

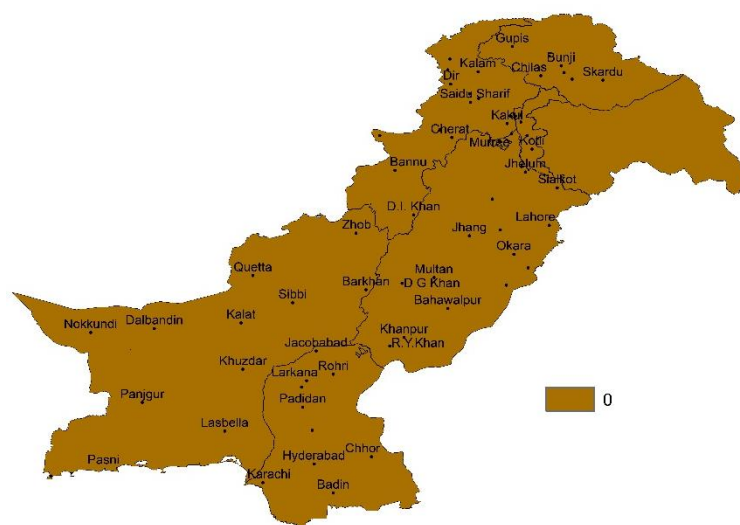
Weekly Weather and Crop Bulletin for Pakistan

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PAKISTAN METEOROLOGICAL
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**Rainfall Distribution (mm) during the Previous
Week (22nd – 28th November, 2021)**



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Highlights of Past Weather (22nd – 28th November, 2021)

Below normal night time temperatures were observed almost all over the country except lower Sindh during the last week.

Rainfall reported as follows during the last week:

1. Dry weather reported from all over the country.

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

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

Editor: Ruqiya Mehmood (Assistant Meteorologist)

Past Weather of Provinces (22nd – 28th October, 2021)**Punjab**

Dry weather reported from Punjab during the week. Weekly maximum and minimum temperatures recorded as 25.7°C & 9.0°C respectively. For the recent week on average 86.3 growing degree days were accumulated. Average relative humidity recorded as 56% and wind speed in the morning/evening recorded as 1.3/2.1 Knots. During the previous week the lowest minimum temperature was recorded as 3.0°C at Murree.

Baluchistan

Dry weather reported from Baluchistan during the week. Weekly maximum and minimum temperatures recorded as 26.4°C & 8.8°C respectively. For the recent week on average 91.7 growing degree days were accumulated. Average relative humidity recorded as 46% and wind speed in the morning/evening recorded as 0.3/4.0 Knots. During the previous week the lowest minimum temperature was recorded as -4.0°C at Kalat.

Khyber Pakhtunkhwa

Dry weather reported from Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 21.7°C & 4.7°C respectively. For the recent week on average 55.4 growing degree days were accumulated. Average relative humidity recorded as 60% and wind speed in the morning/evening recorded as 1.1/1.1 Knots. During the previous week the lowest minimum temperature was recorded as -2.5°C at Kalam.

Sindh

Dry weather reported from Sindh during the week. Weekly maximum and minimum temperatures recorded as 30.3°C & 13.1°C respectively. For the recent week on average 117.1 growing degree days were accumulated. Average relative humidity recorded as 60% and wind speed in the morning/evening recorded as 1.8/2.7 Knots. During the previous week the lowest minimum temperature was recorded as 7.0°C at Moenjodaro.

Gilgit-Baltistan and Azad Jammu & Kashmir

Dry weather reported from Gilgit-Baltistan, Azad Jammu & Kashmir during the week. Weekly maximum and minimum temperatures recorded as 17.5°C & 1.0°C respectively. For the recent week on average 30.9 growing degree days were accumulated. Average relative humidity recorded as 64% and wind speed in the morning/evening recorded as 0.1/0.0 Knots. During the previous week the lowest minimum temperature was recorded as -6.6°C at Skardu.

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

Dry weather reported from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 0.7/1.0 Oktas while, average relative humidity observed as 73%. Mean night time temperature recorded as 5.1°C & for the recent week 69.4 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.2/0.2 Knots.

