

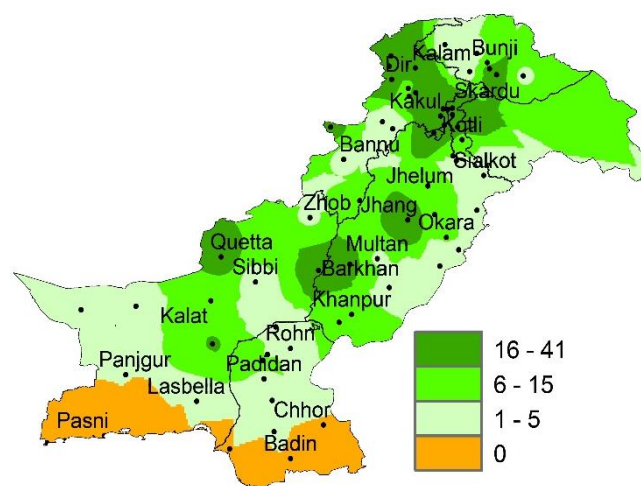
Weekly Weather and Crop Bulletin for Pakistan

NATIONAL AGROMET CENTRE PAKISTAN
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Rainfall Distribution (mm) during the Previous Week (15th – 21st March, 2021)

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Highlights of Past Weather (15th - 21st March, 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 Punjab, Khyber Pakhtunkhwa, Kashmir and Gilgit-Baltistan.
2. Light rainfall reported from Baluchistan and Sindh.

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

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

Editor: Ruqiya Mehmood (Assistant Meteorologist)

Past Weather of Provinces (15th – 21st March, 2021)**Punjab**

Light to moderate rainfall reported from upper/central Punjab during the week. Weekly maximum and minimum temperatures recorded as 30.1°C & 16.2°C respectively. For the recent week on average 127.0 growing degree days were accumulated. Average relative humidity recorded as 55% and wind speed in the morning/evening recorded as 0.4/3.7 Knots. During the previous week the highest precipitation was observed as 41.0 mm at Murree while the lowest minimum temperature was recorded as 5.0°C at Murree.

Baluchistan

Light rainfall reported from northeast Baluchistan during the week. Weekly maximum and minimum temperatures recorded as 30.1°C & 15.3°C respectively. For the recent week on average 123.8 growing degree days were accumulated. Average relative humidity recorded as 50% and wind speed in the morning/evening recorded as 1.4/8.0 Knots. During the previous week the highest precipitation was observed as 22.5 mm at Quetta while the lowest minimum temperature was recorded as 3.0°C at Khuzdar.

Khyber Pakhtunkhwa

Light to moderate rainfall reported from Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 22.3°C & 9.4°C respectively. For the recent week on average 75.3 growing degree days were accumulated. Average relative humidity recorded as 66% and wind speed in the morning/evening recorded as 1.4/1.9 Knots. During the previous week the highest precipitation was observed as 31.50 mm at Chitral while the lowest minimum temperature was recorded as -2.2°C at Kalam.

Sindh

Light rainfall reported from Sindh during the week. Weekly maximum and minimum temperatures recorded as 36.0°C & 20.1°C respectively. For the

recent week, on average 161.4 growing degree days were accumulated. Average relative humidity recorded as 53% and wind speed in the morning/evening recorded as 2.5/3.3 Knots. During the previous week the highest precipitation was observed as 12.0 mm at Moenjodaro while the lowest minimum temperature was recorded as 17.0°C at Moenjodaro and Dadu.

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 20.4°C & 6.0°C respectively. For the recent week on average 56.6 growing degree days were accumulated. Average relative humidity recorded as 51% and wind speed in the morning/evening recorded as 0.4/2.9 Knots. During the previous week the highest precipitation was observed as 29.9 mm at Rawalakot while the lowest minimum temperature was recorded as -0.5°C at Astore.

Past Weather for Major Agricultural Plains**(15th – 21st March, 2021)****Rawalpindi (Potohar region)**

Rainfall reported as 21.8 mm from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 2.1/3.7 Oktas while, average relative humidity observed as 63%. Mean night time temperature recorded as 13.2°C & for the recent week 110.5 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.6/0.9Knots.

Faisalabad (Central Punjab)

Rainfall reported as 9.8 mm from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 2.6/3.9 Oktas while, average relative humidity observed as 62%. Mean night time temperature recorded as 16.3°C & for the recent week 132.0 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.6/1.2 Knots.

