

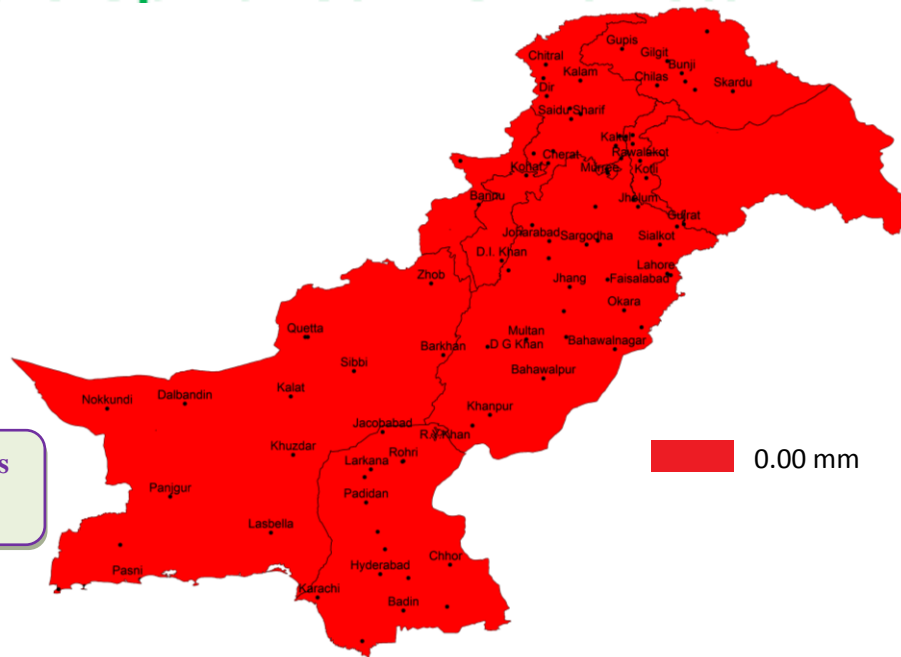
Weekly Weather and Crop Bulletin for Pakistan

**NATIONAL AGROMET CENTRE
PAKISTAN METEOROLOGICAL
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**Rainfall Distribution (mm) during the previous
Week (27th November to 3rd December, 2017)**



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Highlights of Past Weather (27th November to 3rd December, 2017)

Below normal night time temperatures were observed in most parts of the country during this week.

Rainfall reported as follows:

- Dry weather (no rainfall) reported from most parts the country during previous week.

Patron-in-Chief: Dr. Ghulam Rasul (Director General)

Editor-in-Chief: Dr. Khalid M. Malik (Director)

Editor: Dr. Dildar H. Kazmi (Meteorologist)

Past Weather of Provinces (27th November to 3rd December, 2017)

Punjab

Dry weather reported from Punjab during the week. Weekly maximum and minimum temperatures recorded as 25.7°C & 8.0°C respectively. For the recent week on average 83.3 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 62% and wind speed in the morning/evening recorded as 0.6/0.8 knots. During the previous week lowest minimum temperature was recorded as 3.7°C at Islamabad.

Balochistan

Dry weather reported from Balochistan during the week. Weekly maximum and minimum temperatures recorded as 24.6°C & 6.8°C respectively. For the recent week on average 78.3 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 1.3/3.5 knots. During the previous week 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 20.6°C & 4.0°C respectively. For the recent week on average 52.2 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 54% and wind speed in the morning/evening recorded as 0.5/1.8 knots. During the previous week the lowest minimum temperature was recorded as -4.2°C at Kalam.

Gilgit-Baltistan and Azad Jammu & Kashmir

Dry weather reported from Kashmir and Gilgit-Baltistan during the week. Weekly maximum and minimum temperatures recorded as 16.8°C & 1.7°C respectively. For the recent week on average 29.7

growing degree days were accumulated by the end of last week. Average relative humidity recorded as 52% and wind speed in the morning/evening recorded as 0.6/1.2 knots. During the previous week lowest minimum temperature was recorded as -7.6°C at Skardu.

Sindh

Dry weather reported from Sindh during the week. Weekly maximum and minimum temperatures recorded as 29.5°C & 12.1°C respectively. For the recent week, on average 112.5 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 54% and wind speed in the morning/evening recorded as 1.1/2.4 knots. During the previous week lowest minimum temperature was recorded as 8°C at Mirpurkhas.

Past Weather for Major Agricultural Plains
(27th November to 3rd December, 2017)

Rawalpindi (Potohar region)

Dry weather reported from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 0.0/1.3 Oktas while average relative humidity observed as 73%. Mean night time temperature recorded as 5.3°C & for the recent week 66.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.2/0.6 knots.

Faisalabad (Central Punjab)

Dry weather reported from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 0.0/0.6 Oktas while average relative humidity observed as 67%. Mean night time temperature recorded as 6.9°C & for the recent week 84.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.0 knots.

Tandojam (Lower Sindh)

Dry weather reported from Tandojam during the week; however, cloudiness in the morning/evening recorded as 0.0/0.6 Oktas while average relative humidity observed as 56%. Mean night time temperature recorded as 11.4°C & for the recent week 105.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.2/1.2 knots.

Usta Muhammad (Eastern Balochistan)

Dry weather reported from Usta Muhammad during the week; however, cloudiness in the morning/evening recorded 0.0/0.5 Oktas while average relative humidity observed as 72%. Mean night time temperature recorded as 11.9°C & for the recent week 100.6 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.2/0.5 knots.

Quetta (Northern Baluchistan)

Dry weather reported from Quetta during the week; however, cloudiness in the morning/evening recorded as 0.0/0.3 Oktas while average relative humidity observed as 27%. Mean night time temperature recorded as 1.4°C & for the recent

week 24.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/3.3 knots.

Past Weather for Sub-Regional Agricultural Plains (27th November to 3rd December, 2017)

Multan

Dry weather reported from Multan during the week; however, cloudiness in the morning/evening recorded as 0.0/0.7 Oktas while average relative humidity observed as 63%. Mean night time temperature recorded as 9.5°C & for the recent week 88.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.0 knots.