Faisalabad (Central Punjab)

Dry weather reported from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 0.1/0.1 Oktas while, average relative humidity observed as 65%. Mean night time temperature recorded as 9.1°C & for the recent week 91.6 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.3/0.0 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 10.9°C & for the recent week 97.4 growing degree days accumulated. Wind speed recorded in the morning/evening as 1.1/1.1 Knots.

Usta Muhammad (Eastern Baluchistan)

Dry weather reported from Usta Muhammad during the week; however, clear sky observed in the morning/evening while, average relative humidity observed as 58%. Mean night time temperature recorded as 11.6°C & for the recent week 100.0 growing degree days accumulated. Calm wind reported in the morning/evening.

Quetta (Northern Baluchistan)

Dry weather reported from Quetta during the week; however, cloudiness in the morning/evening recorded as 0.0/0.6 Oktas while, average relative humidity observed as 36%. Mean night time temperature recorded as 2.3°C & for the recent week 34.9 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.9/1.8 Knots.

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

Dry weather reported from Multan during the week; however, cloudiness in the morning/evening recorded as 0.1/0.0 Oktas while, average relative humidity observed as 62%. Mean night time temperature recorded as 7.0°C & for the recent week 89.6 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.9/3.4 Knots.

Lahore

Dry weather reported from Lahore during the week; however, cloudiness in the morning/evening recorded as 0.3/0.0 Oktas while, average relative humidity observed as 63%. Mean night time temperature recorded as 10.1°C & for the recent week 92.4 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.0/0.6 Knots.

Zhob

Dry weather reported from Zhob during the week; however, cloudiness in the morning/evening recorded as 0.0/0.3 Oktas while, average relative humidity observed as 44%. Mean night time temperature recorded as 6.0°C & for the recent week 69.3 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.9/2.4 Knots.

Murree

Dry weather reported from Murree during the week; however, cloudiness in the morning/evening recorded as 0.7/1.0 Oktas while, average relative humidity observed as 42%. Mean night time temperature recorded 7.0°C & for the recent week 52.0 growing degree days accumulated. Wind speed recorded in the morning/evening as 3.1/2.3 Knots.

D.I. Khan

Dry weather reported from D.I. Khan during the week; however, clear sky observed in the morning/evening while, average relative humidity observed as 69%. Mean night time temperature recorded as 9.0°C & for the recent week 94.4 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.9/0.9 Knots.

Peshawar

Dry weather reported from Peshawar during the week; however, cloudiness in the morning/evening recorded as 0.9/2.0 Oktas while, average relative humidity observed as 70%. Mean night time temperature recorded as 5.3°C & for the recent week 72.7 growing degree days accumulated. Calm wind reported in the morning/evening.

Kalam

Dry weather reported from Kalam during the week; however, cloudiness in the morning/evening recorded as 1.1/3.1 Oktas while, average relative humidity observed as 57%. Mean night time temperature recorded as -2.5°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 2.3/3.9 Oktas while, average relative humidity observed as 64%. Mean night time temperature recorded as -4.0°C & for the recent week 25.0 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.3/0.0 Knots.

Skardu

Dry weather reported from Skardu during the week; however, cloudiness in the morning/evening recorded as 2.6/1.9 Oktas while, average relative humidity observed as 57%. Mean night time temperature recorded as -6.6°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, Third Leaf Stage.

Lower Sindh (Tandojam)

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

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

Northern Baluchistan (Quetta)

