

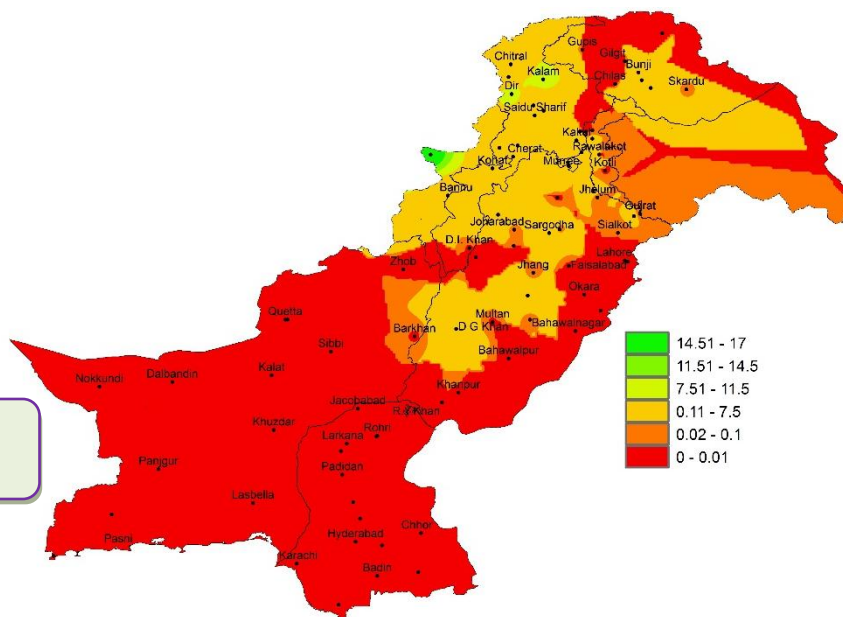
Weekly Weather and Crop Bulletin for Pakistan

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Rainfall Distribution (mm) during the previous
Week (5th March to 11th March, 2018)



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Highlights of Past Weather (5th March to 11th March, 2018)

Above normal night temperatures were observed all over the country.

Province wise rainfall distribution reported as follows:

- Light to moderate rainfall observed in KP during the previous week.
- Light rainfall reported from many places of Punjab during the previous week.
- Light rainfall observed at only one station in GB and Azad Kashmir.
- Dry weather reported from Sindh and Balochistan.

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

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

Editor: Khalida Noureen (Meteorologist)

Past Weather of Provinces (5th March to 11th**March, 2018)****Punjab**

Light rainfall observed at most places in Punjab during the previous week. Weekly maximum and minimum temperatures recorded as 29.0°C & 13.2°C respectively. For the recent week on average 112.5 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 59% and wind speed in the morning/evening recorded as 1.3/2.8 knots. During the previous week highest amount of rainfall was reported as 5.81 mm at Murree, lowest minimum temperature was recorded as 2.0°C at Murree.

Balochistan

Dry weather reported from Balochistan during the week. Weekly maximum and minimum temperatures recorded as 28.1°C & 11.7°C respectively. For the recent week on average 101.9 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 46% and wind speed in the morning/evening recorded as 1.9/7.3 knots. During the previous week lowest minimum temperature was recorded as 1.0°C at Kalat.

Khyber Pakhtunkhwa

Light to moderate rainfall observed at most places in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 23.2°C & 7.1°C respectively. For the recent week on average 71.0 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 1.1/2.6 knots. During the previous week highest amount of rainfall was reported as 17.0 mm at Parachinar & lowest minimum temperature was recorded as -5.5°C at Kalam.

Gilgit-Baltistan and Azad Jammu & Kashmir

Light rainfall observed at only one station in Gilgit-Baltistan and Azad Jammu & Kashmir during the week. Weekly maximum and minimum temperatures recorded as 20.6°C & 5.0°C respectively. For the recent week on average 52.8 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 44% and wind speed in the morning/evening recorded as 0.8/2.4 knots. During the previous week highest amount of rainfall was reported as 0.2 mm at Garhi Dopatta and lowest minimum temperature was recorded as -2.5°C at Astore.

Sindh

Dry weather reported from Sindh during the week. Weekly maximum and minimum temperatures recorded as 34.4°C & 17.0°C respectively. For the recent week, on average 144.0 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 49% and wind speed in the morning/evening recorded as 1.5/3.6 knots. During the previous week lowest minimum temperature was recorded as 11.8°C at Badin.

Past Weather for Major Agricultural Plains**(5th March to 11th March, 2018)****Rawalpindi (Potohar region)**

Rainfall reported as trace (Not Measureable) from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 1.1/1.9 Oktas while average relative humidity observed as 65%. Mean night time temperature recorded as 10.5°C & for the recent week 98.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.4/0.8 knots.

Faisalabad (Central Punjab)

Rainfall reported as Trace (Not Measureable) from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 0.3/1.3 Oktas while average relative humidity observed as 59%. Mean night time temperature recorded as 13.4°C & for the recent week 116.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.5/1.2 knots.

Tandojam (Lower Sindh)

Dry weather reported from Tandojam during the week; however, cloudiness in the morning/evening recorded as 0.5/0.3 Oktas while average relative humidity observed as 32%. Mean night time temperature recorded as 21.1°C & for the recent week 155.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.1/0.4 knots.

Usta Muhammad (Eastern Balochistan)

Dry weather reported from Usta Muhammad during the week; however, cloudiness in the morning/evening recorded 0.7/0.2 Oktas while average relative humidity observed as 63%. Mean night time temperature recorded as 16.3°C & for the recent week 128.7 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.5/2.0 knots.

Quetta (Northern Baluchistan)

Dry weather reported from Quetta during the week; however, cloudiness in the morning/evening recorded as 1.4/3.0 Oktas while average relative humidity observed as 32%. Mean night time temperature recorded as 9.4°C & for the recent

week 71.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.6/2.8 knots.

Past Weather for Sub-Regional Agricultural Plains (5th March to 11th March, 2018)**Multan**

Dry weather reported from Multan during the week; however, cloudiness in the morning/evening recorded as 1.5/2.3 Oktas while average relative humidity observed as 58%. Mean night time temperature recorded as 15.3°C & for the recent week 123.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.0/5.3 knots.

Lahore

Dry weather reported from Lahore during the week; however, cloudiness in the morning/evening recorded as 0.8/1.2 Oktas while average relative humidity observed as 55%. Mean night time temperature recorded as 16.3°C & for the recent week 124.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/4.0 knots.

