

Decadal Agromet Bulletin of Pakistan



Highlights....

- ❖ Light to moderate rainfall reported in the agricultural plains of Punjab, K.P, Moderate to heavy in G.B, Kashmir, whereas Sindh & Baluchistan remained dry during the last decade.
- ❖ Highest amount of rainfall recorded as 72.5mm at Rawalakot during the last decade.
- ❖ Lowest minimum temperature recorded -12.0°C at Kalat during the last decade.
- ❖ Mainly cold and dry weather is expected in most parts of the country with foggy conditions over the plains of Punjab, upper parts of Sind and central plains of KPK. However, partly cloudy weather conditions with light to moderate rain (with light snowfall over the hills) is expected at K.P,K, G.B, Kashmir and Potohar region in Punjab during first half of the decade (21st to 23rd December).
- ❖ Farmers of barani and irrigated areas are advised to remove weeds from the fields, so that the present soil moisture may fully be utilized.
- ❖ Farmers of cotton crop areas are advised to prepare their field for incoming rabi crops and complete sowing in time.
- ❖ Frost is expected in several plain areas of the country during the decade at clear nights. Farmers are advised to take in time precautionary measures in this regard to protect standing corps and orchards.

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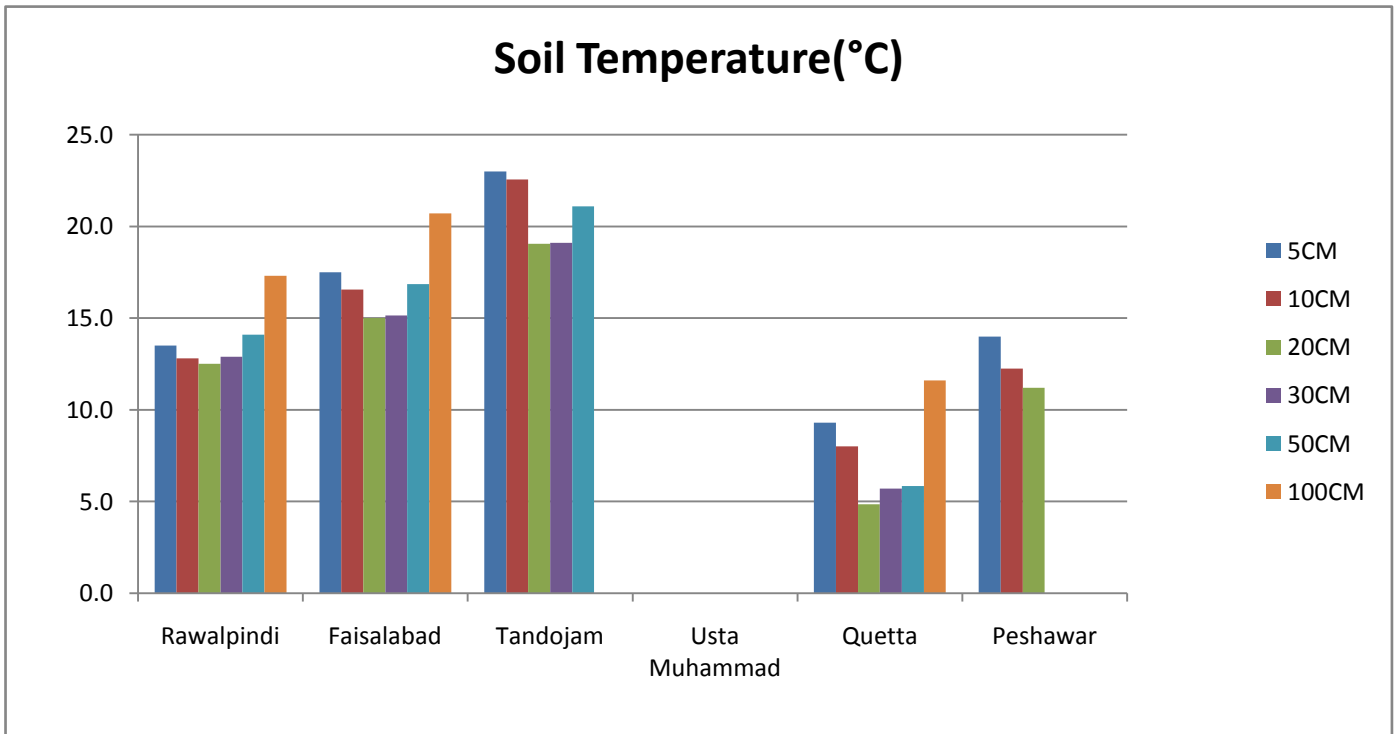
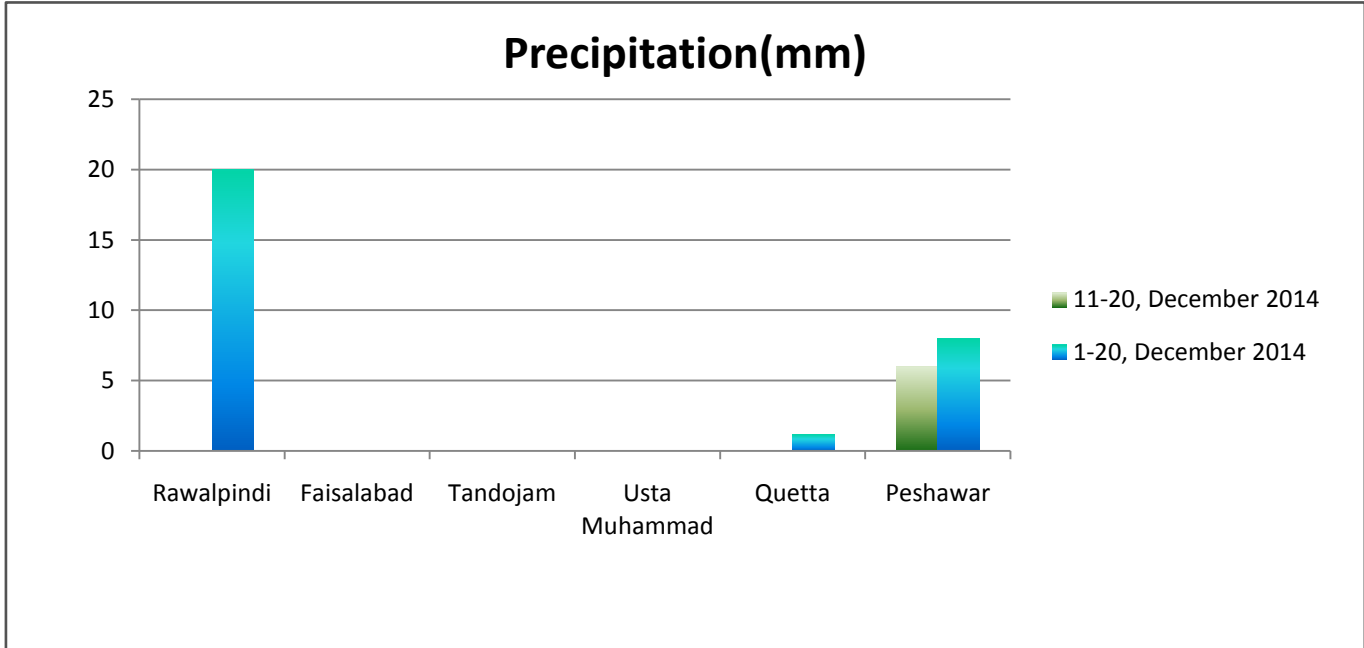
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Meteorological conditions during 2nd decade of December, 2015