Lahore

Dry weather reported from Lahore during the week; however, cloudiness in the morning/evening recorded as 0.0/0.5 Oktas while average relative humidity observed as 61%. Mean night time temperature recorded as 9.7°C & for the recent week 90.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.0 knots.

Zhob

Dry weather reported from Zhob during the week; however, cloudiness in the morning/evening recorded as 0.0/0.0 Oktas while average relative humidity observed as 37%. Mean night time temperature recorded as 4.2°C & for the recent week 55.4 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.0/2.2 knots.

Murree

Dry weather reported from Murree during the week; however, cloudiness in the morning/evening recorded as 0.7/0.3 Oktas while average relative humidity observed as 51%. Mean night time temperature recorded as 6.0°C & for the recent week 39.7 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/1.0 knots.

D.I. Khan

Dry weather reported from D.I. Khan during the week; however, cloudiness in the morning/evening recorded as 0.0/0.0 Oktas while average relative humidity observed as 64%. Mean night time temperature recorded as 8.7°C & for the recent week 87.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.0 knots.

Peshawar

Dry weather reported from Peshawar during the week; however, cloudiness in the morning/evening recorded as 1.2/0.8 Oktas while average relative humidity observed as 71%. Mean night time temperature recorded as 6.4°C & for the recent week 70.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/1.7 knots.

Kalam

Dry weather from Kalam during the week; however, cloudiness in the morning/evening recorded as 1.8/2.7 Oktas while average relative humidity observed as 60%. Mean night time temperature recorded as -2.7°C & for the recent week 10.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.0 knots.

Gilgit

Dry weather reported from Gilgit during the week; However, cloudiness in the morning/evening recorded as 3.8/4.2 Oktas while average relative humidity observed as 65%. Mean night time temperature recorded as -2.4°C & for the recent week 18.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.3 knots.

Skardu

Dry weather reported from Skardu during the week; However, cloudiness in the morning/evening recorded as 5.3/6.0 Oktas while average relative humidity observed as 64%. Mean night time temperature recorded as -4.9°C & for the recent week *** growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.0 knots.

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)

There is presently one crop in the fields of RAMC Faisalabad.

Wheat: Sown on 01-12-2017

Lower Sindh (Tandojam)

There is presently one crop in the fields of RAMC Tandojam.

Wheat: Emergence Stage

Northern Baluchistan (Quetta)

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

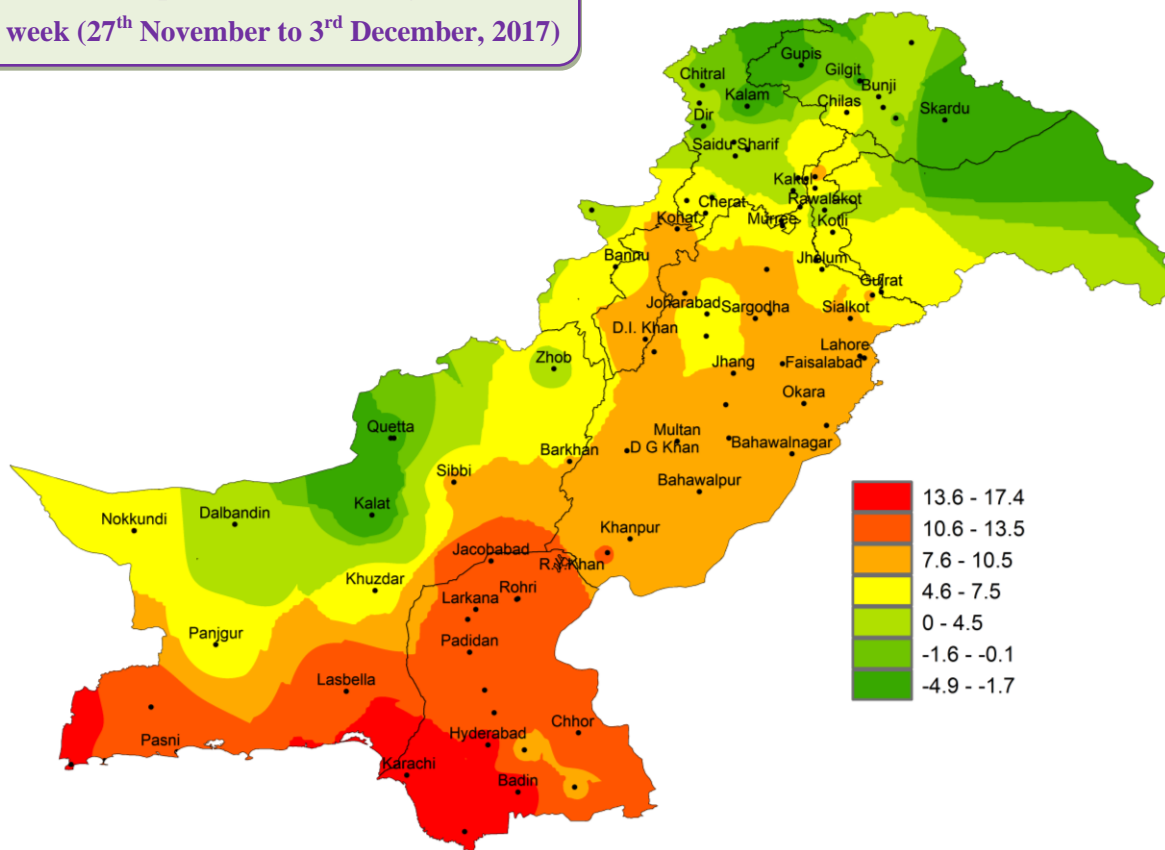
Eastern Baluchistan (Usta Muhammad)

There are presently two crops grown in the fields of RAMC Usta Muhammad.

