

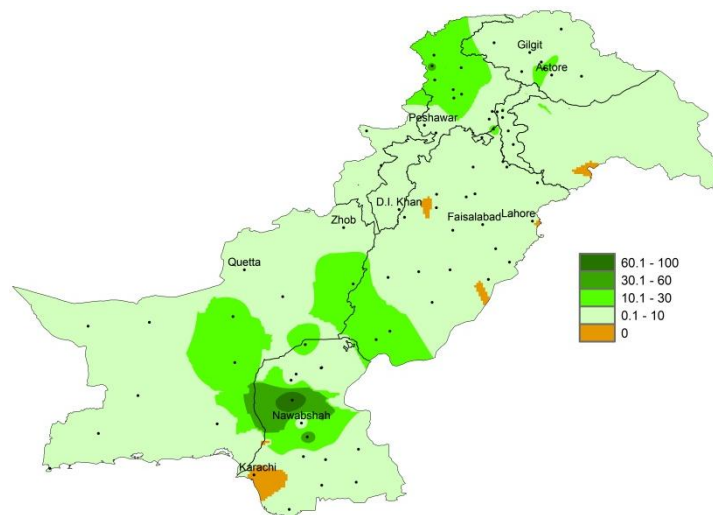
Weekly Weather and Crop Bulletin for Pakistan

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**Rainfall Distribution (mm) during the Previous
Week (28th October- 3rd November, 2019)**



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Highlights of Past Weather (28th October- 3rd November, 2019)

Above normal night time temperatures were observed all over the country during the last week.

Province wise distribution of rainfall reported as follows during the last week:

1. Light to moderate rainfall observed in Punjab, Khyber Pakhtunkhwa, Baluchistan, Gilgit-Baltistan & AJK.
2. Moderate to heavy rainfall observed in Sindh.

Patron-in-Chief: Muhammad Riaz (Director General)

Editor-in-Chief: Dr Muhammad Afzaal (Director)

Editor: Saeeda Saleh (Assistant Meteorologist)

Past Weather of Provinces (28th October- 3rd November, 2019)

Punjab

Light to moderate rainfall observed in Punjab during the week. Weekly maximum and minimum temperatures recorded as 29.8°C & 16.9°C respectively. For the recent week on average 126.0 growing degree days were accumulated. Average relative humidity recorded as 59% and wind speed in the morning/evening recorded as 0.5/1.4 Knots. During the previous week the highest precipitation was recorded as 14.01 mm at Rahim Yar Khan while minimum night time temperature was recorded as 9.0°C Murree.

Baluchistan

Light to moderate rainfall observed in Baluchistan during the week. Weekly maximum and minimum temperatures recorded as 30.1°C & 16.2°C respectively. For the recent week on average 127.2 growing degree days were accumulated. Average relative humidity recorded as 53% and wind speed in the morning/evening recorded as 1.0/5.4 Knots. During the previous week the highest precipitation was recorded as 19.00 mm at Barkhan while minimum night time temperature was recorded as 3.5°C at Kalat.

Khyber Pakhtunkhwa

Light to moderate rainfall observed in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 23.7°C & 9.8°C respectively. For the recent week on average 78.2 growing degree days were accumulated. Average relative humidity recorded as 69% and wind speed in the morning/evening recorded as 1.3/1.3 Knots. During the previous week the highest precipitation recorded as 32.6 mm at Drosh while minimum night time temperature was recorded as 0.5°C at Kalam.

Gilgit-Baltistan and Azad Jammu & Kashmir

Light rainfall observed in Gilgit-Baltistan & Kashmir during the week. Weekly maximum and

minimum temperatures recorded as 21.9°C & 7.7°C respectively. For the recent week on average 64.9 growing degree days were accumulated. Average relative humidity recorded as 63% and wind speed in the morning/evening recorded as 1.1/0.8 Knots. During the previous week the highest precipitation recorded as 8.0 mm at Muzafarabad while minimum night time temperature was recorded as 0.1°C at Skardu.

Sindh

Moderate to heavy rainfall observed in Sindh during the week. Weekly maximum and minimum temperatures recorded as 33.1°C & 21.4°C respectively. For the recent week, on average 151.2 growing degree days were accumulated. Average relative humidity recorded as 65% and wind speed in the morning/evening recorded as 1.5/2.7 Knots. During the previous week the highest precipitation was recorded as 98.01 mm at Padidan while minimum night time temperature was recorded as 16.5°C at Dadu.