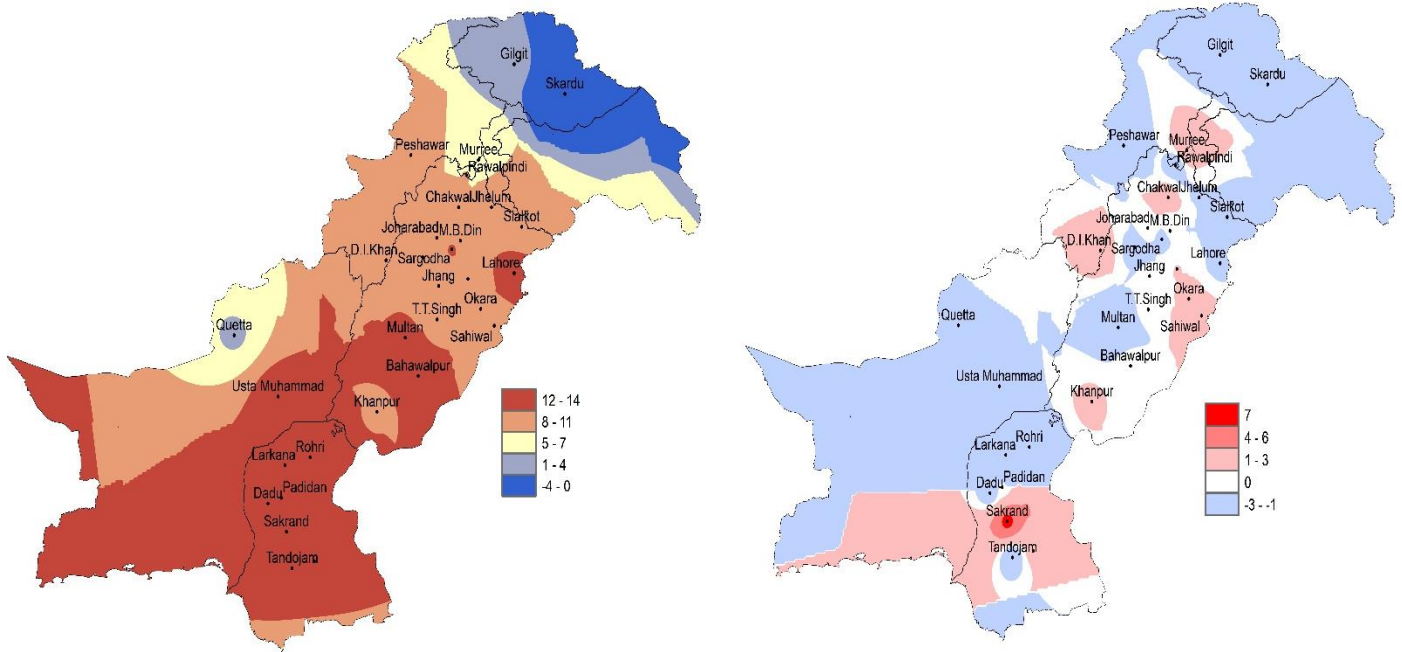
There is presently no crop grown in the fields of RAMC Quetta.

Eastern Baluchistan (Usta Muhammad)

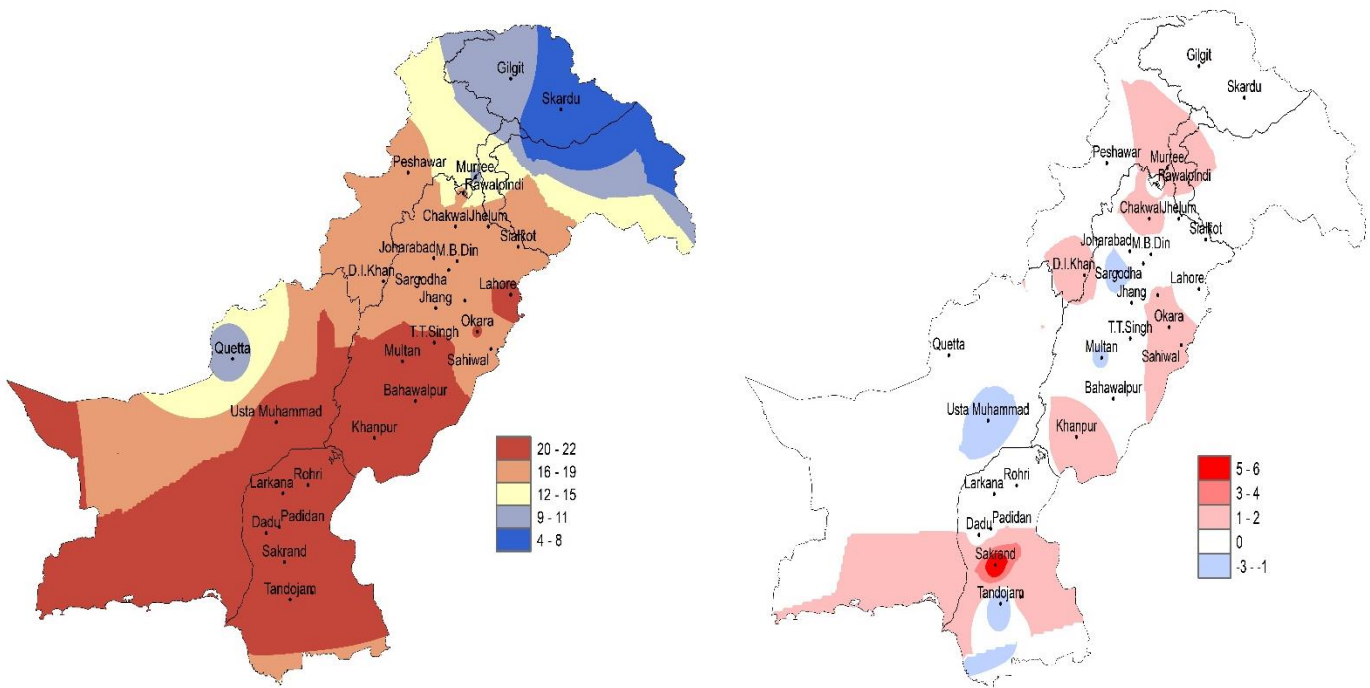
Presently Rice Crop is sown in the fields of RAMC Usta Muhammad.