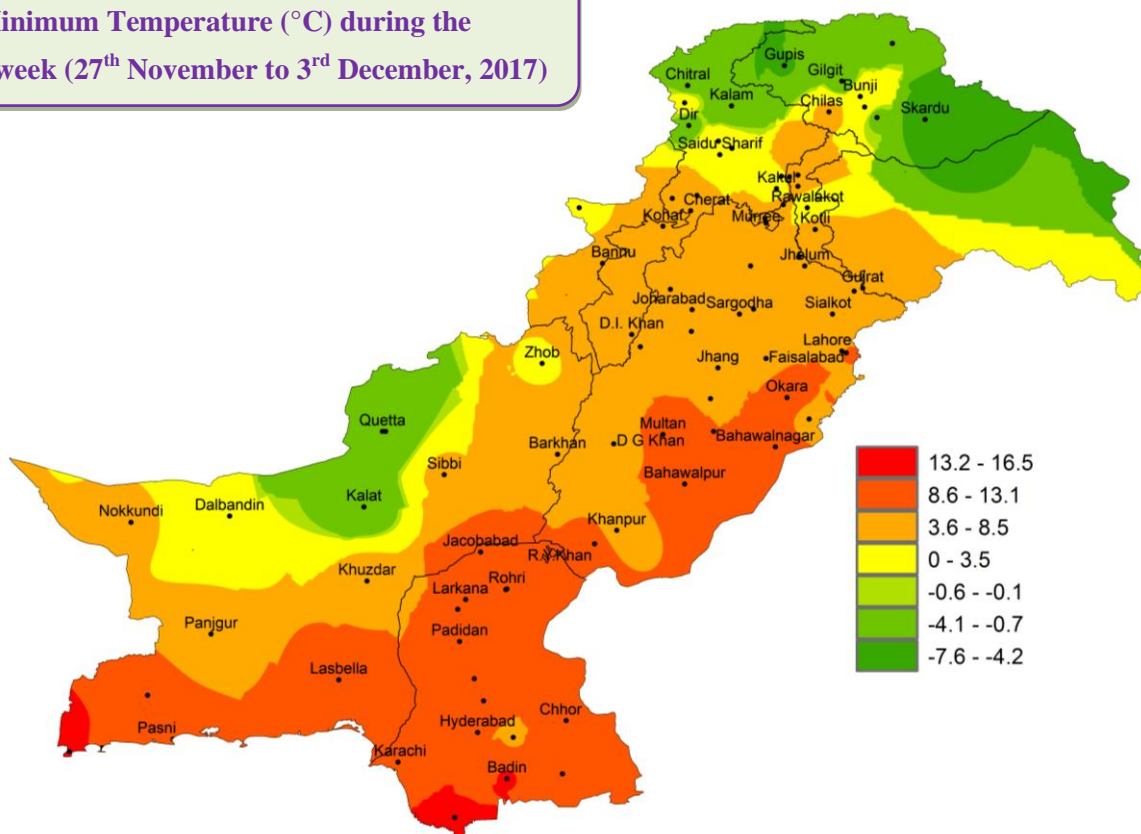
Rice: Harvesting in progress.

Wheat: Sown on 22 November, Germination stage

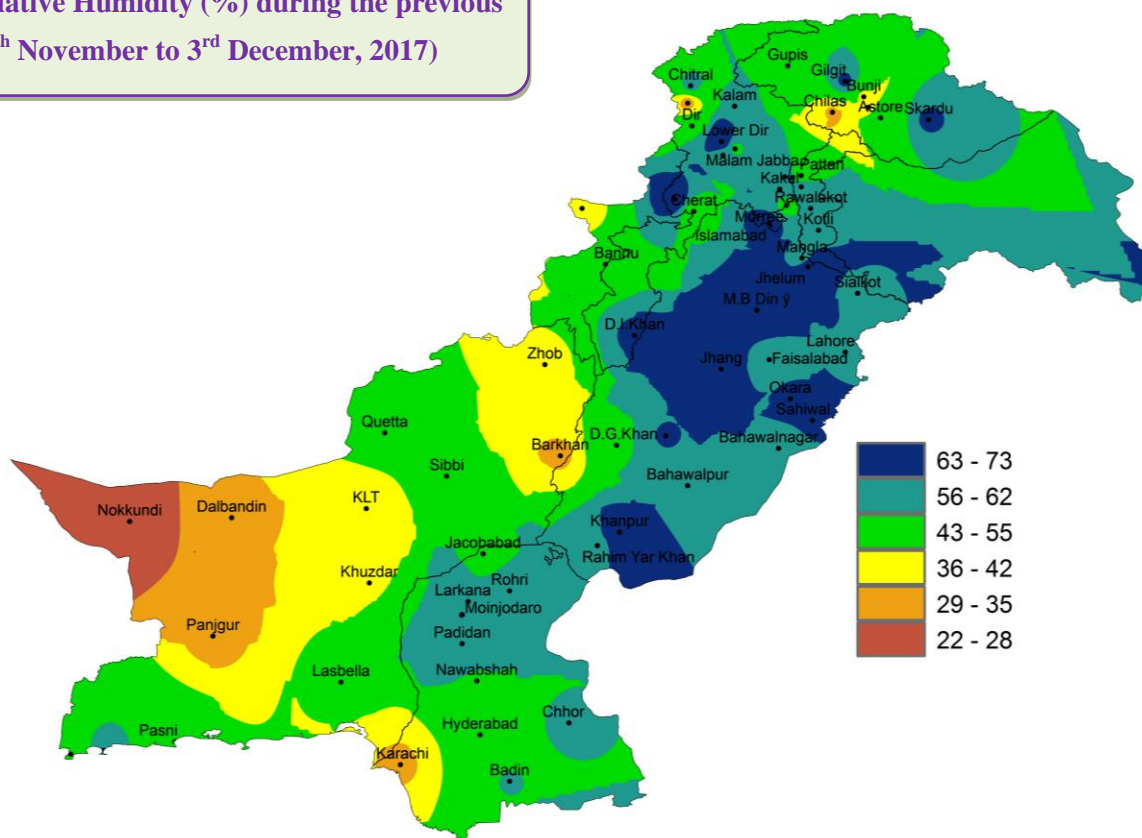
**Mean Minimum Temperature (°C) during the
Previous week (27th November to 3rd December, 2017)**