Zhob

Dry weather reported from Zhob during the week; however, cloudiness in the morning/evening recorded as 1.2/2.5 Oktas while average relative humidity observed as 39%. Mean night time temperature recorded as 8.2°C & for the recent week 74.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.7/6.0 knots.

Murree

Rainfall reported as 5.81 mm from Murree during the week; however, cloudiness in the morning/evening recorded as 1.3/1.7 Oktas while average relative humidity observed as 52%. Mean night time temperature recorded as 6.0°C & for the recent week 43.7 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 4.0/0.3 knots.

D.I. Khan

Dry weather reported from D.I.Khan during the week; however, cloudiness in the morning/evening recorded as 0.0/1.3 Oktas while average relative

humidity observed as 67%. Mean night time temperature recorded as 14.1°C & for the recent week 116.6 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.0 knots.

Peshawar

Rainfall reported as 3.0 mm from Peshawar during the week; however, cloudiness in the morning/evening recorded as 2.0/3.8 Oktas while average relative humidity observed as 63%. Mean night time temperature recorded as 12.4°C & for the recent week 96.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/2.7 knots.

Kalam

Rainfall reported as 10.0 mm from Kalam during the week; however, cloudiness in the morning/evening recorded as 2.5/3.8 Oktas while average relative humidity observed as 56%. Mean night time temperature recorded as -1.6°C & for the recent week 26.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/1.3 knots.

Gilgit

Dry weather reported from during the week; However, cloudiness in the morning/evening recorded as 3.8/4.3 Oktas while average relative humidity observed as 40%. Mean night time temperature recorded as 3.4°C & for the recent week 54.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/10.3 knots.

Skardu

Dry weather reported from Skardu during the week; However, cloudiness in the morning/evening recorded as 4.2/3.8 Oktas while average relative humidity observed as 43%. Mean night time temperature recorded as -0.2°C & for the recent week 20.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/1.3 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 (*Galaxy*); Very Good, Flowering stage in irrigated Conditions.

Lower Sindh (Tandojam)

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

Wheat (*Sindh*); Good, at Wax Maturity stage.

Northern Baluchistan (Quetta)

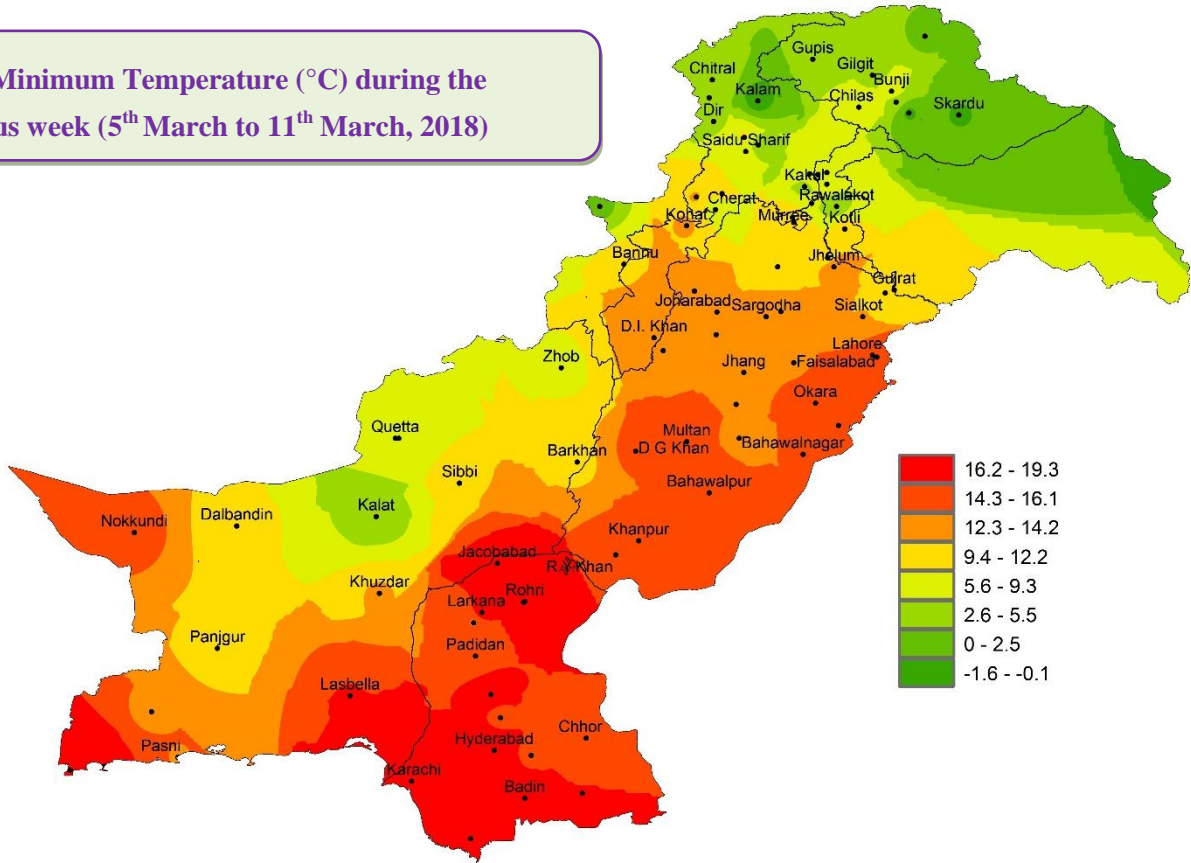
There is presently no crop grown in the fields of RAMC Quetta.

