

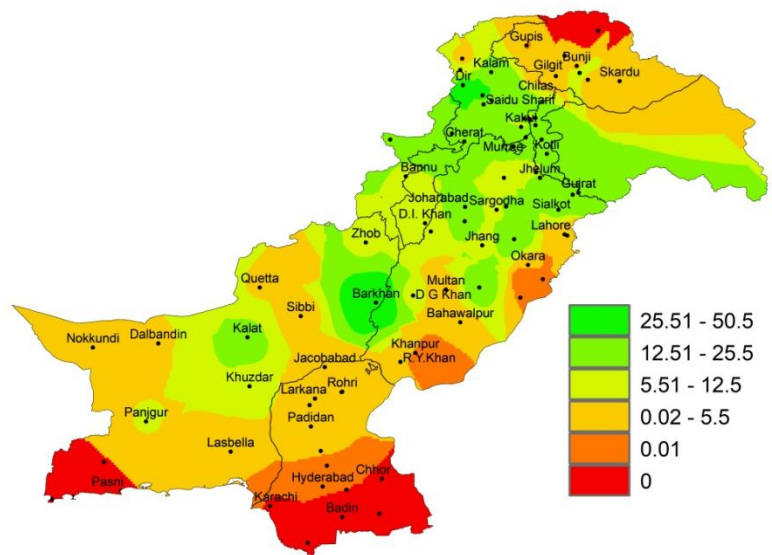
Weekly Weather and Crop Bulletin for Pakistan

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**Rainfall Distribution (mm) during the Previous
Week (18th March to 24th March, 2019)**



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Highlights of Past Weather (18th March to 24th March, 2019)

Above normal night time temperatures were observed all over the country except Khyber Pakhtunkhwa where below normal night time temperatures were observed during the last week.

Province wise distribution of rainfall reported as follows:

- Light to moderate rainfall observed almost all over the country.

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

Editor-in-Chief: Dr M. Afzaal Karori (Director)

Editor: Saeeda Saleh (Assistant Meteorologist)

Past Weather of Provinces (18th March to 24th March, 2019)**Punjab**

Light to moderate rainfall observed in Punjab during the week. Weekly maximum and minimum temperatures recorded as 26.3°C & 13.1°C respectively. For the recent week on average 102.9 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 58% and wind speed in the morning/evening recorded as 3.3/4.0 Knots. During the previous the highest precipitation was recorded as 24.01 mm at Faisalabad while the lowest minimum temperature was recorded as 03°C at Murree.

Baluchistan

Light to moderate rainfall observed in Baluchistan during the week. Weekly maximum and minimum temperatures recorded as 25.3°C & 13.5°C respectively. For the recent week on average 100.3 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 53% and wind speed in the morning/evening recorded as 1.8/6.0 Knots. During the previous week the highest precipitation recorded as 50.00 mm at Barkhan while the lowest minimum temperature was recorded as 02°C at Kalat.

Khyber Pakhtunkhwa

Light to moderate rainfall observed in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 18.6°C & -5.4°C respectively. For the recent week on average 51.4 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 70% and wind speed in the morning/evening recorded as 0.9/1.4 Knots. During the previous week the highest precipitation recorded as 31.00 mm at Dir while the lowest minimum temperature was recorded as -6.0°C at Kalam.

Gilgit-Baltistan and Azad Jammu & Kashmir

Light to moderate rainfall observed in Gilgit-Baltistan & Kashmir during the week. Weekly maximum and minimum temperatures recorded as 17.2°C & 4.9°C respectively. For the recent week on average 49.9 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 51% and wind speed in the morning/evening recorded as 1.1/3.3 Knots. During the previous week the highest precipitation recorded as 22.7 mm at Rawalakot while the lowest minimum temperature was recorded as -2.0°C at Astore.

Sindh

Light rainfall observed in Sindh during the week. Weekly maximum and minimum temperatures recorded as 32.5°C & 17.7°C respectively. For the recent week, on average 139.9 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 2.4/2.7 Knots. During the previous week the highest precipitation recorded as 4.01mm at Jacobabad while lowest minimum temperature was recorded as 13.0°C at Padidan.

Past Weather for Major Agricultural Plains (17th March to 24th March, 2019)

Rawalpindi (Potohar region)

11.2 mm rainfall reported from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 3.7/4.3 Oktas while, average relative humidity observed as 68%. Mean night time temperature recorded as 9.2°C & for the recent week 80.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/0.3 Knots.

Faisalabad (Central Punjab)

30.00mm rainfall reported from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 2.9/3.3 Oktas while, average relative humidity observed as 58%. Mean night time temperature recorded as 13.5°C & for the recent week 108.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.6/1.6 Knots.

Tandojam (Lower Sindh)

Dry weather reported from Tandojam during the week; however, cloudiness in the morning/evening recorded as 0.0/0.7 Oktas while, average relative humidity observed as 54%. Mean night time temperature recorded as 15.7°C & for the recent week 137.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.8/1.7 Knots.

