

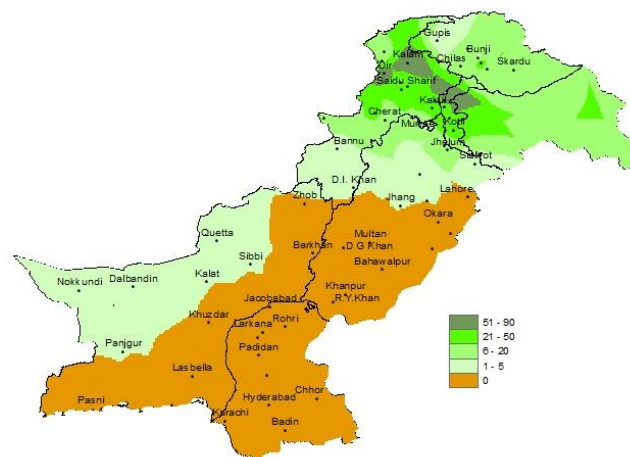
Weekly Weather and Crop Bulletin for Pakistan

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Rainfall Distribution (mm) during the Previous Week (22nd – 28th February, 2021)

Contents

Highlights of past weather	1-2
Past weather for Agri Plains	3-4
Crop progress	4
Agro meteorological 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 (22nd - 28th February, 2021)

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

Rainfall reported as follows during the last week:

1. Light to moderate rainfall reported from Khyber Pakhtunkhwa, Kashmir and Gilgit-Baltistan.
2. Light rainfall reported from a few stations in upper Punjab and northeast Baluchistan.
3. Dry weather reported from lower Punjab and Sindh.

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

Editor: Ruqiya Mehmood (Assistant Meteorologist)

Past Weather of Provinces (22nd - 28th February, 2021)**Punjab**

Light rainfall reported a few stations in upper Punjab during the week. Weekly maximum and minimum temperatures recorded as 28.3°C & 13.0°C respectively. For the recent week on average 109.4 growing degree days were accumulated. Average relative humidity recorded as 57% and wind speed in the morning/evening recorded as 0.8/4.2 Knots. During the previous week the highest precipitation was observed as 27.1 mm at Murree while the lowest minimum temperature was recorded as 3.0°C at Murree.

Baluchistan

Light rainfall reported from a few stations in northeast Baluchistan during the week. Weekly maximum and minimum temperatures recorded as 26.0°C & 11.0°C respectively. For the recent week on average 94.8 growing degree days were accumulated. Average relative humidity recorded as 43% and wind speed in the morning/evening recorded as 2.4/8.9 Knots. During the previous week the highest precipitation was observed as 4.3 mm at Dalbandin while the lowest minimum temperature was recorded as -4.0°C at Kalat.

Khyber Pakhtunkhwa

Light to moderate rainfall reported from Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 19.6°C & 7.2°C respectively. For the recent week on average 58.7 growing degree days were accumulated. Average relative humidity recorded as 72% and wind speed in the morning/evening recorded as 1.3/1.6 Knots. During the previous week the highest precipitation was observed as 88.0 mm at Pattan while the lowest minimum temperature was recorded as -4.5°C at Kalam.

Sindh

Dry weather reported from Sindh during the week. Weekly maximum and minimum temperatures recorded as 32.7°C & 15.9°C respectively. For the

recent week, on average 135.1 growing degree days were accumulated. Average relative humidity recorded as 52% and wind speed in the morning/evening recorded as 1.9/4.0 Knots. During the previous week the lowest minimum temperature was recorded as 11.0°C at Moenjodaro.

Gilgit-Baltistan and Azad Jammu & Kashmir

Light to moderate rainfall reported from Gilgit-Baltistan and Azad Jammu & Kashmir during the week. Weekly maximum and minimum temperatures recorded as 15.7°C & 5.4°C respectively. For the recent week on average 37.1 growing degree days were accumulated. Average relative humidity recorded as 65% and wind speed in the morning/evening recorded as 0.7/2.0 Knots. During the previous week the highest precipitation was observed as 50.0 mm at Rawalakot while the lowest minimum temperature was recorded as -5.0°C at Astore.

Past Weather for Major Agricultural Plains**(22nd - 28th February, 2021)****Rawalpindi (Potohar region)**

Rainfall reported as 5.1 mm from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 2.9/2.9 Oktas while, average relative humidity observed as 66%. Mean night time temperature recorded as 11.3°C & for the recent week 100.2 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.2/1.2 Knots.