Tandojam (Lower Sindh)

Dry weather reported from Tandojam during the week; however, cloudiness in the morning/evening recorded as 0.9/0.9 Oktas while, average relative humidity observed as 56%. Mean night time temperature recorded as 16.0°C & for the recent week 148.8 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.5/0.9 Knots.

Usta Muhammad (Eastern Baluchistan)

Dry weather reported from Usta Muhammad during the week; however, cloudiness in the morning/evening recorded as 1.5/2.5 Oktas while, average relative humidity observed as 54%. Mean night time temperature recorded as 19.1°C & for the recent week 149.5 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.5/0.2 Knots.

Quetta (Northern Baluchistan)

Rainfall reported as 15.4 mm from Quetta during the week; however, cloudiness in the morning/evening recorded as 3.7/3.1 Oktas while, average relative humidity observed as 34%. Mean night time temperature recorded as 8.9°C & for the recent week 76.4 growing degree days accumulated. Wind speed recorded in the morning/evening as 2.1/3.4 Knots.

Past Weather for Sub-Regional Agricultural Plains (15th – 21st March, 2021)**Multan**

Rainfall reported as 4.2 mm from Multan during the week; however, cloudiness in the morning/evening recorded as 3.4/6.1 Oktas while, average relative humidity observed as 60%. Mean night time temperature recorded as 18.0°C & for the recent week 139.4 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.0/4.6 Knots.

Lahore

Rainfall reported as 2.7 mm from Lahore during the week; however, cloudiness in the morning/evening recorded as 3.0/2.9 Oktas while, average relative humidity observed as 52%. Mean night time temperature recorded as 18.6°C & for the recent week 134.5 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.0/4.3 Knots.

Zhob

Rainfall reported as 4.0 mm from Zhob during the week; however, cloudiness in the morning/evening recorded as 2.7/4.9 Oktas while, average relative humidity observed as 44%. Mean night time temperature recorded as 9.1°C & for the recent week 86.5 growing degree days accumulated. cloudiness in the morning/evening recorded as 4.1/6.7 Oktas.

Murree

Rainfall reported as 41.0 mm from Murree during the week; however, cloudiness in the morning/evening recorded as 3.2/5.3 Oktas while, average relative humidity observed as 54%. Mean night time temperature recorded as 7.2°C & for the recent week 52.7 growing degree days accumulated. Wind speed recorded in the morning/evening as 1.3/2.3 Knots.

D.I. Khan

Rainfall reported as 9.0 mm from D.I. Khan during the week; however, cloudiness in the morning/evening recorded as 2.5/4.7 Oktas while, average relative humidity observed as 64%. Mean night time temperature recorded as 18.1°C & for the recent week 134.5 growing degree days

accumulated. Wind speed recorded in the morning/evening as 1.7/1.7 Knots.

Peshawar

Rainfall reported as 1.4 mm from Peshawar during the week; however, cloudiness in the morning/evening recorded as 3.9/6.3 Oktas while, average relative humidity observed as 61%. Mean night time temperature recorded as 14.6°C & for the recent week 117.5 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.0/2.0 Knots.

Kalam

Rainfall reported as 30.5 mm from Kalam during the week; however, cloudiness in the morning/evening recorded as 5.9/6.1 Oktas while, average relative humidity observed as 77%. Mean night time temperature recorded as -0.4°C & for the recent week 2.3 growing degree days accumulated. Calm wind reported in the morning/evening.

Gilgit

Rainfall reported as trace (not measurable) from Gilgit during the week. However, cloudiness in the morning/evening recorded as 4.8/6.4 Oktas while, average relative humidity observed as 42%. Mean night time temperature recorded as 6.3°C & for the recent week 63.8 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.0/6.6 Knots.

Skardu

Rainfall reported as 2.8 mm from Skardu during the week; however, cloudiness in the morning/evening recorded as 4.8/5.4 Oktas while, average relative humidity observed as 43%. Mean night time temperature recorded as 2.9°C & for the recent week 32.3 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.0/1.7 Knots.

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 standing in the fields of RAMC Faisalabad.

Wheat: V. Good, Milk Maturity Stage.

Lower Sindh (Tandojam)

Wheat crop was cultivated in the fields of RAMC Tandojam.

Wheat: Harvested on 19th March, 2021.