Usta Muhammad (Eastern Baluchistan)

Dry weather reported from Usta Muhammad during the week; however, cloudiness in the morning/evening recorded as 2.7/2.0 Oktas while, average relative humidity observed as 62%. Mean night time temperature recorded as 14.4°C & for the recent week 110.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/1.1 Knots.

Quetta (Northern Baluchistan)

0.8mm rainfall reported from Quetta during the week; however, cloudiness in the morning/evening recorded as 3.7/5.4 Oktas while, average relative humidity observed as 48%. Mean night time temperature recorded as 7.8°C & for the recent week

50.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.2/3.8 Knots.

Past Weather for Sub-Regional Agricultural Plains (17th March to 24th March, 2019)

Multan

0.22mm rainfall reported from Multan during the week; however, cloudiness in the morning/evening recorded as 4.0/2.6 Oktas while, average relative humidity observed as 62%. Mean night time temperature recorded as 15.3°C & for the recent week 115.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 4.0/4.8 Knots.

Lahore

0.23 mm rainfall was reported from Lahore during the week; however, however, cloudiness in the morning/evening recorded as 3.1/3.2 Oktas while, average relative humidity observed as 55%. Mean night time temperature recorded as 15.8°C & for the recent week 115.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.3/4.7 Knots.

Zhob

9.00 mm rainfall was reported from Zhob during the week; however, cloudiness in the morning/evening recorded as 4.0/4.9 Oktas while, average relative humidity observed as 53%. Mean night time temperature recorded as 6.9°C & for the recent week 57.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 4.3/5.3 Knots.

Murree

23.71 mm rainfall was reported from Murree during the week; however, cloudiness in the morning/evening recorded as 4.6/5.3 Oktas while, average relative humidity observed as 58%. Mean night time temperature recorded as 5.7° C & for the recent week 31.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 3.7/2.6 Knots.

D.I. Khan

7.00 mm rainfall was reported from D.I. Khan during the week; however, cloudiness in the

morning/evening recorded as 3.4/3.7 Oktas while, average relative humidity observed as 68%. Mean night time temperature recorded as 13.6°C & for the recent week 103.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/1.7 Knots.

Peshawar

16.41 mm rainfall was reported from Peshawar during the week; however, cloudiness in the morning/evening recorded as 4.4/6.3 Oktas while, average relative humidity observed as 63%. Mean night time temperature recorded as 11.6°C & for the recent week 72.6 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/1.7 Knots.

Kalam

17.50mm rainfall was reported from Kalam during the week; however, cloudiness in the morning/evening recorded as 2.6/6.4 Oktas while, average relative humidity observed as 75%. Mean night time temperature recorded as -4.6°C by the end of last week. Calm weather recorded in the morning/evening.

Gilgit

Dry weather was reported from Gilgit during the week; However, cloudiness in the morning/evening recorded as 5.1/7.3 Oktas while, average relative humidity observed as 40%. Mean night time temperature recorded as 6.5°C & for the recent week 56.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.6/4.9 Knots.

Skardu

Dry weather was reported from Skardu during the week; however, cloudiness in the morning/evening recorded as 4.1/6.1 Oktas while, average relative humidity observed as 47%. Mean night time temperature recorded as 1.4°C by the end of last week. Wind speed recorded in the morning/evening as 0.3/3.7 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)

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

Wheat: *Very Good*, flowering stage completed.

Lower Sindh (Tandojam)

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

Wheat (TJ-83): *harvested on 17th March.*

Northern Baluchistan (Quetta)