Eastern Baluchistan (Usta Muhammad)

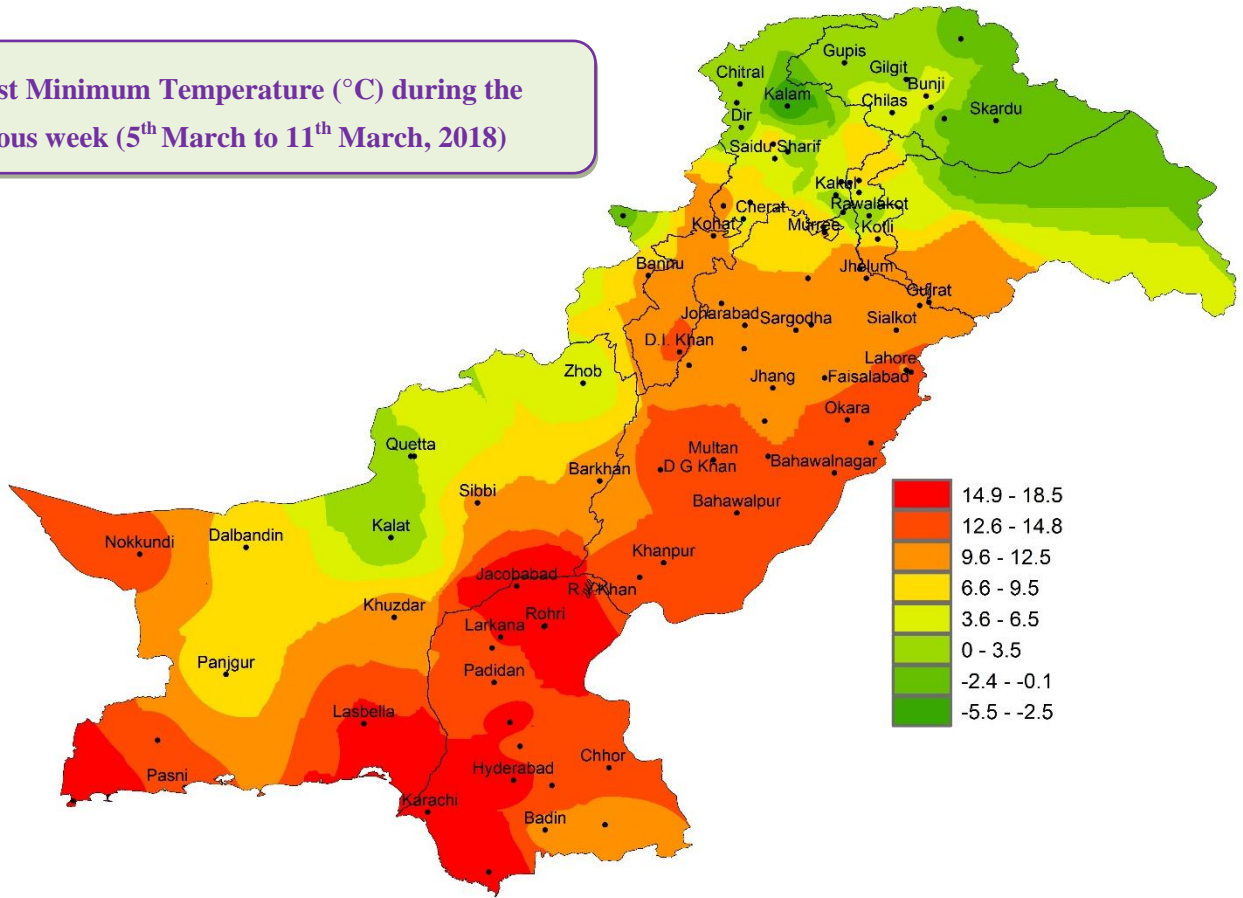
There is presently one crop grown in the fields of RAMC Usta Muhammad.

Wheat (*Galaxy*); Good, at Wax Maturity stage.

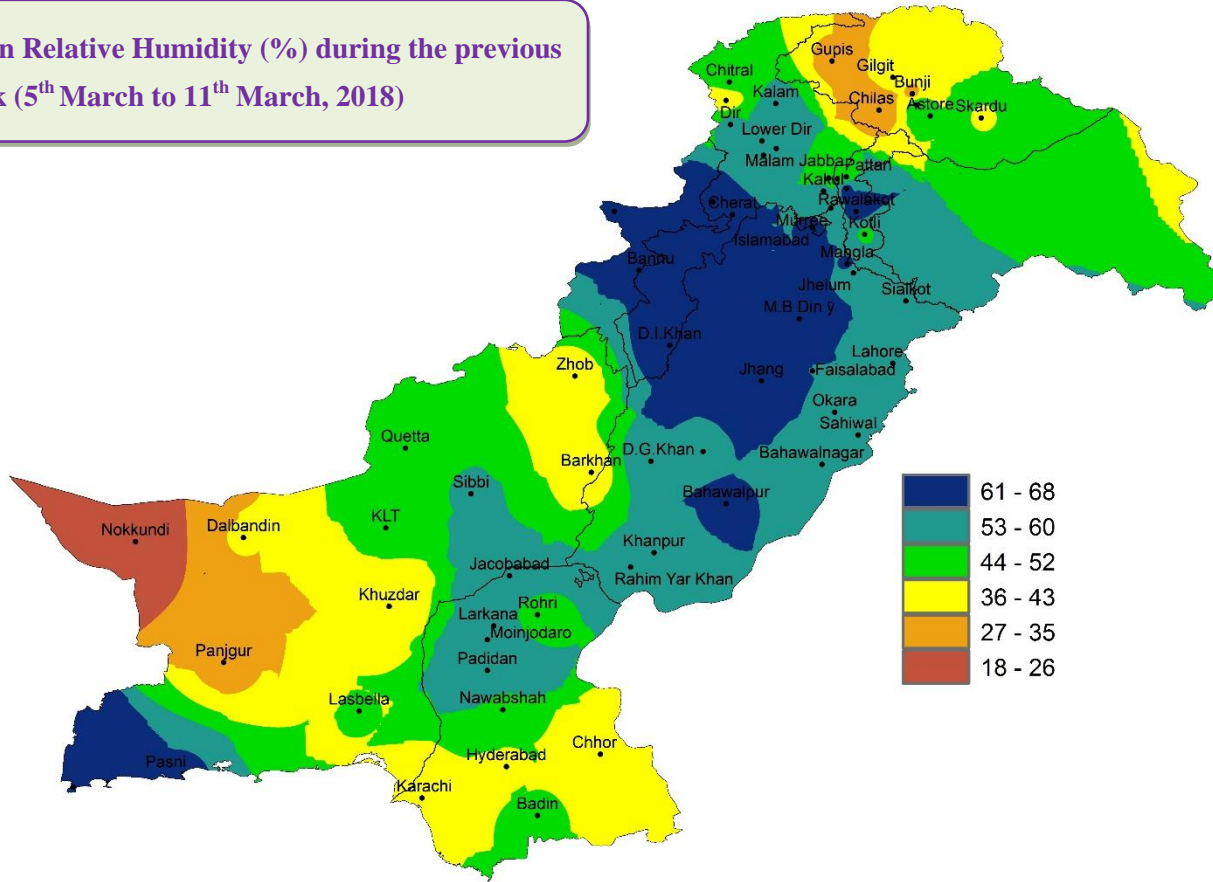
Mean Minimum Temperature (°C) during the Previous week (5th March to 11th March, 2018)



