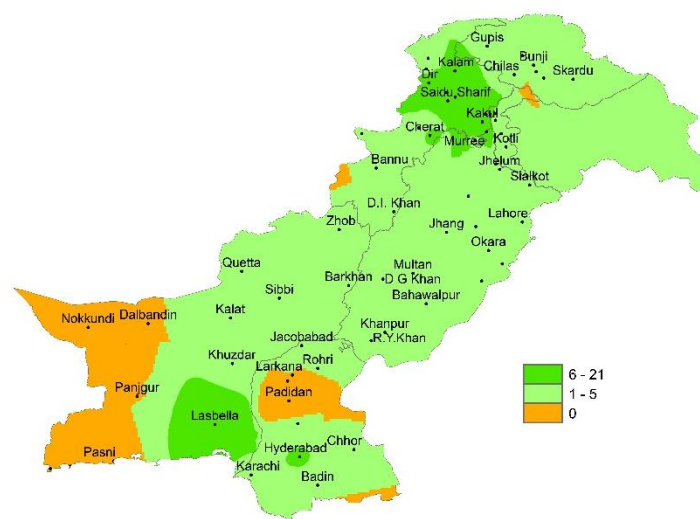


Weekly Weather and Crop Bulletin for Pakistan

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PAKISTAN METEOROLOGICAL
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**Rainfall Distribution (mm) during the Previous
Week (20th – 26th December, 2021)**

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Highlights of Past Weather (20th – 26th December, 2021)

Normal to above night time temperatures were observed almost all over the country except lower Khyber Pakhtunkhwa during the last week.

Rainfall reported as follows during the last week:

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

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

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

Editor: Ruqiya Mehmood (Assistant Meteorologist)

Past Weather of Provinces (20th – 26th December, 2021)**Punjab**

Light rainfall reported from Punjab during the week. Weekly maximum and minimum temperatures recorded as 19.7°C & 4.6°C respectively. For the recent week on average 50.1 growing degree days were accumulated. Average relative humidity recorded as 67% and wind speed in the morning/evening recorded as 0.3/0.6 Knots. During the previous week the highest precipitation was observed as 8.5 mm at Murree while the lowest minimum temperature was recorded as -1.0°C at Murree.

Baluchistan

Light rainfall reported from a few stations in Baluchistan during the week. Weekly maximum and minimum temperatures recorded as 23.4°C & 7.3°C respectively. For the recent week on average 76.6 growing degree days were accumulated. Average relative humidity recorded as 50% and wind speed in the morning/evening recorded as 1.6/5.7 Knots. During the previous week the highest precipitation was observed as 13.0 mm at Lasbella while the lowest minimum temperature was recorded as -5.5°C at Kalat.

Khyber Pakhtunkhwa

Light to moderate rainfall reported from Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 15.8°C & 1.3°C respectively. For the recent week on average 27.6 growing degree days were accumulated. Average relative humidity recorded as 72% and wind speed in the morning/evening recorded as 0.9/0.9 Knots. During the previous week the highest precipitation was observed as 21.0 mm at Dir while the lowest minimum temperature was recorded as -5.5°C at Kalam.

Sindh

Light rainfall reported from a few stations in Sindh during the week. Weekly maximum and minimum temperatures recorded as 24.7°C & 9.6°C

respectively. For the recent week on average 84.8 growing degree days were accumulated. Average relative humidity recorded as 63% and wind speed in the morning/evening recorded as 1.7/2.3 Knots. During the previous week the highest precipitation was observed as 6.0 mm at Hyderabad while the lowest minimum temperature was recorded as 2.5°C at Mithi.

Gilgit-Baltistan and Azad Jammu & Kashmir

Light rainfall reported from Gilgit-Baltistan, Azad Jammu & Kashmir during the week. Weekly maximum and minimum temperatures recorded as 10.9°C & -2.5°C respectively. Average relative humidity recorded as 68% and wind speed in the morning/evening recorded as 0.4/0.2 Knots. During the previous week the highest precipitation was observed as 8.0 mm at Muzaffarabad while the lowest minimum temperature was recorded as -13.6°C at Skardu.