Rice: Good, Full Maturity Stage.

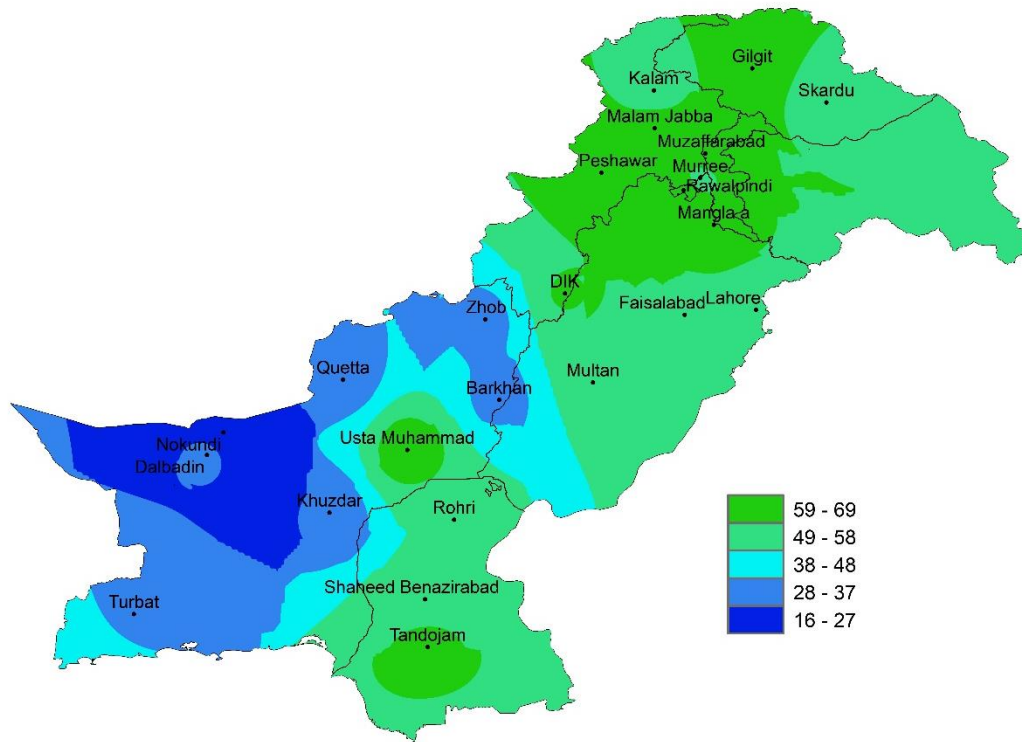
Normal & Departure of Minimum temperature (°C) for the previous week (22nd – 28th November, 2021)