Past Weather for Major Agricultural Plains (28th October- 3rd November, 2019)

Rawalpindi (Potohar region)

0.01 mm (Trace) rainfall reported from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 1.8/1.8 Oktas while, average relative humidity observed as 76%. Mean night time temperature recorded 15.4°C & for the recent week 135.2 growing degree days accumulated. Calm wind was observed in the morning/evening.

Faisalabad (Central Punjab)

1.20 mm rainfall reported from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 1.6/2.0 Oktas while, average relative humidity observed as 69%. Mean night time temperature recorded as 17.3°C & for the recent week 148.4 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.2/0.0Knots.

Tandojam (Lower Sindh)

Dry weather reported from Tandojam during the week; however, cloudiness in the morning/evening recorded as 1.7/1.8 Oktas while, average relative humidity observed as 67%. Mean night time temperature recorded as 18.4°C & for the recent week 161.8 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.4/1.2 Knots.

Usta Muhammad (Eastern Baluchistan)

14.00 mm rainfall reported from Usta Muhammad during the week; however, cloudiness in the morning/evening recorded as 2.2/1.7 Oktas while, average relative humidity observed as 70%. Mean night time temperature recorded as 19.1°C & for the recent week 127.3 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.2/0.2 Knots.

Quetta (Northern Baluchistan)

7.80 mm rainfall reported from Quetta during the week; however, cloudiness in the morning/evening recorded as 1.6/4.1 Oktas while, average relative humidity observed as 41%. Mean night time temperature recorded as 10.4°C & for the recent week 104.6 growing degree days accumulated.

Wind speed recorded in the morning/evening as 2.2/3.1 Knots.

Past Weather for Sub-Regional Agricultural Plains (28th October- 3rd November, 2019)

Multan

0.02 mm rainfall reported from Multan during the week; however, cloudiness in the morning/evening recorded as 1.6/1.6 Oktas while, average relative humidity observed as 60%. Mean night time temperature recorded as 18.8°C & for the recent week 138.1 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.6/2.9 Knots.

Lahore

Dry weather reported from Lahore during the week; however, however, cloudiness in the morning/evening recorded as 1.6/2.9 Oktas while, average relative humidity observed as 66%. Mean night time temperature recorded as 17.0°C & for the recent week 124.0 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.0/0.3 Knots.

Zhob

6.00 mm rainfall reported from reported from Zhob during the week; however, cloudiness in the morning/evening recorded as 1.0/3.0 Oktas while, average relative humidity observed as 51%. Mean night time temperature recorded as 11.0°C & for the recent week 110.0 growing degree days accumulated. Wind speed recorded in the morning/evening as 2.0/6.1 Knots.

Murree

13.01 mm rainfall was reported from Murree during the week; however, cloudiness in the morning/evening recorded as 1.1/4.0 Oktas while, average relative humidity observed as 51%. Mean night time temperature recorded as 11.5°C & for the recent week 71.7 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.9/1.1 Knots.

D.I. Khan

0.01 mm (Trace) rainfall reported from D.I. Khan during the week; however, cloudiness in the morning/evening recorded as 1.1/1.7 Oktas while, average relative humidity observed as 69%. Mean night time temperature recorded as 15.8°C & for the recent week 127.5 growing degree days

accumulated. Wind speed recorded in the morning/evening as 0.6/0.3 Knots.

Peshawar

2.81 mm rainfall reported from Peshawar during the week; however, cloudiness in the morning/evening recorded as 2.0/5.4 Oktas while, average relative humidity observed as 72%. Mean night time temperature recorded as 15.8°C & for the recent week 91.0 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.0/0.6 Knots.

Kalam

28.00 mm rainfall reported from Kalam during the week; however, cloudiness in the morning/evening recorded as 3.9/6.7 Oktas while, average relative humidity observed as 76%. Mean night time temperature recorded as 2.4°C & for the recent 28.4 growing degree days accumulated. Calm wind was observed in the morning/evening.

Gilgit

0.02 mm rainfall reported from Gilgit during the week. However, cloudiness in the morning/evening recorded as 5.3/4.7 Oktas while, average relative humidity observed as 65%. Mean night time temperature recorded as 6.5°C & for the recent week 67.0 growing degree days accumulated. Wind speed recorded in the morning/evening as 1.0/0.0 Knots.

Skardu

0.01 mm (Trace) rainfall reported from Skardu during the week; however, cloudiness in the morning/evening recorded as 4.1/6.1 Oktas while, average relative humidity observed as 50%. Mean night time temperature recorded as 2.2°C & for the recent week 26.5 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.0/0.9 Knots.