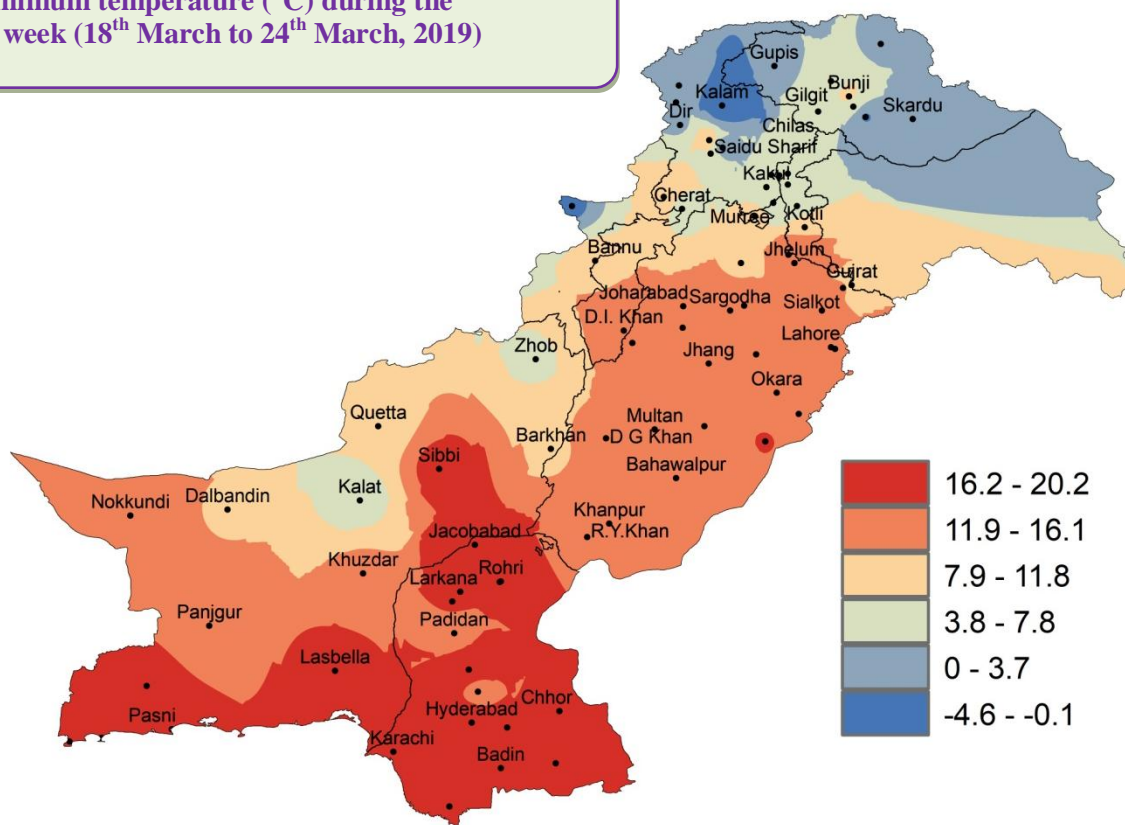
There is presently no crop grown in the fields of RAMC Quetta.

Eastern Baluchistan (Usta Muhammad)

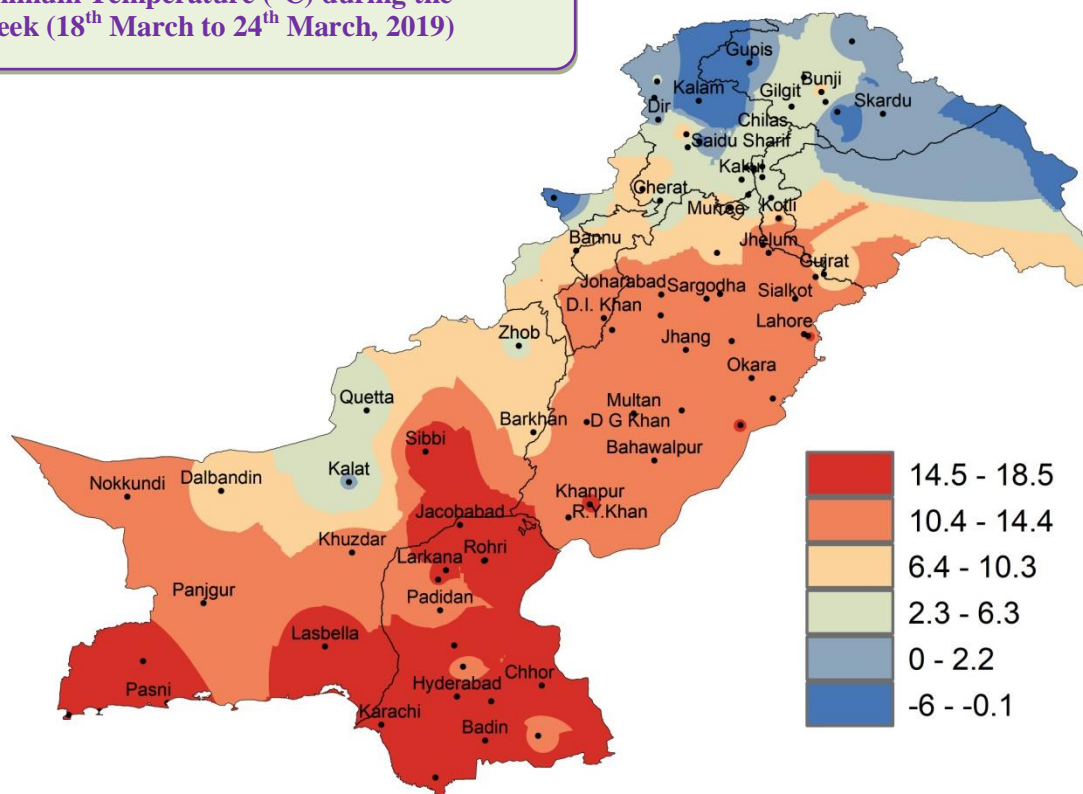
Presently wheat crop is sown in the fields of RAMC Usta Muhammad.

Wheat: *Good*, flowering stage.

