

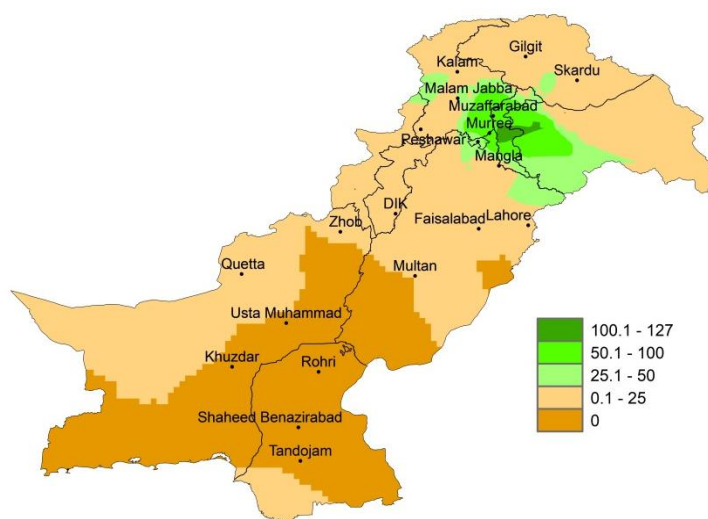
Weekly Weather and Crop Bulletin for Pakistan

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PAKISTAN METEOROLOGICAL
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**Rainfall Distribution (mm) during the Previous
Week (4th – 10th November, 2019)**



Contents

Highlights of past weather	1-2
Past weather for Agri Plains	3-4
Crop progress	4
Agrometeorological parameters	
• Temperature	5
• R.H and GDD	6
• Wind speed	7
• Cloudiness	8
Advisory for Farmers	9
Weather Outlook	10
National data for selected stations	11
AgMIP project findings	12

Highlights of Past Weather (4th– 10th November, 2019)

Above normal night time temperatures were observed in Sindh, Khyber Pakhtunkhwa, Punjab, Gilgit Baltistan and Kashmir, while mix trend was observed in Balochistan during the last week.

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

1. Light to moderate amount of rainfall observed in Punjab, Khyber Pakhtunkhwa and Sindh.
2. Moderate to heavy amount of rainfall observed in Gilgit Baltistan.
3. Light amount of rainfall observed in Balochistan.

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

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

Editor: Khalida Noureen (Meteorologist)

Past Weather of Provinces (4th – 10th November, 2019)**Punjab**

Light to moderate rainfall observed in Punjab during the week. Weekly maximum and minimum temperatures recorded as 26.7°C & 13.7°C respectively. For the recent week on average 108.4 growing degree days were accumulated. Average relative humidity recorded as 63% and wind speed in the morning/evening recorded as 1.6/3.0 Knots. During the previous week the highest precipitation was recorded as 83.50 mm at Murree while minimum temperature was recorded as 3.5°C at Murree.

Baluchistan

Light rainfall observed in Baluchistan during the week. Weekly maximum and minimum temperatures recorded as 25.7°C & 10.8°C respectively. For the recent week on average 91.2 growing degree days were accumulated. Average relative humidity recorded as 45% and wind speed in the morning/evening recorded as 4.0/4.1 Knots. During the previous week the highest precipitation was recorded as 0.20 mm at Quetta while minimum temperature was recorded as -5.0°C at Kalat.

Khyber Pakhtunkhwa

Light to moderate rainfall observed in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 20.9°C & 7.7°C respectively. For the recent week on average 94.5 growing degree days were accumulated. Average relative humidity recorded as 67% and wind speed in the morning/evening recorded as 1.6/2.4 Knots. During the previous week the highest precipitation recorded as 72.40 mm at Kakul while minimum temperature was recorded as -1.0°C at Kalam.

Gilgit-Baltistan and Azad Jammu & Kashmir

Moderate to heavy rainfall observed in Gilgit-Baltistan & Kashmir during the week. Weekly maximum and minimum temperatures recorded as

16.1°C & 5.0°C respectively. For the recent week on average 76.2 growing degree days were accumulated. Average relative humidity recorded as 68% and wind speed in the morning/evening recorded as 1.1/2.1 Knots. During the previous week the highest precipitation recorded as 126.70 mm at Rawalakot while minimum temperature was recorded as -3.6°C at Skardu.