Past Weather for Major Agricultural Plains**(20th – 26th December, 2021)****Rawalpindi (Potohar region)**

Rainfall reported as 3.3 mm from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 2.6/3.9 Oktas while, average relative humidity observed as 72%. Mean night time temperature recorded as 2.5°C & for the recent week 42.6 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.2/0.3 Knots.

Faisalabad (Central Punjab)

Rainfall reported as trace (not measurable) from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 2.3/1.7 Oktas while, average relative humidity observed as 78%. Mean night time temperature recorded as 5.0°C & for the recent week 55.6 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.0/1.1 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 63%. Mean night time temperature recorded as 9.6°C & for the recent week 84.5 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.3/0.4 Knots.

Usta Muhammad (Eastern Baluchistan)

Dry weather reported from Usta Muhammad during the week; however, cloudiness in the morning/evening recorded as 1.4/1.1 Oktas while, average relative humidity observed as 68%. Mean night time temperature recorded as 7.6°C & for the recent week 66.3 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.1/0.0 Knots.

Quetta (Northern Baluchistan)

Rainfall reported as 3.8 mm from Quetta during the week; however, cloudiness in the morning/evening recorded as 3.4/4.7 Oktas while, average relative humidity observed as 34%. Mean night time temperature recorded as 3.9°C & for the recent week 40.2 growing degree days accumulated. Wind speed recorded in the morning/evening as 1.8/3.1 Knots.

Past Weather for Sub-Regional Agricultural Plains (20th – 26th December, 2021)**Multan**

Rainfall reported as 1.4 mm from Multan during the week; however, cloudiness in the morning/evening recorded as 3.3/3.1 Oktas while, average relative humidity observed as 70%. Mean night time temperature recorded as 5.9°C & for the recent week 56.7 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.0/0.6 Knots.

Lahore

Dry weather reported from Lahore during the week; however, cloudiness in the morning/evening recorded as 1.9/2.0 Oktas while, average relative humidity observed as 73%. Mean night time temperature recorded as 5.1°C & for the recent week 48.2 growing degree days accumulated. Calm wind reported in the morning/evening.

Zhob

Dry weather reported from Zhob during the week; however, cloudiness in the morning/evening recorded as 1.0/1.9 Oktas while, average relative humidity observed as 35%. Mean night time temperature recorded as 0.4°C & for the recent week 30.8 growing degree days accumulated. Wind speed recorded in the morning/evening as 3.6/5.0 Knots.

Murree

Rainfall reported as 8.5 mm from Murree during the week; however, cloudiness in the morning/evening recorded as 3.9/5.0 Oktas while, average relative humidity observed as 57%. Mean night time temperature recorded 1.9°C & for the recent week 15.1 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.9/1.1 Knots.

D.I. Khan

Rainfall reported as 1.0 mm from D.I. Khan during the week; however, cloudiness in the morning/evening recorded as 1.6/2.1 Oktas while, average relative humidity observed as 70%. Mean night time temperature recorded as 3.0°C & for the recent week 49.6 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.3/0.3 Knots.

Peshawar

Rainfall reported as 0.4 mm from Peshawar during the week; however, cloudiness in the morning/evening recorded as 4.1/4.1 Oktas while, average relative humidity observed as 73%. Mean night time temperature recorded as 3.0°C & for the recent week 44.5 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.0/0.3 Knots.

Kalam

Rainfall reported as 13.6 mm from Kalam during the week; however, cloudiness in the morning/evening recorded as 4.0/5.3 Oktas while, average relative humidity observed as 66%. Mean night time temperature recorded as -4.3°C & for the recent week 2.3 growing degree days accumulated. Calm wind reported in the morning/evening.

Gilgit

Dry weather reported from Gilgit during the week. However, cloudiness in the morning/evening recorded as 5.6/5.4 Oktas while, average relative humidity observed as 67%. Mean night time temperature recorded as -3.4°C. Wind speed recorded in the morning/evening as 0.3/0.0 Knots.

Skardu

Rainfall reported as 1.2 mm from Skardu during the week; however, cloudiness in the morning/evening recorded as 5.1/4.0 Oktas while, average relative humidity observed as 66%. Mean night time temperature recorded as -8.3°C. 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: Very Good, Tillering Stage Completed.

Lower Sindh (Tandojam)

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

Wheat (TD-I): Good, Tillering Stage.