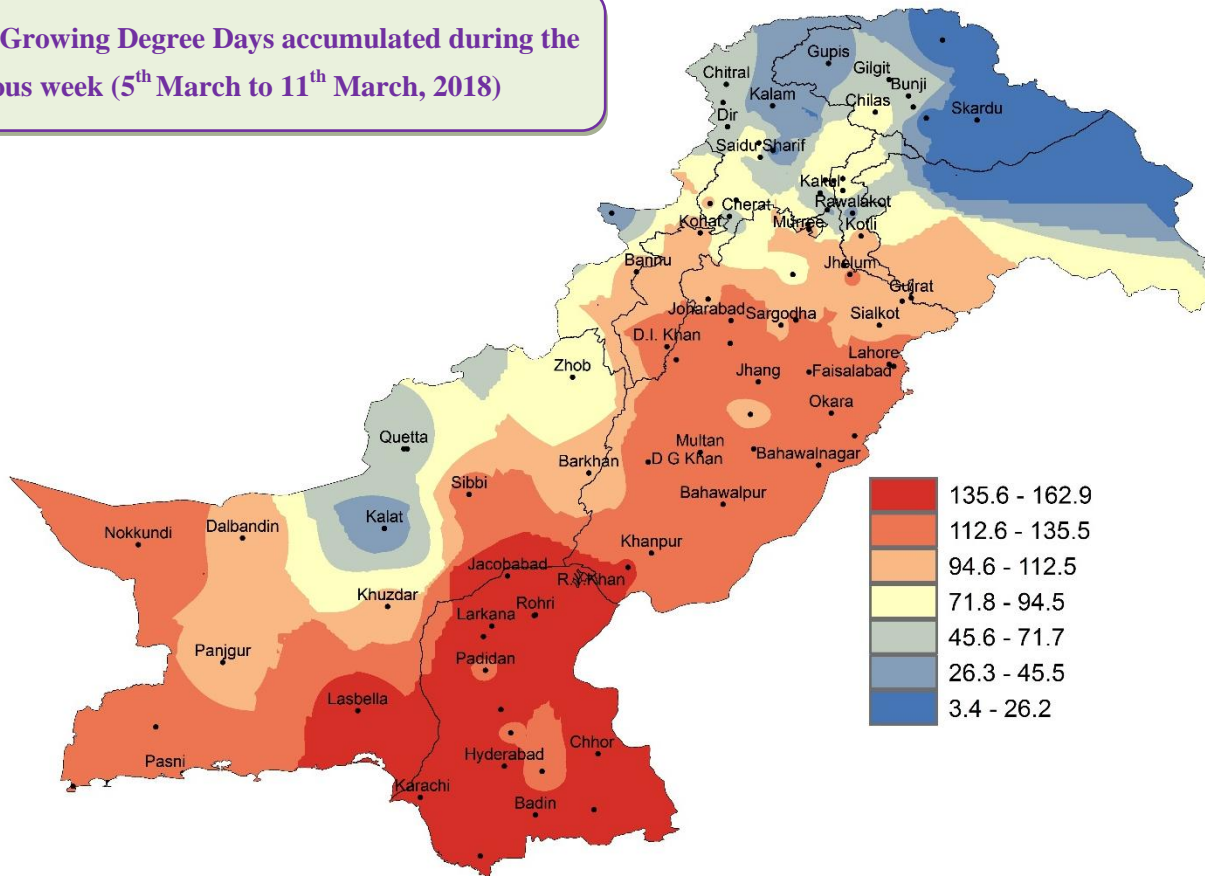
Lowest Minimum Temperature (°C) during the Previous week (5th March to 11th March, 2018)



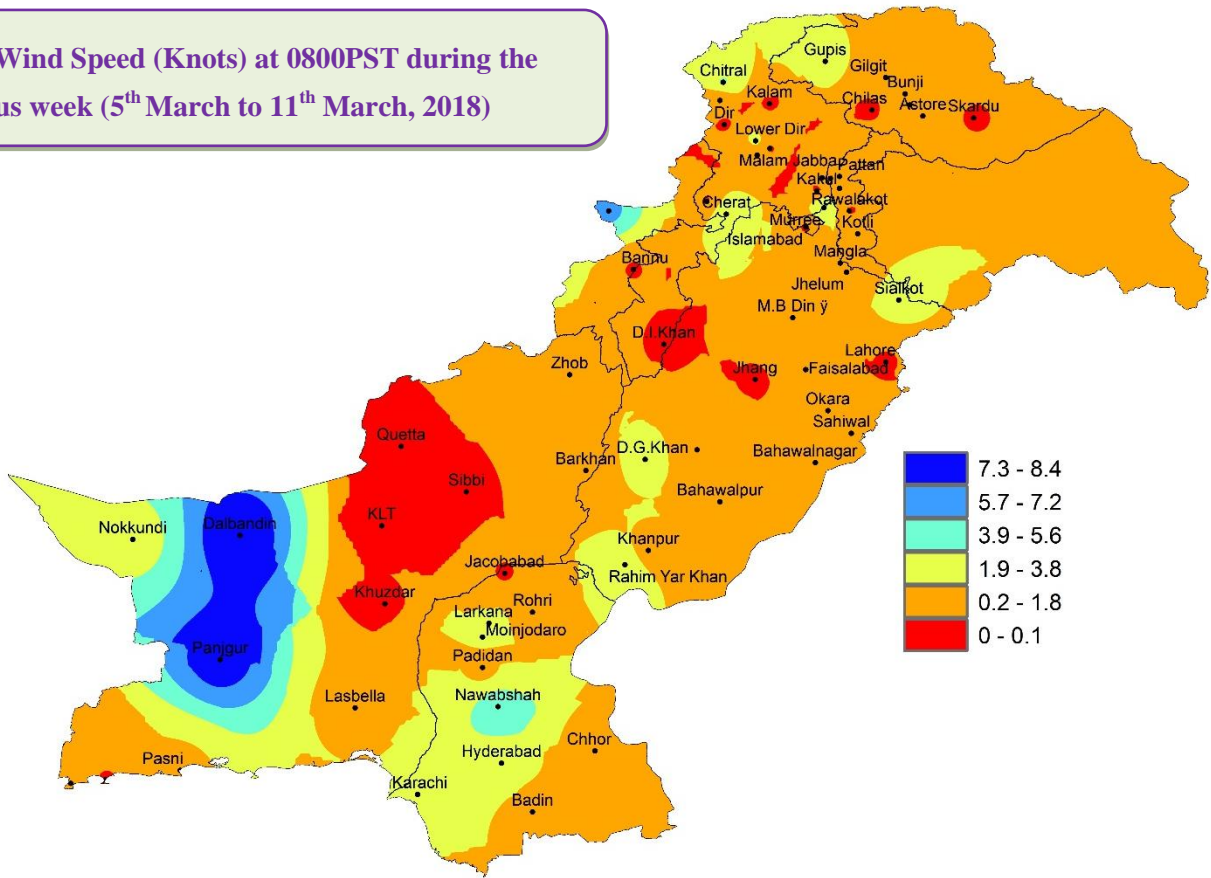
Mean Relative Humidity (%) during the previous week (5th March to 11th March, 2018)



