

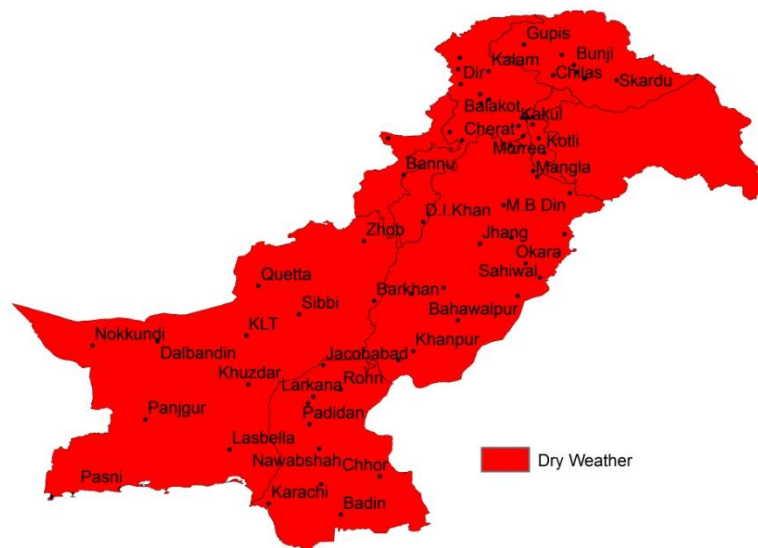
Weekly Weather and Crop Bulletin for Pakistan

**NATIONAL AGROMET CENTRE
PAKISTAN METEOROLOGICAL
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**Rainfall Distribution (mm) during the Previous
Week (17th December to 23rd December, 2018)**



Contents

Highlights of past weather (General)	1-2
Past weather for Agri Plains	3-4
Crop progress	4
Min Temperature maps	5
R.H and GDD	6
Wind speed maps	7
Cloudiness maps	8
Farmers advisory	9
Weather Outlook	10
National data for selected stations	11-13
AgMIP findings	14

Highlights of Past Weather (17th December to 23rd December, 2018)

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

Province wise distribution of rainfall reported as follows:

- Dry weather observed all over the country during the previous week.

Patron-in-Chief: Mr. Riaz Khan (Director General)

Editor-in-Chief: Asma Jawad Hashmi (Deputy Director)

Editor: Saeeda Saleh (Assistant Meteorologist)

Past Weather of Provinces (17th December to 23rd December, 2018)**Punjab**

Dry weather observed in Punjab during the week. Weekly maximum and minimum temperatures recorded as 21.2°C & 4.0°C respectively. For the recent week on average 53.3 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 66% and wind speed in the morning/evening recorded as 0.4/0.9 Knots. During the previous the lowest minimum temperature was recorded as 0.5°C at Sialkot.

Baluchistan

Dry weather observed in Baluchistan during the week. Weekly maximum and minimum temperatures recorded as 22.0°C & 3.9°C respectively. For the recent week on average 55.0 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 42% and wind speed in the morning/evening recorded as 1.6/3.1 Knots. During the previous week the lowest minimum temperature was recorded as -8.0°C at Kalat.

Khyber Pakhtunkhwa

Dry weather observed in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 16.9°C & 0.8°C respectively. For the recent week on average 26.8 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 59% and wind speed in the morning/evening recorded as 1.2/1.8 Knots. During the previous week the lowest minimum temperature was recorded as -6.0°C at Kalam.

Gilgit-Baltistan and Azad Jammu & Kashmir

Dry weather observed in Gilgit-Baltistan & Kashmir during the week. Weekly maximum and minimum temperatures recorded as 12.6°C & -2.7°C

respectively. For the recent week on average 1.8 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 56% and wind speed in the morning/evening recorded as 1.1/0.9 Knots. During the previous week the lowest minimum temperature was recorded as -11.7°C at Skardu.

Sindh

Dry weather observed in Sindh during the week. Weekly maximum and minimum temperatures recorded as 25.0°C & 6.6°C respectively. For the recent week, on average 75.1 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 56% and wind speed in the morning/evening recorded as 0.9/2.5 Knots. During the previous week lowest minimum temperature was recorded as 2.0°C at Moin-Jo-Daro.

Past Weather for Major Agricultural Plains (17th December to 23rd December, 2018)**Rawalpindi (Potohar region)**

Dry weather reported from Rawalpindi during the week; however, clear sky was observed in the morning/evening while, average relative humidity observed as 75%. Mean night time temperature recorded as 0.8°C & for the recent week 42.8 growing degree days accumulated by the end of last week. Calm weather recorded in the morning/evening.

Faisalabad (Central Punjab)

Dry weather reported from Faisalabad during the week; however, clear sky was observed in the morning/evening while, average relative humidity observed as 66%. Mean night time temperature recorded as 3.9°C & for the recent week 58.6 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.2 Knots.

Tandojam (Lower Sindh)

Dry weather reported from Tandojam during the week; however, clear sky was observed in the morning/evening while, average relative humidity observed as 64%. Mean night time temperature recorded as 6.6°C & for the recent week 73.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.5/1.2 Knots.

Usta Muhammad (Eastern Baluchistan)

Dry weather reported from Usta Muhammad during the week; however, clear sky was observed in the morning/evening while, average relative humidity observed as 61%. Mean night time temperature recorded as 8.0°C & for the recent week 71.0 growing degree days accumulated by the end of last week. Calm weather recorded in the morning/evening.

Quetta (Northern Baluchistan)

Dry weather reported from Quetta during the week; however, cloudiness in the morning/evening recorded as 0.0/1.4 Oktas while, average relative

humidity observed as 23%. Mean night time temperature recorded as -1.4°C & for the recent week 9.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.5/2.3 Knots.