Sr. No.	Station	Precipitation (mm)			Air Temperature (°c)			Soil Temperatures (°c)						R.H (%)	Sunshine Duration(hours)	Wind Speed (km/hr)	ETo (mm/day)
		Normal	Actual	Dep	Tmax	Tmin	Mean	5cm	10cm	20cm	30cm	50cm	100cm				
1	RAWALPINDI	1.5	0.0	-1.5	-2.1	-0.3	11.2	13.5	12.8	12.5	12.9	14.1	17.3	63	79.0	1.8	1.2
2	FAISALABAD	0.2	0.0	-0.2	-0.5	-1.5	13.3	17.5	16.6	15.0	15.2	16.9	20.7	62	72.1	1.5	1.3
3	JHELUM	0.4	0.0	-0.4	-1.3	-1.9	13.2	13.7	13.1	13.2	13.9	15.6	***	62	75.5	1.3	1.2
4	LAHORE	0.4	0.0	-0.4	-1.2	-3.0	13.9	15.9	15.6	15.4	15.7	***	20.5	58	81.8	1.6	1.2
5	SARGODHA	0.6	TR	-0.5	-1.0	-0.8	14.0	16.7	15.9	15.8	16.9	19.4	20.9	65	75.9	1.1	1.2
6	MULTAN	0.6	0.0	-0.6	-1.4	-0.4	13.9	***	***	***	***	***	***	51	77.3	1.9	1.5
7	KHANPUR	1.6	0.0	-1.6	-0.1	-1.8	14.0	***	15.5	16.3	17.1	18.4	21.5	49	77.0	2.6	1.9
8	TANDOJAM	0.4	0.0	-0.4	-0.7	-3.5	15.6	23.0	22.6	19.1	19.1	21.1	***	56	88.4	2.5	2.2
9	SAKRAND ☆	1.0	0.0	-1.0	0.7	-5.2	13.1	19.6	17.8	***	***	***	26.0	54	86.0	3.1	2.2
10	ROHRI	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
11	DI KHAN	0.1	0.0	-0.1	-1.9	-2.6	11.7	***	***	***	***	***	***	56	74.6	***	2.4
12	PESHAWAR	0.6	6.0	5.4	-0.7	-3.2	11.5	13.1	11.6	10.8	***	***	17.5	56	71.2	1.1	1.0
13	USTA MUHAMMAD	0.1	0.0	-0.1	0.5	-2.8	14.6	20.1	20.5	21.2	21.8	***	23.0	53	***	***	3.4
14	QUETTA	0.2	0.0	-0.2	-3.9	-2.7	3.5	12.8	10.3	6.9	7.3	7.5	13.2	37	87.5	4.4	1.7
15	SKARDU	1.2	0.0	-1.2	-1.2	-0.7	0.0	***	***	***	***	***	***	68	43.9	0.4	0.8
16	GILGIT	0.3	1.9	1.6	-1.5	-2.0	3.5	***	***	***	***	***	***	56	44.5	2.0	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; $\text{Dep} \div \text{Normal} \times 100$. 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.