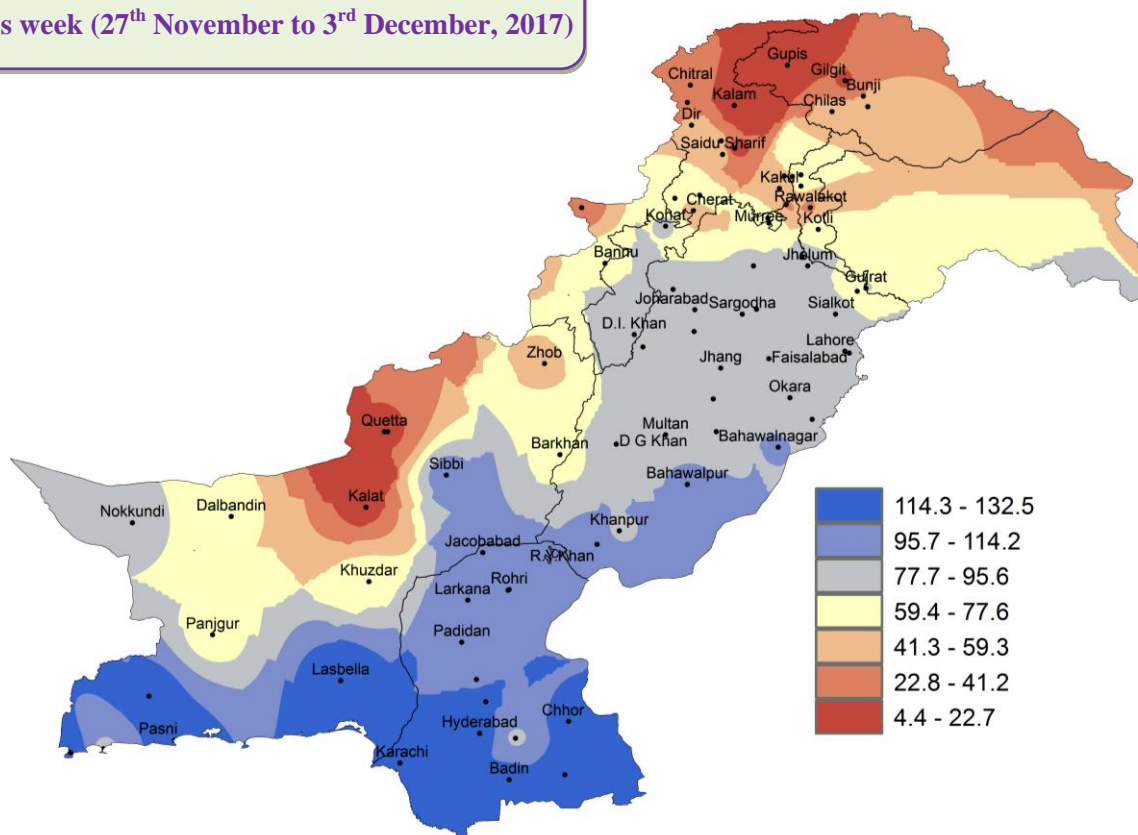
**Lowest Minimum Temperature (°C) during the
Previous week (27th November to 3rd December, 2017)**



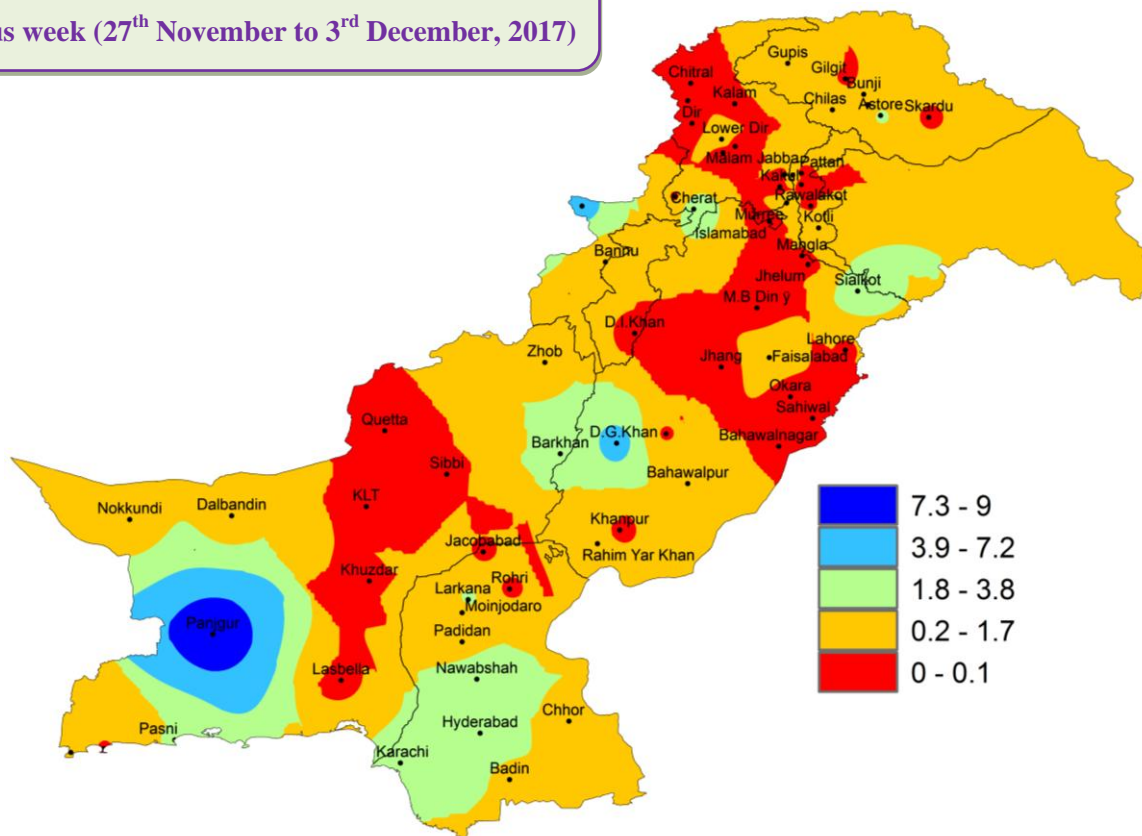
Mean Relative Humidity (%) during the previous week (27th November to 3rd December, 2017)