Past Weather for Sub-Regional Agricultural Plains (17th December to 23rd December, 2018)**Multan**

Dry weather reported from Multan during the week; however, clear sky was observed in the morning/evening while, average relative humidity observed as 63%. Mean night time temperature recorded as 4.9°C & for the recent week 57.4 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/2.0 Knots.

Lahore

Dry weather reported from Lahore during the week; however, clear sky was observed in the morning/evening while, average relative humidity observed as 69%. Mean night time temperature recorded as 6.5°C & for the recent week 62.8 growing degree days accumulated by the end of last week. Calm weather recorded in the morning/evening.

Zhob

Dry weather reported from Zhob during the week; however, clear sky was observed in the morning/evening while, average relative humidity observed as 35%. Mean night time temperature recorded as 0.8°C & for the recent week 30.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.8/5.0 Knots.

Murree

Dry weather reported from Murree during the week; however, cloudiness in the morning/evening recorded as 0.0/1.3 Oktas while, average relative humidity observed as 51%. Mean night time temperature recorded as 3.1°C & for the recent week 24.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.0/0.0 Knots.

D.I. Khan

Dry weather reported from D.I. Khan during the week; however, clear sky was observed in the morning/evening while, average relative humidity observed as 82%. Mean night time temperature recorded as 7.1°C & for the recent week 64.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.2/0.8 Knots.

Peshawar

Dry weather reported from Peshawar during the week; however, cloudiness in the morning/evening recorded as 0.0/0.4 Oktas while, average relative humidity observed as 78%. Mean night time temperature recorded as 4.1°C & for the recent week 59.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/1.5 Knots.

Kalam

Dry weather reported from Kalam during the week; however, cloudiness in the morning/evening recorded as 2.3/3.5 Oktas while, average relative humidity observed as 64%. Mean night time temperature recorded as -5.5°C by the end of last week. Calm weather recorded in the morning/evening.

Gilgit

Dry weather reported from Gilgit during the week; However, cloudiness in the morning/evening recorded as 1.7/5.5 Oktas while, average relative humidity observed as 62%. Mean night time temperature recorded as -4.3°C by the end of last week. 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 1.8/2.8 Oktas while, average relative humidity observed as 67%. Mean night time temperature recorded as -10.9 °C by the end of last week. Calm weather recorded in the morning/evening.

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 wheat crop is grown in the fields of RAMC Faisalabad.

Wheat: *Very Good, 3rd Leaf stage.*

Lower Sindh (Tandojam)

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

Wheat (TJ-83): *Good, shooting stage.*

Northern Baluchistan (Quetta)

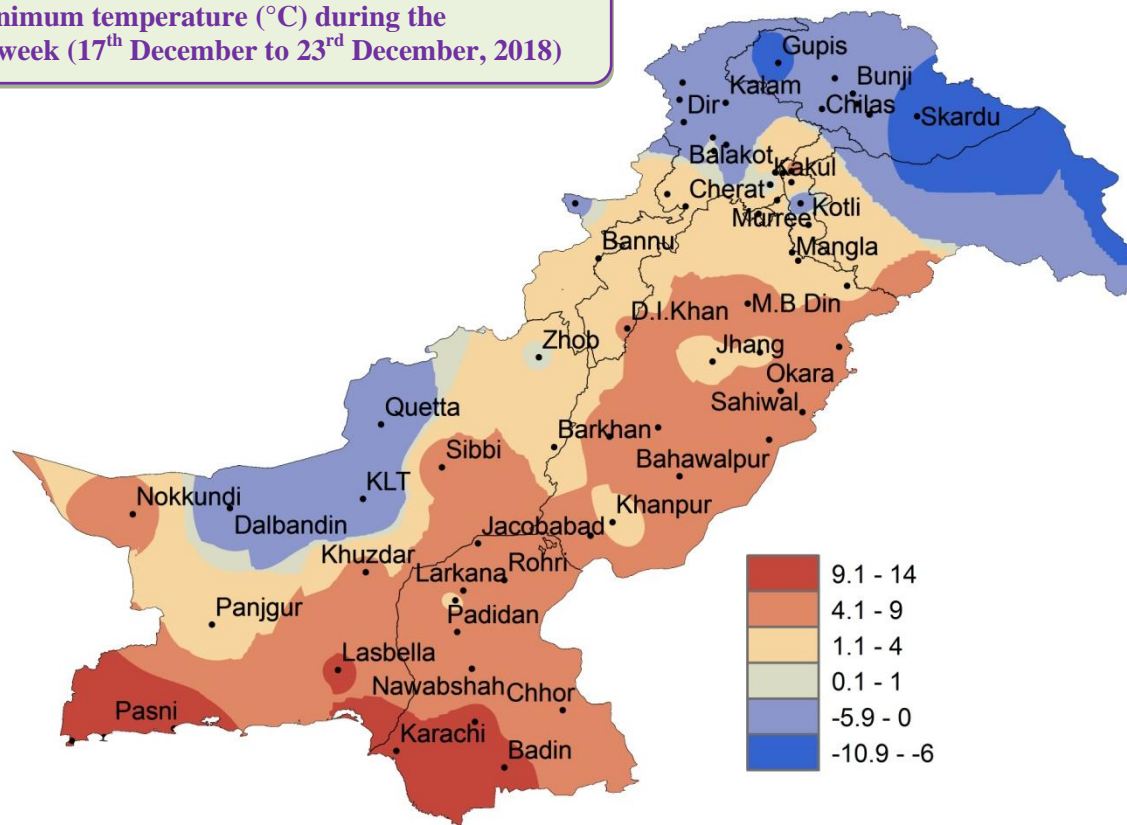
There is presently no crop grown in the fields of RAMC Quetta.

