

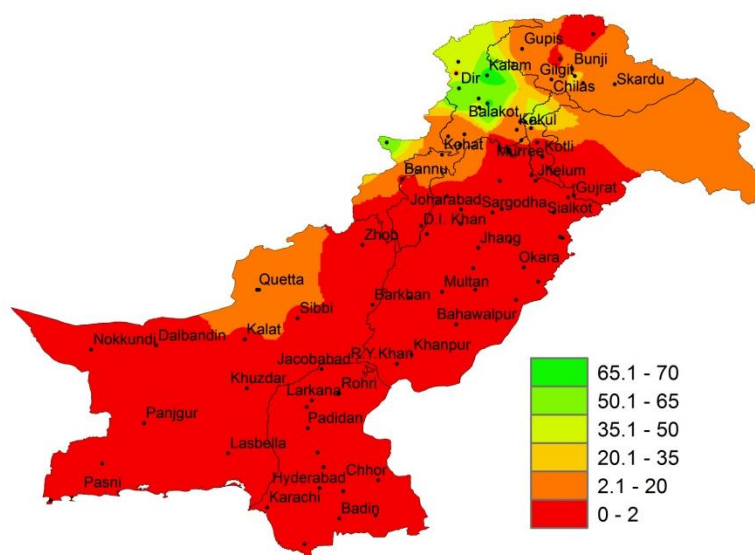
# Weekly Weather and Crop Bulletin for Pakistan

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**Rainfall Distribution (mm) during the  
Previous Week (from 20<sup>th</sup> to 26<sup>th</sup> March, 2017)**



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## Highlights of Past Weather (from 20<sup>th</sup> to 26<sup>th</sup> March, 2017)

Slightly below normal night temperatures reported from most parts of the country.

Province wise distribution of rainfall reported as follows:

- Light to moderate rainfall reported from most places of Khyber Pakhtunkhwa (KP) Gilgit-Baltistan (GB), Kashmir and Punjab.
- Light to moderate rainfall reported from few places of Balochistan.
- Dry weather reported from Sindh.

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

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

**Editor: Dr. Dildar Kazmi (Meteorologist)**

**Past Weather of Provinces (from 20<sup>th</sup> to 26<sup>th</sup> March, 2017)****Punjab**

Light to moderate rainfall reported from most of the places in Punjab during the week. Weekly maximum and minimum temperatures recorded as 31.8°C & 15.8°C respectively. For the recent week on average 131.6 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 53% and wind speed in the morning/evening recorded as 1.5/3.4 Knots. During the previous week the highest amount of rainfall was recorded as 2.2 mm at Murree & the lowest minimum temperature was recorded as 0.5°C at Murree.

**Sindh**

Dry weather reported from Sindh during the week. Weekly maximum and minimum temperatures recorded as 36.7°C & 18.9°C respectively. For the recent week, on average 160.5 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 48% and wind speed in the morning/evening recorded as 1.8/4.0 Knots. During the previous week the lowest minimum temperature was recorded as 12.5°C at Dadu.

**Khyber Pakhtunkhwa**

Light to moderate rainfall reported from most of the places in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 21.9°C & 9.2°C respectively. For the recent week on average 74.0 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 60% and wind speed in the morning/evening recorded as 1.2/1.8 Knots. During the previous week the highest amount of rainfall was recorded as 70.0 mm at Malam Jabba & the lowest minimum temperature was recorded as -3.0°C at Kalam.

**Balochistan**

Light to moderate rainfall reported from few places of Balochistan during the week. Weekly maximum and minimum temperatures recorded as 29.4°C & 14.6°C respectively. For the recent week on average 119.0 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 45% and wind speed in the morning/evening recorded as 1.1/5.1 Knots. During the previous week the highest amount of rainfall was recorded as 18.1 mm at Quetta & the lowest minimum temperature was recorded as 1.0°C at Kalat.

**Gilgit-Baltistan and Azad Jammu & Kashmir**

Light to moderate rainfall reported from most of the places in Gilgit-Baltistan & Kashmir during the week. Weekly maximum and minimum temperatures recorded as 19.4°C & 6.9°C respectively. For the recent week on average 57.0 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 1.1/3.1 Knots. During the previous week the highest amount of rainfall was recorded as 23.0 mm at Muzaffarabad & the lowest minimum temperature was recorded as 0.0°C at Astore.

### **Past Weather for Major Agricultural Plains (from 20<sup>th</sup> to 26<sup>th</sup> March, 2017)**

#### **Rawalpindi (Potohar region)**

Rainfall reported as trace (not measureable) from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 2.1/3.7 Oktas while, average relative humidity observed as 56%. Mean night time temperature recorded as 13.2°C & for the recent week 107.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.5/2.3 Knots.

#### **Faisalabad (Central Punjab)**

Dry weather reported from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 2.0/1.6 Oktas while, average relative humidity observed as 65%. Mean night time temperature recorded as 10.9°C & for the recent week 127.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/1.6 Knots.

#### **Tandojam (Lower Sindh)**

Dry weather reported from Tandojam during the week; however, cloudiness in the morning/evening recorded as 2.4/0.9 Oktas while, average relative humidity observed as 56%. Mean night time temperature recorded as 13.0°C & for the recent week 126.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/2.3 Knots.

#### **Usta Muhammad (Eastern Balochistan)**

Dry weather reported from Usta Muhammad during the week; however, cloudiness in the morning/evening recorded 0.6/1.2 Oktas while, average relative humidity observed as 52%. Mean night time temperature recorded as 14.6°C & for the recent week 133 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.9 Knots.