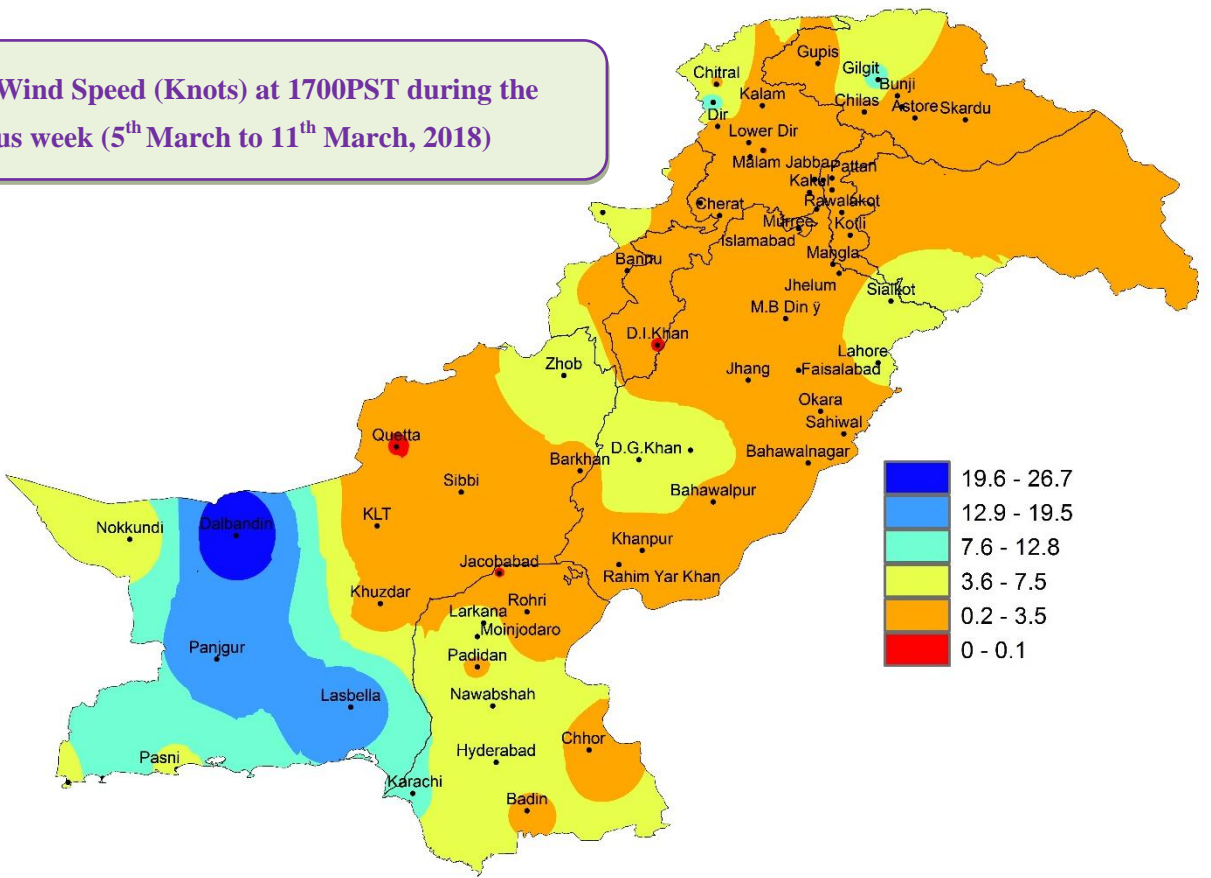
Total Growing Degree Days accumulated during the previous week (5th March to 11th March, 2018)



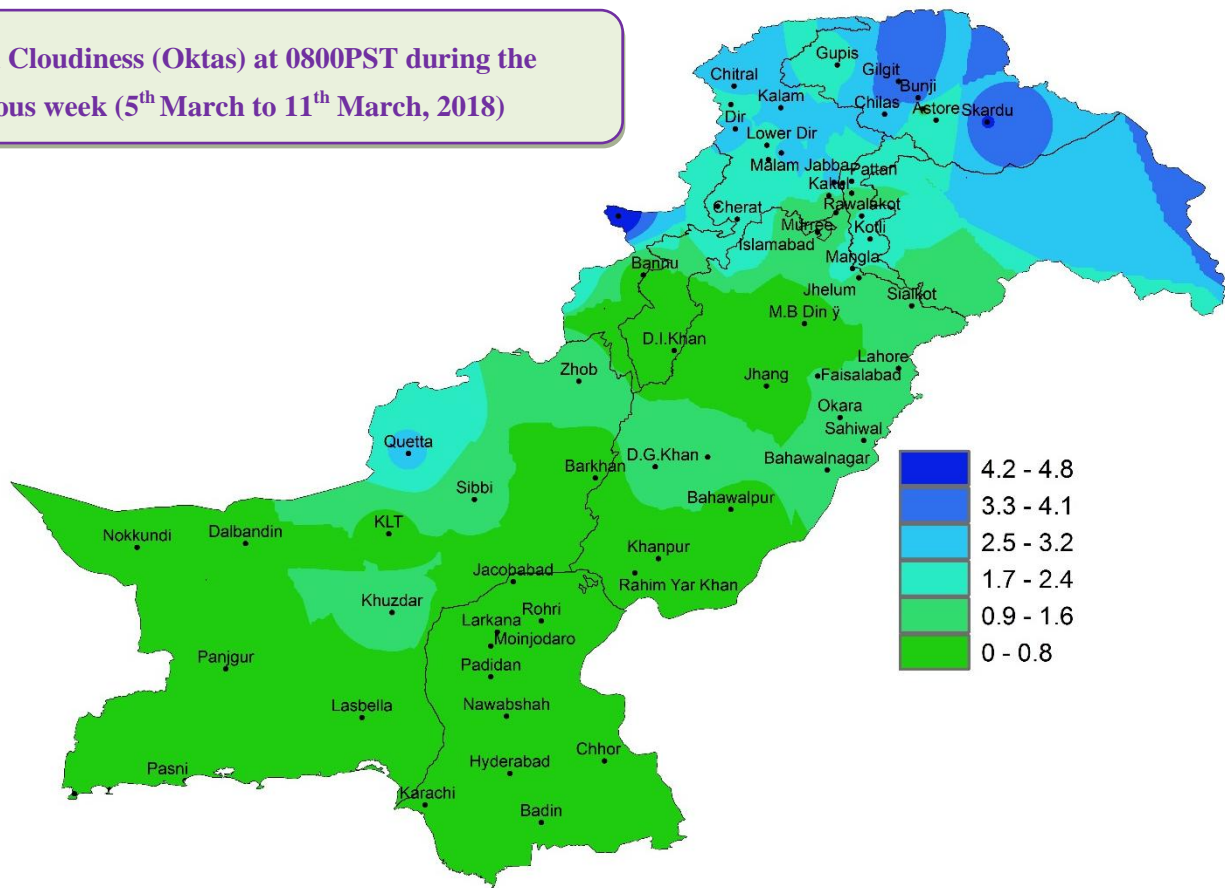
Mean Wind Speed (Knots) at 0800PST during the previous week (5th March to 11th March, 2018)