Graph at RAMC's during December, 2015



Past Weather (11th to 20th December, 2015)

Light to moderate rainfall reported in the agricultural plains of Punjab, K.P, Moderate to heavy in G.B, Kashmir, whereas Sindh & Baluchistan remained dry during the last decade.

1.1 Punjab

Light to moderate rainfall reported in the agricultural plains of Punjab. Chief amount of rainfall received in Jhelum, Islamabad & Mangla Decadal maximum & minimum temperature both dropped below normal by 1.1°C & 1.4°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 59%, 76.9 hrs, 1.7km/hr and 1.4mm/day respectively.

1.2 Sindh

Dry weather reported in the agricultural plains of Sindh. Decadal maximum remained normal whereas decadal minimum temperature dropped below normal by 2.9°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 55%, 87.2hrs, 2.8km/hr and 2.2mm/day respectively.

1.3 Khyber Pakhtunkhwa (KP)

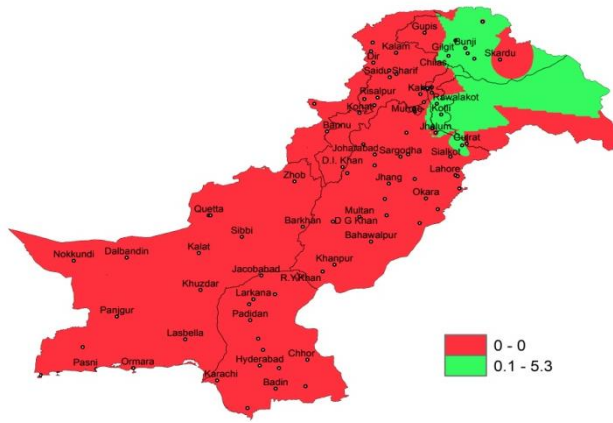
Light to moderate rainfall reported in the agricultural plain of KP. Decadal maximum & minimum temperature both dropped below normal by 1.3°C & 2.9°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 56%, 72.9 hrs, 1.1km/hr and 1.7/day respectively.

1.4 Balochistan

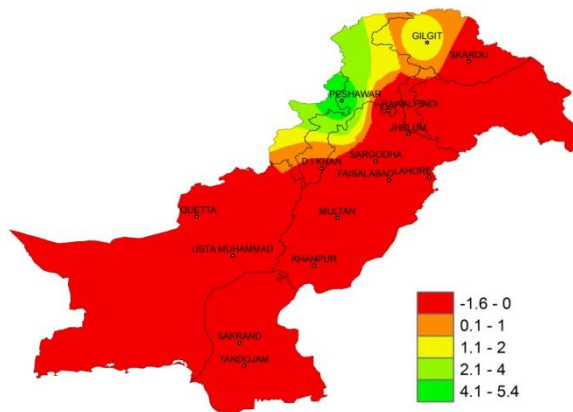
Rainfall reported from a single place Samungli as 1.0mm in agricultural plains of Baluchistan. Decadal maximum & minimum temperature both dropped below normal by 1.7°C & 2.8°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 45%, 87.5hrs, 4.4km/hr and 2.6/day respectively.