Faisalabad (Central Punjab)

Dry weather reported from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 1.3/2.3 Oktas while, average relative humidity observed as 55%. Mean night time temperature recorded as 13.1°C & for the recent week 112.5 growing degree days accumulated. Wind speed recorded in the morning/evening as 1.0/1.2 Knots.

Tandojam (Lower Sindh)

Dry weather reported from Tandojam during the week; however, cloudiness in the morning/evening recorded as 0.7/0.3 Oktas while, average relative humidity observed as 55%. Mean night time temperature recorded as 12.0°C & for the recent week 122.8 growing degree days accumulated. Wind speed recorded in the morning/evening as 1.4/3.2 Knots.

Usta Muhammad (Eastern Baluchistan)

Dry weather reported from Usta Muhammad during the week; however, cloudiness in the morning/evening recorded as 0.5/0.4 Oktas while, average relative humidity observed as 54%. Mean night time temperature recorded as 15.0°C & for the recent week 125.8 growing degree days accumulated. Wind speed recorded in the morning/evening as 1.1/0.2 Knots.

Quetta (Northern Baluchistan)

Dry weather reported from Quetta during the week; however, cloudiness in the morning/evening recorded as 2.8/2.7 Oktas while, average relative humidity observed as 36%. Mean night time temperature recorded as 6.4°C & for the recent week 51.9 growing degree days accumulated. Wind speed recorded in the morning/evening as 2.8/5.0 Knots.

Past Weather for Sub-Regional Agricultural Plains (22nd - 28th February, 2021)**Multan**

Dry weather reported from Multan during the week; however, cloudiness in the morning/evening recorded as 1.6/0.9 Oktas while, average relative humidity observed as 52%. Mean night time temperature recorded as 14.4°C & for the recent week 119.6 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.6/5.4 Knots.

Lahore

Dry weather reported from Lahore during the week; however, cloudiness in the morning/evening recorded as 1.9/1.9 Oktas while, average relative humidity observed as 62%. Mean night time temperature recorded as 15.2°C & for the recent week 116.7 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.0/13.1 Knots.

Zhob

Dry weather reported from Zhob during the week; however, cloudiness in the morning/evening recorded as 1.1/1.3 Oktas while, average relative humidity observed as 40%. Mean night time temperature recorded as 4.2°C & for the recent week 62.0 growing degree days accumulated. cloudiness in the morning/evening recorded as 5.4/0.0 Oktas.

Murree

Rainfall reported as 27.11 mm from Murree during the week; however, cloudiness in the morning/evening recorded as 4.4/3.9 Oktas while, average relative humidity observed as 57%. Mean night time temperature recorded as 5.9°C & for the recent week 37.4 growing degree days accumulated. Wind speed recorded in the morning/evening as 1.7/3.7 Knots.

D.I. Khan

Dry weather reported from D.I. Khan during the week; however, cloudiness in the morning/evening recorded as 0.4/0.0 Oktas while, average relative humidity observed as 57%. Mean night time temperature recorded as 14.3°C & for the recent week 118.5 growing degree days accumulated. Wind speed recorded in the morning/evening as 1.4/0.9 Knots.

Peshawar

Rainfall reported as 23.2 mm from Peshawar during the week; however, cloudiness in the morning/evening recorded as 3.6/4.6 Oktas while, average relative humidity observed as 66%. Mean night time temperature recorded as 11.1°C & for the recent week 91.9 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.3/2.0 Knots.

Kalam

Rainfall reported as 82.5 mm from Kalam during the week; however, cloudiness in the morning/evening recorded as 5.6/6.9 Oktas while, average relative humidity observed as 87%. Mean night time temperature recorded as -2.2°C. Wind speed recorded in the morning/evening as 0.0/1.7 Knots.

Gilgit

Rainfall reported as 5.3 mm from Gilgit during the week. However, cloudiness in the morning/evening recorded as 6.9/5.9 Oktas while, average relative humidity observed as 54%. Mean night time temperature recorded as 6.2°C & for the recent week 43.8 growing degree days accumulated. Wind speed recorded in the morning/evening as 1.7/4.6 Knots.