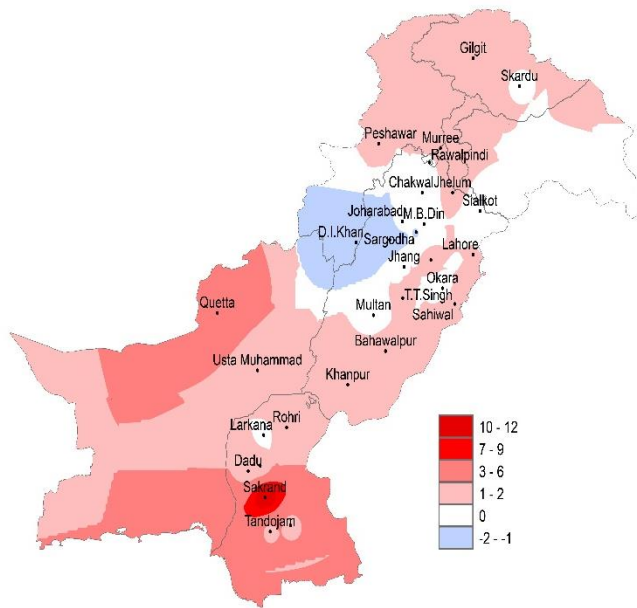
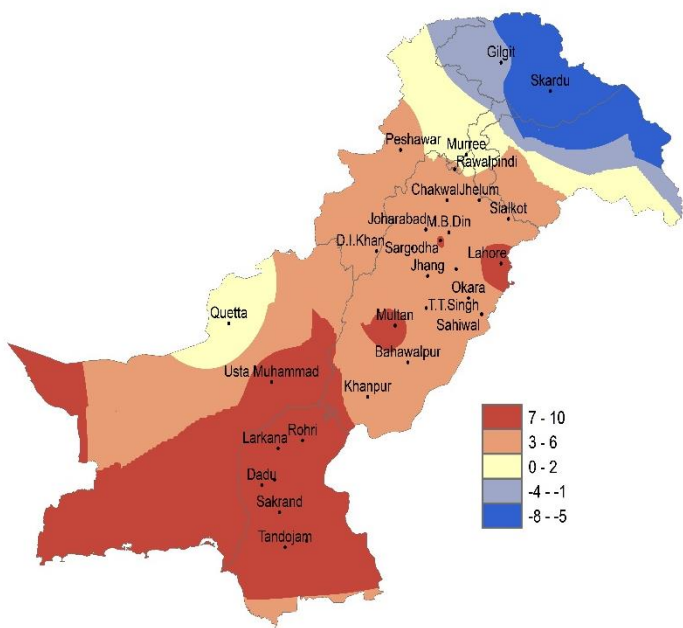
Northern Baluchistan (Quetta)

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

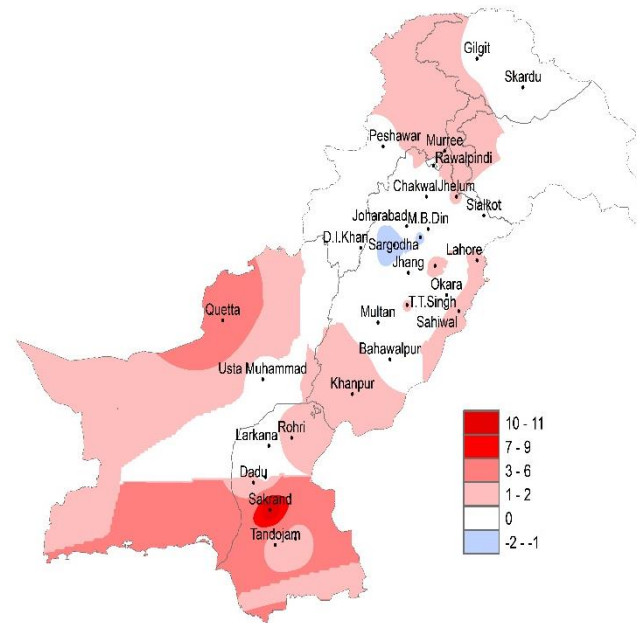
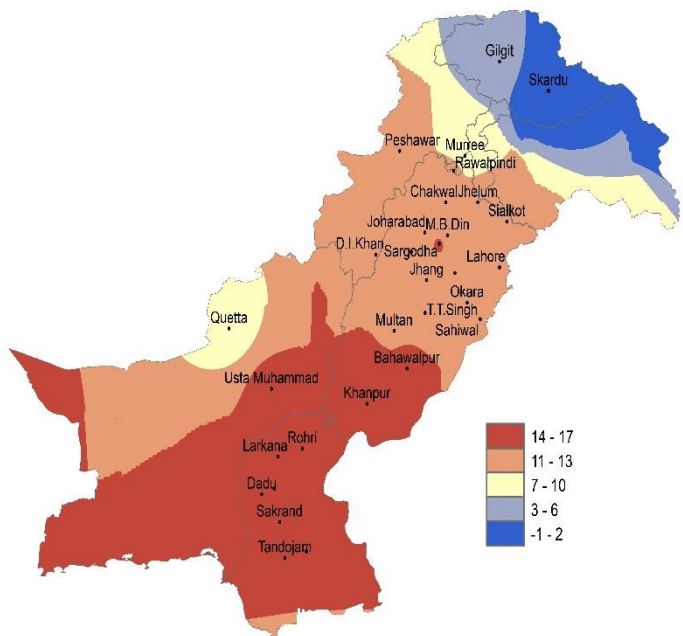
Eastern Baluchistan (Usta Muhammad)