1.5 Gilgit-Baltistan and Azad Jammu & Kashmir

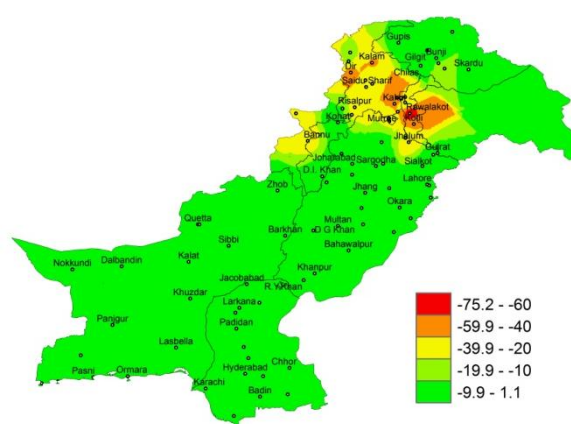
Moderate to heavy rainfall reported in the agriculture plains of GB & Kashmir. Decadal maximum & minimum temperature both dropped below normal by 1.4°C & 1.4°C respectively, in the province.. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 62%, 44.2hrs, 1.2km/hr and 0.9 mm/day respectively.



I. Actual rainfall



II. Departure of rainfall from Normal



III. 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 December, 2015)

2.1 RAMC, Rawalpindi (Potohar region)

Dry weather reported during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 63%. Mean day temperature was 18.2°C while night temperature recorded as 4.1°C with 79.0hours bright sunshine duration. Wind speed recorded as 1.8km/hr with mean wind direction *Westerly*.

Wheat (Chakwal 97): Good condition 3rd leaf

2.2 RAMC, Faisalabad (Central Punjab)

Dry weather reported during the decade however weather remained cloudy for 02days. Average relative humidity recorded as 62%. Mean day temperature was 21.8°C while night temperature recorded as 4.8°C with 72.1hours bright sunshine duration. Wind speed recorded as 1.5 km/hr with mean wind direction *North westerly*.

Wheat: Very good condition, Tillering stage

2.3 RAMC, Tandojam (Lower Sindh)

Dry weather reported during the decade .Sky remained clear thought the decade. Average relative humidity recorded as 56%. Mean day temperature was 24.8°C while night temperature recorded as 6.4°C with 88.4 hours bright sunshine duration. Wind speed recorded as 2.5km/hr with mean wind direction *Northerly*.

Wheat (TJ-83): Good condition, 3rd leaf stage

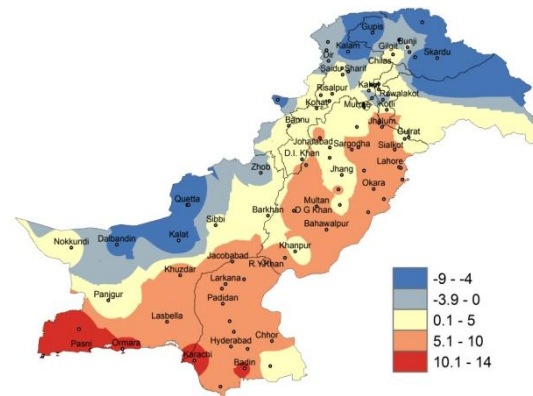
2.4 RAMC, Usta Muhammad (Eastern Baluchistan)

Dry weather reported during the decade however weather remained cloudy for 02days. Average relative humidity recorded as 53%. Mean day temperature was 23.2°C while night temperature recorded as 5.9°C.

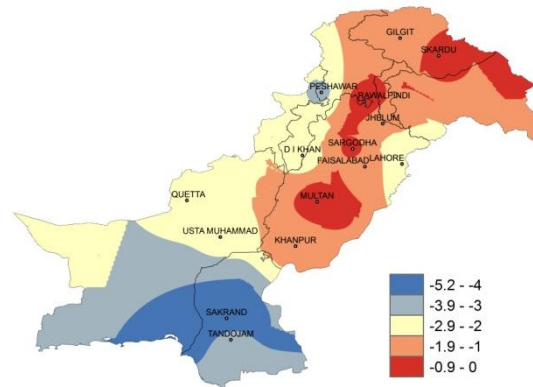
Wheat: Good condition at Germination stage.