Skardu

Rainfall reported as 19.0 mm from Skardu during the week; however, cloudiness in the morning/evening recorded as 7.0/7.1 Oktas while, average relative humidity observed as 75%. Mean night time temperature recorded as 1.0°C & for the recent week 19.0 growing degree days accumulated. Calm wind reported in the morning/evening.

**Crop Condition for Major Agricultural Plains
(Based on data from Regional Agromet Centers)****Potohar Region (Rawalpindi)**

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

Central Punjab (Faisalabad)

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

Wheat: V. Good, Heading Stage.

Lower Sindh (Tandojam)

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

Wheat: Good, Crop Variety (TD-1), Wax Maturity Stage.

Northern Baluchistan (Quetta)

Presently wheat crop is grown in the fields of RAMC Quetta.

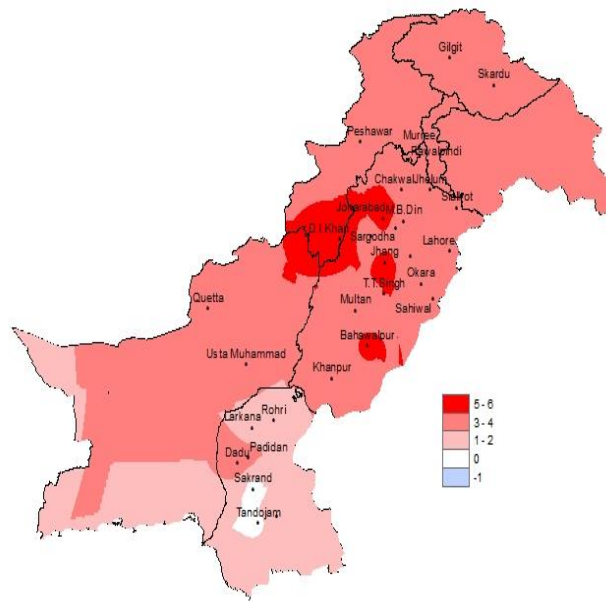
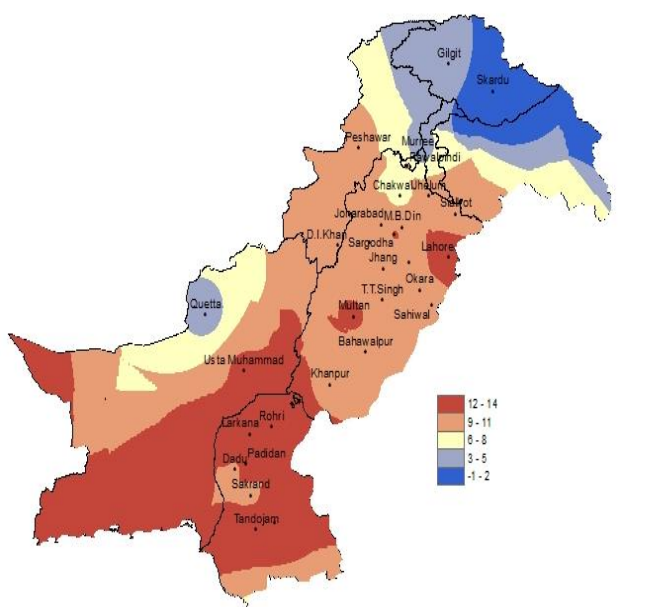
Wheat: Good, Crop Variety (Seriab-92), Tillering Stage.

Eastern Baluchistan (Usta Muhammad)