Eastern Baluchistan (Usta Muhammad)

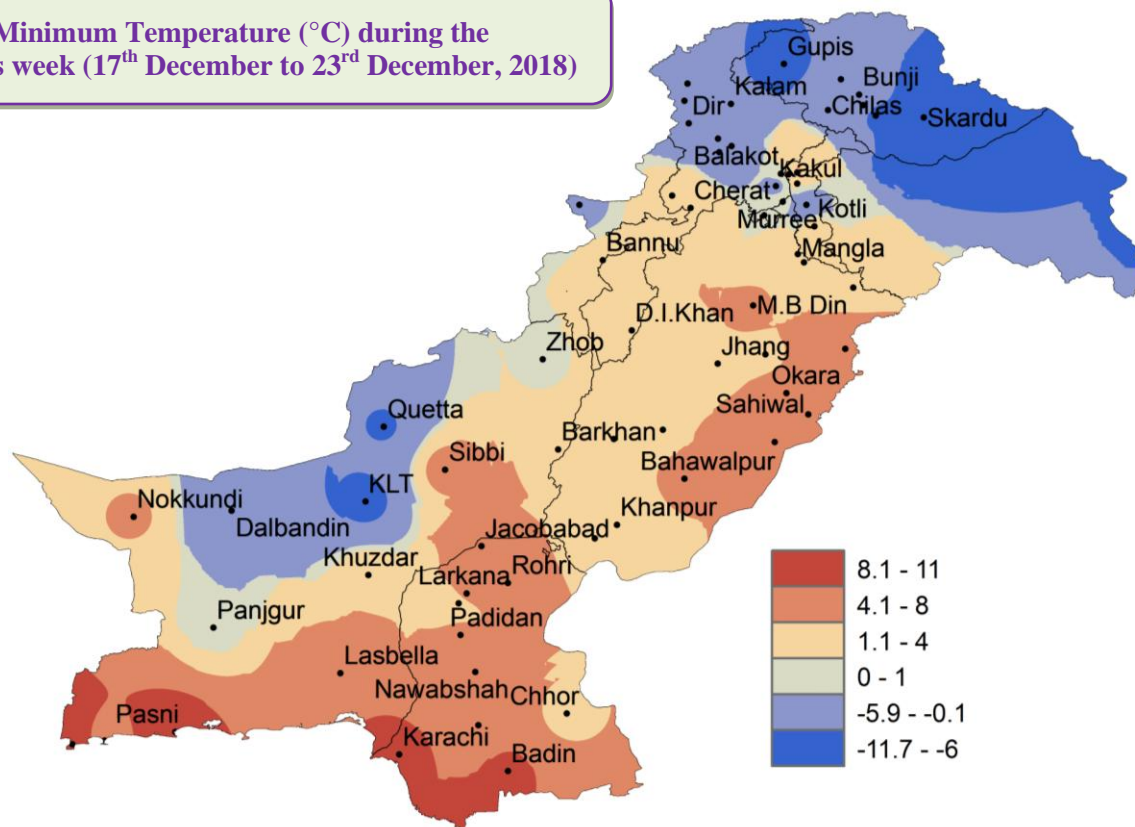
Presently wheat crop is sown in the fields of RAMC Usta Muhammad.

Wheat: *Good, Third leaf stage.*

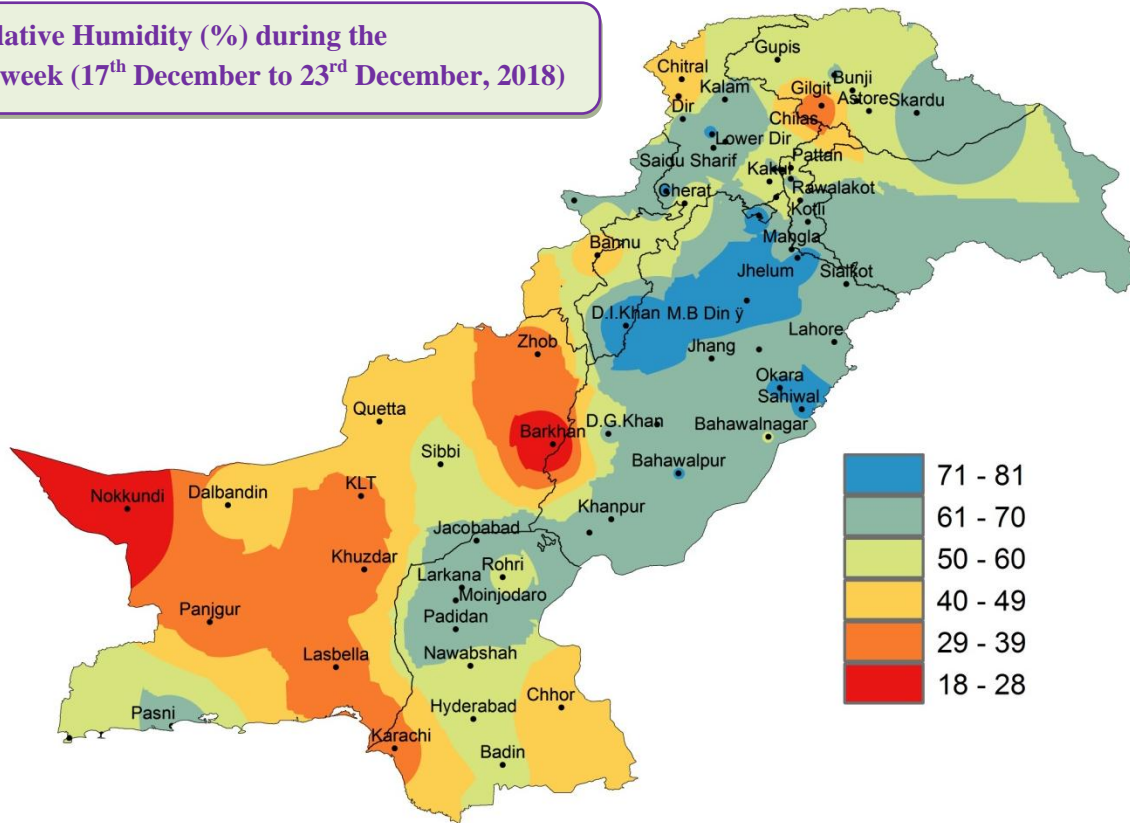
Mean Minimum temperature (°C) during the
Previous week (17th December to 23rd December, 2018)