Sindh

Light to moderate rainfall observed in Sindh during the week. Weekly maximum and minimum temperatures recorded as 31.2°C & 17.6°C respectively. For the recent week, on average 135.0 growing degree days were accumulated. Average relative humidity recorded as 60% and wind speed in the morning/evening recorded as 2.0/3.5 Knots. During the previous week the highest precipitation was recorded as 18.00 mm at Thatta while minimum temperature was recorded as 10.0°C at Moinjodaro.

Past Weather for Major Agricultural Plains (4th – 10th November, 2019)

Rawalpindi (Potohar region)

61.60 mm rainfall reported from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 2.3/2.2 Oktas while, average relative humidity observed as 75%. Mean night time temperature recorded 12.2°C & for the recent week 111.3 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.0/0.4 Knots.

Faisalabad (Central Punjab)

0.01 mm (Trace) rainfall reported from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 1.4/0.9 Oktas while, average relative humidity observed as 61%. Mean night time temperature recorded as 13.4°C & for the recent week 125.8 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.8/1.1 Knots.

Tandojam (Lower Sindh)

Dry weather reported from Tandojam during the week; however, clear sky observed in the morning/evening while, average relative humidity observed as 60%. Mean night time temperature recorded as 16.4°C & for the recent week 146.5 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.5/1.1 Knots.

Usta Muhammad (Eastern Baluchistan)

Dry weather reported from Usta Muhammad during the week; however, cloudiness in the morning/evening recorded as 0.2/0.4 Oktas while, average relative humidity observed as 54%. Mean night time temperature recorded as 16.9°C & for the recent week 111.3 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.8/0.5 Knots.

Quetta (Northern Baluchistan)

0.40 mm rainfall reported from Quetta during the week; however, cloudiness in the morning/evening recorded as 0.6/1.4 Oktas while, average relative humidity observed as 32%. Mean night time temperature recorded as 4.6°C & for the recent week 68.3 growing degree days accumulated. Wind speed recorded in the morning/evening as 1.4/3.8 Knots.

Past Weather for Sub-Regional Agricultural Plains (4th – 10th November, 2019)

Multan

Dry weather reported from Multan during the week; however, cloudiness in the morning/evening recorded as 0.6/1.0 Oktas while, average relative humidity observed as 61%. Mean night time temperature recorded as 15.4°C & for the recent week 114.7 growing degree days accumulated. Wind speed recorded in the morning/evening as 2.0/3.7 Knots.

Lahore

1.70 mm rainfall reported from Lahore during the week; however, however, cloudiness in the morning/evening recorded as 1.0/1.4 Oktas while, average relative humidity observed as 64%. Mean night time temperature recorded as 16.6°C & for the recent week 118.9 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.6/2.9 Knots.

Zhob

Dry weather reported from reported from Zhob during the week; however, cloudiness in the morning/evening recorded as 0.0/1.3 Oktas while, average relative humidity observed as 41%. Mean night time temperature recorded as 8.8°C & for the recent week 70.5 growing degree days accumulated. Wind speed recorded in the morning/evening as 10.7/5.6 Knots.

Murree

83.50 mm rainfall was reported from Murree during the week; however, cloudiness in the morning/evening recorded as 2.4/3.1 Oktas while, average relative humidity observed as 64%. Mean night time temperature recorded as 5.3°C & for the recent week 106.4 growing degree days accumulated. Wind speed recorded in the morning/evening as 2.3/2.3 Knots.

D.I. Khan

3.01 mm rainfall reported from D.I. Khan during the week; however, cloudiness in the morning/evening recorded as 0.9/0.0 Oktas while, average relative humidity observed as 63%. Mean night time temperature recorded as 13.7°C & for the recent week 112.8 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.6/2.0 Knots.

Peshawar

3.91 mm rainfall reported from Peshawar during the week; however, cloudiness in the morning/evening recorded as 2.3/2.9 Oktas while, average relative humidity observed as 66%. Mean night time temperature recorded as 11.1°C & for the recent week 94.7 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.9/0.3 Knots.