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

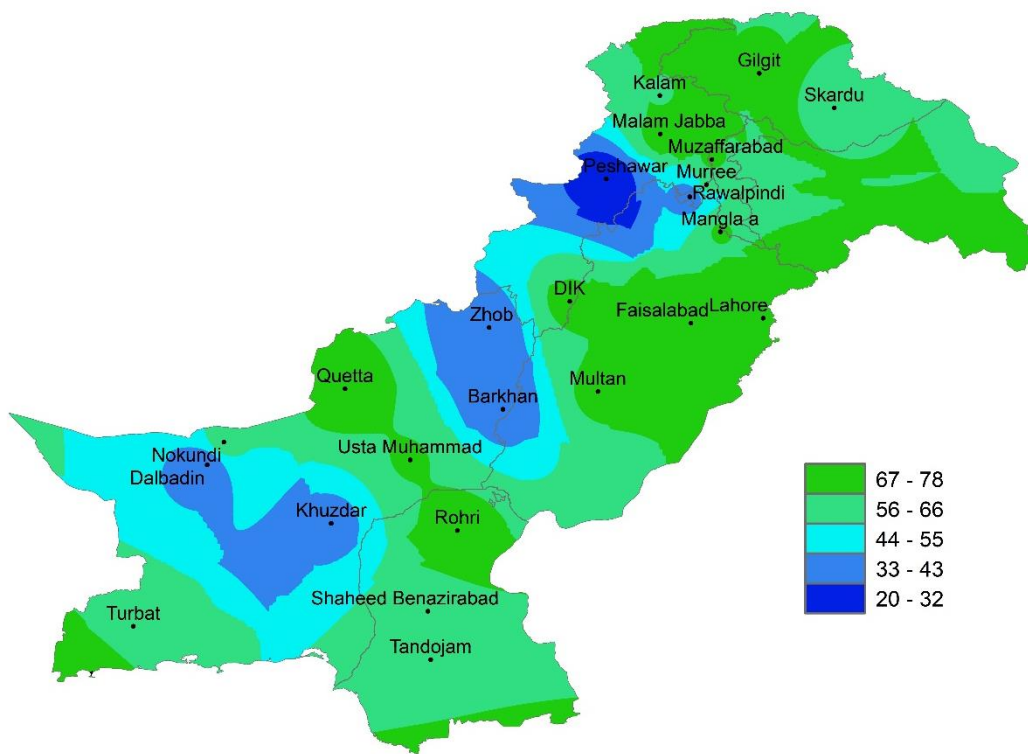
Normal & Departure of Minimum temperature (°C) for the previous week (20th – 26th December, 2021)