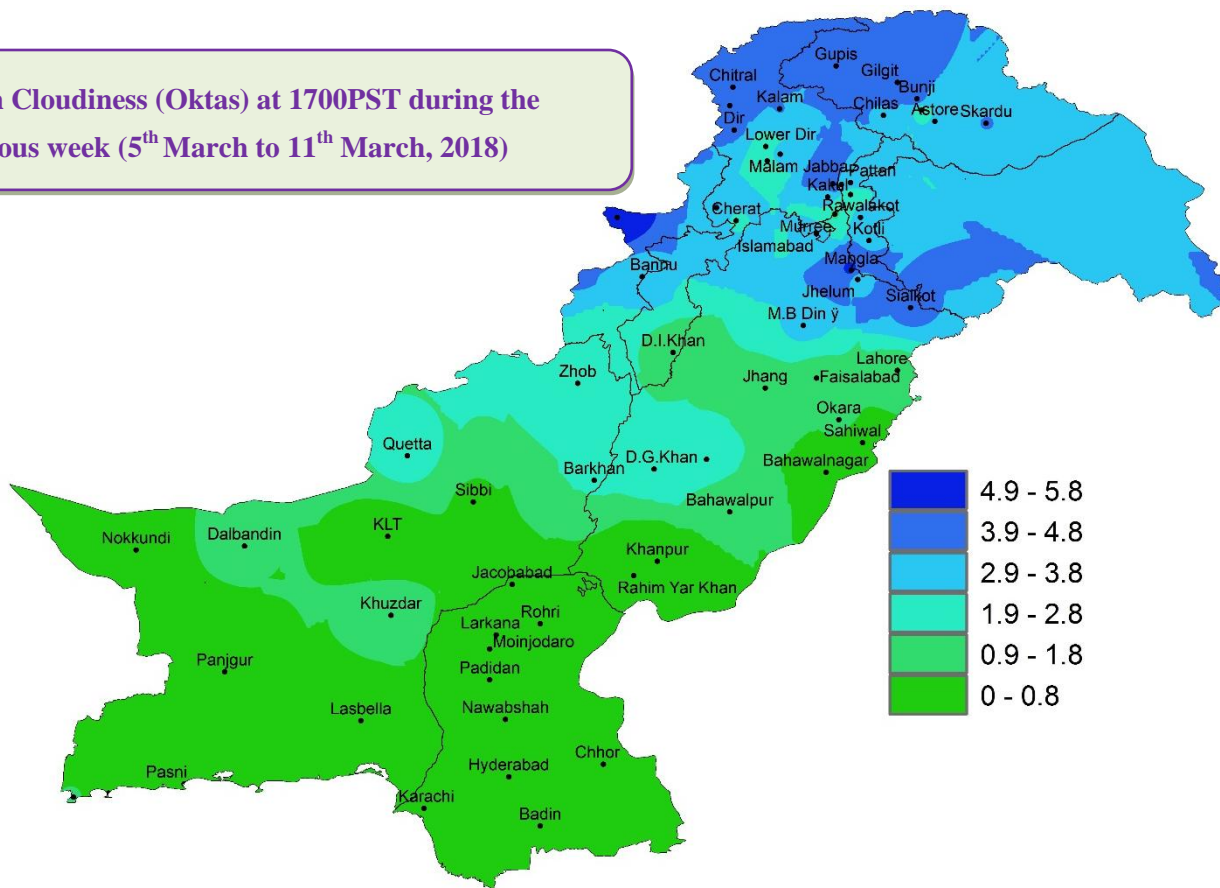
Mean Wind Speed (Knots) at 1700PST during the previous week (5th March to 11th March, 2018)



Mean Cloudiness (Oktas) at 0800PST during the previous week (5th March to 11th March, 2018)



Mean Cloudiness (Oktas) at 1700PST during the previous week (5th March to 11th March, 2018)



Weekly Weather Advisory for Farmers
(12th March to 18th March, 2018)

Westerly wave is likely to enter upper parts of the country tonight and may grip upper and central parts on Tuesday and persist over upper parts till Wednesday

MONDAY (12-03-2018)

Partly cloudy weather is expected in most upper parts of the country. However, rain-thunderstorm with gusty winds is expected at scattered places in FATA and Malakand division, while at isolated places in Peshawar, Hazara, Rawalpindi divisions, Islamabad, Kashmir and Gilgit-Baltistan.

TUESDAY (13-03-2018)

Partly cloudy weather is expected in most upper and central parts of the country. However, rain-thunderstorm with gusty winds is expected at scattered places in Khyber-Pakhtunkhwa, FATA, Kashmir, Gilgit-Baltistan, Islamabad, Rawalpindi, Gujranwala, Sargodha, Lahore divisions, while at isolated places in Quetta, Zhob, Kalat, D.G.Khan, Multan, Bahawalpur, Sahiwal and Faisalabad divisions.