Kalam

23.00 mm rainfall reported from Kalam during the week; however, cloudiness in the morning/evening recorded as 3.3/4.1 Oktas while, average relative humidity observed as 75%. Mean night time temperature recorded as -0.6°C & for the recent 115.8 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.0/1.4 Knots.

Gilgit

15.61 mm rainfall reported from Gilgit during the week. However, cloudiness in the morning/evening recorded as 6.1/5.1 Oktas while, average relative humidity observed as 75%. Mean night time temperature recorded as 5.0°C & for the recent week 41.0 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.3/0.3 Knots.

Skardu

2.10 mm rainfall reported from Skardu during the week; however, cloudiness in the morning/evening recorded as 5.3/5.4 Oktas while, average relative humidity observed as 59%. Mean night time temperature recorded as 0.5°C & for the recent week 135.7 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.0/1.1 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: *Harvested on 11-11-2019.*

Lower Sindh (Tandojam)

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

Wheat: *Crop sowing is in progress.*

Northern Baluchistan (Quetta)

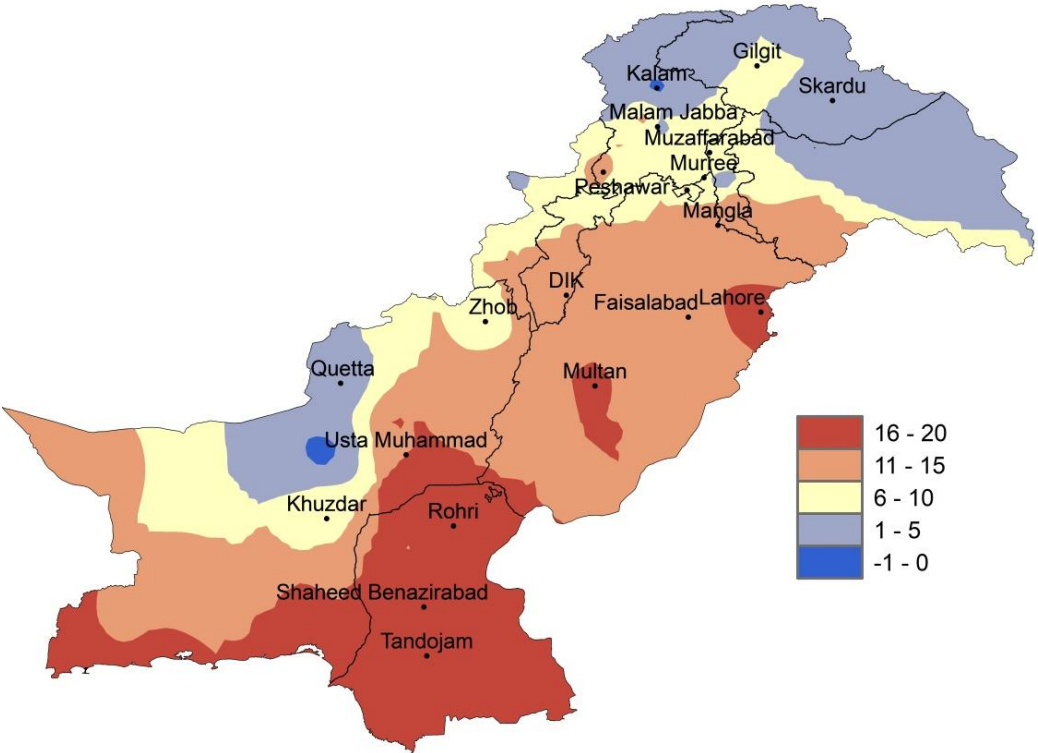
There is presently no crop grown in the fields of RAMC Quetta.