2.5 RAMC, Quetta (Northern Balochistan)

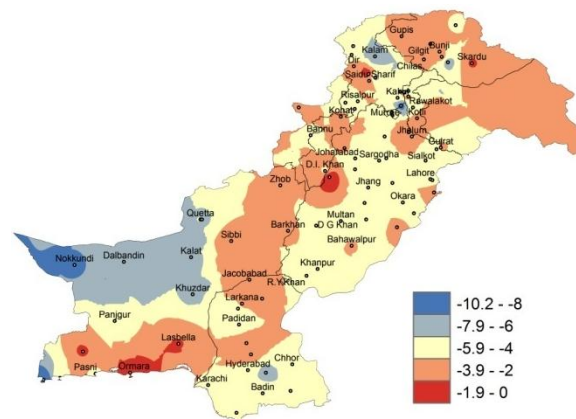
Dry weather reported during the decade however weather remained cloudy for 06days. Average relative humidity recorded as 37%. Mean day temperature was 10.5°C while night temperature recorded as -3.5°C with 87.5 hours bright sunshine duration and wind speed recorded as 4.4km/hr with mean wind direction *North easterly*.



I. Actual min-temp



II. Departure of min-temp from Normal



III. 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 December, 2015)**

2.6 **Jhelum**

Dry weather reported during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 62%. Mean day temperature was 20.9°C while night temperature recorded as 5.4°C with 75.5hours bright sunshine duration. Wind speed recorded 1.3km/hr with wind direction *North westerly*

2.7 **Lahore**

Dry weather reported during the decade however weather remained cloudy for 02days. Average relative humidity recorded as 58%. Mean day temperature was 20.7°C while night temperature recorded as 7.0°C with 81.8hours bright sunshine duration. Wind speed recorded as 1.6 km/hr with mean wind direction *North westerly*.

2.8 **Sargodha**

Rainfall reported as Trace (non measureable) during the decade. Sky remained clear thought the decade. Average relative humidity recorded as 65%. Mean day temperature was 21.6°C while night temperature recorded as 6.4°C with 75.9hours bright sunshine duration Wind speed recorded as 1.1km/h with mean wind direction as *North westerly*.

2.9 **Multan**

Dry weather reported during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 51%. Mean day temperature was 21.8°C while night temperature recorded as 6.0°C with 77.3 hours bright sunshine duration. Wind speed recorded 1.9km/hr with mean wind direction *Southerly*.

2.10 **Khanpur**

Dry weather reported during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 49%. Mean day temperature was 22.9°C while night temperature recorded as 5.1°C with 77.0hours bright sunshine duration. Wind speed recorded as 2.6 km/hr with mean wind direction *South westerly*.

2.11 **Sakrand**

Dry weather reported during the decade however weather remained cloudy for 03days. Average relative humidity recorded as 54%. Mean day temperature was 23.3°C while night temperature recorded as 2.8°C with 86.0 hours bright sunshine duration. Wind speed recorded 3.1km/hr with wind direction *Northerly*.

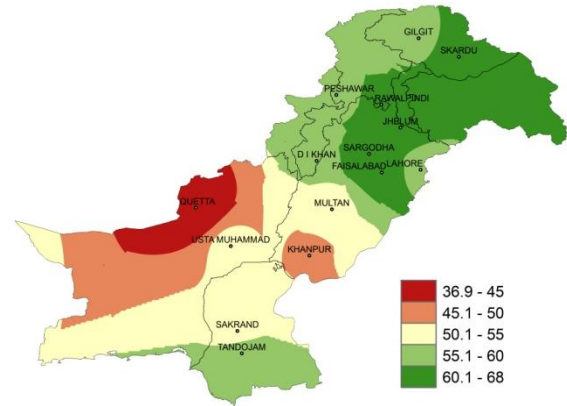


Figure.3: Relative Humidity in percentage (%)