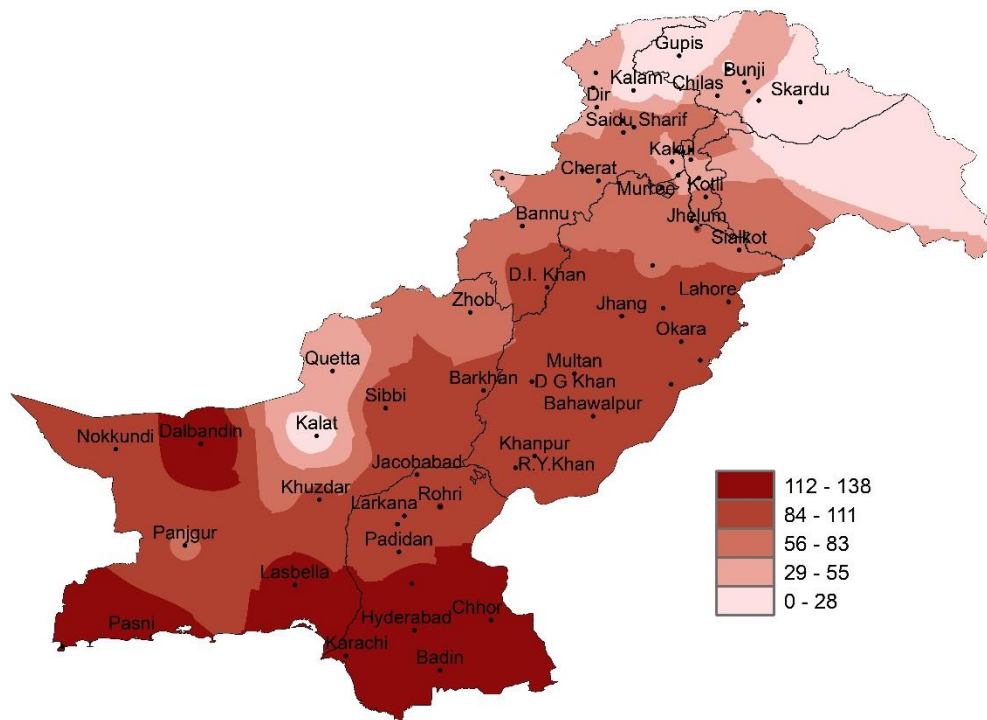
Normal & Departure of Mean temperature (°C) for the previous week (22nd – 28th November, 2021)



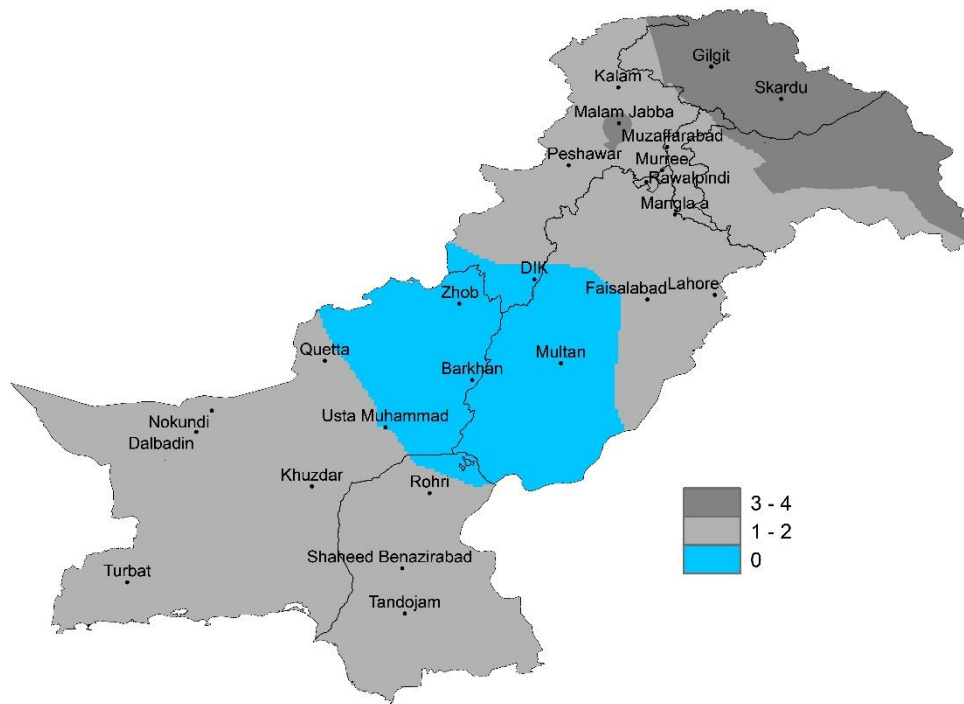
Mean Relative Humidity (%) during the previous week (22nd – 28th November, 2021)