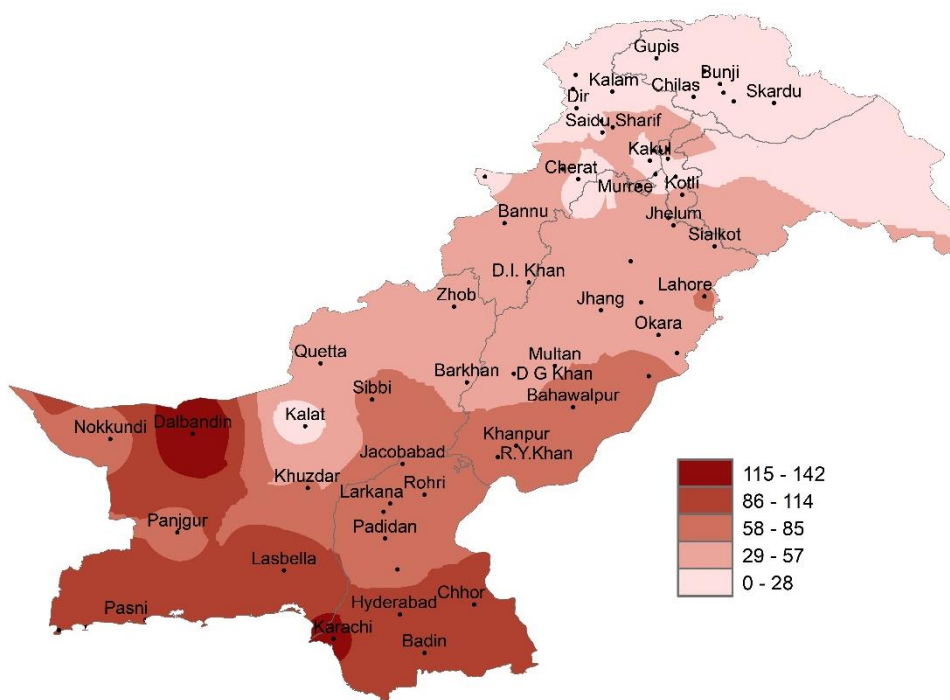
Normal & Departure of Mean temperature (°C) for the previous week (20th – 26th December, 2021)



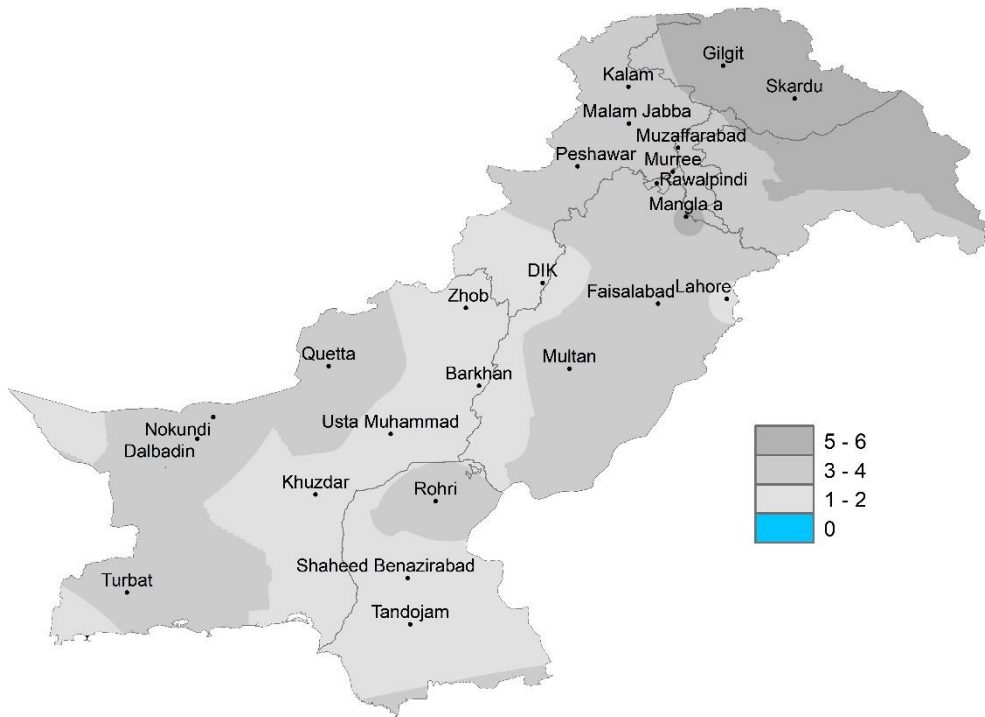
Mean Relative Humidity (%) during the previous week (20th – 26th December, 2021)