#### **Quetta (Northern Baluchistan)**

Rainfall reported as 3.8 mm from Quetta during the week; however, cloudiness in the morning/evening recorded as 3.7/5.1 Oktas while, average relative humidity observed as 45%. Mean night time temperature recorded as 10.8°C at the end of last week. Wind speed recorded in the morning/evening as 3.2/3.1 Knots.

### **Past Weather for Sub-Regional Agricultural Plains (from 20<sup>th</sup> to 26<sup>th</sup> March, 2017)**

#### **Multan**

Dry weather reported from Multan during the week; however, cloudiness in the morning/evening recorded as 2.7/2.1 Oktas while, average relative humidity observed as 50%. Mean night time temperature recorded as 18.4°C & for the recent week 145.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 3.7/18.6 Knots.

#### **Lahore**

Rainfall reported as 0.01 mm from Lahore during the week; however, cloudiness in the morning/evening recorded as 1.7/4.6 Oktas while, average relative humidity observed as 49%. Mean night time temperature recorded as 19.1°C & for the recent week 144.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.7/3.7 Knots.

#### **Zhob**

Dry weather reported from Zhob during the week; however, cloudiness in the morning/evening recorded as 4.0/5.7 Oktas while, average relative humidity observed as 38%. Mean night time temperature recorded as 8.2°C & for the recent week 80 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 5.0/5.6 Knots.

#### **Murree**

Rainfall reported as 2.2 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 54%. Mean night time temperature recorded as 7.2°C by the end of last week. Wind speed recorded in the morning/evening as 1.4/2.3 Knots.

**D.I. Khan**

Dry weather reported from D.I.Khan during the week; however, cloudiness in the morning/evening recorded as 2.6/3.9 Oktas while, average relative humidity observed as 59%. Mean night time temperature recorded as 16.2°C & for the recent week 134.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/2.3 Knots.

**Peshawar**

Rainfall reported as 16.1 mm from Peshawar during the week; however, cloudiness in the morning/evening recorded as 4.1/5.5 Oktas while, average relative humidity observed as 61%. Mean night time temperature recorded as 14.8°C & for the recent week 111.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.4/3.3 Knots.

**Kalam**

Rainfall reported as 68.0 mm from Kalam during the week; however, cloudiness in the morning/evening recorded as 3.9/6.6 Oktas while, average relative humidity observed as 63%. Mean night time temperature recorded as -0.1°C by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.0 Knots.

**Gilgit**

Rainfall reported as 1.11 mm from Gilgit during the week; However, cloudiness in the morning/evening recorded as 5.4/7.7 Oktas while, average relative humidity observed as 52%. Mean night time temperature recorded as 6.9°C & for the recent week 58.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/4.0 Knots.

**Skardu**

Rainfall reported as 11.0 mm from Skardu during the week; however, cloudiness in the morning/evening recorded as 7.0/6.7 Oktas while, average relative humidity observed as 59%. Mean night time temperature recorded as 3.2°C by the end of last week. Wind speed recorded in the morning/evening as 0.0/2.6 Knots.

**Crop Situation for Major Agricultural Plains**  
**(Based on data from Regional Agromet Centres)****Potohar Region (Rawalpindi)**

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

**Central Punjab (Faisalabad)**

There is presently one crop (irrigated conditions) grown in the fields of RAMC Faisalabad.

**Wheat:** Very good condition, *Milk Maturity* stage completed.

**Lower Sindh (Tandojam)**

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

**Northern Balochistan (Quetta)**

There is presently one crop (irrigated conditions) grown in the fields of RAMC Quetta.

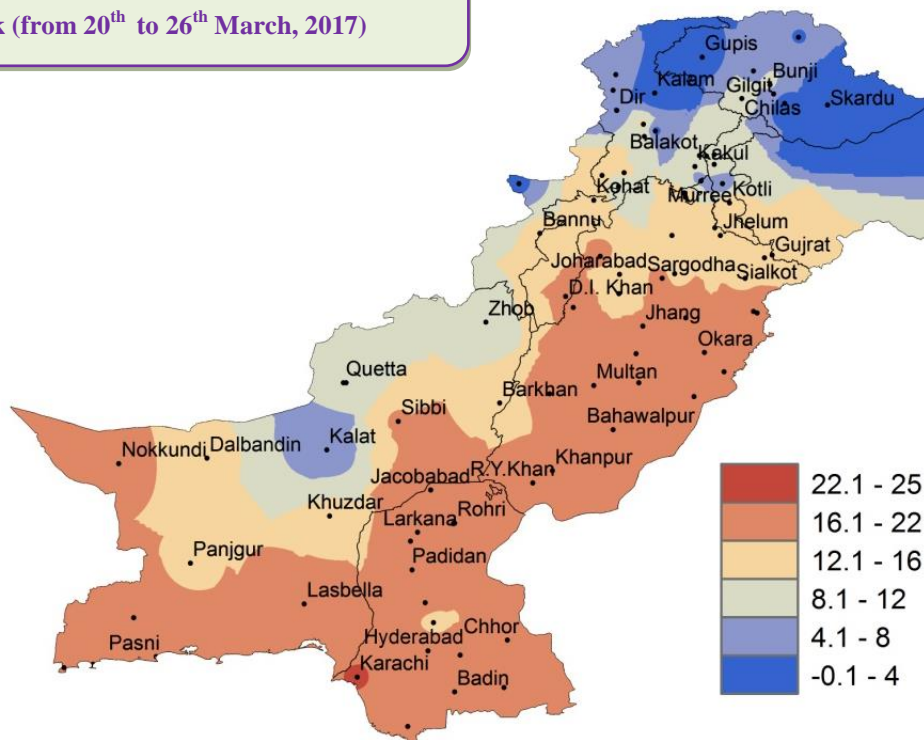
**Wheat (Local white):** Good condition at *Shooting* stage.