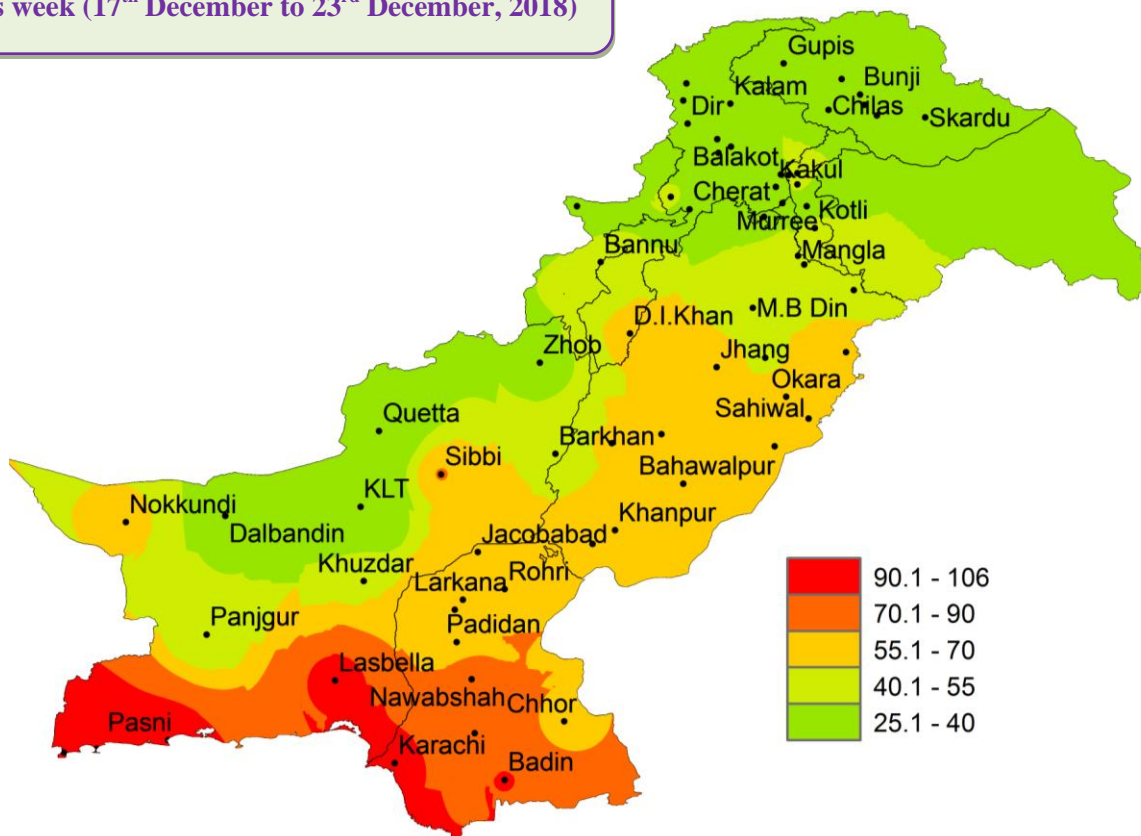
Lowest Minimum Temperature (°C) during the
Previous week (17th December to 23rd December, 2018)



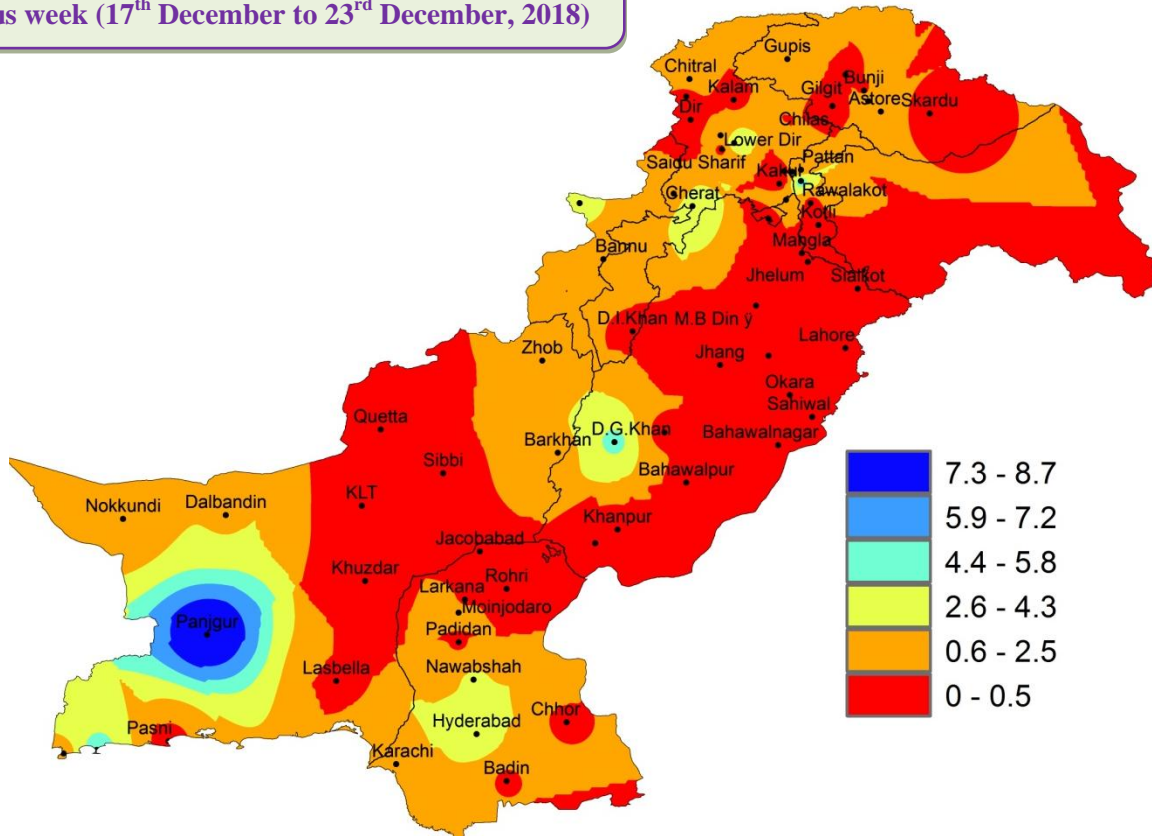
**Mean Relative Humidity (%) during the
Previous week (17th December to 23rd December, 2018)**