Crop Situation for Major Agricultural Plains (Based on data from Regional Agro met Centers)

Potohar Region (Rawalpindi)

There is presently no crop grown in the fields of RAMC Rawalpindi.

Central Punjab (Faisalabad)

Presently cotton crop is sown in the fields of RAMC Faisalabad.

Cotton: V.Good, Picking Stage Completed.

Lower Sindh (Tandojam)

Presently cotton crop is sown in the fields of RAMC Tandojam.

Cotton: The land is prepared for new crop.

Northern Baluchistan (Quetta)

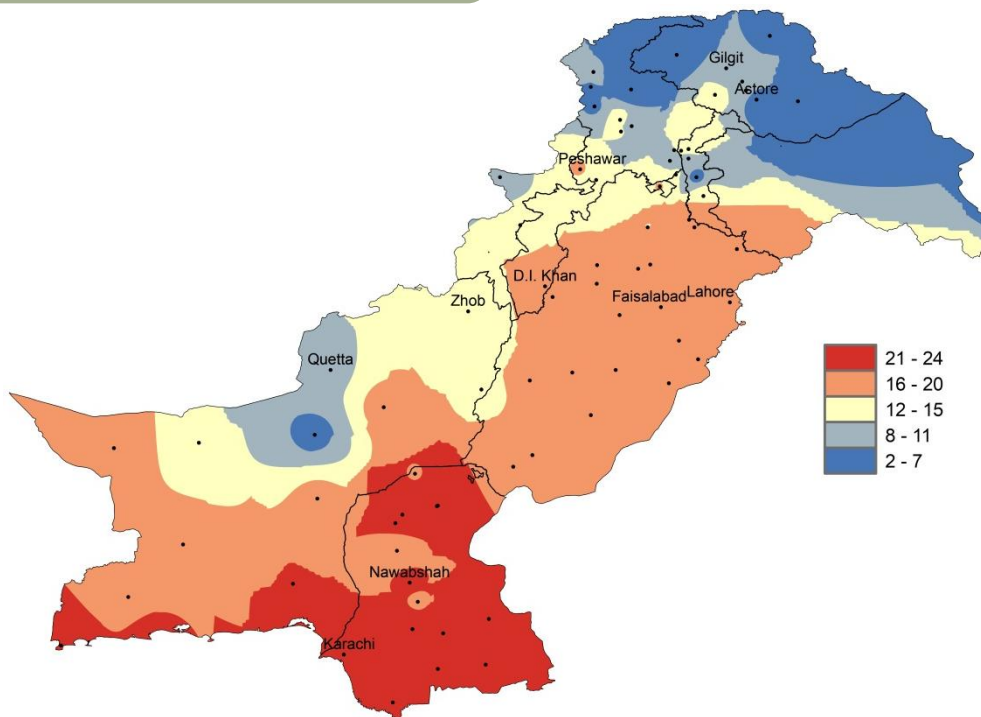
There is presently no crop grown in the fields of RAMC Quetta.

Eastern Baluchistan (Usta Muhammad)

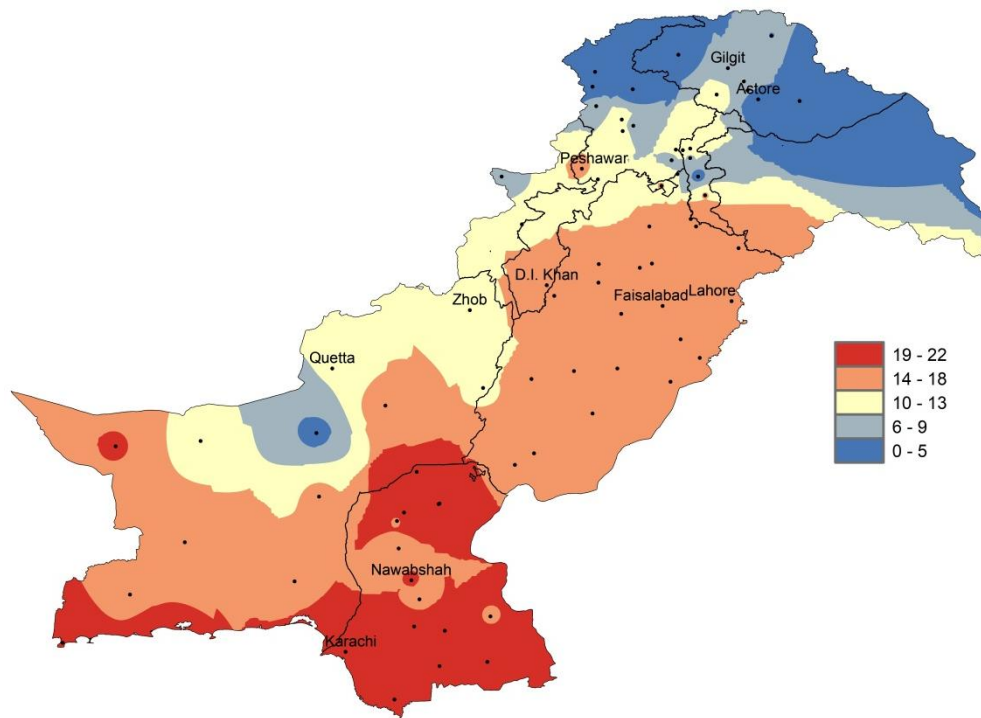
Presently rice crop is sown in the fields of RAMC Usta Muhammad.