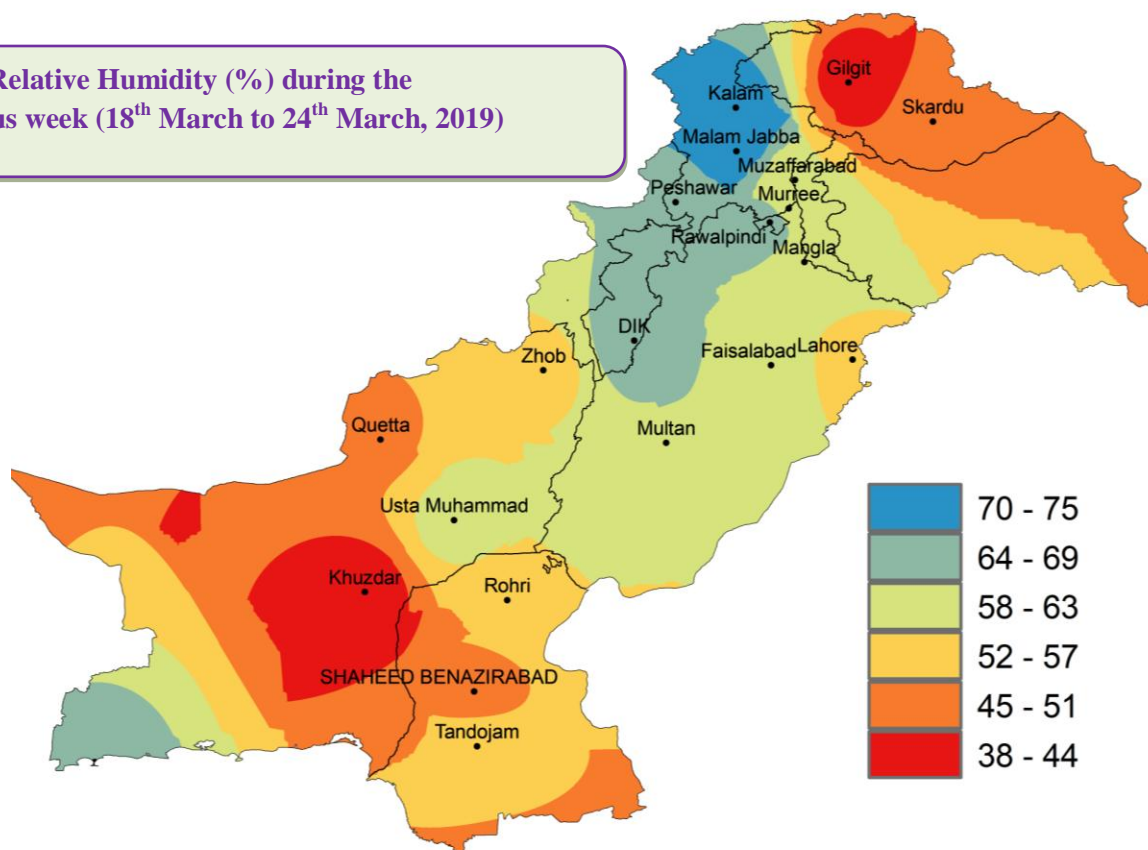
**Mean Minimum temperature (°C) during the
Previous week (18th March to 24th March, 2019)**



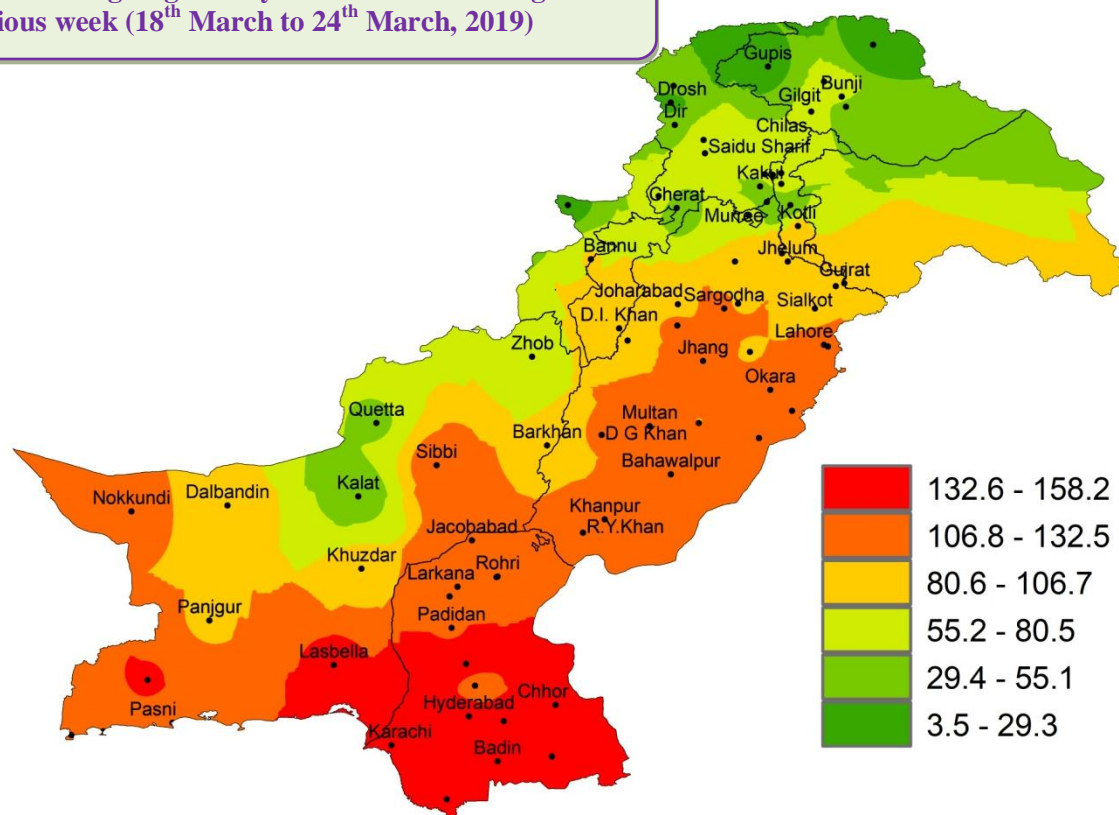
**Lowest Minimum Temperature (°C) during the
Previous week (18th March to 24th March, 2019)**