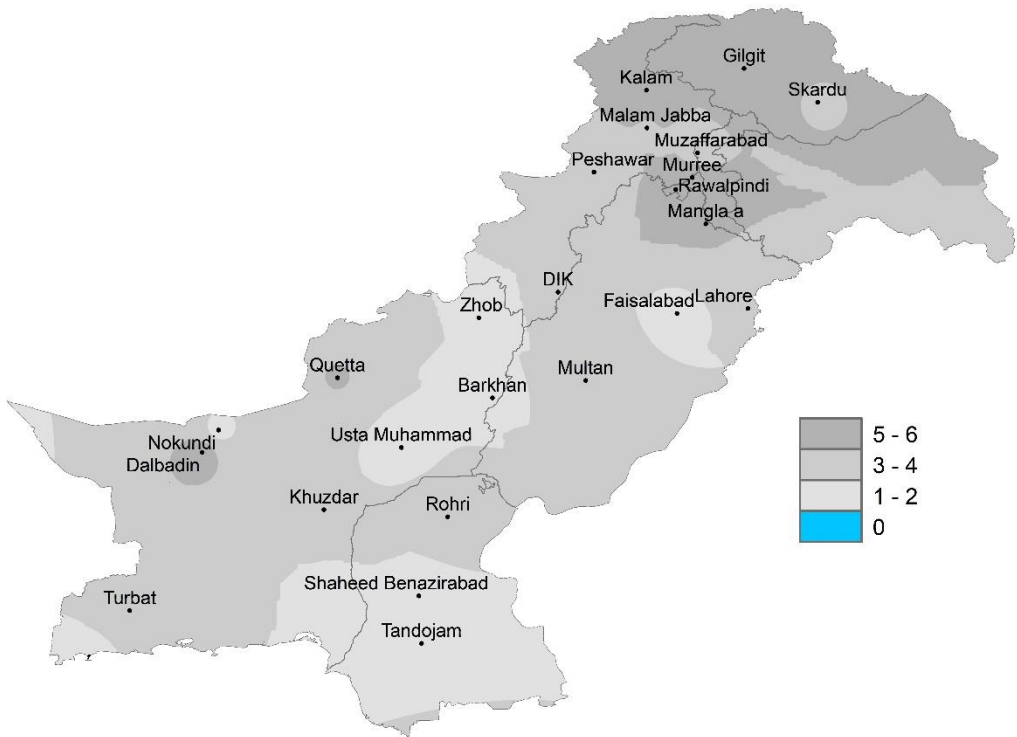
Total Growing Degree Days accumulated during the previous week (20th – 26th December, 2021)



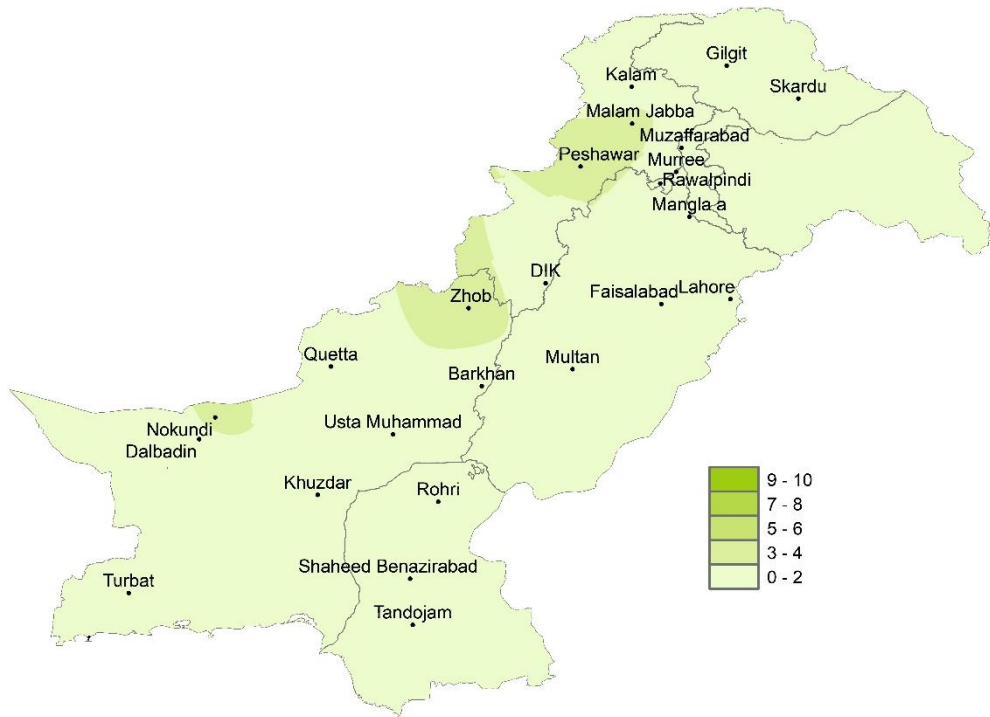
Mean Cloudiness (Oktas) at 0800PST during the previous week (20th – 26th December, 2021)