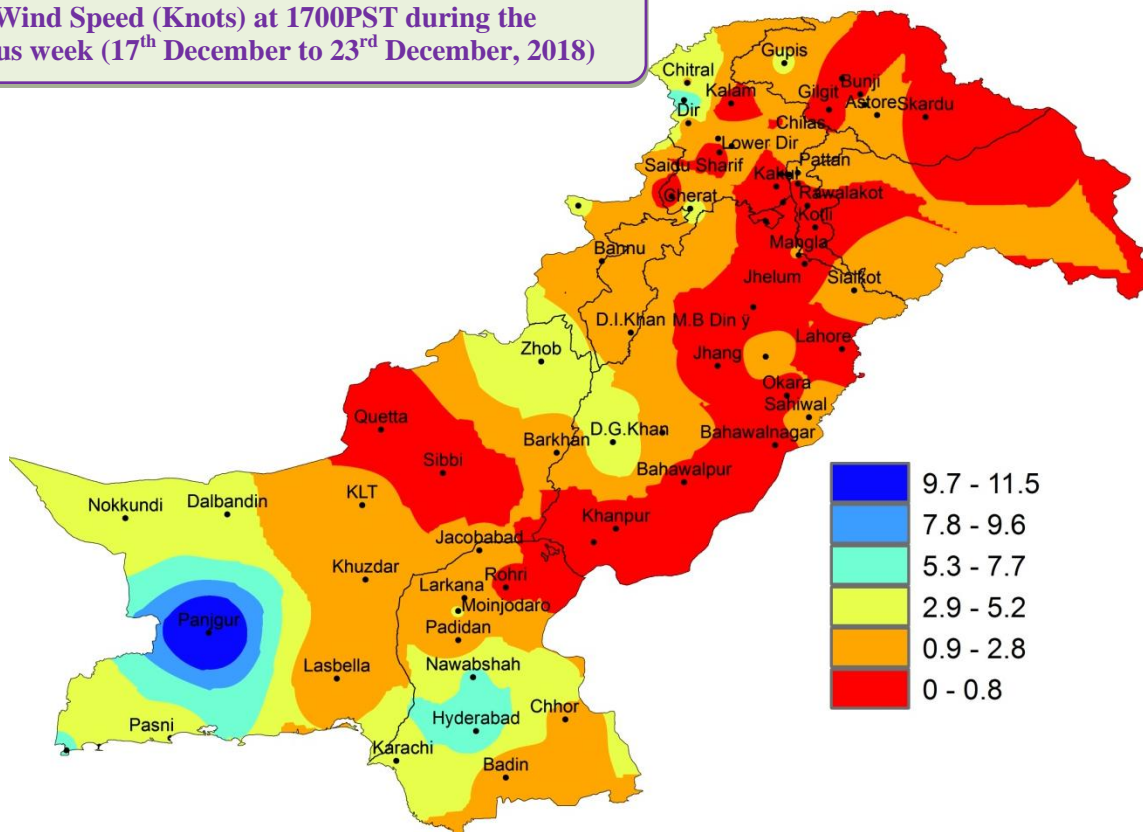
**Total Growing Degree Days accumulated during the
Previous week (17th December to 23rd December, 2018)**



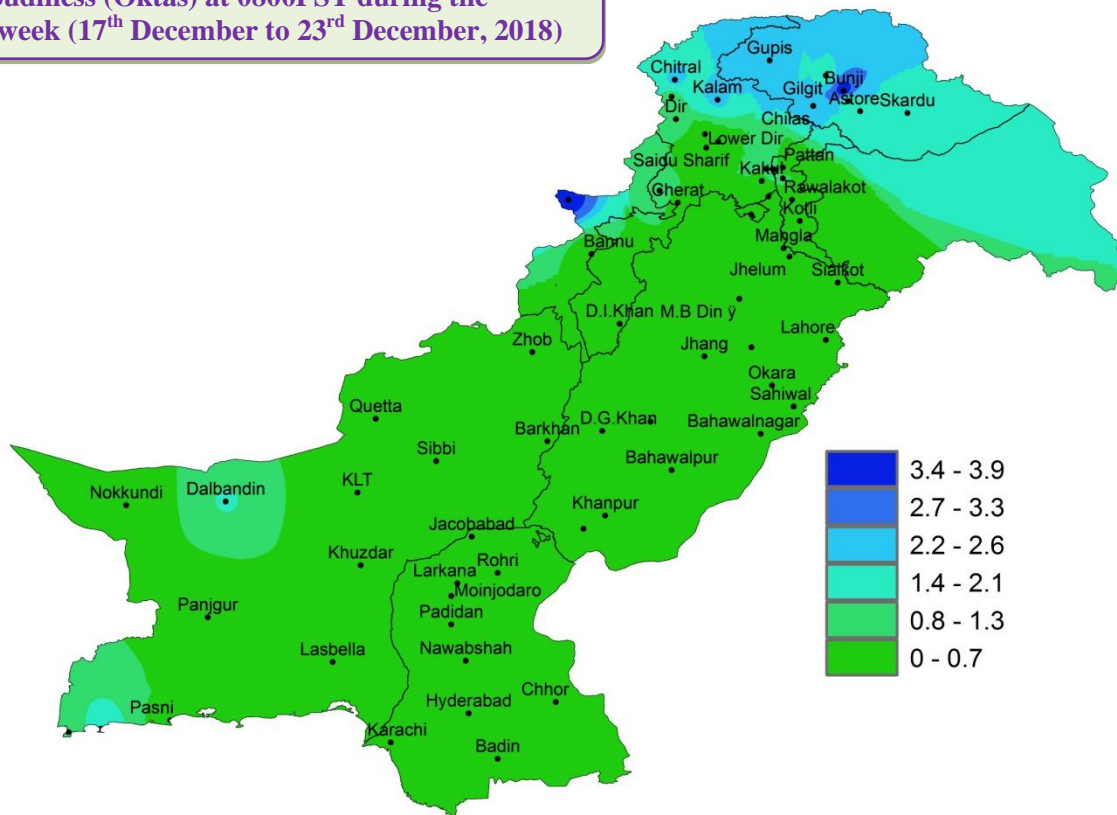
Mean Wind Speed (Knots) at 0800PST during the
Previous week (17th December to 23rd December, 2018)