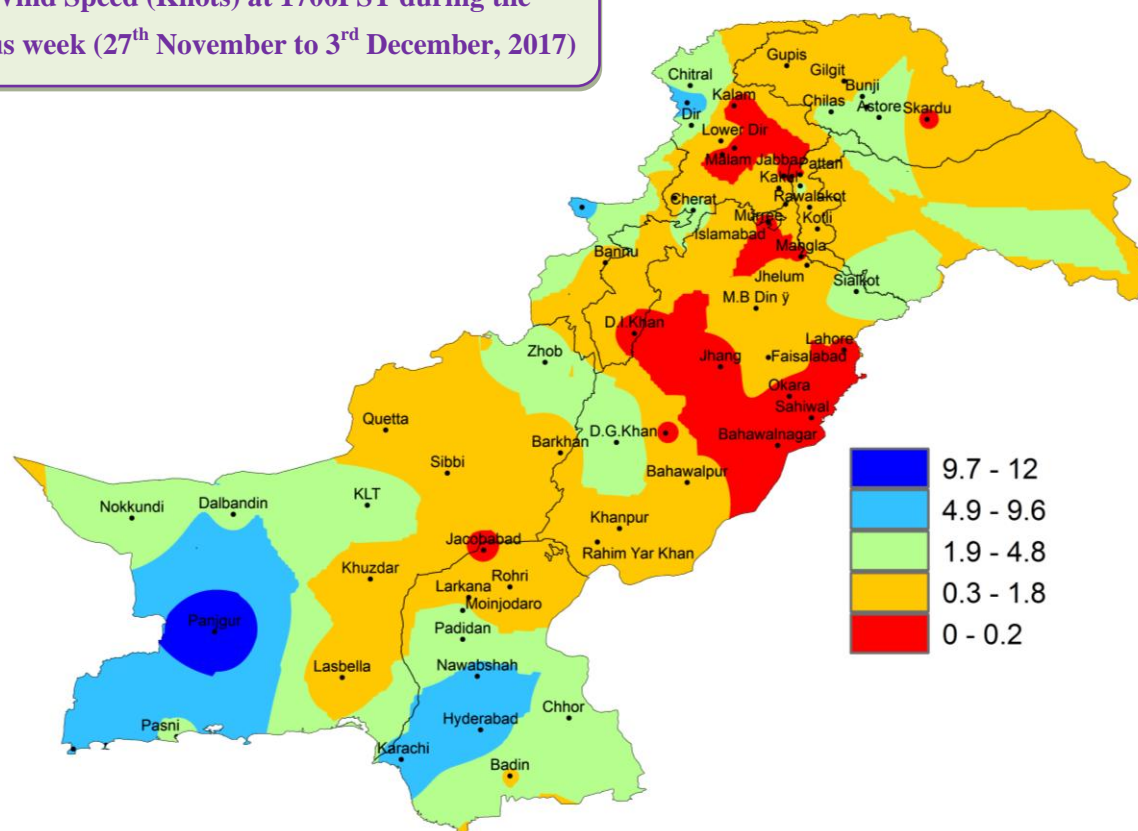
Total Growing Degree Days accumulated during the previous week (27th November to 3rd December, 2017)



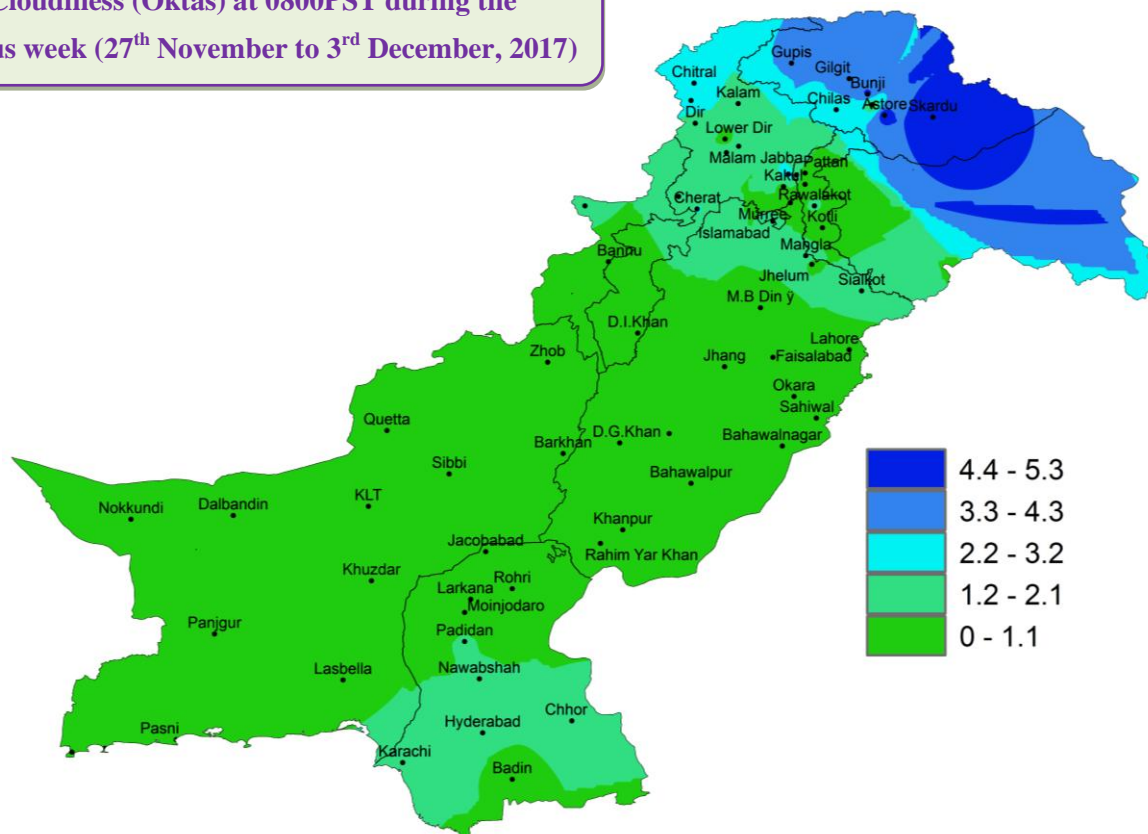
Mean Wind Speed (Knots) at 0800PST during the previous week (27th November to 3rd December, 2017)