Rice: Good, Flowering Stage.

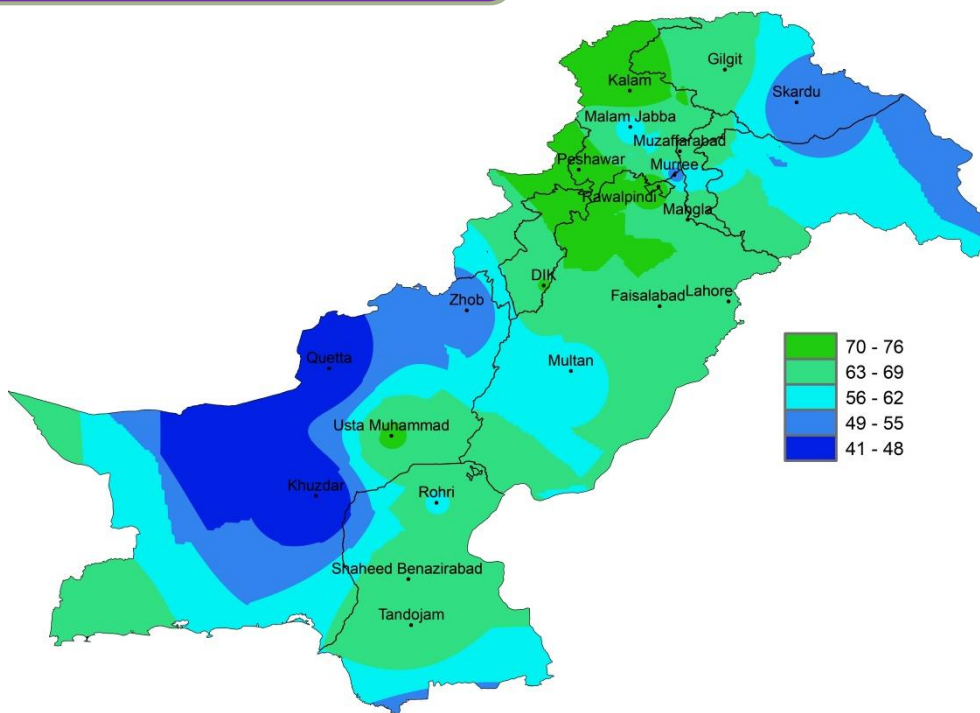
Mean Minimum temperature (°C) during the Previous week (28th October- 3rd November, 2019)



