostly cold and dry weather is reported from the agricultural plains of Sindh and Balochistan.

1.1 Punjab

Above normal rainfall reported from some places of the agricultural plains of eastern and northern Punjab; mainly from Mandi-Bahauddin, Islamabad, Mangla, Murree and Sialkot etc (Fig. 1.a). Decadal day time maximum temperature raised above normal by 1.1°C and night time minimum temperature dropped below normal by 0.8°C, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 2.1 km/hr, 60 %, and 1.2 mm/day respectively (Fig 3-4).

1.2 Sindh

Mainly cold and dry weather is reported from most of the agricultural plains of Sindh. Decadal day maximum temperature raised above normal by 1.5°C and night minimum temperature dropped below normal by 0.9°C, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 2.4 km/hr, 55 %, and 1.8 mm/day respectively.

1.3 Khyber Pakhtoon Khawa (KPK)

Normal to above normal rainfalls reported from most of the agricultural plains of KPK; mainly from Malamjabba, Dir, Kalam and Saidu Sharif etc. Decadal day time maximum temperature raised above normal by 0.1°C and night time minimum temperature dropped below normal by 1.4°C, in the province. Mean values of wind speed, relative humidity and ETo were recorded as 1.9 km/hr, 64 %, and 1.1 mm/day respectively.

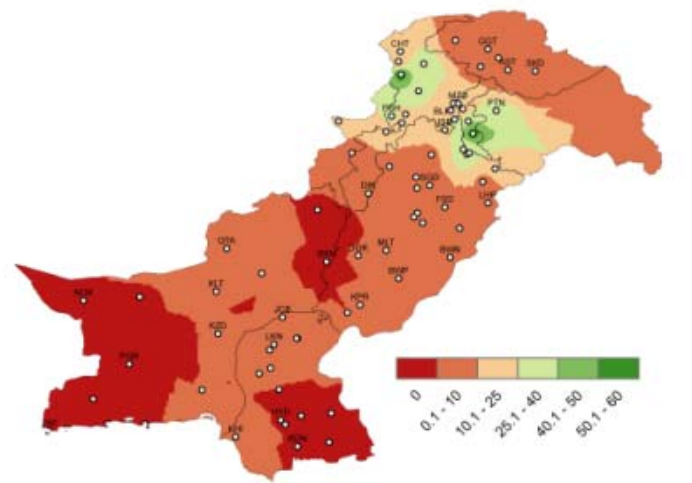
1.4 Balochistan

Mainly cold and dry weather is reported from most of the agricultural plains of Balochistan. In the northern Balochistan decadal day time maximum temperature raised above normal by 0.1°C and night time minimum temperature dropped below normal by 1.6°C. Whereas mean values of wind speed, relative humidity and ETo were recorded 3.8 km/hr, 45 %, and 1.5 mm/day respectively.

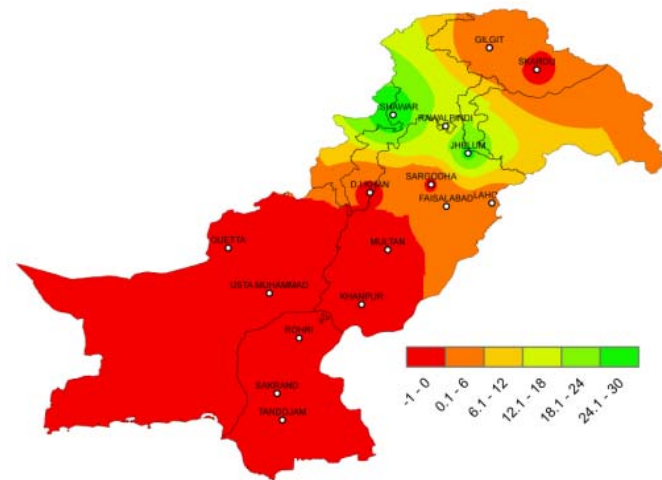
1.5 Gilgit Baltistan and Azad Jammu & Kashmir

Mainly cold and dry weather is reported from most of the agricultural plains of Gilgit Baltistan and Azad Jammu & Kashmir however good rainfall reported from Pattan, Muzaffarabad Kotli and Rawalakot. In Gilgit Baltistan region; decadal day time maximum temperature and night time minimum temperature both dropped below normal by 0.1 °C & 0.3 °C respectively. Whereas mean values of wind