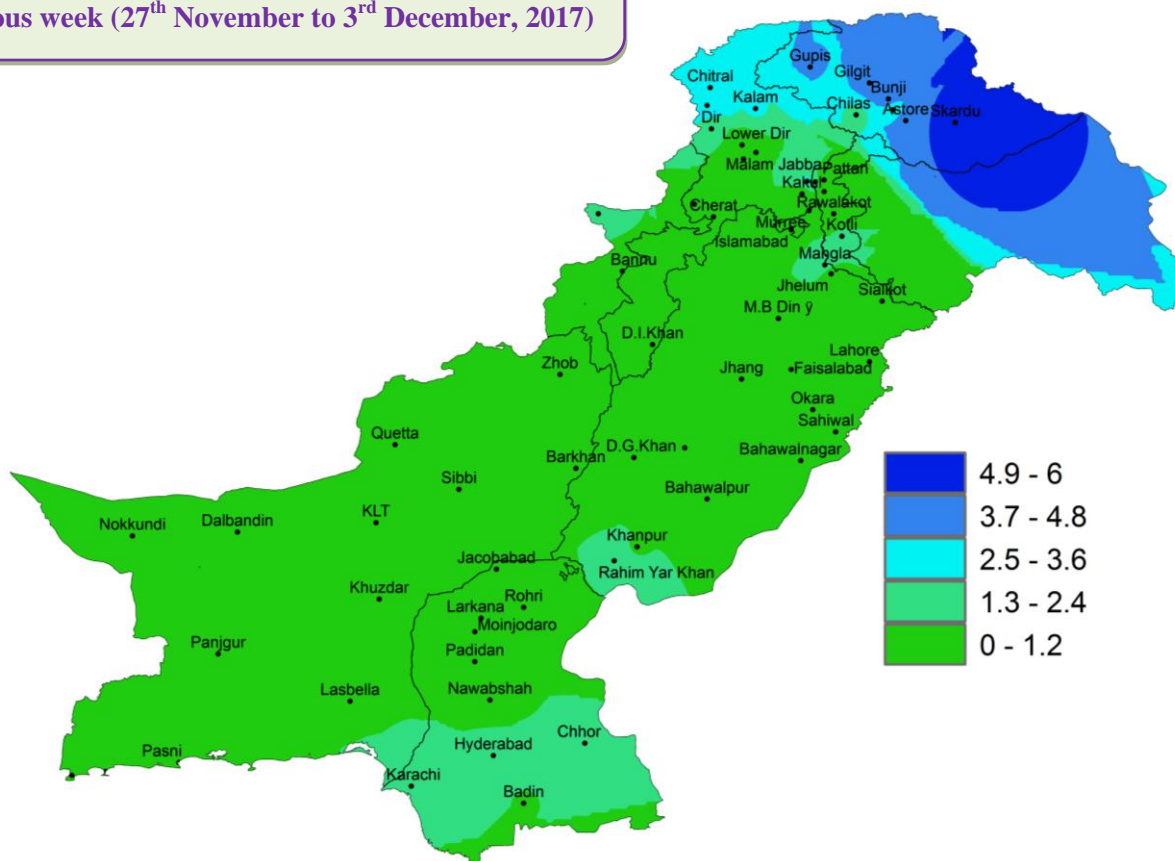
Mean Wind Speed (Knots) at 1700PST during the previous week (27th November to 3rd December, 2017)



Mean Cloudiness (Oktas) at 0800PST during the previous week (27th November to 3rd December, 2017)



Mean Cloudiness (Oktas) at 1700PST during the previous week (27th November to 3rd December, 2017)



Weekly Weather Advisory for Farmers
(4th to 10th December, 2017)

A westerly wave is likely to enter upper parts of the country today evening and may persist during next 02-03 days.

MONDAY**04-12-2017**

Mainly cold and dry weather is expected in most parts of the country. However, rain-thunderstorms with gusty winds (snowfall over the hills) is expected at isolated places in Malakand, Hazara divisions, Gilgit-Baltistan and FATA. Shallow foggy conditions are likely over few plain areas of Punjab and upper Sindh during morning hours.

TUESDAY**05-12-2017**

Mainly cold and dry weather is expected in most parts of the country. However, rain-thunderstorms with gusty winds (snowfall over the hills) is expected at scattered places in Malakand division while at isolated places in Hazara, Mardan divisions, Gilgit-Baltistan, FATA and Kashmir. Shallow foggy conditions are likely over few plain areas of Punjab and upper Sindh during morning hours.

WEDNESDAY**06-12-2017**

Mainly cold and dry weather is expected in most parts of the country. However, rain-thunderstorm with gusty winds (snowfall over the hills) is expected at a few places in Malakand division. Shallow foggy conditions are likely over few plain areas of Punjab and upper Sindh during morning hours.

THURSDAY**07-12-2017**

Mainly cold and dry weather is expected in most parts of the country. Shallow foggy conditions are likely over few plain areas of Punjab and upper Sindh during morning hours.

FRIDAY**08-12-2017**

Mainly cold and dry weather is expected in most parts of the country. Shallow foggy conditions are likely over few plain areas of Punjab and upper Sindh during morning hours.