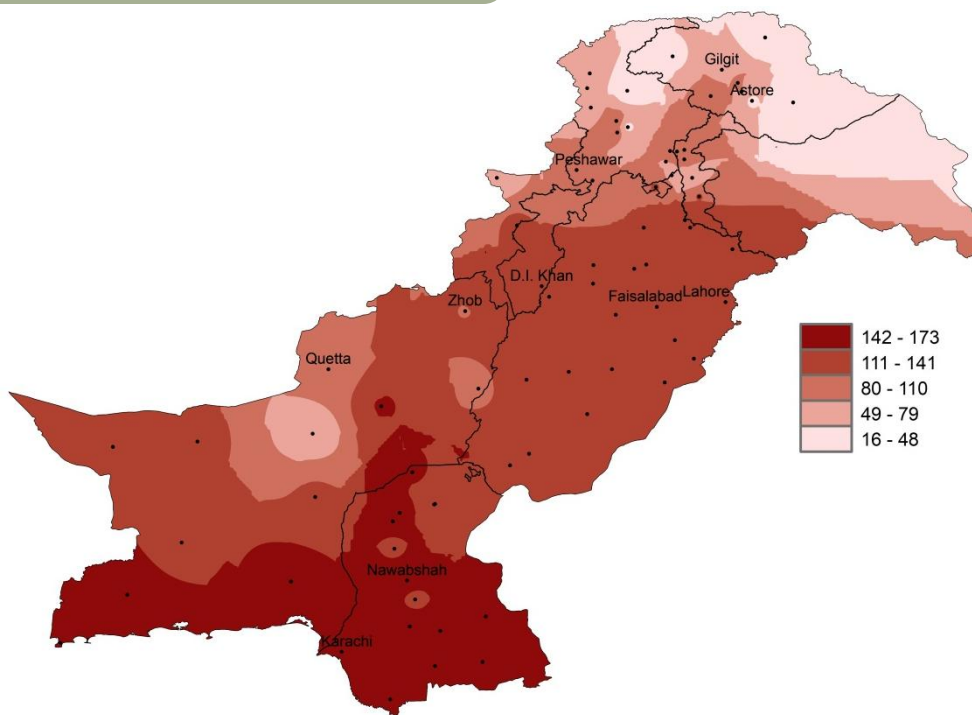
Lowest Minimum Temperature (°C) during the Previous week (28th October- 3rd November, 2019)



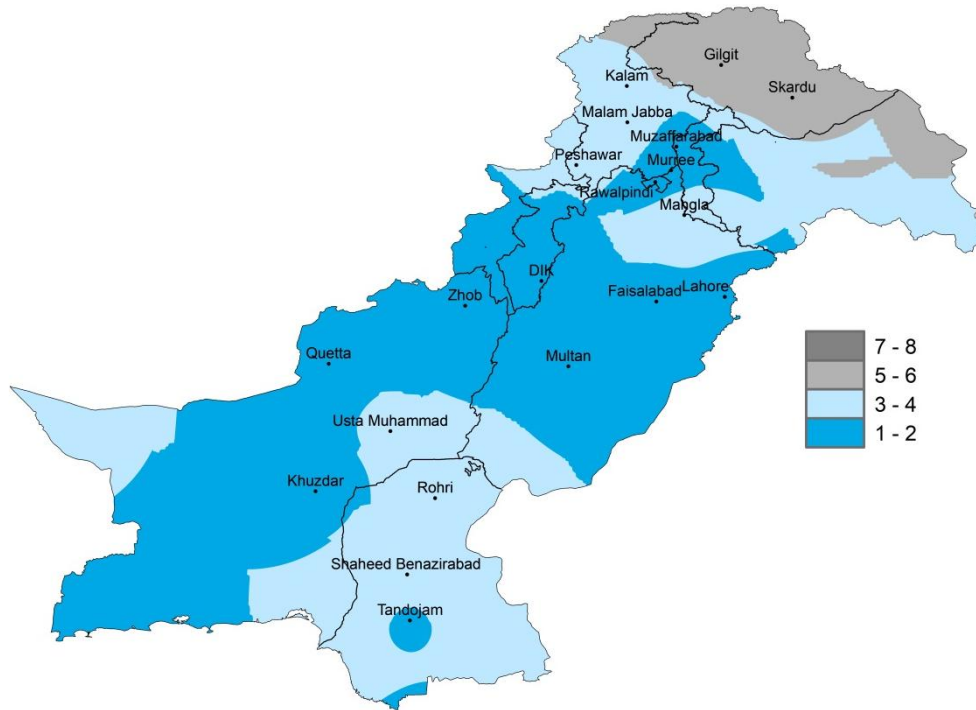
Mean Relative Humidity (%) during the Previous week (28th October- 3rd November, 2019)