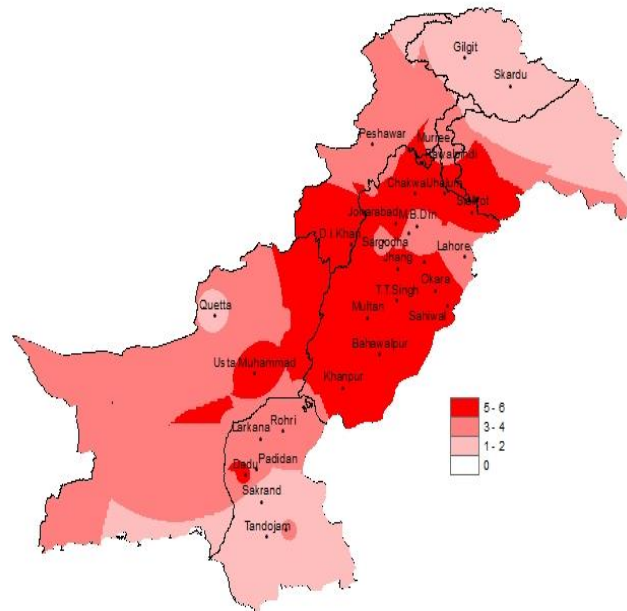
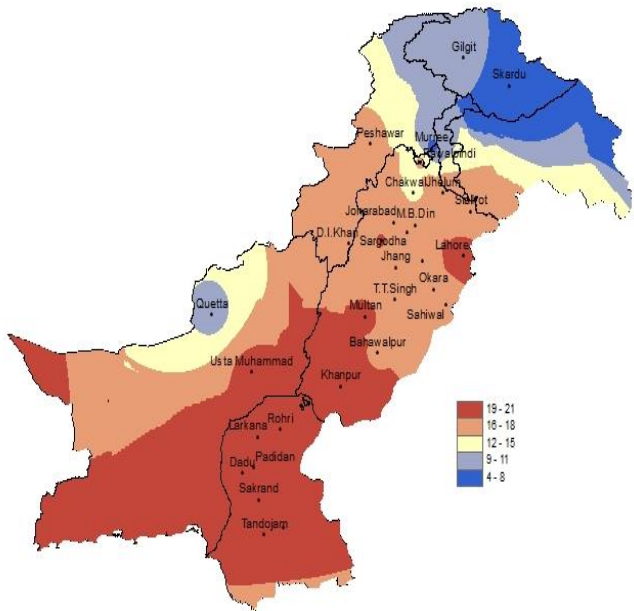
Presently wheat crop is sown in the fields of RAMC Usta Muhammad.

Wheat: Good, Flowering Stage.

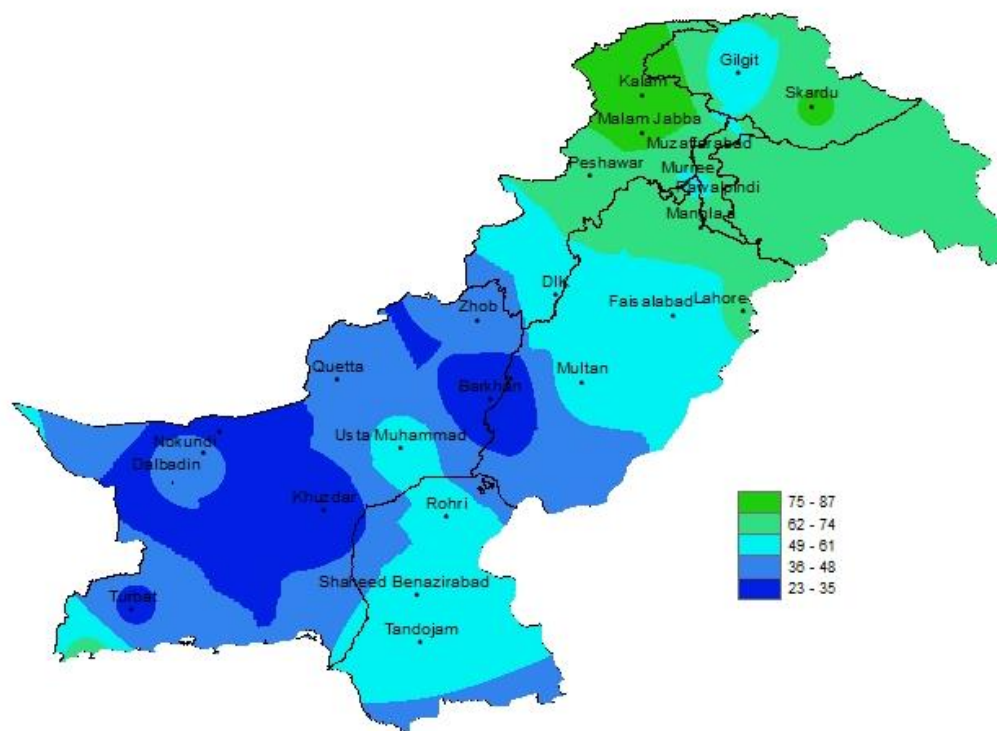
Normal & Departure of Minimum temperature (°C) for the previous week (22nd – 28th February, 2021)