Eastern Baluchistan (Usta Muhammad)

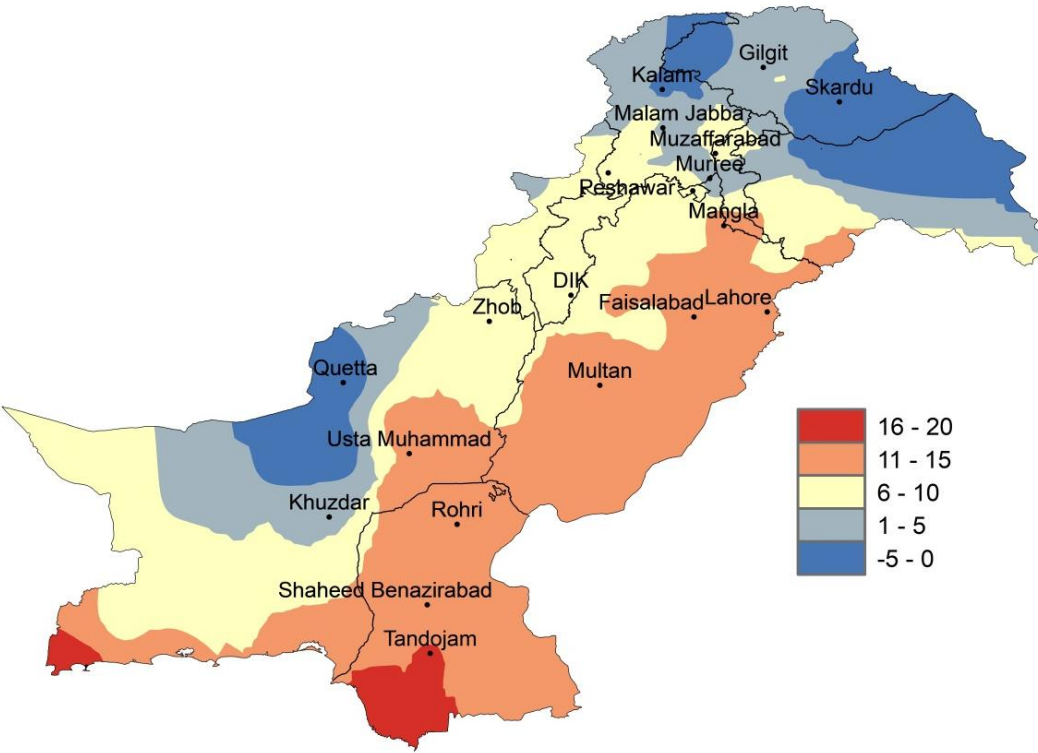
Presently rice crop is sown in the fields of RAMC Usta Muhammad.

Rice: *Good, Wax Maturity Stage.*

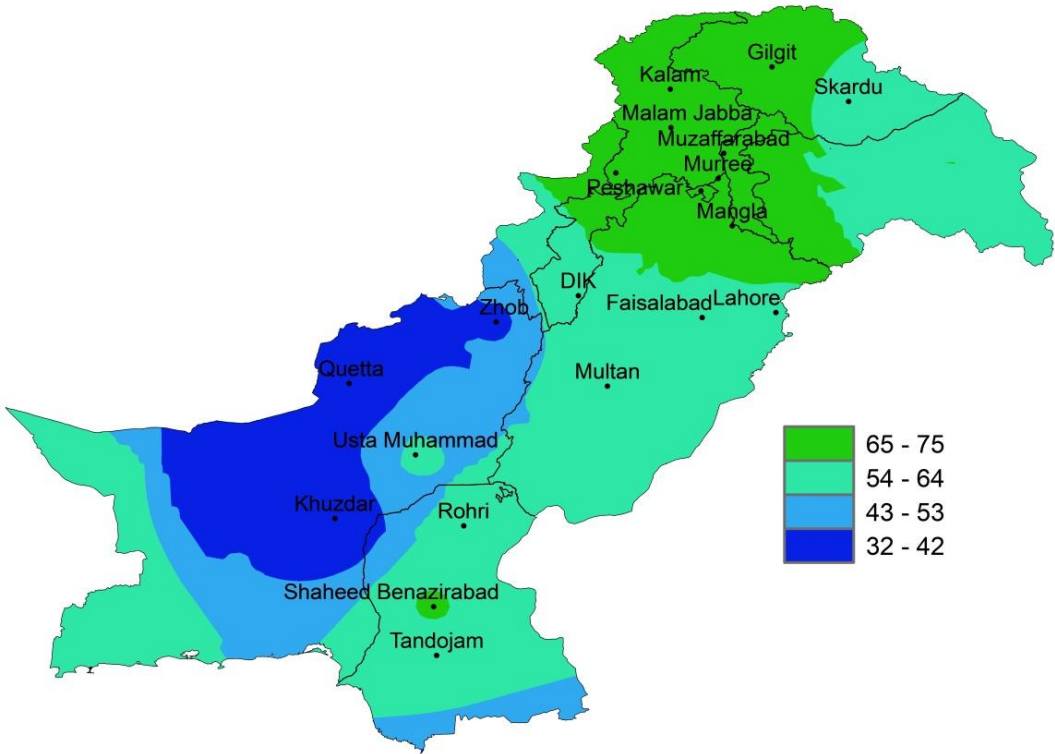
Mean Minimum temperature (°C) during the Previous week (4th – 10th November, 2019)