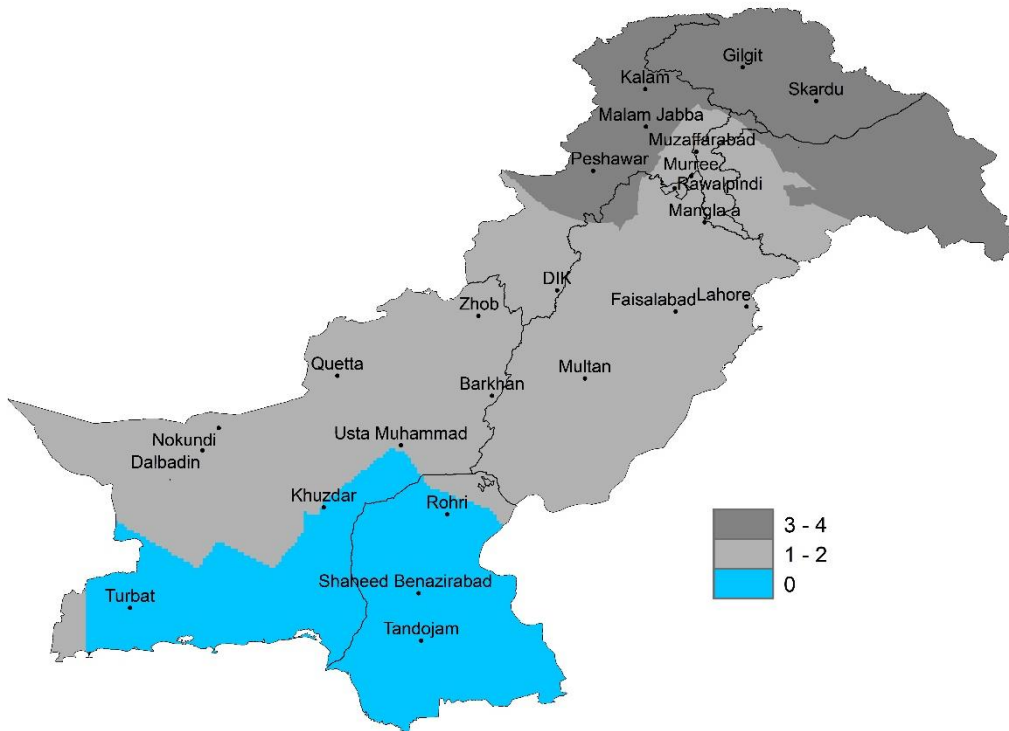
Total Growing Degree Days accumulated during the previous week (22nd – 28th November, 2021)