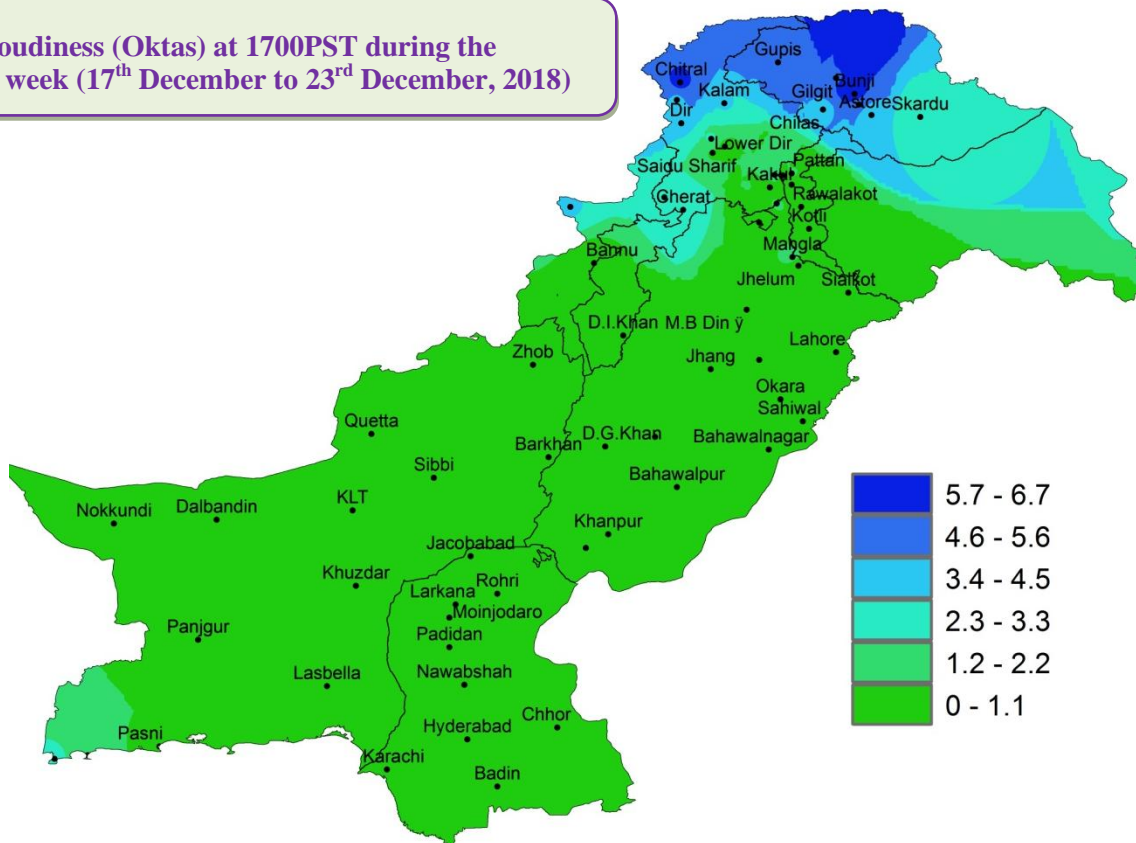
Mean Wind Speed (Knots) at 1700PST during the
Previous week (17th December to 23rd December, 2018)



Mean Cloudiness (Oktas) at 0800PST during the
Previous week (17th December to 23rd December, 2018)



Mean Cloudiness (Oktas) at 1700PST during the
Previous week (17th December to 23rd December, 2018)



Weekly Weather Advisory for Farmers
(24th December to 30th December, 2018)

Continental air is likely to prevail over most parts of the country.

MONDAY**24-12-2018**

Dense/Shallow Foggy conditions are likely to continue in plains of Punjab, upper Sindh and Peshawar division during morning/night hours. Cold and dry weather is expected in most parts, while very cold weather in northern parts of the country. Frost is also expected in upper parts of the country during morning hours.

TUESDAY**25-12-2018**

Dense/Shallow Foggy conditions are likely to continue in plains of Punjab, upper Sindh and Peshawar division during morning/night hours. Cold and dry weather is expected in most parts, while very cold weather in northern parts of the country. Frost is also expected in upper parts of the country during morning hours.

WEDNESDAY**26-12-2018**

Dense/Shallow Foggy conditions are likely to continue in plains of Punjab, upper Sindh and Peshawar division during morning/night hours. Cold and dry weather is expected in most parts, while very cold weather in northern parts of the country. Frost is also expected in upper parts of the country during morning hours.