Northern Baluchistan (Quetta)

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

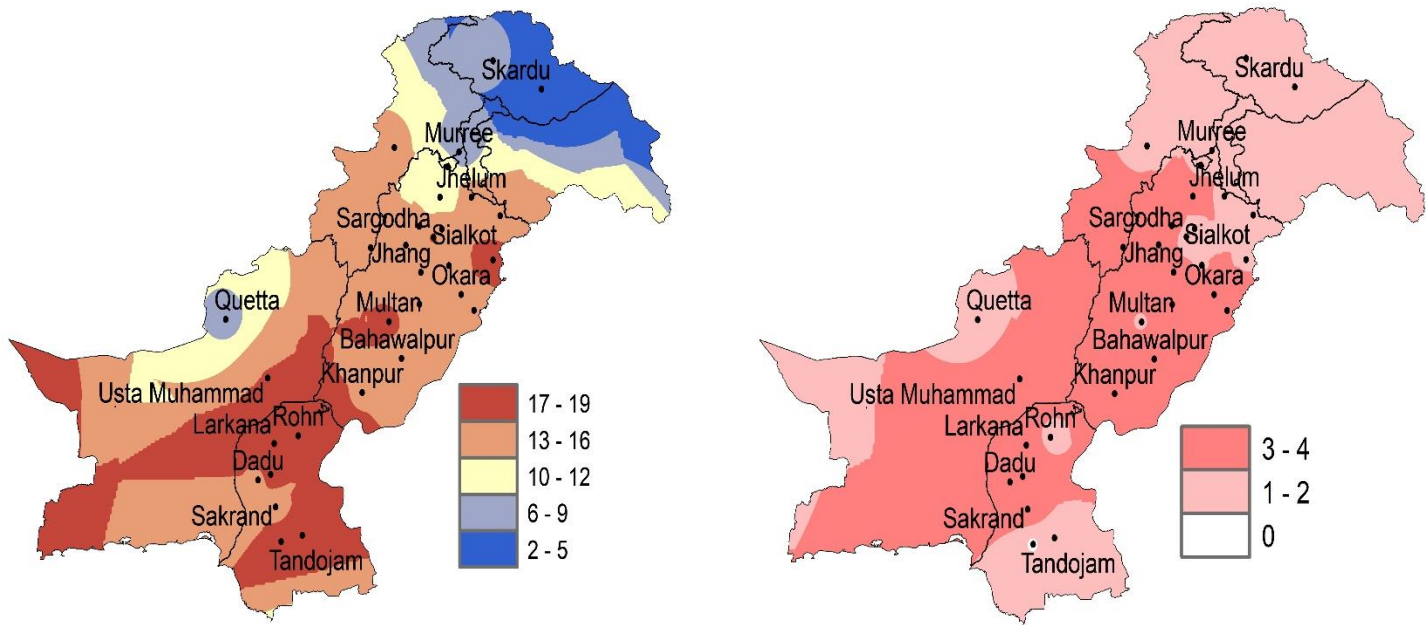
Wheat: Good, Crop Variety (Seriab-92), Tillering Stage.

Eastern Baluchistan (Usta Muhammad)

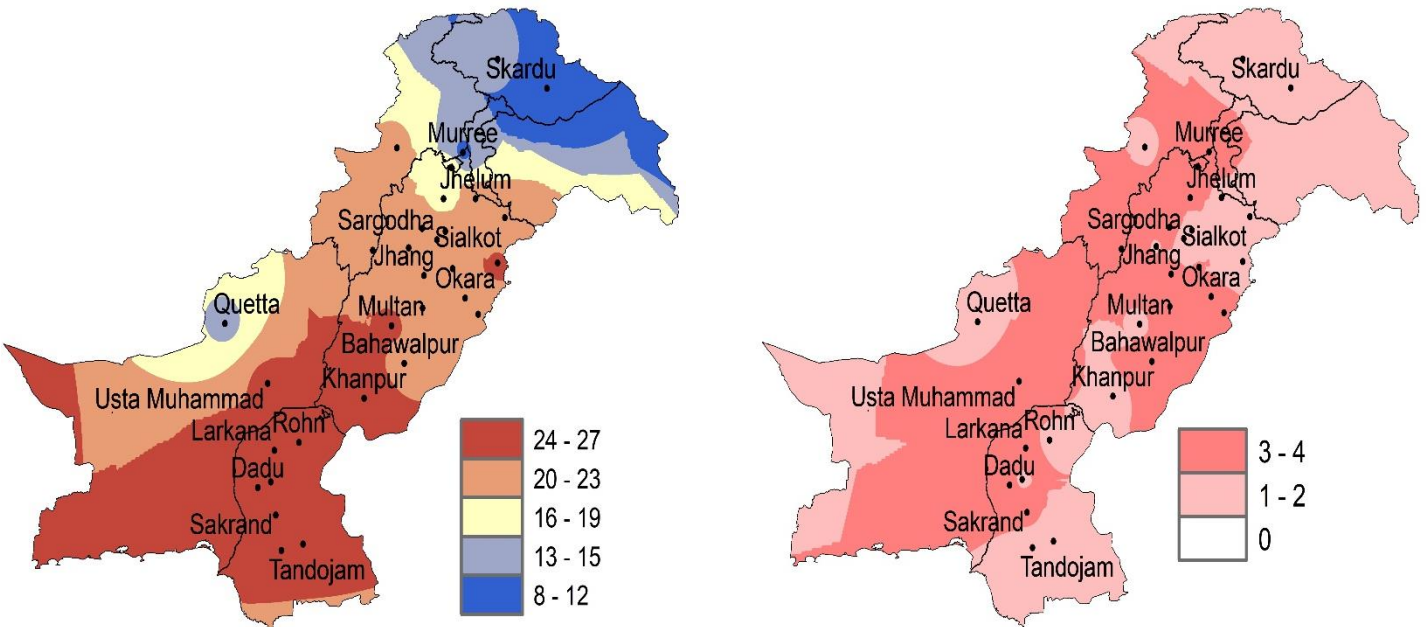
Presently wheat crop is standing in the fields of RAMC Usta Muhammad.