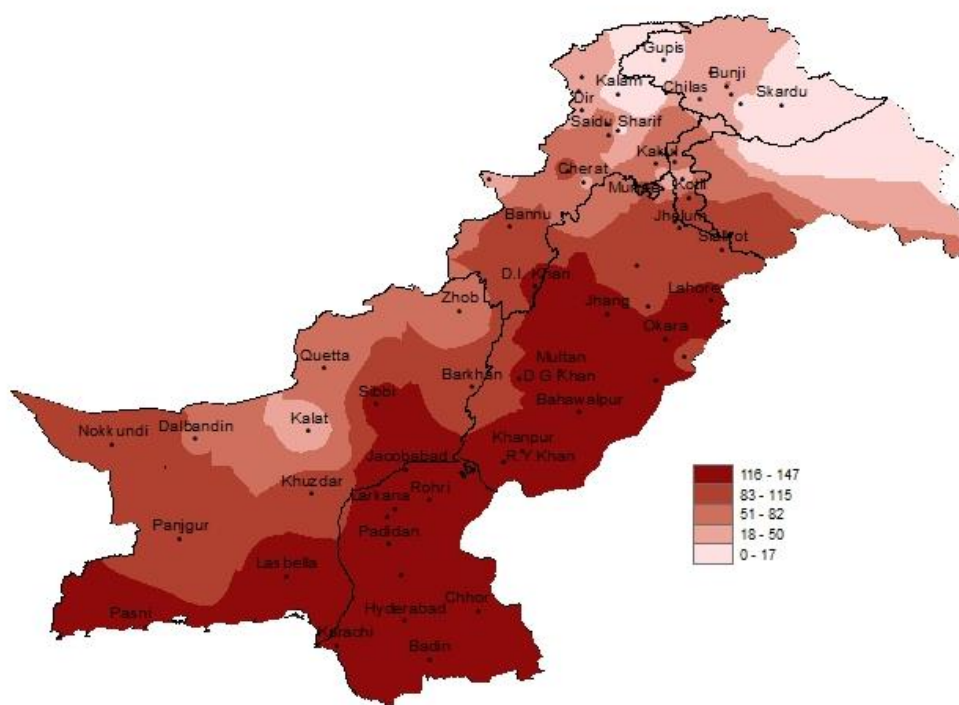
Normal & Departure of Mean temperature (°C) for the previous week (22nd – 28th February, 2021)



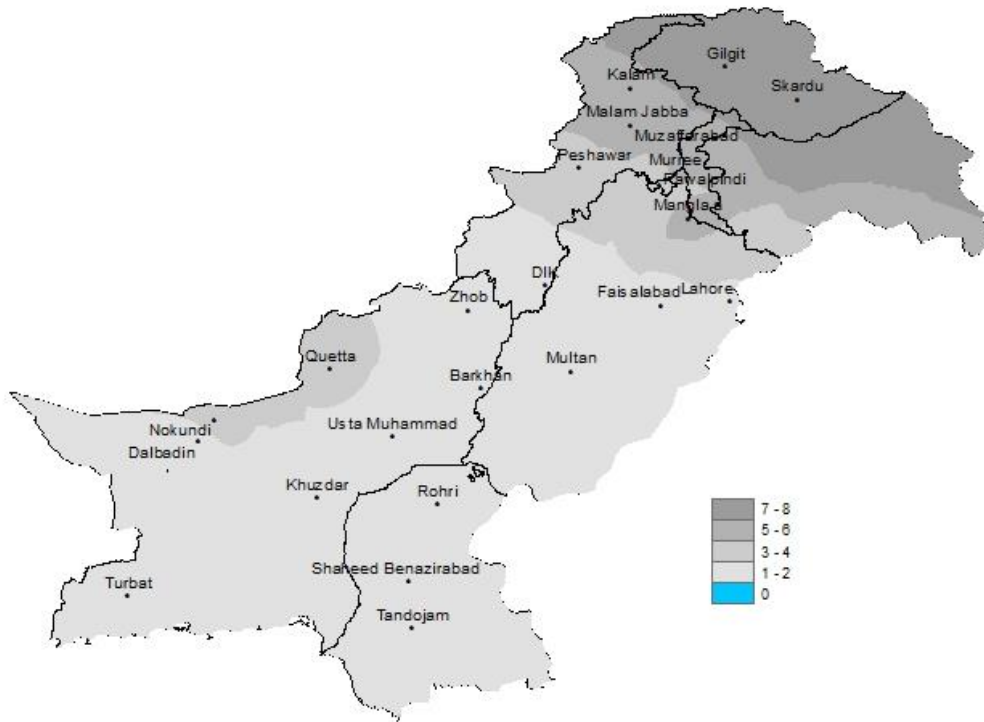
Mean Relative Humidity (%) during the previous week (22nd – 28th February, 2021)