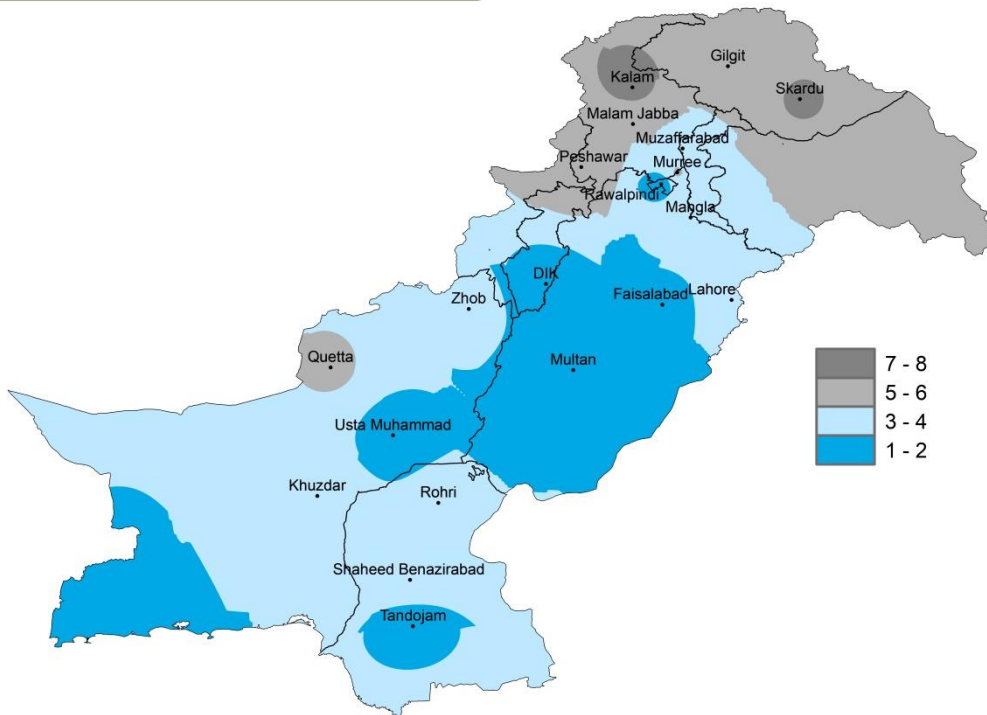
Total Growing Degree Days accumulated during the Previous week (28th October- 3rd November, 2019)



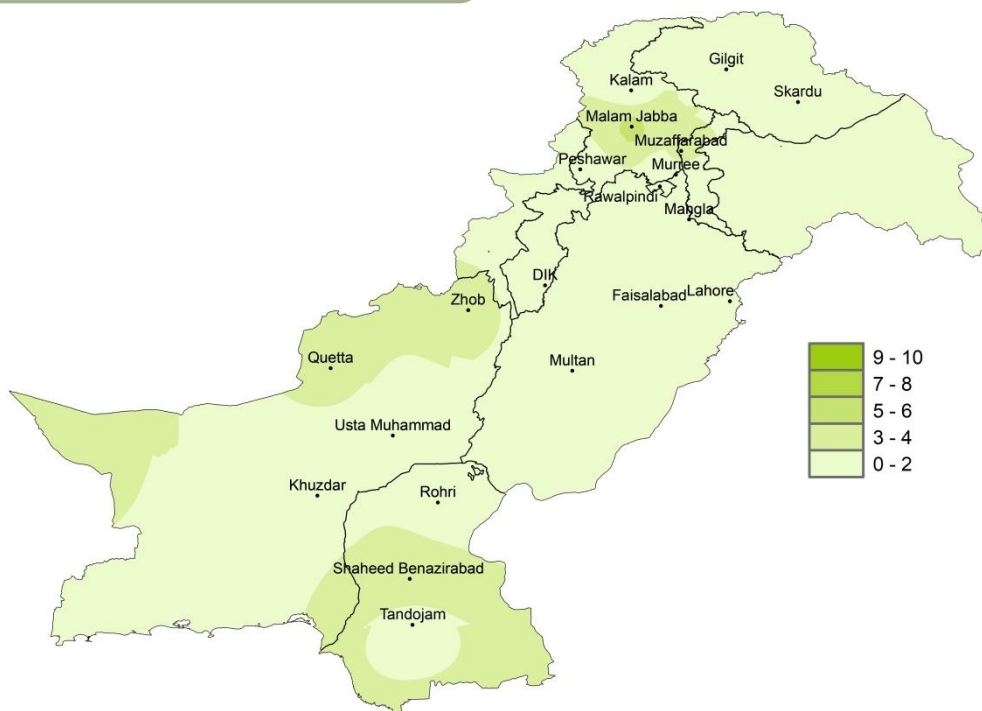
Mean Cloudiness (Oktas) at 0800PST during the Previous week (28th October- 3rd November, 2019)