Wheat: Good, Milk Maturity Stage.

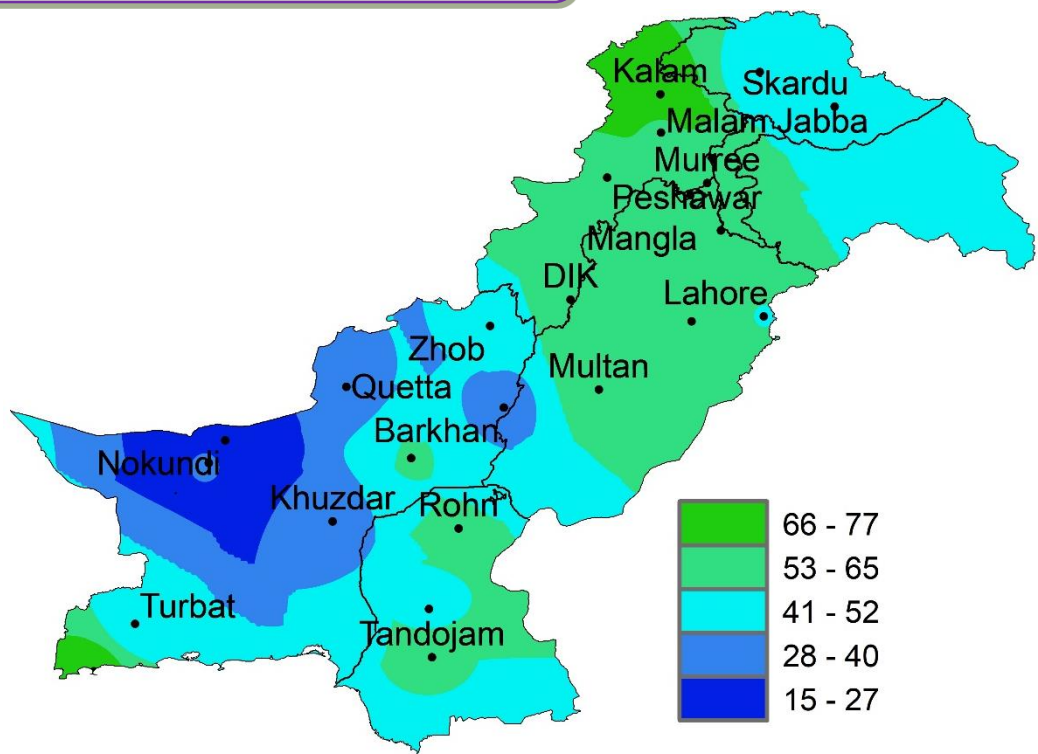
Normal & Departure of Minimum temperature (°C) for the previous week (15th – 21st March, 2021)