**Eastern Balochistan (Usta Muhammad)**

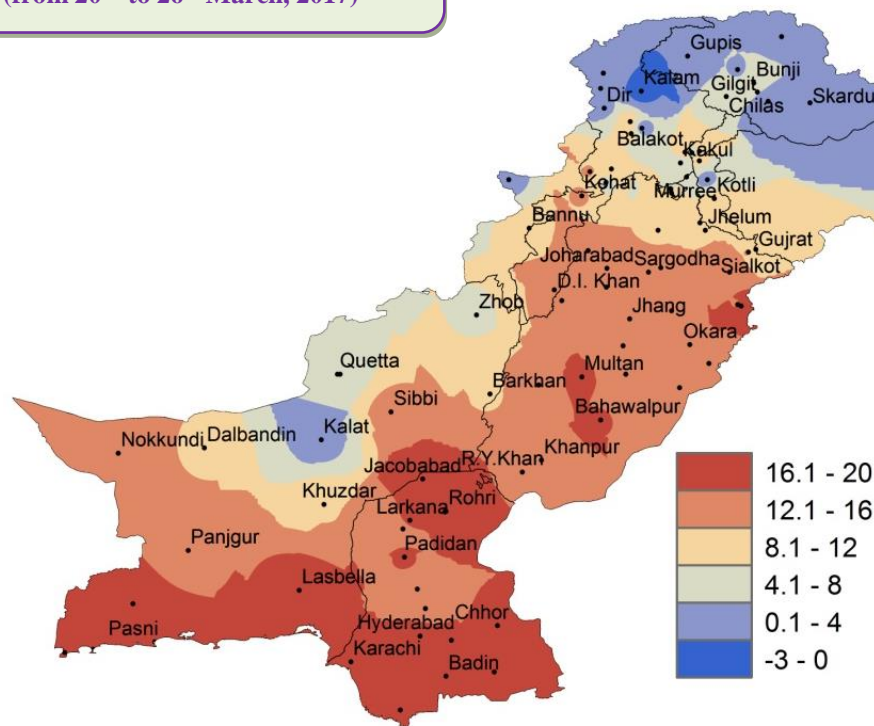
There is presently one crop (irrigated conditions) grown in the fields of RAMC Usta Muhammad.

**Wheat:** Good condition at *Wax Maturity* stage.

Mean Minimum Temperature (°C) during the  
Previous week (from 20<sup>th</sup> to 26<sup>th</sup> March, 2017)

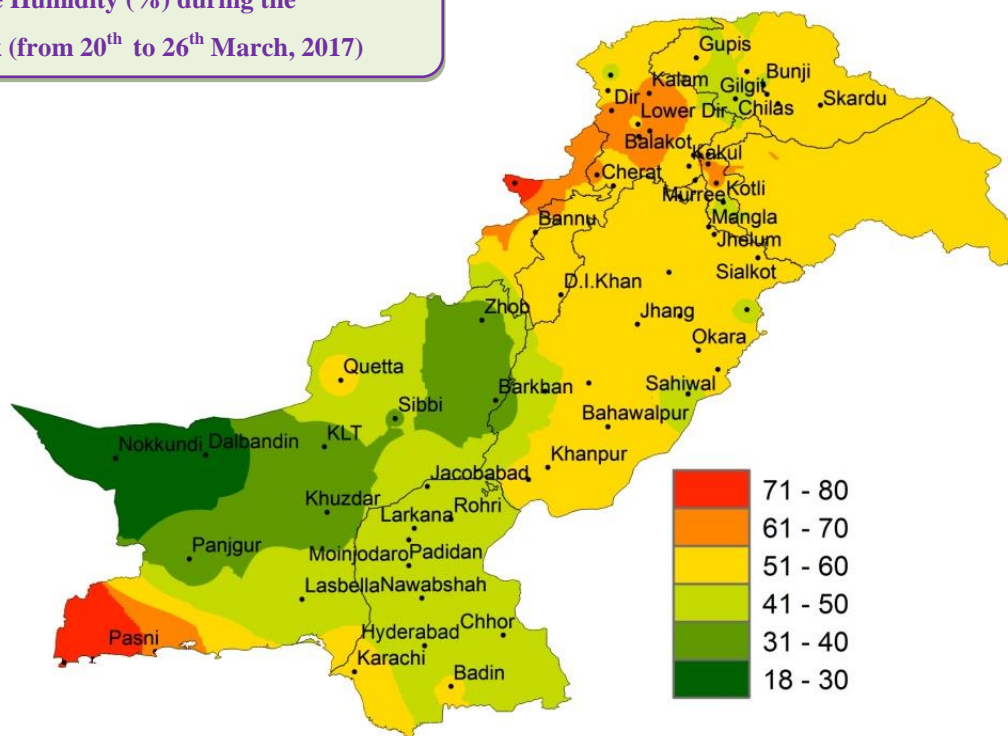


Lowest Minimum Temperature (°C) during the  
Previous week (from 20<sup>th</sup> to 26<sup>th</sup> March, 2017)