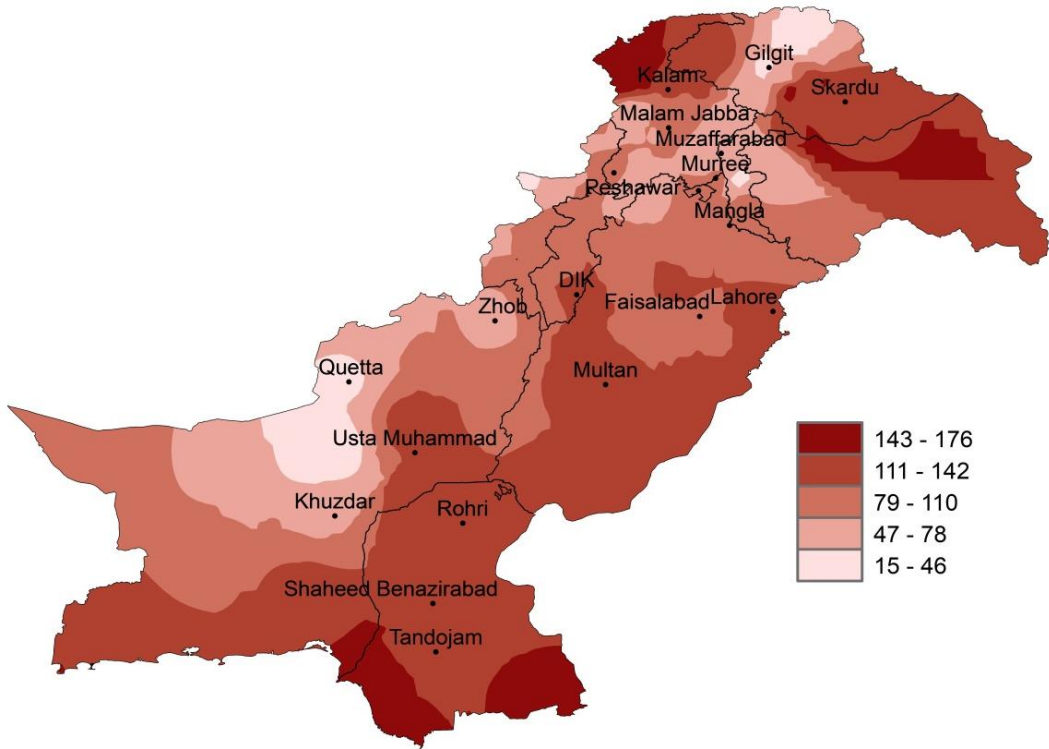
Highest Minimum Temperature (°C) during the Previous week (4th – 10th November, 2019)