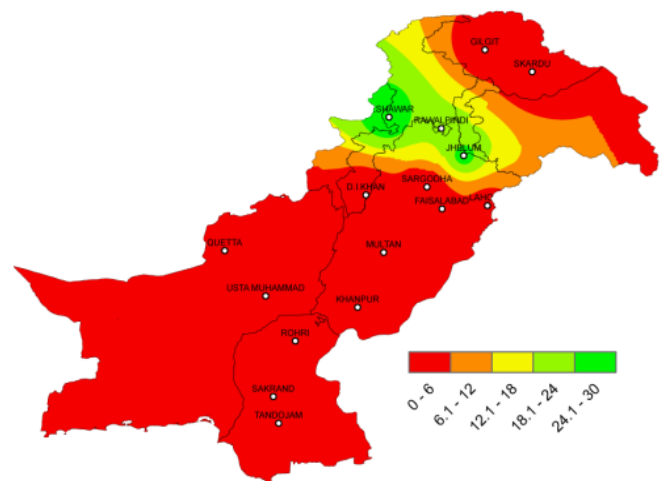
speed, relative humidity and ETo were recorded as 1.5 km/hr, 55 %, and 0.8 mm/day respectively.



a) Actual rainfall



b) Departure of rainfall



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 January to 10th January, 2012) as per Table-1**

2.1 RAMC, Rawalpindi (Potohar region)

Rainfall reported as 18.6 mm during the decade, weather remained cloudy for 6 days and average average relative humidity recorded as 63%. Mean night temperature was 1.9°C while day temperature recorded as 16.6°C with 54.4 hours bright sunshine duration. Wind speed recorded as 1.0 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)

Dry weather with cloudiness for 2 days observed during the decade and average relative humidity recorded as 58 %. Mean night temperature was 6.4°C while day temperature recorded as 23.2°C with 83.8 hours bright sunshine duration. Wind speed recorded as 1.1 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 *Tillering* stage

2.3 RAMC, Faisalabad (Central Punjab)

Rainfall reported as 2.0 mm during the decade, weather remained cloudy for 7 days and average relative humidity recorded as 60%. Mean night temperature was 3.7°C while day temperature recorded as 19.6°C with 55.2 hours bright sunshine duration. Wind speed recorded as 2.4 Km/hr with variable direction north-westerly. 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)

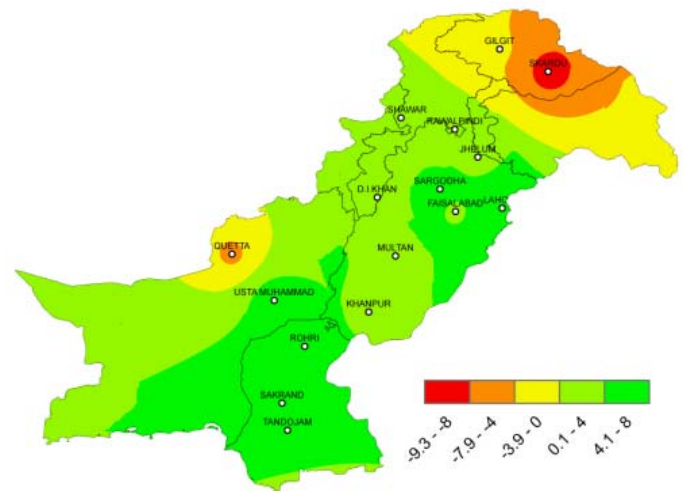
Rainfall reported as 1.2 mm during the decade, weather remained cloudy for 4 days and average relative humidity recorded as 39%. Mean night temperature was -4.5 °C while day temperature recorded as 10.1 °C with 72 hours bright sunshine duration and wind speed recorded as 6.5 Km/hr with mean direction north-westerly. Presently only one crop (rainfed conditions) is grown at the station as detailed below.

Wheat: Good condition at *Third Leaf* stage.

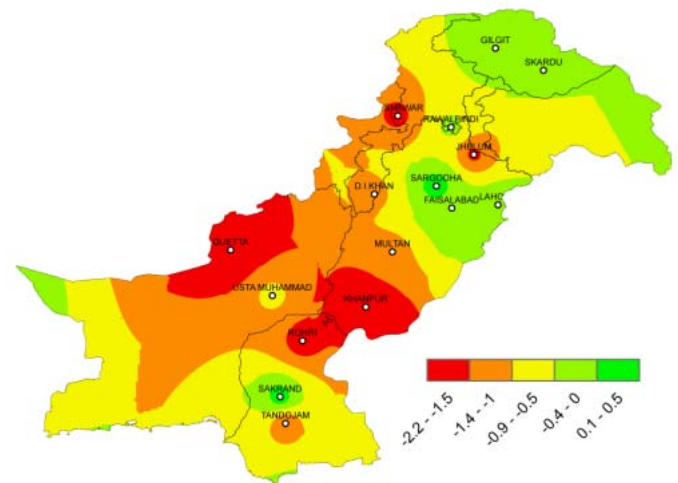
2.5 RAMC, Usta Muhammad (Eastern Balochistan)

Dry weather with clear skies observed during the decade and average relative humidity recorded as 52 %. Mean night temperature was 5.5°C while day temperature recorded as 20.9°C. Wind speed recorded as 1.1 Km/hr with mean direction northerly. Presently two crops (irrigated conditions) are grown at the station as detailed below.