WEDNESDAY (14-03-2018)

Partly cloudy weather is expected in most upper and central parts of the country. However, rain-thunderstorm with gusty winds is expected at scattered places in Khyber-Pakhtunkhwa, FATA, Kashmir, Gilgit-Baltistan, Islamabad, Rawalpindi, Gujranwala, Sargodha, Lahore divisions, while at isolated places in Zhob, D.G.Khan, Multan, Bahawalpur, Sahiwal and Faisalabad divisions.

THURSDAY (15-03-2018)

Mainly dry weather is expected in most parts of the country. However, rain-thunderstorm with gusty winds is expected at isolated places in Malakand, Hazara divisions, Kashmir and Gilgit-Baltistan.

FRIDAY (16-03-2018)

Mainly dry weather is expected in most parts of the country.

SATURDAY (17-03-2018)

Mainly dry weather is expected in most parts of the country.

SUNDAY (18-03-2018)

Mainly dry weather is expected in most parts of the country.

ADVISES FOR FARMERS

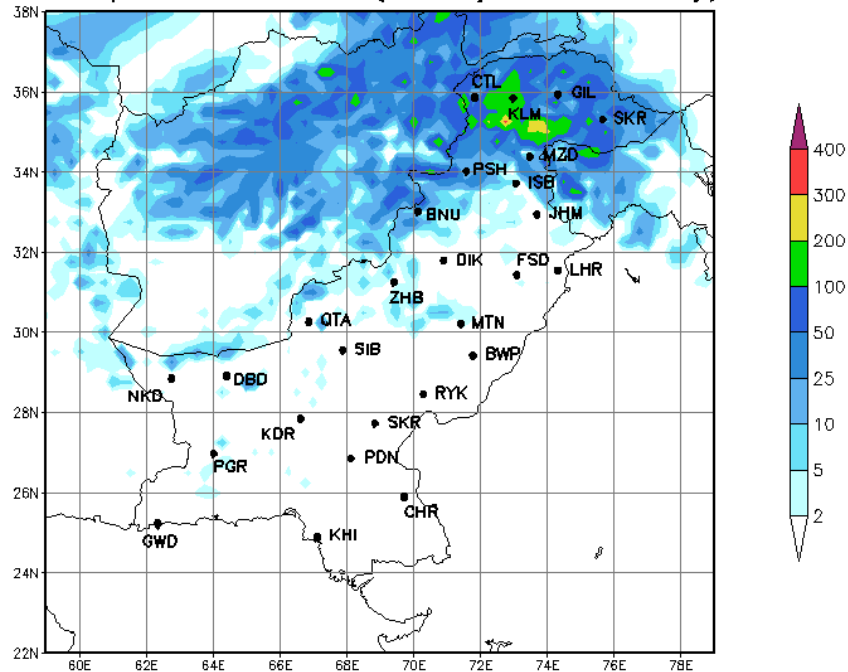
During the last week, light rainfall was observed in most of the agricultural plains of the country. In the next week light to moderate rainfall may occur in the agricultural plains of the country. Accordingly, following advises are suggested for the farming community.

- Necessary precautionary measures may be taken to protect crops/nurseries from effects of extreme weather conditions.
- Crops/Nurseries may be irrigated according to the rainfall prediction.
- Removal of weeds from the fields must be ensured.

Weather Outlook from 12th to 18th March 2018

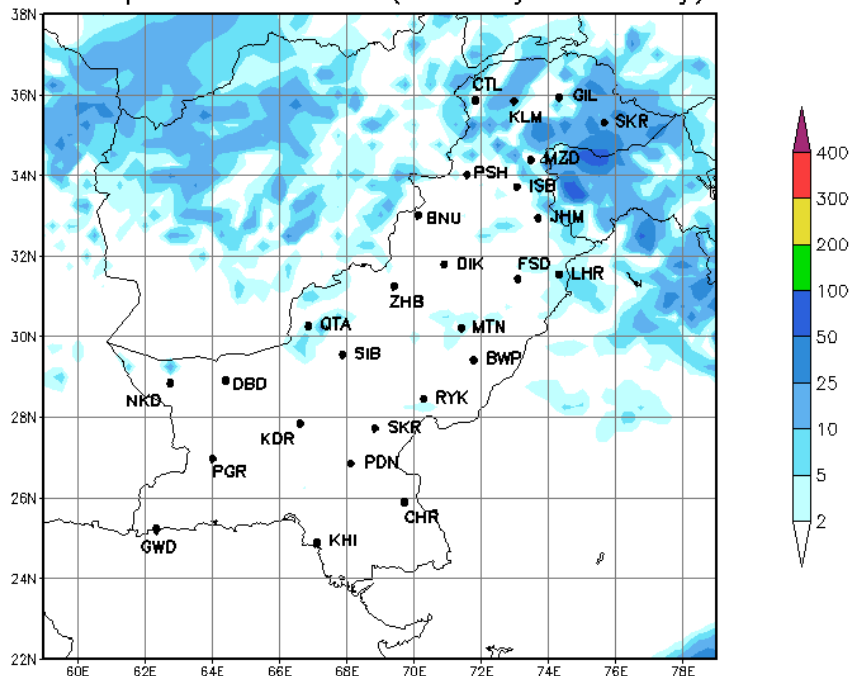
The outlook for the period 12th to 14th March, 2018 shows that dry weather may prevail in most parts of the country, however moderate to heavy rainfall is expected at most places in GB, Azad Kashmir, and KP and light rainfall may occur in scattered places of northern Balochistan and upper Punjab.

Precipitation Forecast (Monday to Wednesday)



The outlook for the period 15th to 18th March, 2018 shows that light to moderate rainfall is expected in Gilgit-Baltistan, northern KP and Azad Kashmir. Light rainfall may occur at scattered places in north eastern Punjab.