SATURDAY**09-12-2017**

Mainly cold and dry weather is expected in most parts of the country. Shallow foggy conditions are likely over few plain areas of Punjab and upper Sindh during morning hours.

SUNDAY**10-12-2017**

Mainly cold and dry weather is expected in most parts of the country. Shallow foggy conditions are likely to prevail over few plain areas of Punjab and upper Sindh during morning hours.

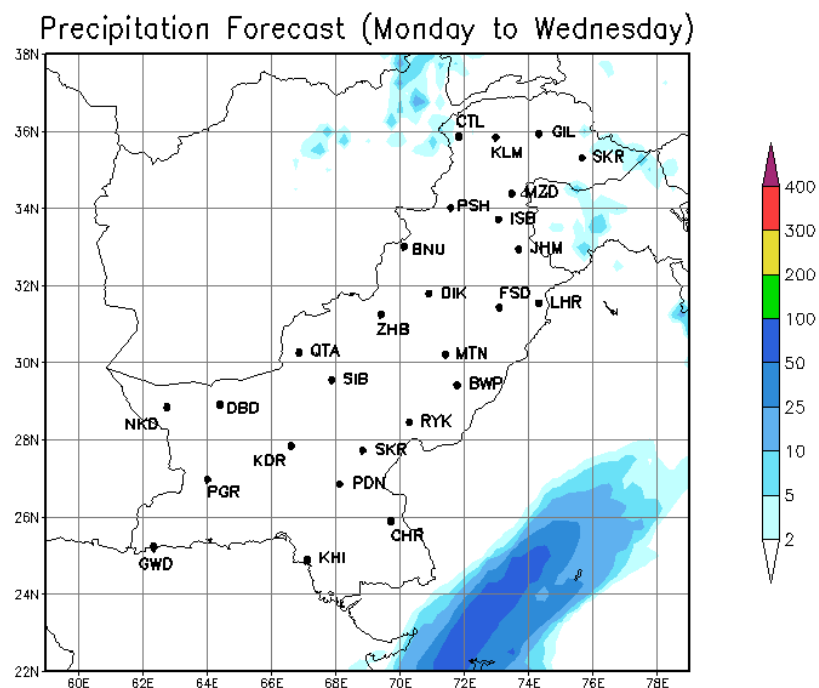
ADVISES FOR FARMERS

During the last week, no rainfall occurred in most parts of the agricultural plains of the country. In next week mainly dry weather is expected at most parts of the country. Accordingly, following advises are suggested for the farming community.

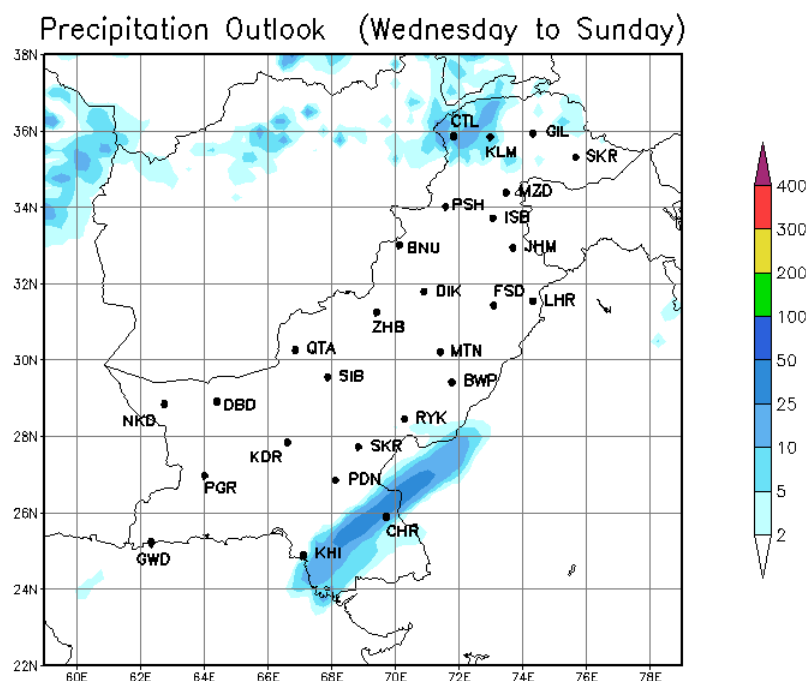
- Necessary precautionary measures may be taken to protect crops/nurseries from effects of severe weather.
- Farmers of rainfed areas are advised to utilize the available moisture in the field and may complete sowing at the earliest.

Weather Outlook from 4th to 10th December, 2017

The outlook for the period 4th to 6th December, 2017 shows that dry weather is expected in most parts of the country however light rainfall is expected at isolated places of Gilgit-Baltistan and Kashmir.



The outlook for the period 7th to 10th December, 2017 shows that dry weather is expected in most parts of the country however light rainfall is expected at particular places in upper KP and lower Sindh (including coastal areas of Sindh) while at isolated places in Gilgit-Baltistan.



National Weather Data of Selected Cities (27th November to 3rd December, 2017)