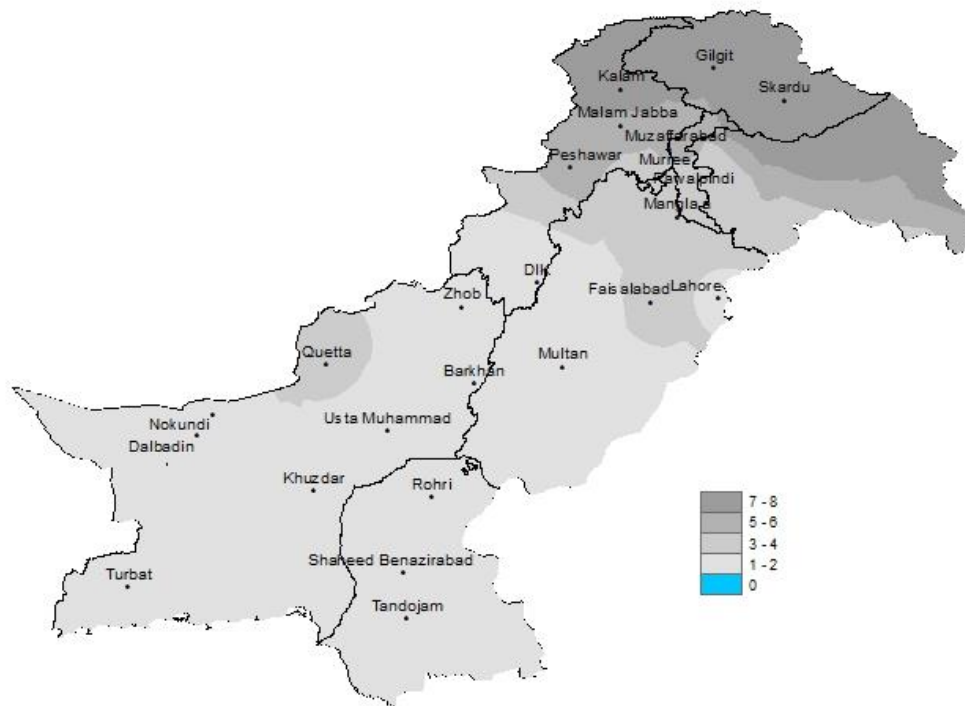
Total Growing Degree Days accumulated during the previous week (22nd – 28th February, 2021)



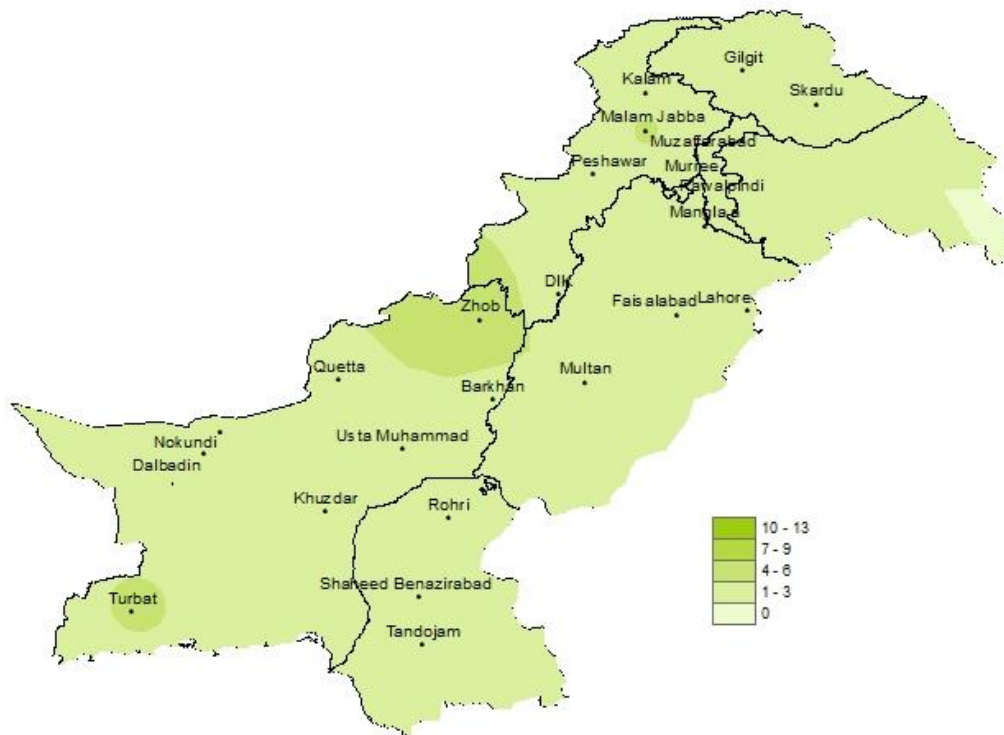
Mean Cloudiness (Oktas) at 0800PST during the previous week (22nd – 28th February, 2021)