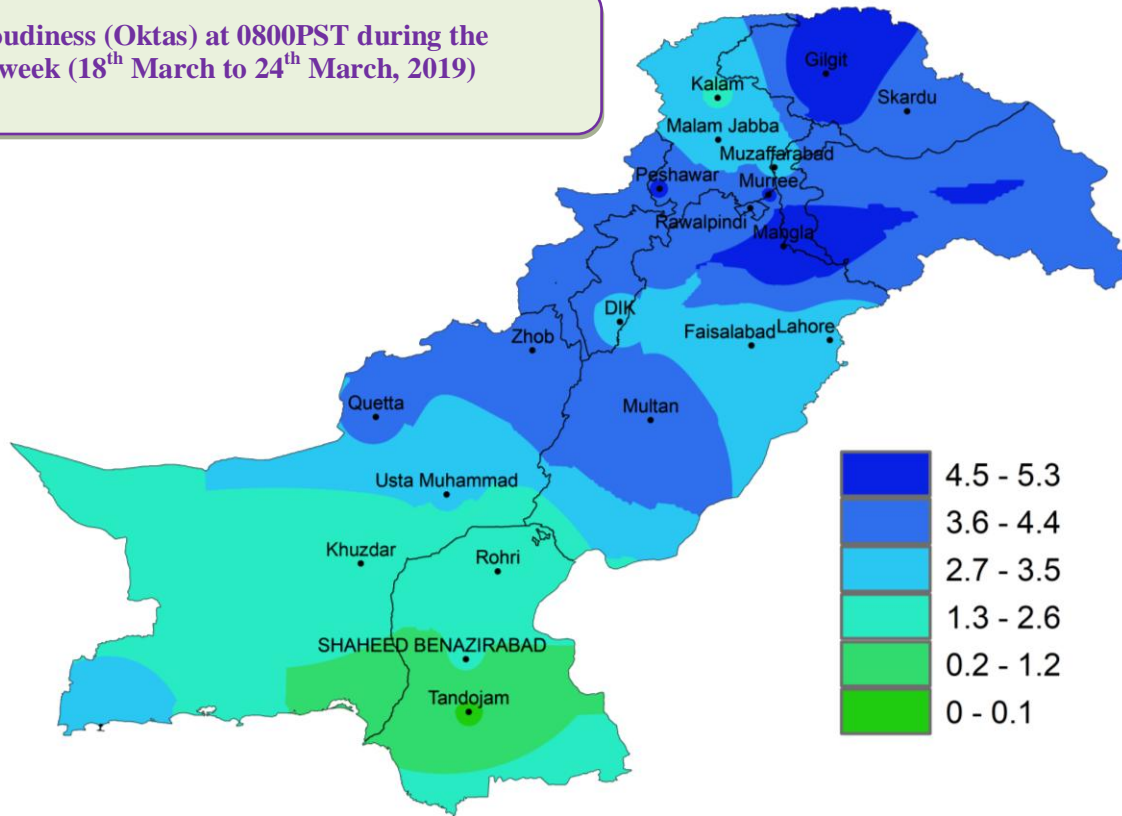
Mean Relative Humidity (%) during the
Previous week (18th March to 24th March, 2019)