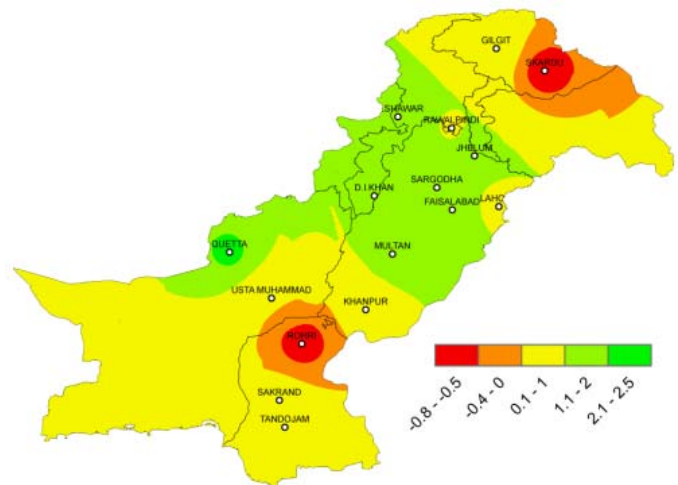
Wheat: Good condition at *Third Leaf* stage.
Mustard: Good condition at *Third Leaf* stage.



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 (1st January to 10th January, 2012)

2.6 Rohri

During the decade no rainfall occurred however weather remained cloudy for 3 days and average relative humidity recorded as 46 %. Mean night temperature was 6.8°C while day temperature recorded as 21.3°C with 88.7 hours bright sunshine duration. Wind speed recorded as 3.8 Km/hr with mean direction *northeasterly*.

2.7 Skardu

During the decade no rainfall occurred however weather remained cloudy for 7 days and average relative humidity recorded as 51 %. Mean night temperature was -9.3 °C while day temperature recorded as 4.5°C with 23 hours bright sunshine duration. Wind speed recorded as 1.0 Km/hr with mean direction *south-westerly*.

2.8 Multan

During the decade no rainfall occurred however weather remained cloudy for 6 days and average relative humidity recorded as 57 %. Mean night temperature was 4.0°C while day temperature recorded as 19.7 °C with 67.1 hours bright sunshine duration. Wind speed recorded as 1.9 Km/hr with mean direction *northerly*.

2.9 Lahore

Rainfall reported as 2.4 mm during the decade, weather remained cloudy for 4 days and average relative humidity recorded as 66%. Mean night temperature was 7.1°C while day temperature recorded as 17.5°C with 62.2 hours bright sunshine duration. Wind speed recorded as 1.6 Km/hr with mean direction *north-westerly*.

2.10 Peshawar

Rainfall reported as 30.0 mm during the decade, weather remained cloudy for 7 days and average relative humidity recorded as 75%. Mean night temperature was 2.4 °C while day temperature recorded as 16.3 °C with 48.3 hours bright sunshine duration. Wind speed recorded as 0.8 Km/hr with mean direction *northerly*.

2.11 Khanpur

Weather remained dry during the decade however weather remained cloudy for 6 days and average relative humidity recorded as 53%. Mean night temperature was 3.0°C while day temperature recorded as 20.8°C with 74.7 hours bright sunshine duration. Wind speed recorded as 4.1 Km/hr with mean direction *north-easterly*.

2.12 Sargodha

Rainfall reported as Trace during the decade, weather remained cloudy for 7 days and average relative humidity recorded as 68%. Mean night temperature was 5.1°C while

day temperature recorded as 19.3°C with 58.5 hours bright sunshine duration. Wind speed recorded as 2.0 Km/hr with variable direction.