THURSDAY**27-12-2018**

Dense/Shallow Foggy conditions are likely to continue in plains of Punjab, upper Sindh and Peshawar division during morning/night hours. Cold and dry weather is expected in most parts, while very cold weather in northern parts of the country. Frost is also expected in upper parts of the country during morning hours.

FRIDAY**28-12-2018**

Dense/Shallow Foggy conditions are likely to continue in plains of Punjab, upper Sindh and Peshawar division during morning/night hours. Cold and dry weather is expected in most parts, while very cold weather in northern parts of the country. Frost is also expected in upper parts of the country during morning hours.

SATURDAY**29-12-2018**

Mainly cold and dry weather is expected in most parts, while very cold weather in northern parts of the country. Foggy conditions are likely to continue in plains of Punjab, upper Sindh and Peshawar division during morning/night hours.

SUNDAY**30-12-2018**

Mainly cold and dry weather is expected in most parts, while very cold weather in northern parts of the country. Foggy conditions are likely to continue in plains of Punjab, upper Sindh and Peshawar division during morning/night hours.

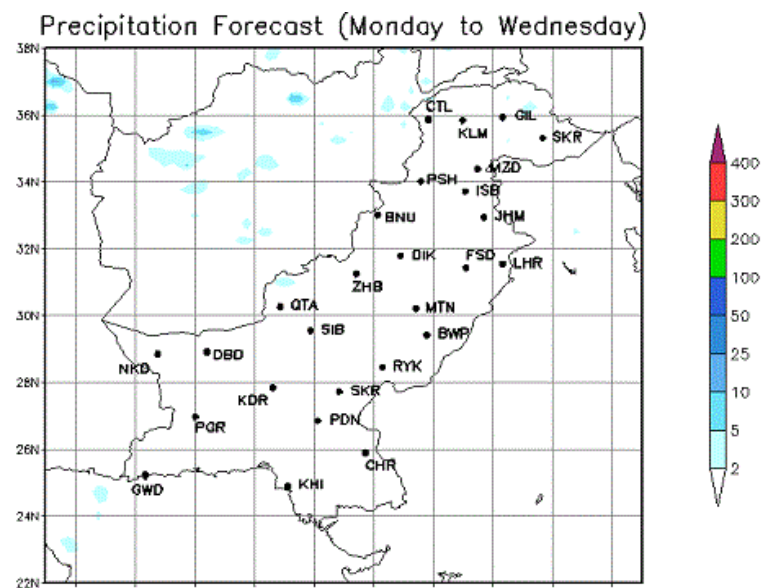
ADVISES FOR FARMERS

During the last week, light rainfall occurred at scattered places in GB and upper KP, while cold and dry weather prevailed in rest parts. This may continue with almost the same pattern in coming days as well. Keeping in view the expected weather conditions following advises are suggested for farming community.

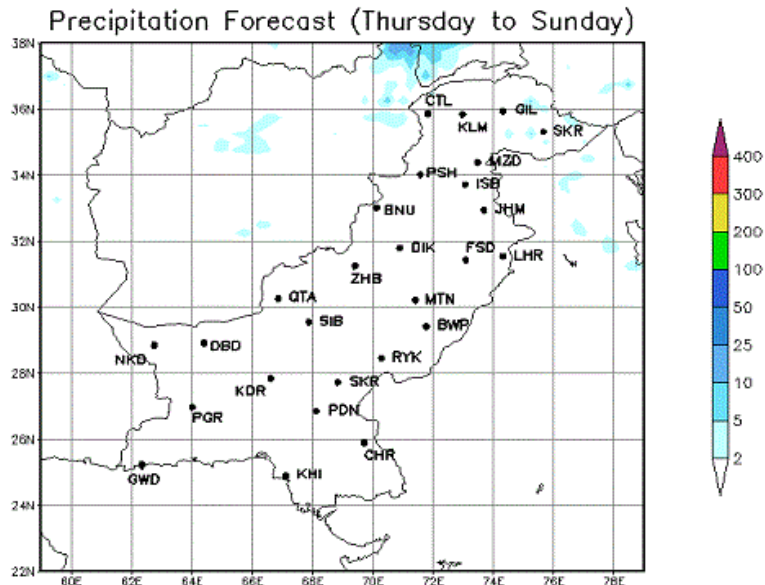
- Farmers are advised to use ensured and certified seed for the sowing of Rabi crops in accordance with the proper moisture conditions.
- Store cotton crop in proper and dry place because the cost of good and clean quality cotton is high than that of the filthy one.
- Protect your nurseries from frost.

Weather Outlook from (24th December to 30th December, 2018)

The outlook from 24th December to 26th December, 2018 shows that dry weather may prevail all over the country.



The outlook from 27th December to 30th December, 2018 shows that dry weather may prevail all over the country.



National Weather Data of Selected Cities (Weekly Data from 24th December to 30th December, 2018)