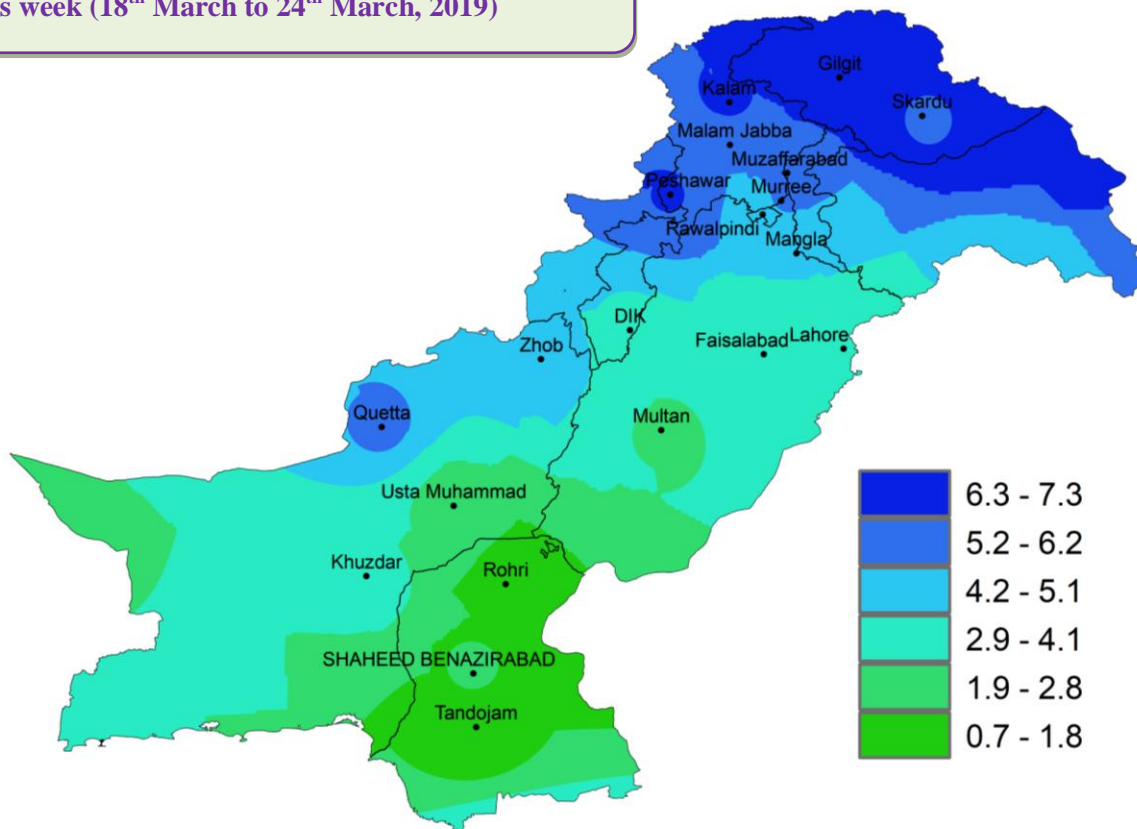
Total Growing Degree Days accumulated during the
Previous week (18th March to 24th March, 2019)



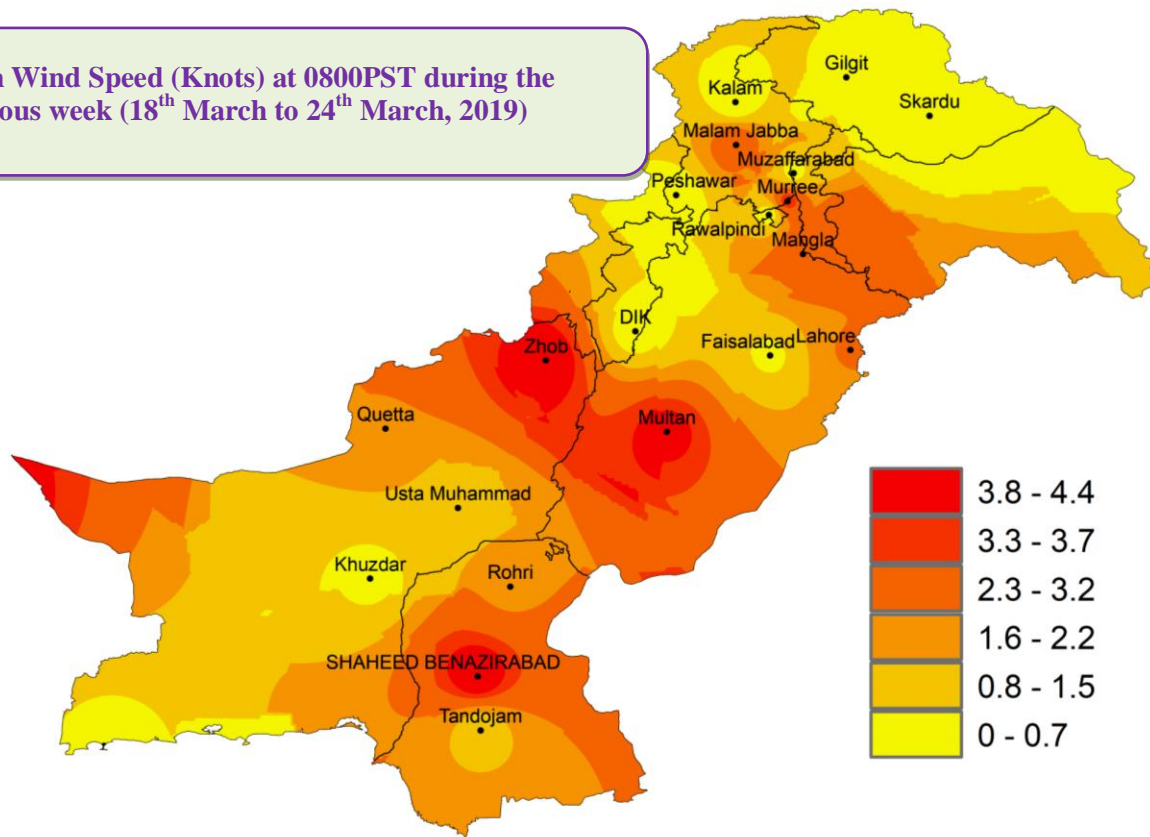
Mean Cloudiness (Oktas) at 0800PST during the Previous week (18th March to 24th March, 2019)