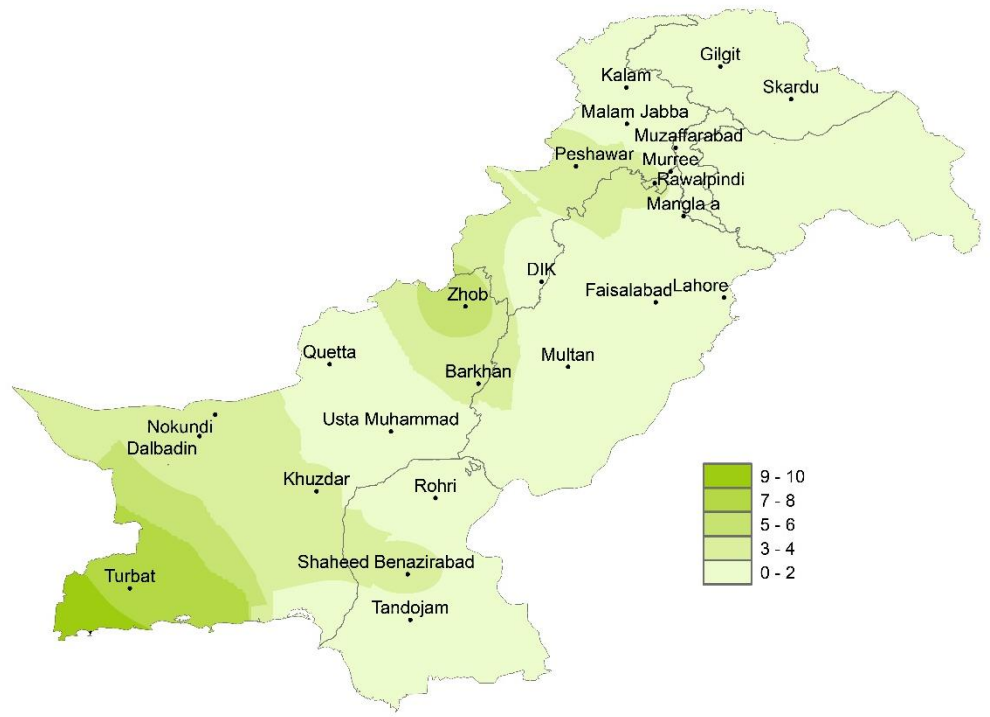
Mean Cloudiness (Oktas) at 1700PST during the previous week 20th – 26th December, 2021)



Mean Wind Speed (Knots) at 0800PST during the previous week (20th – 26th December, 2021)



Mean Wind Speed (Knots) at 1700PST during the previous week (20th – 26th December, 2021)



Weekly Weather Advisory for Farmers
(27th December 2021 – 2nd January, 2022)

A westerly wave is still affecting upper parts of the country and likely to persist till Tuesday (morning).

MONDAY
27-12-2021

Rain/snow is expected in northeast Punjab, upper Khyber Pakhtunkhwa, Potohar region, lower Balochistan, Gilgit-Baltistan, Kashmir and coastal areas of Sindh. Fog/ smog is likely to prevail in plain areas of Punjab during night. Cold and dry weather is expected elsewhere in the country.