Precipitation Outlook (Thursday to Sunday)



National Weather Data of Selected Cities (5th March to 11th March, 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	-0.9	-2.5	7.8	43	0.00	1.8	2.8	1.0	1.7
Badin	18.6	11.8	152.7	45	0.00	0.0	0.0	0.8	3.0
Bahawalnagar	14.3	13.0	125.5	56	0.00	1.0	0.5	1.7	2.7
Bahawalpur	15.2	14.0	124.3	61	0.00	0.4	0.8	0.8	2.7
Balakot	7.7	5.6	80.6	48	0.00	3.0	5.0	0.0	1.2
Bannu	11.7	10.0	101.7	61	2.00	0.3	3.2	0.0	2.7
Barkhan	11.4	10.0	96.5	37	0.00	0.0	1.8	0.8	2.7
Bunji	9.0	7.2	70.3	30	0.00	4.2	4.7	0.7	0.3
Cherat	7.3	6.0	55.5	61	6.00	2.0	2.7	3.7	3.0
Chhor	15.6	13.0	152.0	37	0.00	0.0	0.5	0.4	3.0
Chilas	8.6	6.5	81.5	27	0.00	2.8	3.7	0.0	2.0
Chitral	5.3	2.8	55.2	47	2.61	2.7	4.0	4.0	3.0
D.G.Khan	14.7	13.4	120.1	60	0.61	1.6	2.2	2.4	6.0
D.I.Khan	14.1	13.0	116.6	67	0.00	0.0	1.3	0.0	0.0
Dalbandin	10.4	8.5	108.5	35	0.00	0.8	1.0	8.4	26.7
Dir	4.3	1.5	57.8	55	10.00	2.7	4.0	0.0	2.0
Drosh	4.3	2.6	49.5	36	3.20	2.0	4.3	0.0	10.3
Faisalabad	13.4	12.5	116.2	59	TR	0.3	1.3	0.5	1.2
Garidopatta	7.6	5.5	81.0	64	0.20	1.2	2.0	0.3	1.7
Gawader	18.0	17.0	114.0	66	0.00	0.0	0.5	0.0	10.7
Gilgit	3.4	1.5	54.3	40	0.00	3.8	4.3	0.3	10.3
Gupis	3.4	3.0	33.5	32	0.00	2.2	4.2	2.7	2.3
Hyderabad	19.3	16.5	152.0	42	0.00	0.0	0.0	3.3	5.7

Islamabad	10.3	8.5	94.0	62	2.60	0.8	3.2	0.0	1.0
Jacobabad	17.1	16.0	139.8	56	0.00	0.4	0.3	0.0	0.0
Jhang	13.3	12.5	116.0	66	TR	0.3	1.3	0.0	1.0
Jhelum	13.0	11.1	116.4	58	TR	0.8	3.2	1.0	2.0
Jiwani	16.7	15.0	123.0	68	0.00	0.0	0.8	1.6	5.3
Kakul	4.6	2.5	59.5	55	2.00	1.3	3.2	0.0	1.3
Kalam	-1.6	-5.5	26.9	56	10.00	2.5	3.8	0.0	1.3
Kalat	2.6	1.0	31.0	46	0.00	0.5	0.0	0.0	2.0
Karachi	18.9	17.5	152.2	41	0.00	0.0	0.0	2.5	7.7
Khanpur	14.6	13.0	130.2	58	0.00	0.0	0.3	1.3	2.3
Khuzdar	12.4	11.0	99.0	35	0.00	1.2	1.3	0.0	1.7
Kotli	11.7	9.6	105.0	50	0.00	2.0	3.7	1.3	2.3
Lahore	16.3	14.0	124.3	55	0.00	0.8	1.2	0.0	4.0
Larkana	17.1	16.0	139.8	52	0.00	0.3	0.3	2.0	4.0
Lasbella	16.1	15.0	146.4	44	0.00	0.0	0.2	0.8	18.3
Lower Dir	10.1	9.0	92.1	54	0.00	2.2	2.3	2.3	2.0
M.B Din	13.2	11.5	114.2	63	TR	0.0	3.2	0.8	1.3
Malam Jabba	3.0	1.0	16.5	58	3.00	2.7	3.2	0.0	0.0
Mangla	11.5	10.0	100.1	61	0.30	2.3	5.2	0.7	2.3
Mir Khani	3.5	3.0	56.9	51	4.20	1.2	2.2	1.2	3.8
Moinjodaro	14.0	12.5	139.5	56	0.00	0.0	0.0	2.0	5.2
Multan(PBO)	15.3	13.8	123.3	58	0.00	1.5	2.3	1.0	5.3
Murree	6.0	2.0	43.7	52	5.81	1.3	1.7	4.0	0.3
Muzaffarabad	8.0	6.5	83.3	48	0.00	2.0	3.2	1.3	2.0
Nawabshah	17.2	15.5	144.4	49	0.00	0.6	0.5	4.8	6.3
Nokkundi	15.2	13.5	128.3	18	0.00	0.0	0.7	2.8	3.7

Okara	15.6	14.5	124.5	57	0.00	1.0	1.0	0.3	1.3
Padidan	15.2	14.0	134.3	60	0.00	0.4	0.3	1.2	3.0
Panjgur	11.0	7.5	103.3	31	0.00	0.3	0.0	8.0	15.0
Parachinar	1.5	-1.0	29.0	68	17.00	4.8	5.8	6.0	6.0
Pasni	14.1	13.5	121.3	61	0.00	0.5	0.0	1.3	6.6
Pattan	8.6	7.5	81.5	47	0.00	2.0	3.5	1.0	2.0
Peshawar	12.4	11.0	96.9	63	3.00	2.0	3.8	0.0	2.7
Quetta	9.4	4.8	71.0	32	0.00	1.4	3.0	2.6	2.8
Rahim Yar Khan	15.5	13.5	136.5	52	0.00	0.3	0.0	2.5	3.3
Rawalakot	2.8	1.0	40.5	64	0.00	1.7	3.2	0.0	0.7
Rawalpindi	10.5	8.5	98.1	65	TR	1.1	1.9	0.4	0.8
Rohri	17.7	16.5	143.8	50	0.00	0.7	0.0	1.3	1.6
Sahiwal	14.6	13.0	116.5	58	0.00	1.0	0.3	1.0	0.3
Saidu Sharif	6.8	5.0	74.2	54	4.00	2.0	2.5	0.0	0.0
Sialkot	11.9	10.2	104.4	58	0.20	1.2	4.3	2.5	7.3
Sibbi	11.5	10.0	121.8	53	0.00	1.0	0.7	0.0	0.7
Skardu	-0.2	-2.0	20.2	43	0.00	4.2	3.8	0.0	1.3
Tandojam	21.2	20.0	155.2	63	0.00	0.5	0.3	0.1	0.4
Usta.M	16.3	14.8	128.7	63	0.00	0.7	0.2	0.5	2.0
Zhob	8.2	4.0	74.8	39	0.00	1.2	2.5	1.7	6.0

*** Shows that data was not available.

*TR means Trace (not-measurable data)

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)