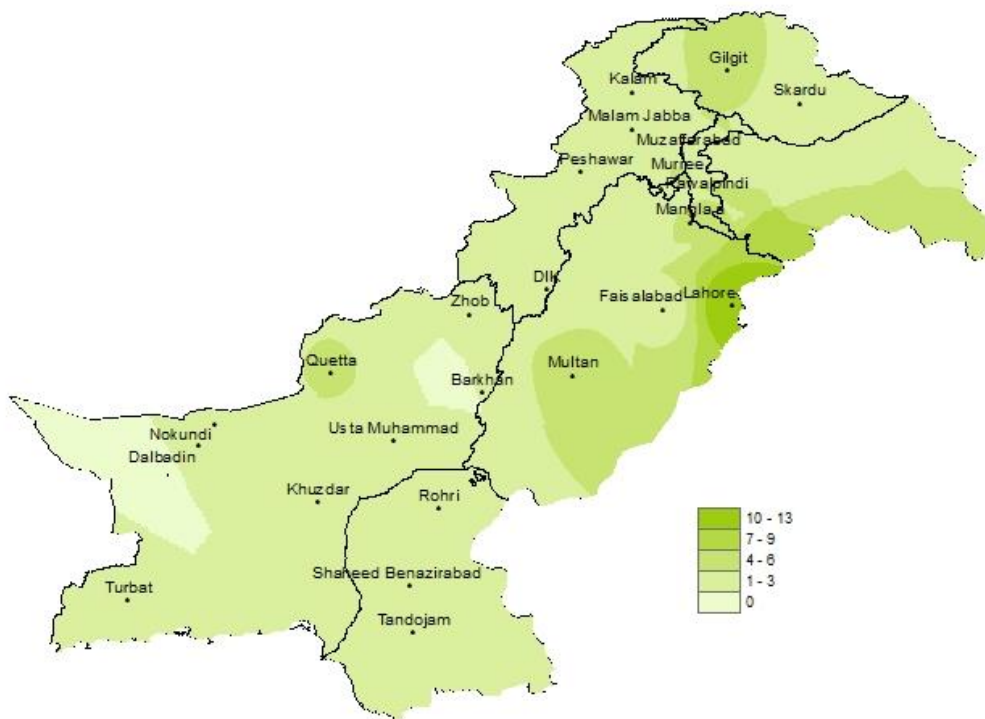
Mean Cloudiness (Oktas) at 1700PST during the previous week (22nd – 28th February, 2021)



Mean Wind Speed (Knots) at 0800PST during the previous week (22nd – 28th February, 2021)



Mean Wind Speed (Knots) at 1700PST during the previous week (22nd – 28th February, 2021)



Weekly Weather Advisory for Farmers**(1st – 7th March, 2021)**

Continental air is prevailing over most parts of the country.

MONDAY**01-03-2021**

Dry weather is expected in most parts of the country, while cold and dry in upper parts.

TUESDAY**02-03-2021**

Dry weather is expected in most parts of the country. However, light rain is expected in upper Khyber-Pakhtunkhwa and Gilgit- Baltistan during evening/night.