TUESDAY
28-12-2021

Dry weather in most parts of the country while partly cloudy in upper and southern parts of the country. More rain is expected in Sindh and coastal areas of Makran. Dense Fog is likely to prevail in upper Sindh and plain areas of Punjab, Khyber Pakhtunkhwa during night/morning hours.

WEDNESDAY
29-12-2021

Mainly cold and dry weather is expected in most parts of the country, While very cold in hilly areas. Fog is likely to prevail in plain areas of Punjab during morning/night hours.

THURSDAY
30-12-2021

Mainly cold and dry weather is expected in most parts of the country, While very cold in hilly areas. Fog is likely to prevail in plain areas of Punjab during morning/night hours. However, partly cloudy weather is expected in upper parts of country.

FRIDAY
31-12-2021.

Mainly cold and dry weather is expected in most parts of the country, While very cold in hilly areas. Fog is likely to prevail in plain areas of Punjab during morning/night hours. However, partly cloudy weather is expected in upper parts of country.

SATURDAY

01-01-2022

Mainly cold and dry weather is expected in most parts of the country, While very cold in hilly areas. Fog is likely to prevail in plain areas of Punjab during morning/night hours. However, partly cloudy weather is expected in upper parts of country.

SUNDAY

02-01-2022

Mainly cold and dry weather is expected in most parts of the country, While very cold in hilly areas. However, rain-wind-thunderstorm is expected in north Balochistan, upper Khyber Pakhtunkhwa, Gilgit Baltistan and Kashmir.

ADVISORY FOR FARMERS

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

- ❖ Farmers are advised to irrigate the Crop according to its need.
- ❖ Use pesticides to avoid the attack from pests on the crops as advised by the agriculture department.

National Weather Data of Selected Cities from (20th – 26th December, 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	5.7	5.0	55.3	35	4.0	0.7	1.6	0.6	2.0
Dalbandin	***	***	142.5	33	0.0	2.0	5.0	0.0	3.1
D.I.Khan	3.0	2.3	49.6	70	1.0	1.6	2.1	0.3	0.3
Faisalabad	5.0	3.0	55.6	78	0.0	2.0	2.0	0.0	1.1
Gawadar	13.5	12.0	110.5	76	0.0	1.1	1.4	0.0	9.7
Gilgit	-3.4	-8.0	0.0	67	0.0	5.6	5.4	0.3	0.0
Kalam	-4.3	-5.5	2.3	66	13.6	4.0	5.3	0.0	0.0
Khuzdar	3.7	1.5	58.0	38	2.2	1.7	2.6	1.1	2.3
Lahore	5.1	3.7	48.2	73	0.0	1.9	2.0	0.0	0.0
Malam Jabba	-3.6	-4.5	0.0	71	20.0	2.1	4.0	3.1	1.7
Mangla	3.1	-0.2	45.9	68	1.1	4.3	4.3	1.1	0.0
Multan	5.9	3.3	56.7	70	1.4	3.3	3.1	0.0	0.6
Murree	1.9	-0.8	15.1	57	8.5	3.9	5.0	0.9	1.1
Muzaffarabad	0.6	-0.5	23.5	70	8.0	2.4	3.3	0.0	0.9
Nawabshah	8.4	5.5	80.1	64	0.0	2.2	1.4	3.1	3.7
Nokkundi	7.9	6.0	78.0	20	0.0	3.1	2.4	2.3	2.6
Peshawar	3.0	-0.2	44.5	73	0.4	4.1	4.1	0.0	0.3
Quetta	3.9	2.0	40.2	34	3.8	3.4	5.0	1.8	3.1
Rawalpindi	2.5	0.0	42.6	72	3.3	3.0	4.0	0.2	0.3
Rohri	9.4	5.5	77.7	63	0.0	1.7	1.0	1.7	2.9
Skardu	-8.3	-13.6	0.0	66	1.2	5.1	4.0	0.0	0.0
Tandojam	9.6	9.0	84.5	63	0.0	0.0	0.0	0.3	0.4
Turbat	14.4	11.8	116.7	59	0.0	3.1	3.1	0.0	6.9
Usta Muhammad	7.6	5.0	66.3	68	0.0	1.0	1.0	0.1	0.0
Zhob	0.4	-2.0	30.8	35	0.0	1.0	1.9	3.6	5.0

*** 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)