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	lowest							
Astore	-6.3	-8.5	-36.6	53	0.00	1.8	3.3	1.0	1.5
Badin	9.9	9.0	90.6	50	0.00	0.5	0.0	0.3	1.0
Bahawalnagar	5.5	5.0	62.3	59	0.00	0.0	0.0	0.0	0.0
Bahawalpur	4.7	4.3	59.0	70	0.00	0.0	0.0	0.0	0.0
Balakot	0.7	0.0	35.1	63	0.00	1.0	2.3	0.0	0.0
Bannu	2.9	1.7	51.8	44	0.00	0.0	0.0	1.3	1.0
Barkhan	3.5	3.0	46.8	18	0.00	0.0	0.0	2.0	1.0
Bunji	-0.7	-2.8	0.0	51	0.00	4.0	6.8	0.3	0.5
Cherat	4.0	3.5	32.7	50	0.00	0.5	2.8	4.3	3.5
Chhor	4.0	3.0	64.7	42	0.00	0.0	0.0	0.3	2.7
Chilas	-0.4	-1.0	8.8	31	0.00	2.3	4.0	0.0	0.5
Chitral	-1.7	-3.4	8.1	48	0.00	2.3	6.0	1.7	2.5
D.G.Khan	4.5	3.7	56.9	61	0.00	0.0	0.0	4.7	4.5
D.I.Khan	4.1	4.0	59.0	78	0.00	0.0	0.0	0.3	1.5
Dalbandin	-1.8	-4.0	32.5	42	0.00	1.3	0.0	2.3	3.0
Dir	-2.4	-3.0	12.3	63	0.00	1.2	4.0	0.0	2.3
Drosh	-1.4	-2.5	3.3	38	0.00	1.0	4.3	0.0	8.0
Faisalabad	3.9	3.0	58.6	66	0.00	0.0	0.0	0.0	0.2
Garidopatta	2.5	0.8	43.7	64	0.00	0.8	0.0	5.3	0.0
Gawader	9.3	6.5	100.3	55	0.00	1.7	1.3	5.0	4.0
Gilgit	-4.3	-6.0	-4.8	62	0.00	1.7	5.5	0.3	0.0
Gupis	-7.0	-8.0	-35.5	53	0.00	2.5	5.3	2.3	3.0
Hyderabad	9.8	6.0	84.5	54	0.00	0.0	0.0	3.7	6.5

Islamabad	1.4	1.0	38.3	75	0.00	0.3	0.0	0.0	0.0
Jacobabad	6.1	4.5	67.0	60	0.00	0.0	0.0	0.0	1.0
Jhang	3.8	3.5	58.9	70	0.00	0.0	0.0	0.0	0.0
Jhelum	3.5	2.8	51.2	75	0.00	0.3	0.0	0.0	0.0
Jiwani	13.4	11.0	106.0	54	0.00	0.8	2.5	2.0	5.5
Kakul	-0.4	-1.0	23.8	53	0.00	0.3	0.5	0.0	0.5
Kalam	-5.5	-6.0	-12.8	64	0.00	2.3	3.5	0.0	0.0
Kalat	9.5	9.0	93.0	35	0.00	0.0	0.0	1.7	4.5
Karachi	3.5	3.2	58.4	61	0.00	0.0	0.0	0.0	0.0
Khanpur	4.7	3.0	54.5	36	0.00	0.0	0.0	0.0	1.0
Khuzdar	-5.3	-8.0	-4.8	37	0.00	0.0	0.0	0.0	1.5
Kotli	3.1	2.4	53.4	66	0.00	0.0	0.0	0.0	0.5
Lahore	6.5	5.8	62.8	69	0.00	0.0	0.0	0.0	0.0
Larkana	6.1	5.5	67.8	67	0.00	0.0	0.0	0.3	2.0
Lasbella	9.2	7.8	95.0	36	0.00	0.0	0.0	0.3	1.0
Lower Dir	0.1	-1.0	24.0	72	0.00	0.3	2.5	1.3	1.0
M.B Din	5.0	4.5	50.2	81	0.00	0.3	0.0	0.0	0.0
Malam Jabba	-1.9	-2.5	-6.3	61	0.00	0.5	0.8	4.0	2.0
Mangla	3.0	2.2	50.3	66	0.00	0.7	1.8	0.0	1.0
Mir Khani	-1.0	-2.0	14.0	50	0.00	1.3	4.8	1.3	1.5
Moinjodaro	2.8	2.0	56.5	60	0.00	0.0	0.0	1.0	3.0
Multan (PBO)	4.9	3.8	57.4	63	0.00	0.0	0.0	0.0	2.0
Murree	3.1	1.0	24.5	51	0.00	0.0	1.3	2.0	0.0
Muzaffarabad	2.7	1.8	41.2	57	0.00	1.2	0.0	1.5	0.8
Nawabshah	6.1	5.0	74.5	57	0.00	0.0	0.0	2.7	5.5
Nokkundi	4.9	4.5	58.5	18	0.00	0.0	0.0	0.7	3.5

Okara	5.2	5.0	59.0	71	0.00	0.0	0.0	0.0	0.0
Padidan	6.6	4.5	68.8	65	0.00	0.0	0.0	0.3	1.5
Panjgur	1.6	0.0	40.0	34	0.00	0.0	0.0	8.7	11.5
Parachinar	-0.5	-1.5	18.5	62	0.00	3.7	3.5	3.0	3.0
Pasni	11.6	10.5	100.5	64	0.00	0.3	0.8	0.0	4.3
Pattan	5.6	5.0	45.5	47	0.00	0.0	1.5	0.8	3.3
Peshawar	2.4	2.0	43.0	72	0.00	1.0	3.0	0.7	0.0
Quetta	-1.4	-3.4	9.3	23	0.00	0.0	1.4	1.5	2.3
Rahim Yar Khan	4.7	3.8	64.4	64	0.00	0.0	0.0	0.0	0.5
Rawalakot	2.8	-4.0	12.7	60	0.00	0.0	1.0	0.0	0.0
Rawalpindi	0.8	0.5	42.8	75	0.00	0.0	0.0	0.0	0.0
Rohri	6.4	4.5	69.5	59	0.00	0.0	0.0	0.0	0.5
Sahiwal	5.1	4.7	56.9	71	0.00	0.0	0.0	0.0	2.5
Saidu Sharif	0.6	-0.5	26.3	66	0.00	0.0	1.0	0.0	0.0
Sialkot	3.8	3.5	49.6	64	0.00	0.3	0.0	0.5	1.8
Sibbi	6.5	6.0	70.9	54	0.00	0.0	0.0	0.0	0.0
Skardu	-10.9	-11.7	-53.7	67	0.00	1.8	2.8	0.0	0.0
Tandojam	6.6	4.0	73.0	64	0.00	0.0	0.0	0.5	1.2
Usta.M	8.0	5.0	71.0	61	0.00	0.0	0.0	0.0	0.0
Zhob	0.8	0.0	30.8	35	0.00	0.0	0.0	0.8	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)