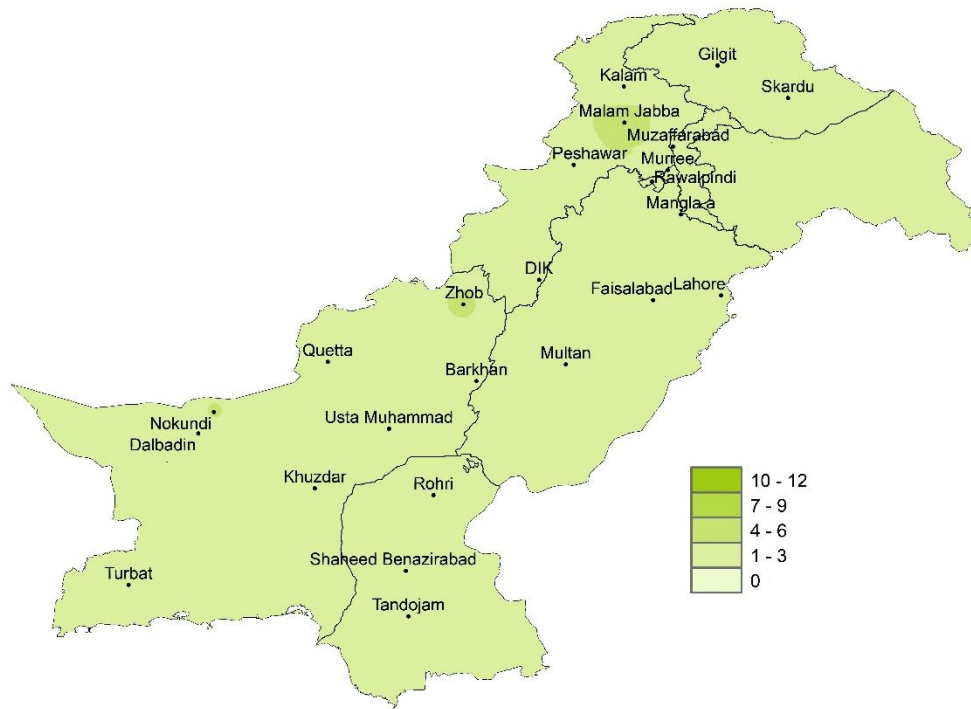
Mean Cloudiness (Oktas) at 0800PST during the previous week (22nd – 28th November, 2021)



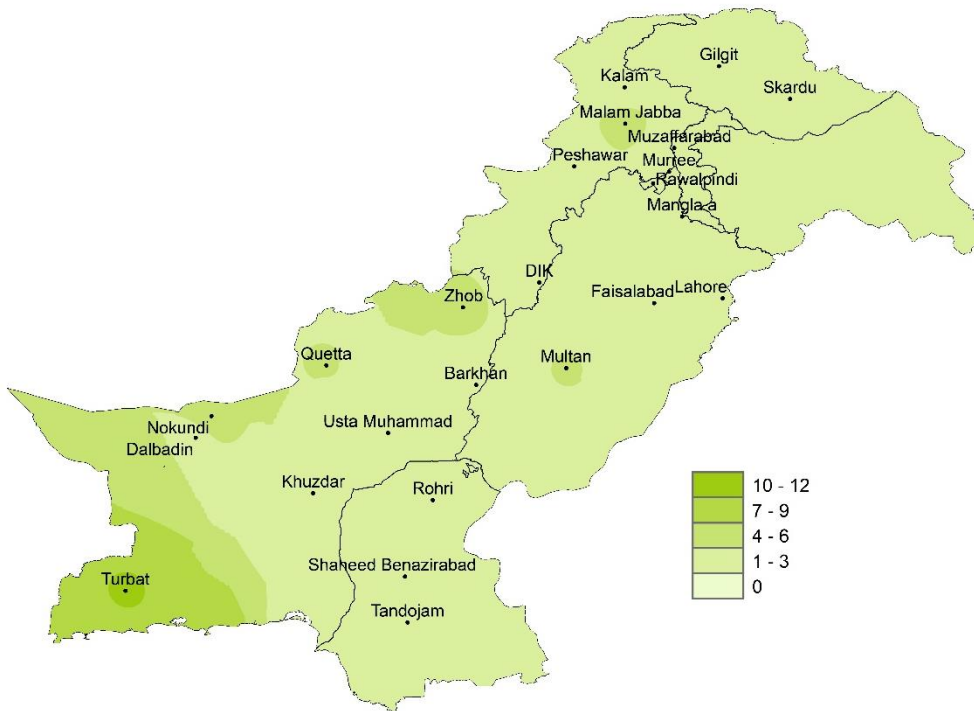
Mean Cloudiness (Oktas) at 1700PST during the previous week (22nd – 28th November, 2021)



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



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



Weekly Weather Advisory for Farmers**(29th November – 5th December, 2021)**

Continental air is prevailing over most parts of the country. A shallow westerly wave is affecting extreme northern parts of the country and likely to persist till Tuesday.