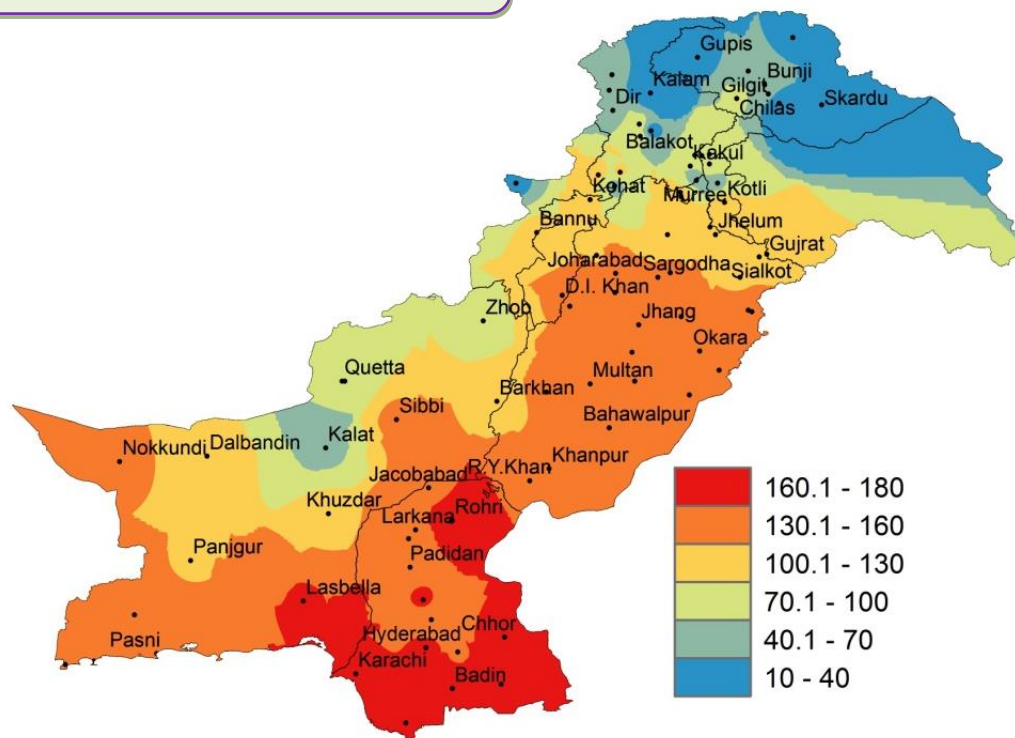




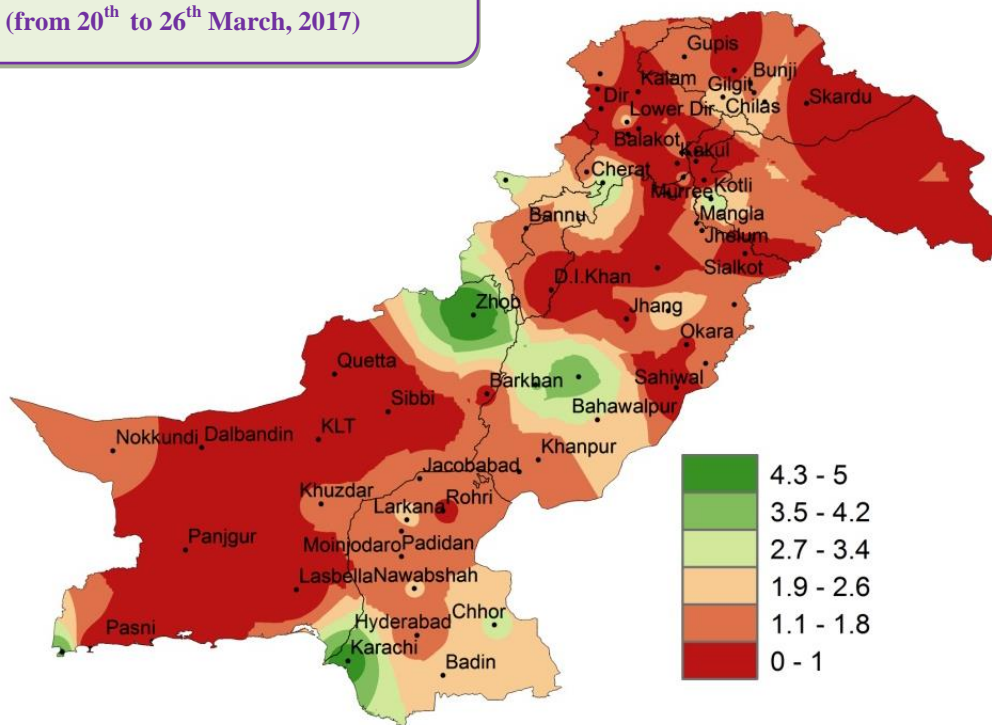
Mean Relative Humidity (%) during the  
Previous week (from 20<sup>th</sup> to 26<sup>th</sup> March, 2017)