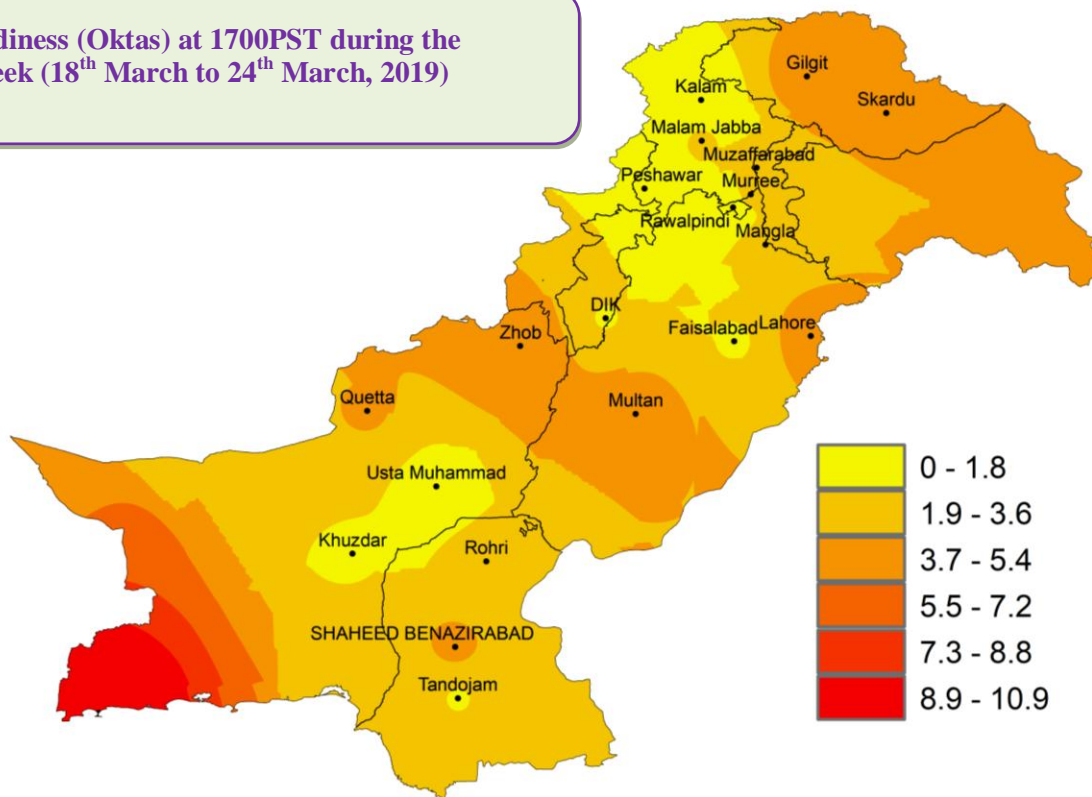
Mean Wind Speed (Knots) at 1700PST during the Previous week (18th March to 24th March, 2019)



Mean Wind Speed (Knots) at 0800PST during the Previous week (18th March to 24th March, 2019)



Mean Cloudiness (Oktas) at 1700PST during the Previous week (18th March to 24th March, 2019)



Weekly Weather Advisory for Farmers
(25th March to 31st March, 2019)

Continental air is prevailing over most parts of the country. A shallow westerly wave is likely affect upper parts of the country on Friday.

MONDAY**25-03-2019**

Mainly dry weather is expected in most parts while cold in northern areas of the country.

TUESDAY**26-03-2019**

Mainly dry weather is expected in most parts while cold in northern areas of the country.

WEDNESDAY**27-03-2019**

Mainly dry weather is expected in most parts while cold in northern areas of the country.

THURSDAY**28-03-2019**

Mainly dry weather is expected in most parts while cold in northern areas of the country. However, rain thunderstorm is expected at isolated places in Quetta, Zhob divisions.

FRIDAY**29-03-2019**

Mainly dry weather is expected in most parts of the country. However, rain thunderstorm is expected at isolated places in Malakand, Hazara, Peshawar,

Kohat, Bannu, Rawalpindi, Sargodha, Gujranwala divisions, Islamabad Kashmir and Gilgit-Baltistan.

SATURDAY**30-03-2019**

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

SUNDAY**31-03-2019**

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.