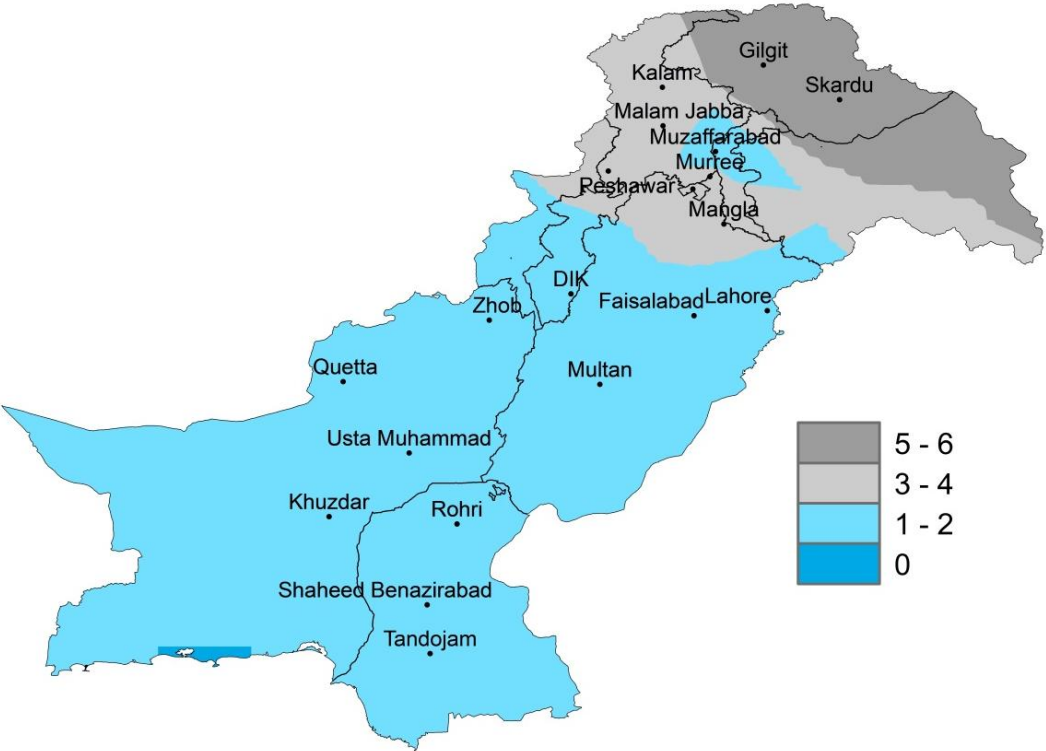
Mean Relative Humidity (%) during the
Previous week (4th – 10th November, 2019)



Total Growing Degree Days accumulated during the
Previous week (4th – 10th November, 2019)



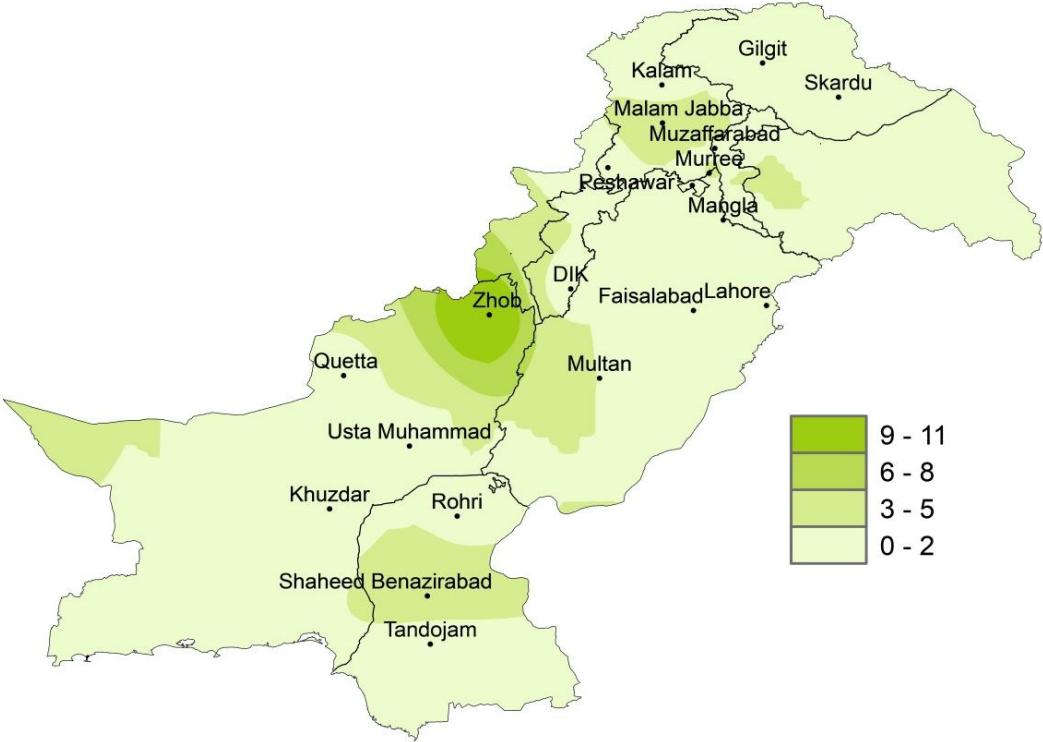
Mean Cloudiness (Oktas) at 0800PST during the
Previous week (4th – 10th November, 2019)