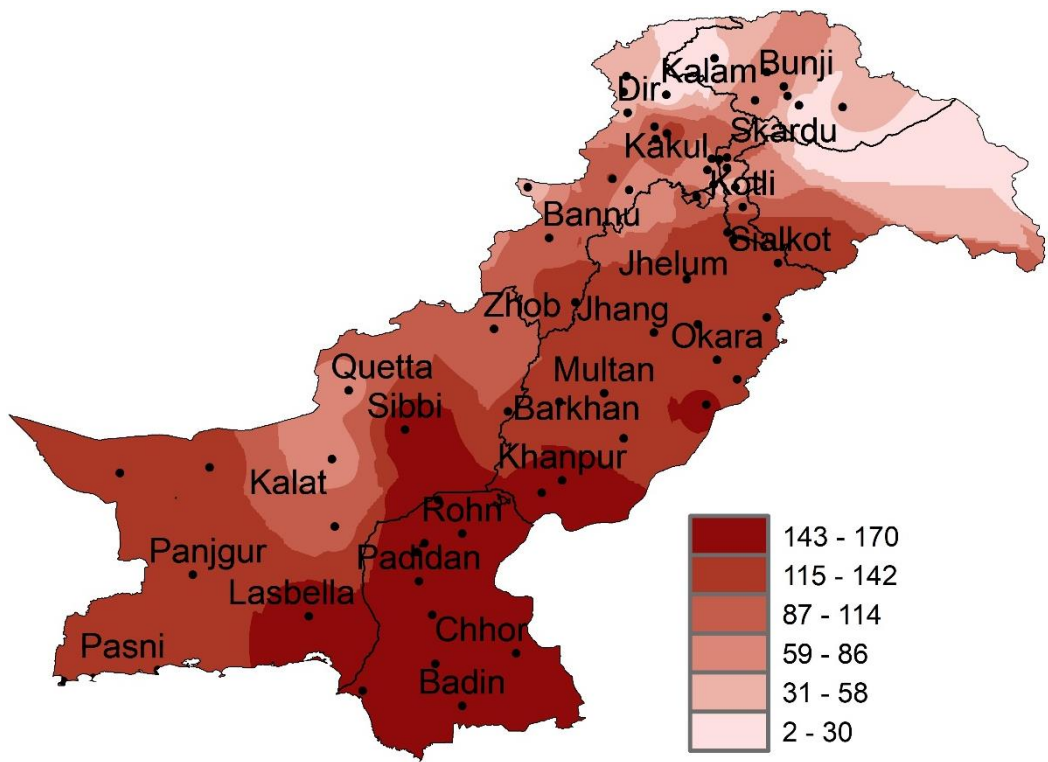
Normal & Departure of Mean temperature (°C) for the previous week (15th – 21st March, 2021)



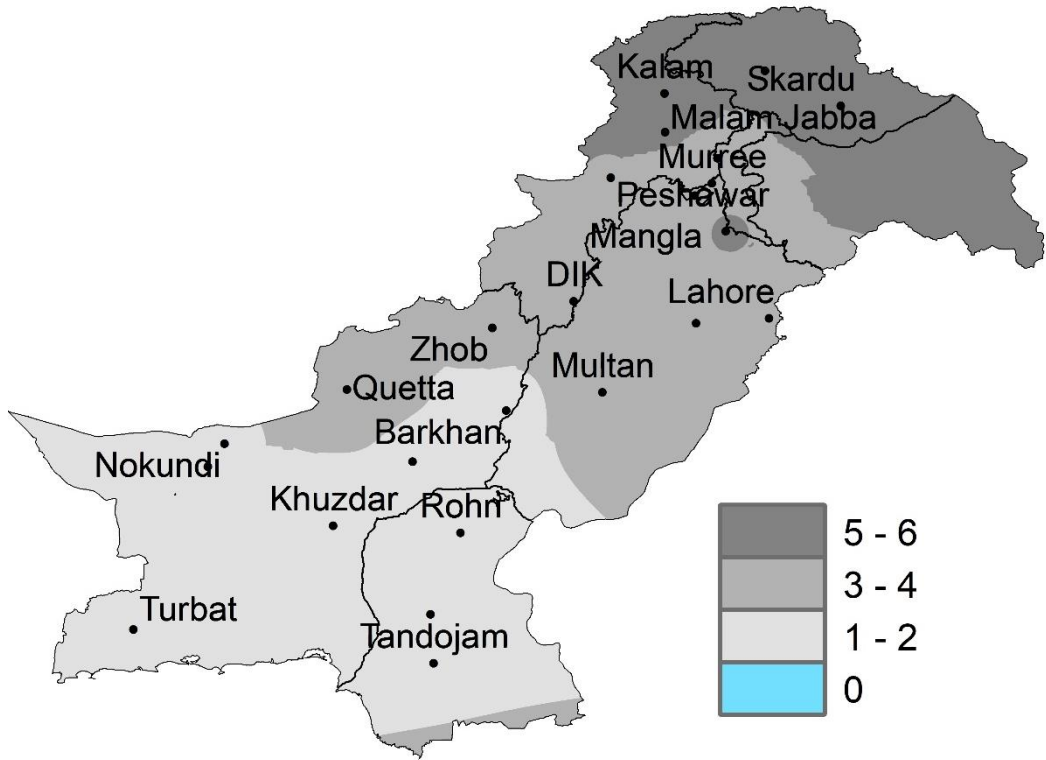
Mean Relative Humidity (%) during the previous week (15th – 21st March, 2021)