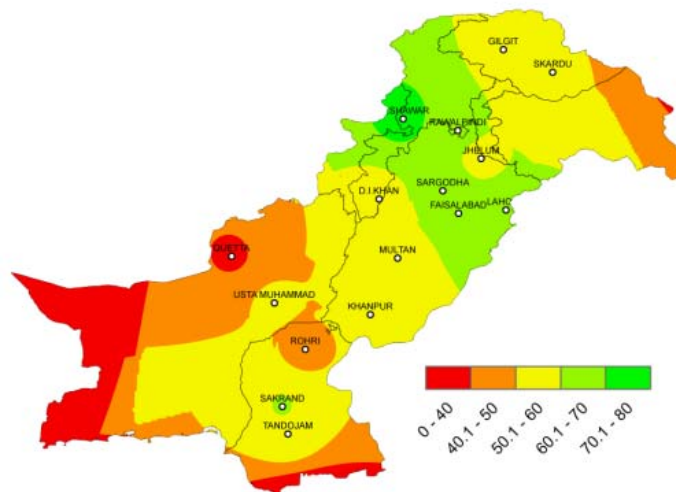


Figure.3: Relative Humidity in percentage

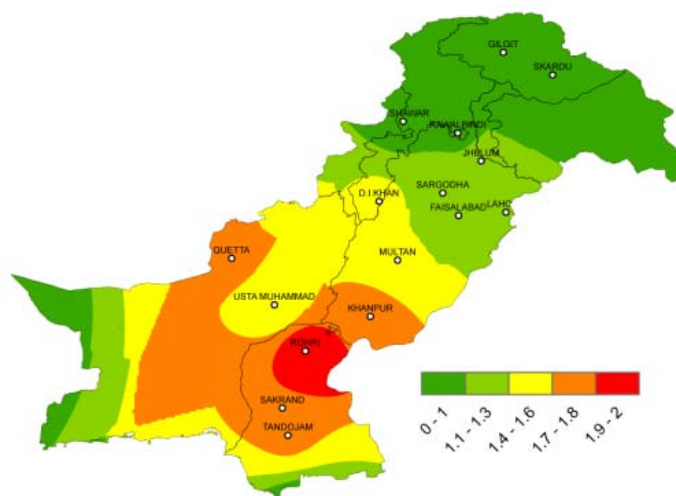


Figure.4: Reference Crop Evapotranspiration “ET₀” in mm/day

2.13 Gilgit.

Rainfall reported as Trace during the decade, weather remained cloudy for the entire period and average relative humidity recorded as 58%. Mean night temperature was -3.8 °C while day temperature recorded as 10.2 °C with 26.5 hours bright sunshine. Wind speed recorded as 1.2 Km/hr with mean direction *easterly*.

2.14 Jhelum

Rainfall reported as 26.6 mm during the decade, weather remained cloudy for 6 days and average relative humidity recorded as 56%. Mean night temperature was 3.4°C while day temperature recorded as 19.1°C with 55.5 hours bright sunshine duration. Wind speed recorded as 1.9 Km/hr with mean direction *north-westerly*.

2.15 D.I. Khan

Dry weather with cloudiness for 3 days observed during the decade and average relative humidity recorded as 53%. Mean night temperature was 3.1°C while day temperature recorded as 19.3°C with 71.5 hours bright sunshine duration. Wind speed recorded as 3.0 Km/hr with mean direction *north-westerly*.

2.16 Sakrand

During the decade no rainfall occurred however weather remained cloudy for 3 days and average relative humidity recorded as 61%. Mean night temperature was 5.8°C while day temperature recorded as 21.2°C with 95.8 hours bright sunshine duration. Wind speed recorded as 2.4 Km/hr with mean direction *northerly*.

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

3.1 Temperature Forecast:

Day temperatures are likely to remain normal during the decade however night temperatures expected to remain 2-3°C below normal during the decade in Kashmir, Gilgit-Baltistan, Punjab, KPK and North Balochistan.

3.2 Rain Forecast:

- **Punjab:** Cloudy conditions with isolated light to moderate rain/light snowfall over the hills expected in northern parts of the province including Potohar region, Gujranwala, Sargodha and Lahore divisions during the period 14th to 15th January, 2012. Dry/cold weather in the remaining days is expected in most parts of the province during the period. However, plains of Punjab including Lahore, Gujranwala, Sargodha, Faisalabad, Multan and Bahawalpur may experience moderate to dense fog during morning hours.
- **Khyber Pakhtoonkhawa:** Cloudy conditions with isolated light to moderate rain/snowfall over the hills expected in most of the agricultural plains during the period 14th to 15th January, 2012. Whereas dry/cold weather is expected in remaining days of the decade. However plains of KPK including Peshawar, Charsada and Sawabi may experience moderate to dense fog during morning hours.
- **Sindh:** Mainly dry weather is expected during the decade.
- **Balochistan:** Isolated light to moderate rain/light snowfall over the hills expected in Quetta, Kalat and Zhob divisions during the period 13th to 14th January, 2012. Whereas dry weather is expected during the rest of the days and parts of the province.
- **Kashmir & Gilgit-Baltistan:** Mostly cloudy conditions with isolated light to moderate rain/light snowfall over the hills expected in Kashmir, Gilgit-Baltistan during the period 14th to 15th January, 2012. Whereas dry weather is expected during the rest of the days and parts of the region.

3.3 Wind Forecast:

Normal wind pattern is likely in most parts of the country. However gusty winds are likely in Upper Punjab, Upper KPK, and northern Balochistan during the period 13th to 15th January, 2012.

3.4 Advisory for Farmers:

- Wheat crop is in third leaf/tillering development stage in the agriculture plains of the country. Farmers should irrigate the early sown crops as per requirement.