MONDAY**29-11-2021**

Mainly cold and dry weather is expected in most parts of the country. However, light rain is expected in Gilgit Baltistan.

TUESDAY**30-11-2021**

Mainly cold and dry weather is expected in most parts of the country. However, smog/fog is likely to intensify in plain areas of Punjab. While, light rain is expected in Gilgit Baltistan.

WEDNESDAY**01-12-2021**

Mainly cold and dry weather is expected in most parts of the country. However, smog/fog is likely to prevail in plain areas of Punjab, central Khyber Pakhtunkhwa and upper Sindh.

THURSDAY**02-12-2021**

Mainly cold and dry weather is expected in most parts of the country. However, fog is likely to prevail in plain areas of Punjab.

FRIDAY**03-12-2021.**

Mainly cold and dry weather is expected in most parts of the country. However, fog is likely to prevail in plain areas of Punjab. However, light rain is expected in Kashmir.

SATURDAY**04-12-2021**

Mainly cold and dry weather is expected in most parts of the country. However, fog is likely to prevail in plain areas of Punjab. However, light rain (light snowfall over the hills) is expected in upper Khyber Pakhtunkhwa, Kashmir and Gilgit Baltistan.

SUNDAY**05-12-2021**

Mainly cold and dry weather is expected in most parts of the country. However, fog is likely to prevail in plain areas of Punjab. However, light rain (light snowfall over the hills) with strong winds is expected in northeast Punjab, Potohar region, upper Khyber Pakhtunkhwa, Kashmir and Gilgit Baltistan.

ADVISORY FOR FARMERS

During the last week, dry weather reported from all over the country. 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 (22nd – 28th November, 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	10.1	9.0	87.8	20	0.0	0.0	0.0	1.7	1.1
Dalbandin	**	**	134.5	33	0.0	0.0	0.0	0.0	1.4
D.I.Khan	10.1	9.0	94.4	69	0.0	0.0	0.0	0.9	0.9
Faisalabad	9.1	7.5	91.6	65	0.0	0.1	0.1	0.3	0.0
Gawadar	14.7	14.0	129.0	64	0.0	0.0	0.0	0.0	9.7
Gilgit	-1.5	-4.0	25.0	64	0.0	2.3	3.9	0.3	0.0
Kalam	-1.4	-2.5	2.3	57	0.0	1.1	3.1	0.0	0.0
Khuzdar	8.9	3.5	87.8	31	0.0	0.0	0.0	0.0	0.0
Lahore	10.6	10.1	92.4	63	0.0	0.3	0.0	0.0	0.6
Malam Jabba	3.7	2.5	0.0	43	0.0	0.6	1.9	3.4	3.1
Mangla	6.7	5.5	77.5	68	0.0	0.7	0.6	0.0	0.0
Multan	8.9	7.0	89.0	62	0.0	0.1	0.0	0.9	3.4
Murree	8.0	7.0	52.0	42	0.0	0.7	1.0	3.1	2.3
Muzaffarabad	4.2	3.1	45.0	69	0.0	0.4	0.4	0.0	0.0
Nawabshah	12.6	11.0	114.8	60	0.0	0.0	0.0	3.1	5.1
Nokkundi	9.2	6.5	89.0	19	0.0	0.0	0.0	1.7	2.6
Peshawar	6.3	5.3	72.7	70	0.0	0.9	2.0	0.0	0.0
Quetta	2.3	0.5	34.9	36	0.0	0.0	0.6	0.9	1.8
Rawalpindi	5.1	3.7	69.4	73	0.0	0.7	1.0	0.2	0.2
Rohri	12.6	11.5	110.7	57	0.0	0.0	0.0	1.1	1.7
Skardu	-5.1	-6.6	0.0	57	0.0	2.6	1.9	0.0	0.0
Tandojam	10.9	10.0	97.4	63	0.0	0.0	0.0	1.1	1.1
Turbat	16.6	15.5	142.0	21	0.0	0.3	0.0	6.6	3.7
Usta Muhammad	11.6	11.0	100.0	58	0.0	0.0	0.0	0.0	0.0
Zhob	7.3	6.0	69.3	44	0.0	0.0	0.3	0.9	2.4

*** 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)