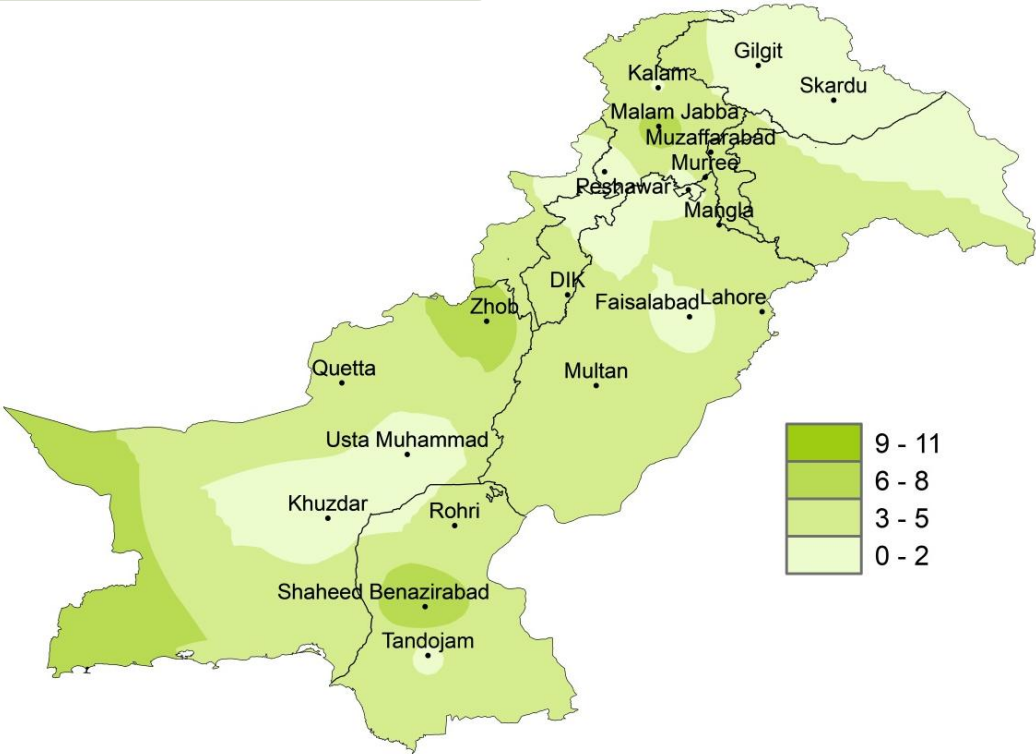
Mean Cloudiness (Oktas) at 1700PST during the
Previous week (4th – 10th November, 2019)



Mean Wind Speed (Knots) at 0800PST during the Previous week (4th – 10th November, 2019)



Mean Wind Speed (Knots) at 1700PST during the Previous week (4th – 10th November, 2019)



Weekly Weather Advisory for Farmers**(11th to 17th November, 2019)**

A deep westerly wave is present along northwest Balochistan and likely to affect most central and southern parts of the country during Wednesday to Saturday.

MONDAY**11-11-2019**

Cloudy weather is expected in most parts of the country while light rain (with light snowfall over mountains) is expected at isolated places in northwestern Balochistan (Quetta, Pishin, Qila Abdullah districts).

TUESDAY**12-11-2019**

Cloudy weather is expected in most parts of the country while light rain (with light snowfall over mountains) is expected at isolated places in northwestern Balochistan (Quetta, Pishin, Qila Abdullah districts) and Gilgit Baltistan.

WEDNESDAY**13-11-2019**

Cloudy weather is expected in most parts of the country. However isolated rain/wind-thunderstorm is expected in northeast Balochistan (Quetta, Zhob, Kalat, Sibbi, Khuzdar, Ziarat districts) and upper Sindh (Sukkur, Larkana, Jacobabad and Ghotki districts).