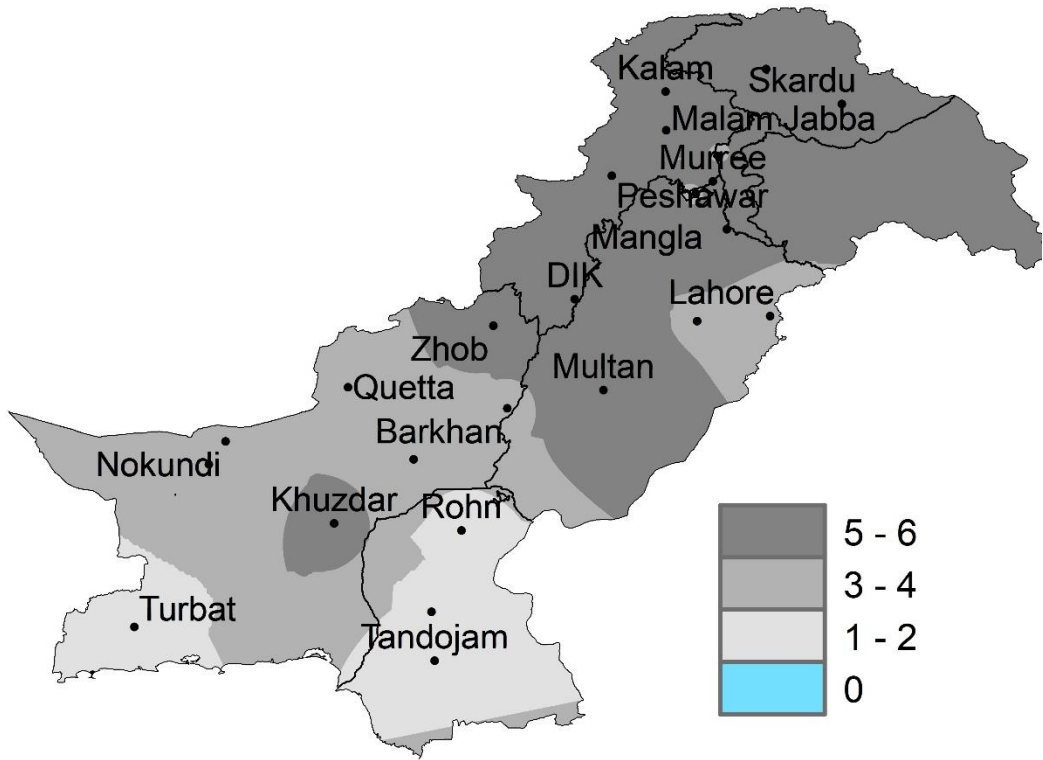
Total Growing Degree Days accumulated during the previous week (15th – 21st March, 2021)



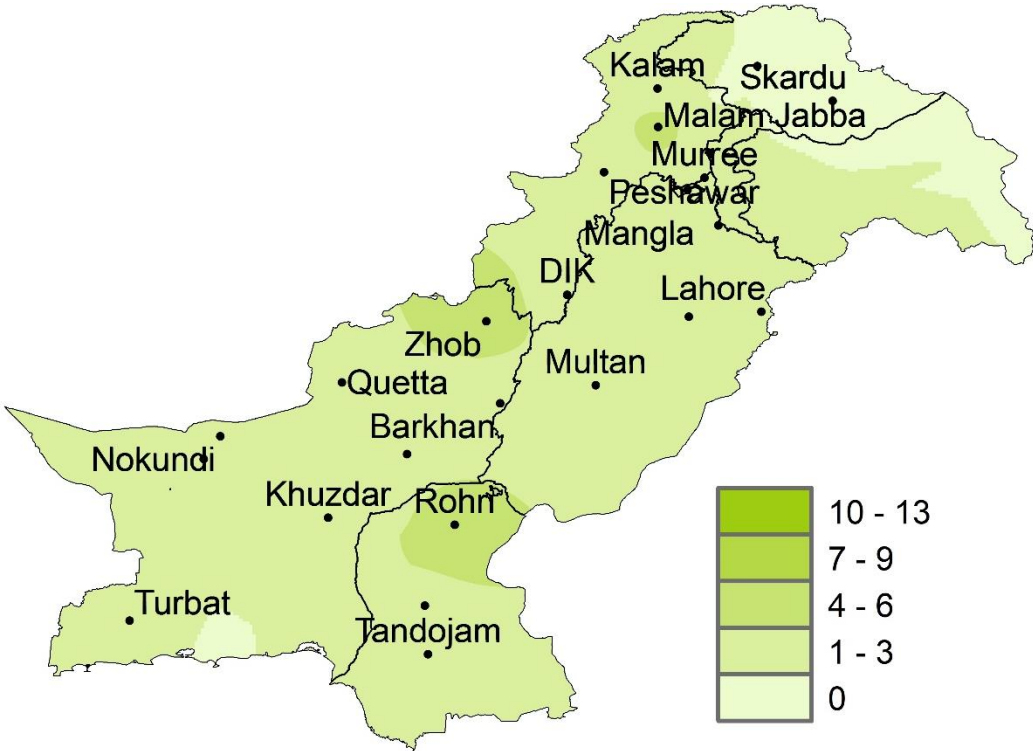
Mean Cloudiness (Oktas) at 0800PST during the previous week (15th – 21st March, 2021)