WEDNESDAY**03-03-2021**

Mainly dry weather is expected in most parts of the country. However, light rain/thunderstorm is expected at isolated places in upper Khyber Pakhtunkhwa and Gilgit Baltistan.

THURSDAY**04-03-2021**

Mainly dry weather is expected in most parts of the country. However, rain/thunderstorm is expected at isolated places in upper Khyber Pakhtunkhwa, Gilgit Baltistan and Kashmir.

FRIDAY**05-03-2021.**

Mainly dry weather is expected in most parts of the country. However, partly cloudy weather is expected in upper parts of the country.

SATURDAY**06-03-2021**

Mainly dry weather is expected in most parts of the country. However, rain/thunderstorm is expected at isolated places in upper Khyber Pakhtunkhwa, Gilgit Baltistan and Kashmir.

SUNDAY**07-03-2021**

Mainly dry weather is expected in most parts of the country. However, rain/thunderstorm is expected in upper Khyber Pakhtunkhwa, Potohar region, Gilgit Baltistan and Kashmir.

ADVISORY FOR FARMERS

During the last week, light to moderate rainfall reported from Khyber Pakhtunkhwa, Kashmir and Gilgit-Baltistan. Light rainfall reported a few stations in upper Punjab and northeast Baluchistan. Dry weather reported from lower Punjab and Sindh. Keeping in view the expected weather conditions farmers are advised the following advisories.

- ❖ Farmers are advised to irrigate the crop according to its need.
- ❖ Pesticides may be applied to avoid any pest attack as per advised by the agriculture department.
- ❖ Proper arrangements should be taken to cultivate the spring season vegetables due to the gradual rise in day time temperatures in the plain areas.

National Weather Data of Selected Cities from (22nd - 28th February, 2021)

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							
Barkhan	11.6	10.0	95.8	23	0.00	0.0	0.7	2.3	0.0
Dalbandin	8.8	2.5	81.8	41	4.31	1.6	1.0	1.7	0.0
D.I. Khan	14.3	12.0	118.5	57	0.00	0.4	0.0	1.4	0.9
Faisalabad	13.1	12.0	112.5	55	0.00	1.3	2.3	1.0	0.5
Gawadar	15.6	13.0	126.5	65	0.00	0.0	0.0	1.4	0.3
Gilgit	6.2	4.5	43.8	54	5.32	6.9	5.9	1.7	4.6
Kalam	-2.2	-4.5	0.0	87	82.50	5.6	6.9	0.0	1.7
Khuzdar	12.1	10.0	94.8	26	0.00	0.3	0.4	0.3	2.3
Lahore	15.2	13.8	116.7	62	0.00	1.9	1.9	0.0	13.1
Malam Jabba	1.8	1.0	1.0	76	49.00	5.1	5.3	3.4	0.0
Mangla	12.1	8.9	100.5	64.4	9.00	4.6	2.6	1.1	3.4
Multan (PBO)	14.4	10.8	119.6	52	0.00	1.6	0.9	0.6	5.4
Murree	5.9	3.0	37.4	57	27.11	4.4	3.9	1.7	3.7
Muzaffarabad	9.6	7.1	71.5	68	28.50	5.1	4.9	0.0	1.7
Nokkundi	14.4	13.5	137.2	52	0.00	0.3	0.0	2.3	0.0
Nawabshah	11.9	7.0	95.3	25	3.30	2.6	1.7	1.1	0.0
Peshawar	11.1	8.3	91.9	66	23.20	3.6	4.6	0.3	2.0
Quetta	6.4	-0.5	51.9	36	0.00	2.8	2.7	2.8	3.4
Rawalpindi	11.3	8.0	100.2	66	5.10	2.9	2.9	0.2	0.6
Rohri	15.4	14.0	131.0	50	0.00	1.1	0.0	2.0	2.3
Skardu	1.0	-1.6	0.0	75	19.01	7.0	7.1	0.0	0.0
Tandojam	12.0	10.5	122.8	55	0.00	0.7	0.3	1.4	0.0
Turbat	16.3	15.5	136.5	33	0.00	0.6	1.0	3.3	0.0
Usta. M	15.0	14.0	125.8	54	0.00	0.5	0.4	1.1	0.0
Zhob	4.2	2.5	62.0	40	0.00	1.1	1.3	5.4	0.0

*** 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)