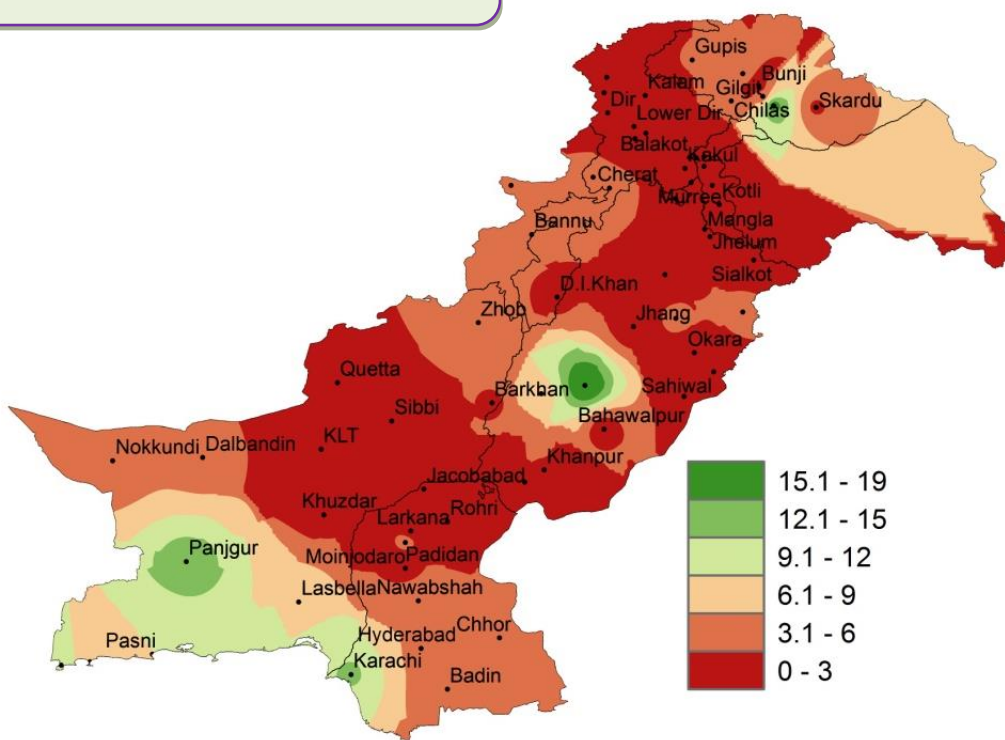
Total Growing Degree Days accumulated during the  
Previous week (from 20<sup>th</sup> to 26<sup>th</sup> March, 2017)



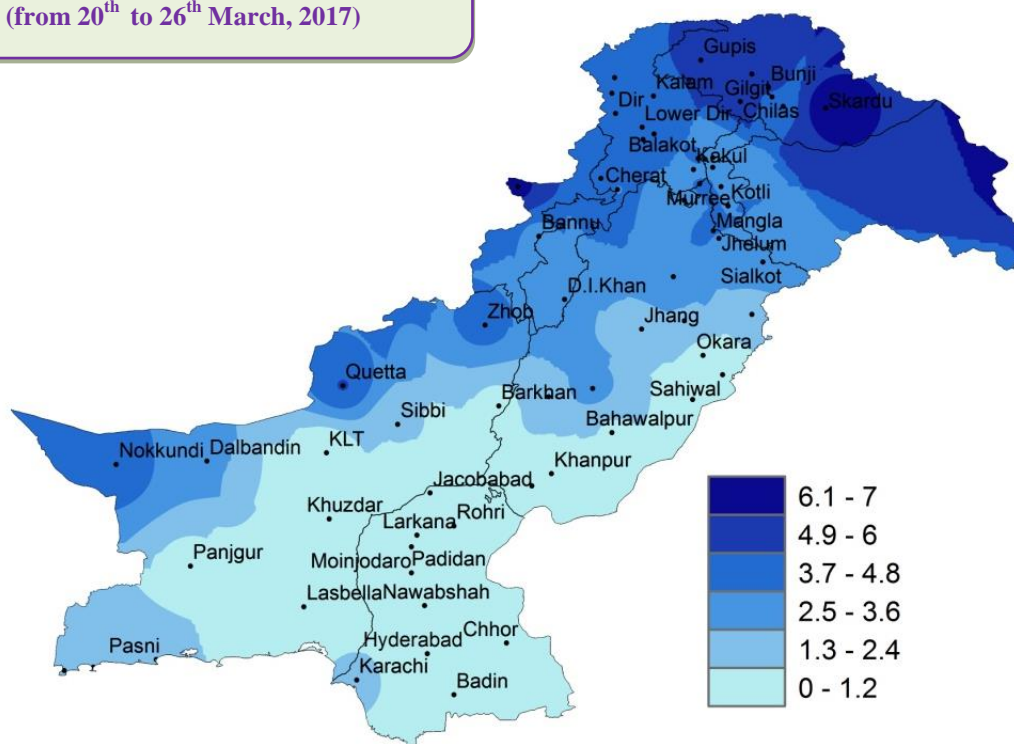
Mean Wind Speed (Knots) at 0800PST during the  
Previous week (from 20<sup>th</sup> to 26<sup>th</sup> March, 2017)