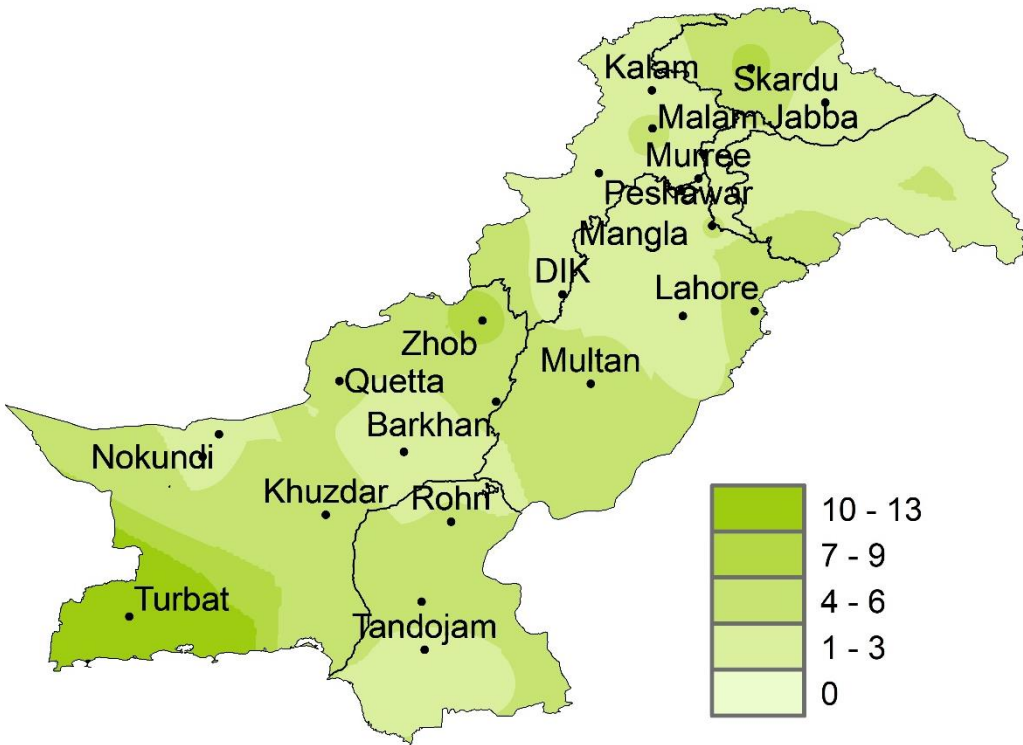
Mean Cloudiness (Oktas) at 1700PST during the previous week (15th – 21st March, 2021)



Mean Wind Speed (Knots) at 0800PST during the previous week (15th – 21st March, 2021)



Mean Wind Speed (Knots) at 1700PST during the previous week (15th – 21st March, 2021)



Weekly Weather Advisory for Farmers**(22nd – 28th March, 2021)**

A strong westerly wave is affecting the upper and central parts of the country and may persist in upper parts till Wednesday(morning).

MONDAY**22-03-2021**

Rain wind-thunderstorm (snow over high mountains) is expected in Khyber Pakhtunkhwa, Kashmir, Gilgit Baltistan, Punjab, Islamabad, north Balochistan and upper Sindh. Hailstorm is expected at a few places, while Heavy fall is also expected in upper Khyber Pakhtunkhwa, upper Punjab and Kashmir during the period.