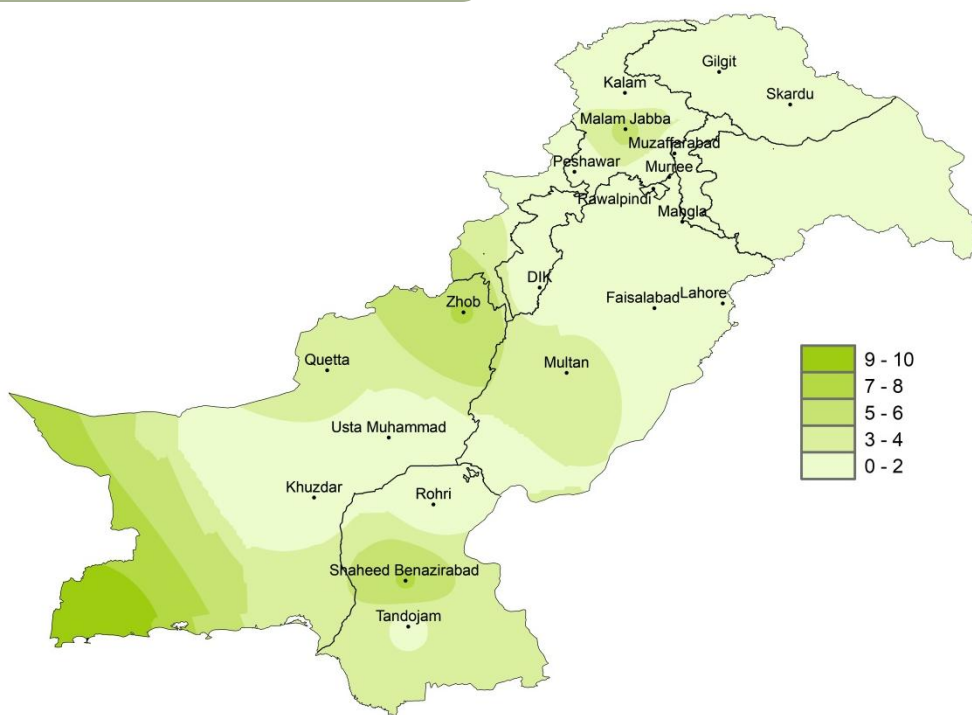
Mean Cloudiness (Oktas) at 1700PST during the Previous week (28th October- 3rd November, 2019)



Mean Wind Speed (Knots) at 0800PST during the Previous week (28th October- 3rd November, 2019)



Mean Wind Speed (Knots) at 1700PST during the Previous week (28th October- 3rd November, 2019)



Weekly Weather Advisory for Farmers**(4th to 10th November, 2019)**

Continental air is prevailing over most parts of the country. A strong westerly wave is likely to approach western parts of the country on Tuesday and will affect upper and central parts of the country during Wednesday and Thursday.

MONDAY**04-11-2019**

Mainly dry weather is expected in most parts of the country while cold in northern areas.

TUESDAY**05-11-2019**

Mainly dry weather is expected in most parts of the country, while cold in northern areas. However, rain-thunderstorm with dust storm is expected at isolated places in northwestern Balochistan (Zhob, Pishin, Quetta) and Khyber Pakhtunkhwa (Kurram, Bannu, D I Khan, Peshawar, Mardan and Kohat) at evening/night.

WEDNESDAY**06-11-2019**

Widespread rain/ wind-thunderstorms with snowfall over hills are expected in districts of Upper Khyber Pakhtunkhwa, Gilgit Baltistan, Kashmir while scattered rain/wind-thunderstorms in Islamabad, Lower Khyber Pakhtunkhwa, and Upper/Central Punjab. Dry weather is expected elsewhere in the country.

THURSDAY**07-11-2019**

Widespread rain/ wind-thunderstorms with snowfall over hills are expected in districts of Upper Khyber Pakhtunkhwa, Gilgit Baltistan, Kashmir while scattered rain/wind-thunderstorms in Islamabad, Lower Khyber Pakhtunkhwa, and Upper/Central Punjab. Dry weather is expected elsewhere in the country.

FRIDAY**08-11-2019**

Scattered rain/wind- thunderstorm is expected in Upper Khyber Pakhtunkhwa, Kashmir and Gilgit Baltistan while at isolated places in Islamabad, Upper Punjab. Dry weather is expected elsewhere in the country.

SATURDAY**09-11-2019**

Mainly dry weather is expected in most parts of the country while cold in northern areas.

SUNDAY**10-11-2019**

Mainly dry weather is expected in most parts of the country while cold in northern areas.

ADVISORY FOR FARMERS

During the last week, light to moderate rainfall occurred all over the country. Keeping in view the above expected weather conditions following advisories are suggested for farming community.

1. Keeping in view the prevailing weather conditions, farmers are advised to complete harvesting of the cotton crop.
2. Farmers of lower parts of the country are advised to start the sowing of wheat crop.