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	-0.7	-2.0	***	47	0.0	4.8	4.7	2.0	4.0
Badin	15.3	13.5	122.1	55	0.0	0.8	1.2	1.3	1.7
Bahawalnagar	9.5	9.0	96.6	60	0.0	0.0	0.5	0.0	0.0
Bahawalpur	10.0	9.4	98.8	60	0.0	0.0	0.8	1.0	0.3
Balakot	4.4	2.8	58.3	62	0.0	2.8	2.8	0.0	0.0
Bannu	6.7	5.5	75.3	48	0.0	0.0	0.0	0.4	1.3
Barkhan	7.5	6.5	71.9	33	0.0	0.0	0.0	2.0	0.7
Bunji	4.8	2.8	40.5	40	0.0	4.6	4.7	0.4	2.0
Cherat	6.6	3.5	46.3	46	0.0	2.2	1.0	2.7	2.0
Chhor	12.0	11.0	120.2	56	0.0	1.4	1.3	0.8	3.3
Chilas	5.9	4.5	49.4	34	0.0	2.3	2.0	1.3	2.0
Chitral	-0.8	-2.2	25.0	60	0.0	2.2	3.3	0.0	2.7
D.G.Khan	8.0	7.5	84.5	53	0.0	0.4	0.3	4.4	4.7
D.I.Khan	8.7	8.0	87.3	64	0.0	0.0	0.0	0.0	0.0
Dalbandin	1.1	0.0	63.0	33	0.0	0.5	0.0	1.0	4.7
Dir	-1.1	-2.0	44.5	52	0.0	1.7	2.0	0.0	2.0
Drosh	2.1	1.6	34.0	30	0.0	2.8	2.8	0.0	8.7
Faisalabad	6.9	6.0	84.2	67	0.0	0.0	0.6	0.0	0.0
Gari dopatta	5.0	4.3	60.7	62	0.0	0.7	1.2	0.0	2.3
Gawader	12.1	11.5	91.3	61	0.0	0.0	0.0	0.0	7.6
Gilgit	-2.4	-3.6	18.2	65	0.0	3.8	4.2	0.0	0.3
Gupis	-2.2	-4.5	4.4	44	0.0	3.3	3.7	1.0	1.3

Hyderabad	14.5	8.5	124.6	47	0.0	1.2	1.7	3.6	6.7
Islamabad	4.5	3.7	60.0	67	0.0	1.2	0.8	0.0	0.0
Jacobabad	11.7	10.0	101.3	53	0.0	0.0	0.0	0.0	0.0
Jhang	7.5	7.0	84.7	68	0.0	0.0	0.0	0.0	0.0
Jhelum	7.2	6.1	78.9	69	0.0	0.8	0.7	0.0	0.7
Jiwani	17.4	16.5	128.4	42	0.0	0.7	0.0	1.7	6.7
Kakul	2.6	1.5	46.9	60	0.0	0.8	0.0	0.0	1.3
Kalam	-2.7	-4.2	10.0	60	0.0	1.8	2.7	0.0	0.0
Kalat	-3.3	-4.0	16.0	36	0.0	0.0	0.0	0.0	2.7
Karachi	15.1	12.5	127.6	34	0.0	2.0	1.7	2.0	5.0
Khanpur	8.5	7.5	93.9	65	0.0	0.5	1.2	0.0	1.3
Khuzdar	6.7	6.0	69.1	41	0.0	0.0	0.0	0.0	1.0
Kotli	7.0	5.7	76.2	61	0.0	0.0	1.3	1.3	0.7
Lahore	9.7	9.0	90.1	61	0.0	0.0	0.5	0.0	0.0
Larkana	10.8	8.8	103.2	56	0.0	0.4	0.5	2.0	1.3
Lasbella	13.5	11.8	132.5	45	0.0	0.4	1.0	0.0	0.4
Lower Dir	2.7	1.5	45.3	71	0.0	1.0	0.3	0.3	0.7
M.B Din	8.4	7.7	81.4	73	0.0	0.5	0.8	0.0	0.3
Malam Jabba	1.9	1.0	9.3	53	0.0	1.2	1.0	0.0	0.0
Mangla	6.6	5.5	77.8	57	0.0	2.0	1.8	0.0	0.0
Mir Khani	2.1	1.6	56.5	40	0.0	0.8	2.3	0.0	2.2
Moinjodaro	10.8	9.0	***	62	0.0	0.0	0.4	0.5	2.0
Multan(PBO)	9.5	9.0	88.8	63	0.0	0.0	0.7	0.0	0.0
Murree	6.0	4.8	39.7	51	0.0	0.7	0.3	0.3	1.0
Muzaffarabad	5.2	4.2	55.6	55	0.0	1.5	1.5	0.5	0.0
Nawabshah	10.8	9.5	113.5	54	0.0	1.2	0.8	3.6	5.8

Nokkundi	7.5	4.0	84.1	22	0.0	0.0	0.0	1.0	3.0
Okara	9.6	9.5	93.0	64	0.0	0.0	0.5	0.0	0.0
Padidan	11.5	10.0	111.5	61	0.0	1.2	0.7	0.8	2.0
Panjgur	5.6	5.0	66.5	33	0.0	0.0	0.0	9.0	12.0
Parachinar	1.2	1.0	28.1	37	0.0	1.5	2.2	4.3	5.2
Pasni	13.4	11.5	123.8	46	0.0	0.4	0.3	1.8	4.3
Pattan	9.2	6.0	77.4	47	0.0	0.7	0.0	0.0	0.0
Peshawar	6.4	4.9	70.2	71	0.0	1.2	0.8	0.0	1.7
Quetta	1.4	0.5	24.0	27	0.0	0.0	0.3	0.3	3.3
Rahim Yar Khan	10.7	9.5	103.6	61	0.0	0.0	1.5	0.4	0.3
Rawalakot	0.7	0.0	38.3	58	0.0	1.2	0.7	0.0	1.0
Rawalpindi	5.3	4.5	66.8	73	0.0	0.0	1.3	0.2	0.6
Rohri	11.6	10.0	104.4	57	0.0	0.0	0.0	0.0	1.0
Sahiwal	8.9	8.0	88.4	62	0.0	0.0	0.5	0.0	0.0
Saidu Sharif	4.4	2.3	51.2	58	0.0	1.2	0.7	0.0	0.0
Sialkot	7.8	6.5	75.6	61	0.0	2.0	1.2	2.7	3.2
Sibbi	8.0	5.0	108.2	47	0.0	0.0	0.0	0.0	1.7
Skardu	-4.9	-7.6	***	64	0.0	5.3	6.0	0.0	0.0
Tandojam	11.4	10.0	105.8	56	0.0	0.0	0.6	0.2	1.2
Usta. M	11.9	11.3	100.6	72	0.0	0.0	0.5	0.2	0.5
Zhob	4.2	3.0	55.4	37	0.0	0.0	0.0	1.0	2.2

*** 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 2014-2012)