TUESDAY**23-03-2021**

Rain wind-thunderstorm (snow over high mountains) is expected in Khyber Pakhtunkhwa, Kashmir, Gilgit Baltistan and Islamabad. Hailstorm is expected at a few places, while heavy fall is also expected in upper Khyber Pakhtunkhwa, upper Punjab and Kashmir during the period.

WEDNESDAY**24-03-2021**

Dry weather is expected in most parts of the country. However, rain-thunderstorm is expected in upper Khyber Pakhtunkhwa, Potohar region, Gilgit Baltistan, Kashmir and adjoining hilly areas.

THURSDAY**25-03-2021**

Dry weather is expected in most parts of the country.

FRIDAY**26-03-2021.**

Dry weather is expected in most parts of the country. However, rain-thunderstorm is expected in Chitral and Dir.

SATURDAY**27-03-2021**

Dry weather is expected in most parts of the country. However, rain-thunderstorm is expected in upper Khyber Pakhtunkhwa and Gilgit Baltistan.

SUNDAY**28-03-2021**

Dry weather is expected in most parts of the country.

ADVISORY FOR FARMERS

During the last week, light to moderate rainfall reported from most of the plains in upper half of the country. While light rainfall reported from Baluchistan and Sindh. Same weather is likely to be prevail in the ongoing week. Keeping in view the expected weather conditions farmers are advised the following advisories.

- ❖ Farmers of central parts and upper half may be ready to harvest the Wheat crop in the coming weeks.
- ❖ 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 (15th – 21st March, 2021)

Stations	Minimum /Night Time Temperature (°C)		Growin g Degree Days	Relative Humidity (%)	Rainfal l (mm)	Cloudiness (Oktas) 0800 PST	Cloudines s (Oktas) 1700 PST	Wind Speed (Knots) 0800 PST	Wind Speed (Knots) 1700 PST
	Mean	Minimum							
Barkhan	14.6	13.5	114.3	35	22.0	1.3	3.6	0.6	3.4
Dalbandin	14.1	13.0	124.0	30	1.0	2.0	2.4	0.9	2.9
D.I. Khan	18.1	17.0	134.5	64	9.0	2.5	4.7	1.7	1.7
Faisalabad	16.3	14.0	132.0	62	9.8	2.6	3.9	0.6	1.2
Gawadar	18.9	18.0	141.8	75	0.0	1.0	0.6	0.0	11.4
Gilgit	6.3	4.5	63.8	42	0.0	4.8	6.4	0.0	6.6
Kalam	-0.4	-2.2	2.3	77	30.5	5.9	6.1	0.0	0.0
Khuzdar	11.9	3.0	104.5	32	15.4	0.6	4.7	0.0	5.7
Lahore	18.6	17.2	134.5	52	2.7	3.0	2.9	0.0	4.3
Malam Jabba	2.6	1.0	0.0	62	30.0	4.3	4.3	4.0	4.0
Mangla	14.8	13.3	122.3	55	5.2	4.3	5.6	1.7	3.1
Multan (PBO)	18.0	16.8	139.4	60	4.2	3.4	6.1	0.0	4.6
Murree	7.2	5.0	52.7	54	41.0	3.2	5.3	1.3	2.3
Muzaffarabad	10.4	8.0	93.8	62	15.0	3.3	3.9	0.0	0.0
Nokkundi	19.4	18.5	165.0	51	1.0	1.3	2.0	2.3	6.0
Nawabshah	16.4	14.0	138.5	15	0.0	1.7	2.6	1.7	2.9
Peshawar	14.6	13.2	117.5	61	1.4	3.9	6.3	0.0	2.0
Quetta	8.9	7.0	76.4	34	15.4	3.7	3.1	2.1	3.4
Rawalpindi	13.2	12.0	110.5	63	21.8	2.1	3.7	0.6	0.9
Rohri	20.3	19.0	159.4	54	1.0	0.9	1.4	4.6	3.1
Skardu	2.9	1.4	32.3	43	2.8	4.8	5.4	0.0	1.7
Tandojam	16.0	15.0	148.8	56	0.0	0.9	0.9	0.5	0.9
Turbat	0.0	0.0	0.0	42	0.0	1.2	2.0	0.0	13.4
Usta. M	19.1	17.0	149.5	54	0.0	1.5	2.5	0.5	0.2
Zhob	9.1	8.0	86.5	44	4.0	2.7	4.9	4.1	6.7

*** 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)