National Weather Data of Selected Cities from (28th October to 3rd November, 2019)

Stations	Minimum /Night Time Temperature (°C)		Growing Degree Days	Relative Humidity (%)	Rainfall (mm)	Cloudiness (Oktas) 0800 PST	Cloudiness (Oktas) 1700 PST	Wind Speed (Knots) 0800 PST	Wind Speed (Knots) 1700 PST
	Mean	Minimum							
D.I. Khan	15.8	15.0	127.5	69	0.01	1.1	1.7	0.6	0.3
Faisalabad	17.3	16.5	148.4	69	1.20	1.6	2.0	0.2	0.0
Gawadar	20.2	19.0	155.5	66	0.00	0.9	1.0	0.9	9.1
Gilgit	6.5	5.5	67.0	65	0.02	5.3	4.7	1.0	0.0
Kalam	2.4	0.5	28.4	76	28.00	3.9	6.7	0.0	0.0
Khuzdar	16.7	14.0	114.8	41	18.20	1.3	3.4	0.0	0.9
Lahore	17.0	15.7	124.0	66	0.00	1.6	2.9	0.0	0.3
Malam Jabba	6.5	5.0	37.8	60	13.50	3.7	4.3	4.6	4.3
Mangla	16.0	13.6	121.6	67	0.01	3.0	3.3	1.3	1.1
Multan (PBO)	18.8	17.5	138.1	60	0.02	1.6	1.6	0.6	2.9
Murree	11.5	9.0	71.7	51	13.01	1.1	4.0	0.9	1.1
Muzaffarabad	11.0	10.0	93.2	68	8.00	1.1	3.1	2.0	1.1
Nawabshah	20.0	18.0	156.5	66	0.00	3.9	3.3	4.0	6.3
Peshawar	15.8	14.5	91.0	72	2.81	2.0	5.4	0.0	0.6
Quetta	10.4	9.2	104.6	41	7.80	1.6	4.1	2.2	3.1
Rawalpindi	15.4	13.5	135.2	76	0.01	1.8	1.8	0.0	0.0
Rohri	20.5	18.5	147.5	62	2.01	2.7	2.9	0.0	0.6
Skardu	2.2	0.1	26.5	50	0.01	4.1	6.1	0.0	0.9
Tandojam	18.4	17.0	161.8	67	0.00	1.7	1.8	0.4	1.2
Usta. M	19.1	19.0	127.3	70	14.00	2.2	1.7	0.2	0.2
Zhob	11.0	10.5	110.0	51	6.00	1.0	3.0	2.0	6.1

*** Shows that data was not available.

Findings of AgMIP Pakistan, University of Agriculture, Faisalabad

1. There would be significant increase in temperature i.e., 2.8°C in day and 2.2°C in the night during mid-century (2040-2069).
2. There would be significant variability in rainfall patterns (about 25% increase in summer & 12% decrease in winter during 2040-2069).
3. Climate Change will affect the crop yields negatively (about 17% for rice and 14 % for wheat).
4. If there will be no adaptation to Climate Change, majority of farmers would be the economic losers.
5. With Adaptation to Climate Change (through technology and management), there would be significant decrease in poverty and improvement in the livelihood of farming community.

(Agricultural Model Inter-comparison and Improvement Project (AgMIP) Pakistan 2012-2014)

- 1- سال 2040-69 کے دوران درجہ حرارت میں قابل ذکر اضافہ ہو سکتا ہے۔ جو کہ دن کے وقت 2.8°C اور رات کو 2.2°C تک ہوگا۔
- 2- گرمیوں کی بارش میں 25 فیصد اضافہ اور سردیوں کی بارش میں 12 فیصد تک کمی کا امکان ہے۔
- 3- مندرجہ بالا موسمی تغیرات کی وجہ سے دھان کی پیداوار میں 17 فیصد اور گندم کی پیداوار میں 14 فیصد تک کمی ہو سکتی ہے۔
- 4- اگر موسمی تغیرات کا مناسب بندوبست نہ کیا گیا۔ تو کسانوں کی اکثریت کو معاشی نقصان کا سامنا کرنا پڑے گا۔
- 5- موسمی تغیرات کے سدباب (بذریعہ نئی ٹیکنالوجی کا استعمال اور بہتر نظم و نسق) سے غربت میں کمی اور کسانوں کی زندگی میں خوشحالی لائی جاسکتی ہے۔

(ایگمپ پاکستان 2012-2014)