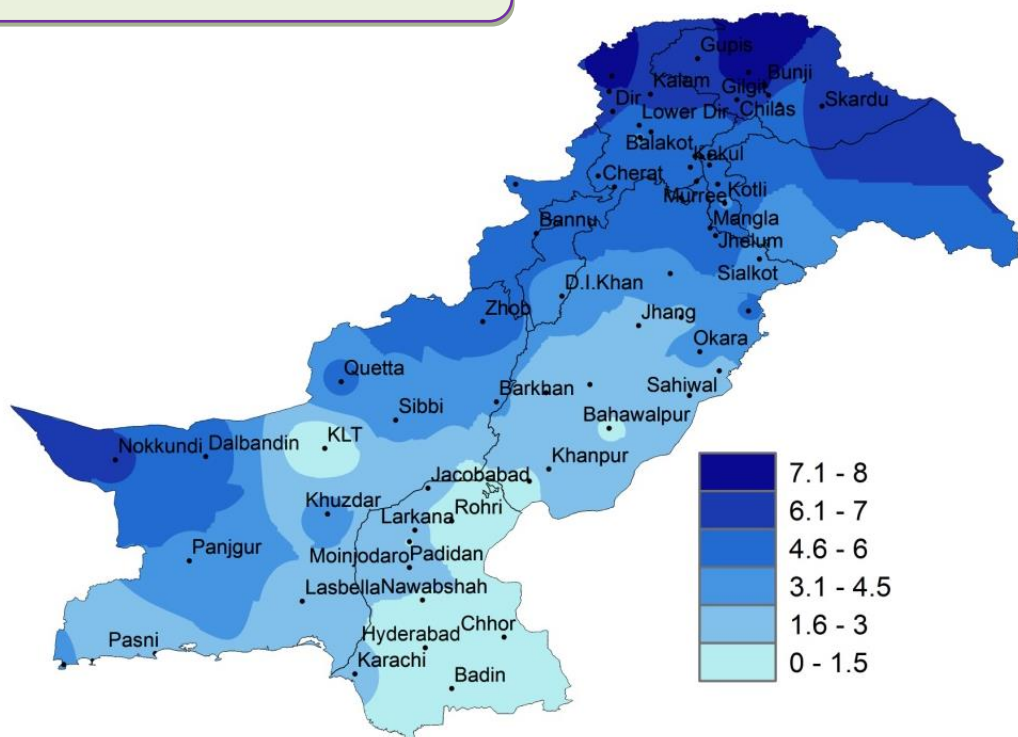
Mean Wind Speed (Knots) at 1700PST during the  
Previous week (from 20<sup>th</sup> to 26<sup>th</sup> March, 2017)



Mean Cloudiness (Oktas) at 0800PST during the  
Previous week (from 20<sup>th</sup> to 26<sup>th</sup> March, 2017)



Mean Cloudiness (Oktas) at 1700PST during the  
Previous week (from 20<sup>th</sup> to 26<sup>th</sup> March, 2017)





**Weekly Weather Advisory for Farmers****(from 27<sup>th</sup> March to 2<sup>nd</sup> April, 2017)**

Continental air is prevailing in most parts of the country. A Shallow westerly wave is likely to approach upper parts of the country on Tuesday.

**MONDAY****27-03-2017**

Mainly dry weather is expected in most parts of the country. However, light rain-thunderstorm is expected at isolated places of Malakand, Hazara, Peshawar, Quetta, Zhob, Rawalpindi divisions, Islamabad, upper FATA and Gilgit-Baltistan. Hot weather is expected in Sindh, south/central Punjab and south Balochistan.

**TUESDAY****28-03-2017**

Mainly dry weather is expected in most parts of the country. However, rain-thunderstorm is expected at isolated places in Kashmir and its adjoining hilly areas. Hot weather is expected in Sindh, south/central Punjab and south Balochistan.

**WEDNESDAY****29-03-2017**

Mainly dry weather is expected in most parts of the country. However, rain-thunderstorm is expected at isolated places in Gilgit-Baltistan and its adjoining hilly areas. Hot weather is expected in Sindh, south/central Punjab and south Balochistan.

**THURSDAY****30-03-2017**

Mainly dry weather is expected in most parts of the country. However, rain-thunderstorm is expected at isolated places in Malakand division, Gilgit-Baltistan, and Kashmir. Hot weather is expected in Sindh, south/central Punjab and south Balochistan.

**FRIDAY****31-03-2017**

Mainly dry weather is expected in most parts of the country. However, rain-thunderstorm is expected at

isolated places in Malakand division, Gilgit-Baltistan, and Kashmir. Hot weather is expected in Sindh, south/central Punjab and south Balochistan.

**SATURDAY****01-04-2017**

Mainly dry weather is expected in most parts of the country. However, rain-thunderstorm is expected at isolated places in Malakand division, Gilgit-Baltistan, and Kashmir. Hot weather is expected in Sindh, south/central Punjab and south Balochistan.

**SUNDAY****02-04-2017**

Mainly dry weather is expected in most parts of the country. However, rain-thunderstorm is expected at isolated places in Malakand division, Gilgit-Baltistan and Kashmir. Hot weather is expected in Sindh, south/central Punjab and south Balochistan.