THURSDAY**14-11-2019**

Scattered rain/wind-thunderstorm (with light snowfall over hills) is expected in most districts of Sindh, Balochistan, Southern Punjab while at isolated places in Upper Khyber Pakhtunkhwa and Gilgit Baltistan. Dust storm/hailstorm is also expected in few plain areas. Cloudy weather is expected elsewhere in the country.

FRIDAY**15-11-2019**

Scattered rain/wind-thunderstorm (with light snowfall over hills) is expected in most districts of Sindh, Balochistan, Southern Punjab while at isolated places in Upper Khyber Pakhtunkhwa, Kashmir and Gilgit Baltistan. Hailstorm is also expected in few plain areas. Cloudy weather is expected elsewhere in the country.

SATURDAY**16-11-2019**

Scattered rain/wind-thunderstorm (with light snowfall over hills) is expected in most districts of Sindh, Balochistan and Southern Punjab while at isolated places in Upper Khyber Pakhtunkhwa, Kashmir and Gilgit Baltistan. Hailstorm is also expected in few plain areas. Cloudy weather is expected elsewhere in the country.

SUNDAY**17-11-2019**

Mostly cloudy weather is expected in most parts of the country while isolated rain/wind-thunderstorm is expected in northeast Balochistan, south Punjab, Upper Khyber Pakhtunkhwa, Kashmir and Gilgit Baltistan.

ADVISORY FOR FARMERS

During the last week, Light to moderate amount of rainfall observed in Punjab, Khyber Pakhtunkhwa and Sindh, whereas moderate to heavy amount of rainfall observed in Gilgit Baltistan. Light amount of rainfall observed in Balochistan. Keeping in view the above expected weather conditions following advisories are suggested for farming community.

1. Complete the cultivation of fodder crops on proper time.
2. Apply deep ploughing in the fields, to preserve the soil moisture for the next crops.
3. Use proper precautions during picking of cotton because the cost of good and clean quality cotton is high than that of the filthy one.
4. Use pesticides to avoid the attack from pests on the crops as advised by the agriculture department.

National Weather Data of Selected Cities from (4th – 10th 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	13.7	10.0	112.8	63	3.01	0.9	0.0	0.6	2.0
Faisalabad	13.4	10.0	125.8	61	0.01	1.4	0.9	0.8	1.1
Gawadar	18.6	16.0	124.8	62	0.00	0.0	1.0	0.0	6.0
Gilgit	5.0	0.5	41.0	75	15.61	6.1	5.1	0.3	0.3
Kalam	-0.6	-1.0	115.8	75	23.00	3.3	4.1	0.0	1.4
Khuzdar	8.8	4.5	73.5	32	0.00	0.0	0.3	1.1	0.9
Lahore	16.6	13.5	118.9	64	1.70	1.0	1.4	0.6	2.9
Malam Jabba	2.7	0.0	95.8	65	34.50	2.7	3.6	5.1	6.0
Mangla	13.1	10.8	101.6	68	18.90	2.6	3.0	2.0	3.4
Multan (PBO)	15.4	12.2	114.7	61	0.00	0.6	1.0	2.0	3.7
Murree	5.3	3.5	106.4	64	83.50	2.4	3.1	2.3	2.3
Muzaffarabad	8.8	6.5	71.5	71	92.60	0.8	3.3	2.0	3.4
Nawabshah	17.9	13.0	141.8	65	0.00	0.3	1.4	3.7	7.1
Peshawar	11.1	8.5	94.7	66	3.91	2.3	2.9	0.9	0.3
Quetta	4.6	0.5	68.3	32	0.40	0.6	1.4	1.4	3.8
Rawalpindi	12.2	10.2	111.3	75	61.60	2.3	2.2	0.0	0.4
Rohri	17.6	14.5	131.3	54	0.00	0.6	0.7	1.7	2.3
Skardu	0.5	-3.6	135.7	59	2.10	5.3	5.4	0.0	1.1
Tandojam	16.4	10.0	146.5	60	0.00	0.0	0.0	0.5	1.1
Usta. M	16.9	14.0	111.3	54	0.00	0.2	0.4	0.8	0.5
Zhob	8.8	5.0	70.5	41	0.00	0.0	1.3	10.7	5.6

*** 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)