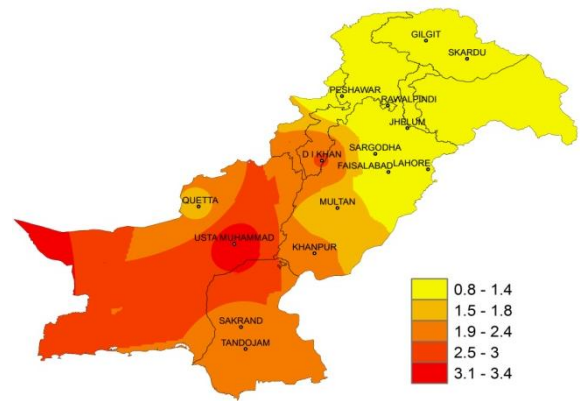


Figure.4: Reference Crop Evapotranspiration “ETo” in mm/day

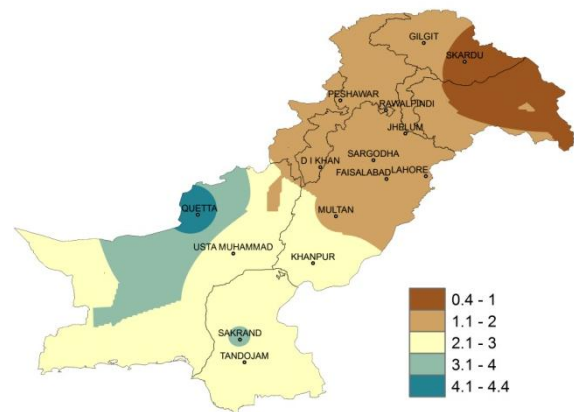


Figure 5: Wind Speed in kilometer per hour (km/h)

2.12 D.I. Khan

Dry weather reported during the decade however weather remained cloudy for 01days. Average relative humidity recorded as 56%. Mean day temperature was 20.6°C while night temperature recorded as 2.7°C with 74.6hours bright sunshine duration.

2.13 Peshawar

Dry weather reported during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 62%. Mean day temperature was 18.7°C while night temperature recorded as 2.1°C with 38.9hours bright sunshine duration. Mean wind direction reported as North easterly.

2.15 Skardu

Dry weather reported during the decade however weather remained cloudy for 04days. Average relative humidity recorded as 68%. Mean day temperature was 5.5°C while night temperature recorded as -5.6°C with 43.9hours bright sunshine duration. Wind speed recorded as 0.4km/hr with mean wind direction *easterly*

2.16 Gilgit

Rainfall reported as 1.9mm during the decade; however weather remained cloudy for 9days. Average relative humidity recorded as 56%. Mean day temperature was 10.5°C while night temperature recorded as -3.6°C with 44.5hours bright sunshine duration. Wind speed recorded as 2.0km/hr with mean wind direction *southerly*

**3. Ten Days Weather Advisory for Farmers
(21st to 31st December, 2015)****3.1 Temperature Forecast**

Day temperatures are expected to be normal but night temperature may drop in most of the agricultural plains of the country during the decade.

3.2 Wind Forecast

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

3.3 Rain Forecast

Continental air is prevailing over most parts of the country. A shallow westerly wave is likely to affect upper parts of the country on Monday night and persists till Wednesday.

❖ **Punjab:** Mostly cold and dry weather with fog over plains is expected during the decade. However light to moderate rainfall with snow over hills is expected in Potohar region and adjoining hills during 22nd and 23rd of December.

❖ **Khyber Pakhtunkhwa:** Mainly cold and dry weather is expected in the province. However light rainfall (with light snowfall over the hills) is expected in hills and central plains from 21st to 23rd of December during the decade. Fog is expected over plain areas of Peshawar and Mardan.

❖ **Sindh:** Dry weather expected in most of the parts of Sindh during the decade, while foggy in Sukkur divisions during night & morning hours.

❖ **Baluchistan:** Mainly cold and dry weather is expected in the province

❖ **Gilgit Baltistan:** Mainly cold and cloudy weather is expected in most parts of the G.B. However light to moderate rain (with light snowfall over the hills) is expected in first half of the decade.

❖ .

❖ **Kashmir:** Mainly cold and dry weather is expected in most parts of the Kashmir. However partly cloudy weather conditions with light to moderate rain (with light snowfall over the hills) is expected from 21st to 23rd of December during the decade..

3.4 Advisory for Farmers

❖ Removing weeds from the standing crops is very important as weeds utilize moisture and food which may be utilized by the crop. As a result considerable loss in yield occurs every year. However operations against weeds should be started using weedicides or manually when the crop completely covers the fields.

❖ Due to expected dry weather in most parts of the country, farmers are advised to irrigate the crops as per requirement during the decade.

❖ Frost is expected in several plain areas of the country during the decade at clear nights. Farmers are advised to take in time precautionary measures in this regard to protect standing crops and orchards.