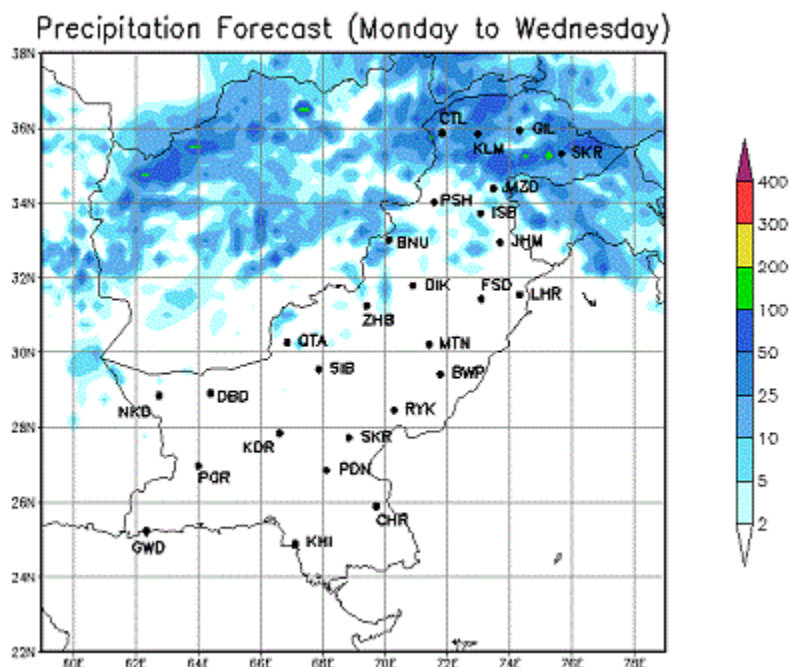
**ADVISES FOR FARMERS**

During the last week, light to moderate rainfall reported from most parts of the country. This may continue in the same manner in coming days in Malakand division, Gilgit-Baltistan and Kashmir. Hot weather is expected in Sindh, south/central Punjab and south Balochistan. Keeping in view the expected weather conditions following advises are suggested for farming community.

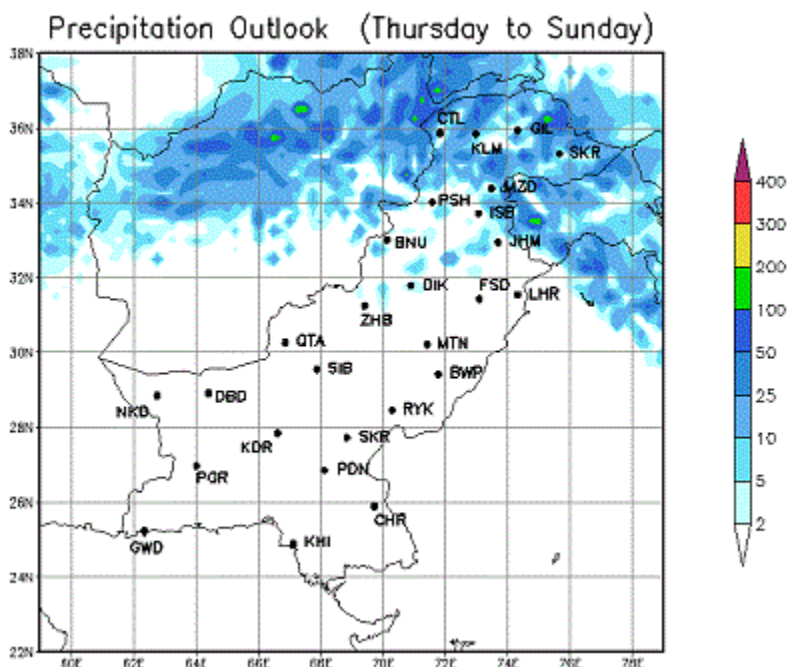
- Removing weeds from the standing crops is very important as weeds utilize moisture and food which may be utilized by the crop. As a result considerable loss in yield occurs every year. However operations against weeds should be started using weedicides or manually when the crop completely covers the fields.
- Harvesting of wheat crop may be initiated in accordance with the expected weather conditions, as windy and rainy conditions may cause hurdles.

## Weather Outlook from 27<sup>th</sup> March to 2<sup>nd</sup> April, 2017

The forecast from 27<sup>th</sup> to 29<sup>th</sup> March, 2017 shows that light to moderate rainfall is expected in upper KP, GB and Kashmir. However, dry weather may prevail in rest of the country.



The outlook from 30<sup>th</sup> March to 2<sup>nd</sup> April, 2017 shows that dry weather is expected in most parts of the country. However, light to moderate rainfall is expected at few places in KP, GB and upper Punjab.



**National Weather Data of Selected Cities**  
**(Weekly Data from 20<sup>th</sup> to 26<sup>th</sup> March, 2017)**

Stations	Maximum/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	1.8	0.0	12.8	59	14.70	4.4	4.9	2.0	16.9
Badin	20.1	19.0	165.0	51	0.00	0.0	0.7	2.3	3.1
Bahawalnagar	17.9	15.0	147.8	48	0.00	0.6	1.9	0.6	1.4
Bahawalpur	17.3	16.1	145.5	54	0.00	1.0	1.4	2.6	1.4
Balakot	11.0	9.7	89.1	55	17.00	4.4	5.9	2.0	0.6
Bannu	13.1	11.0	112.9	56	1.00	3.3	5.1	1.4	3.7
Barkhan	13.7	11.5	113.0	34	0.00	0.7	3.1	0.9	2.6
Bunji	9.9	8.3	70.5	46	0.70	5.7	7.3	1.7	1.1
Cherat	7.8	6.5	53.0	54	7.00	3.6	5.4	3.4	4.3
Chhor	19.7	17.5	171.4	45	0.00	0.0	0.9	2.7	3.4
Chilas	9.4	6.5	75.8	41	4.30	5.4	6.3	2.3	3.4
Chitral	5.9	3.8	48.5	49	38.50	4.2	7.3	1.7	1.4
D.G.Khan	17.4	15.0	138.0	50	0.00	2.3	2.1	3.4	7.7
D.I.Khan	16.2	12.0	134.0	59	0.00	2.6	3.9	0.0	2.3
Dalbandin	13.1	11.0	119.3	27	0.00	2.6	5.0	0.9	4.3
Dir	3.9	2.5	47.5	66	66.00	4.1	6.0	0.0	0.6
Drosh	5.8	4.0	46.8	51	32.00	4.7	7.0	0.9	1.4
Faisalabad	10.9	7.0	127.0	65	0.00	2.0	1.6	0.3	1.6
Garidopatta	11.1	9.0	92.7	61	9.70	3.3	5.3	0.0	0.6
Gawader	19.6	17.0	142.3	71	0.00	2.2	1.9	0.0	8.6
Gilgit	6.9	3.0	58.0	52	1.11	5.4	7.7	0.0	4.0
Gupis	1.4	0.5	18.5	51	14.00	5.4	6.9	1.4	3.1

Hyderabad	20.4	19.5	165.9	45	0.00	0.0	0.9	1.1	5.4
Islamabad	11.5	5.8	103.3	57	0.03	3.1	5.0	0.0	1.1
Jacobabad	20.3	16.5	157.4	44	0.00	0.7	2.1	1.3	2.0
Jhang	16.0	14.5	136.7	56	0.00	2.0	2.6	0.9	0.6
Jhelum	14.8	12.0	128.0	53	0.02	3.3	4.7	1.1	1.1
Jiwani	21.1	19.5	143.3	71	0.00	2.3	3.9	4.3	9.4
Kakul	7.9	6.5	71.1	58	6.00	2.7	4.4	0.0	0.6
Kalam	-0.1	-3.0	10.0	63	68.00	3.9	6.6	0.0	0.0
Karachi	22.1	19.2	165.1	54	0.00	1.6	1.7	4.6	12.3
Khanpur	16.9	15.5	148.4	51	0.00	0.4	2.4	1.4	2.9
Khuzdar	12.9	11.5	112.8	33	0.00	0.0	3.4	1.1	2.3
Kalat	4.7	1.0	55.5	36	0.00	0.0	0.0	0.0	0.0
Kotli	15.0	12.0	117.5	48	0.00	3.6	4.4	3.4	2.6
Lahore	19.1	17.5	144.8	49	0.01	1.7	4.6	1.7	3.7
Larkana	19.3	17.5	159.5	45	0.00	1.0	2.1	2.3	2.9
Lasbella	19.7	18.0	162.8	48	0.00	0.0	2.6	0.3	8.6
Lower Dir	12.9	10.5	92.0	59	51.00	3.7	5.1	2.3	0.9
M.B Din	15.6	13.5	135.5	57	0.00	3.3	4.1	0.3	0.9
Malam Jabba	2.6	1.0	17.5	68	70.00	4.4	5.9	0.3	0.3
Mangla	14.4	11.1	123.9	50	0.01	4.0	5.4	1.4	2.3
Mir Khani	4.5	4.0	47.2	61	34.30	4.0	6.1	1.7	4.4
Moinjodaro	16.1	13.5	146.5	49	0.00	0.0	1.4	1.0	3.1
Multan(PBO)	18.4	16.5	145.1	50	0.00	2.7	2.1	3.7	18.6
Murree	7.2	5.0	54.3	54	2.20	3.9	5.0	1.4	2.3
Muzaffarabad	8.6	6.8	78.4	63	23.00	3.0	4.9	0.4	0.0
Nawabshah	17.8	15.0	164.5	41	0.00	0.3	1.4	1.9	4.9



Nokkundi	17.8	16.0	135.5	18	0.01	4.5	6.1	1.3	4.0
Okara	17.6	15.5	143.1	56	0.00	0.9	3.4	0.9	1.4
Padidan	17.9	16.5	155.8	50	0.00	0.6	1.9	1.4	2.3
Panjgur	14.9	14.5	126.0	36	0.00	0.7	4.3	0.0	13.1
Parachinar	3.3	1.5	27.5	77	62.00	6.3	5.7	3.0	3.0
Pasni	19.4	18.0	141.8	70	0.00	1.4	2.4	0.0	9.0
Pattan	11.8	8.5	84.0	56	61.00	2.3	5.1	0.3	0.0
Peshawar	14.8	12.5	111.2	61	16.10	4.1	5.5	1.4	3.3
Quetta	10.8	7.6	78.0	45	3.80	3.7	5.1	3.2	3.1
Rahim Yar Khan	18.5	15.7	157.8	51	0.00	0.3	1.1	1.4	2.9
Rawalakot	5.2	1.7	57.2	62	0.61	3.6	4.7	0.0	0.3
Rawalpindi	13.2	11.0	107.0	56	0.10	2.1	3.7	0.5	2.3
Rohri	21.4	17.5	165.5	42	0.00	0.0	0.0	0.9	1.7
Sahiwal	17.0	14.0	139.4	54	0.00	0.9	2.9	1.4	2.0
Saidu Sharif	10.9	9.5	83.6	61	43.61	4.1	4.1	0.0	0.0
Sialkot	15.3	12.2	124.4	59	0.00	3.1	4.1	0.6	1.7
Sibbi	16.5	15.0	144.3	40	0.00	1.3	3.4	0.0	0.0
Skardu	3.2	2.0	25.4	59	11.00	7.0	6.7	0.0	2.6
Tandojam	18.0	14.5	156.5	36	0.00	0.0	0.3	0.2	1.6
Usta.M	14.6	14.0	133.0	52	0.00	0.6	1.2	0.0	0.9
Zhob	8.2	7.0	79.5	38	0.00	4.0	5.7	5.0	5.6

\*\*\* 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)