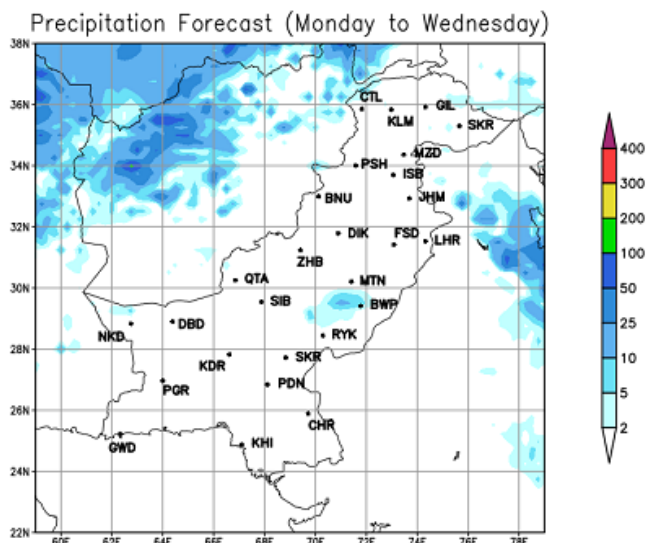
ADVISES FOR FARMERS

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.

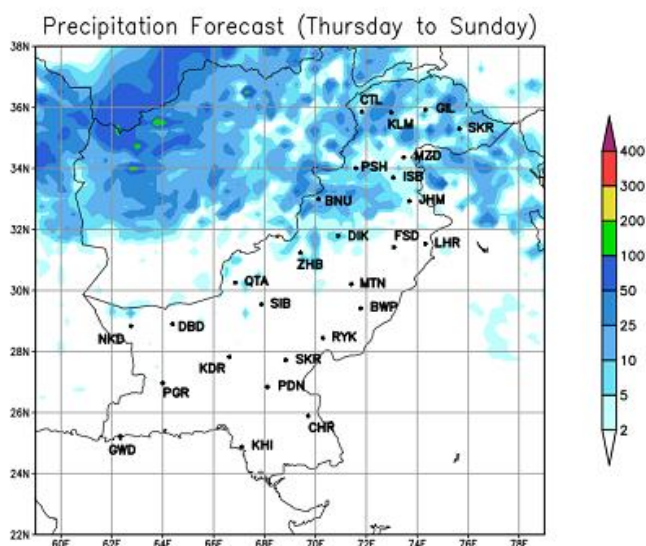
- Farmers are advised to use ensured the proper removal of weeds from the Rabi crops.
- Precautions should be taken to keep the nurseries & vegetables from severe frost conditions.
- Irrigate the crops when needed.

Weather Outlook from 25th March to 31st March, 2019

The outlook from 25th March to 27th March, 2019 shows that dry weather is expected all over the country except isolated place of lower Punjab.



The outlook from 28th March to 31st March, 2019 shows that light to moderate rainfall is expected in Upper half of the country. However, dry weather will prevail over rest of the country.



National Weather Data of Selected Cities Weekly Data from 18th March to 24th March, 2019

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							
D.I.Khan	13.6	12.0	103.3	68	7.00	3.4	3.7	0.3	1.7
Faisalabad	13.5	1.5	108.5	58	30.00	2.9	3.3	0.6	1.6
Gawader	16.2	14.5	122.0	67	0.00	2.9	3.0	0.6	10.9
Gilgit	6.5	4.0	56.5	40	0.00	5.1	7.3	0.6	4.9
Kalam	-4.6	-6.0	-6.7	75	17.50	2.6	6.4	0.0	0.0
Khuzdar	13.3	12.5	89.5	38	11.40	1.7	3.3	0.6	1.7
Lahore	15.8	14.8	115.9	55	0.23	3.1	3.2	2.3	4.7
Malam Jabba	-0.7	-2.0	***	73	22.00	3.1	5.3	3.1	2.0
Mangla	12.0	10.3	97.1	60	7.92	5.3	4.1	3.1	2.6
Multan (PBO)	15.3	13.5	115.0	62	0.22	4.0	2.6	4.0	4.8
Murree	5.7	3.0	31.0	58	23.71	4.6	5.3	3.7	2.6
Muzaffarabad	4.6	4.0	54.1	57	10.00	3.1	5.4	0.4	2.0
Nawabshah	11.6	9.5	72.6	63	16.41	4.4	6.3	0.3	1.7
Peshawar	7.8	5.0	50.8	48	0.80	3.7	5.4	2.2	3.8
Quetta	9.2	8.5	80.5	68	11.20	3.7	4.3	0.3	0.3
Rawalakot	16.9	16.0	129.3	54	1.02	2.0	1.6	2.0	2.3
Rawalpindi	1.4	0.2	***	47	0.00	4.1	6.1	0.3	3.7
Rohri	18.6	17.5	156.5	48	0.01	1.3	2.0	4.4	4.0
Skardu	15.7	13.0	137.0	54	0.00	0.0	0.7	0.8	1.7
Tandojam	14.4	14.0	110.8	62	0.00	2.7	2.0	1.1	1.1
Usta.M	6.9	6.0	57.0	53	9.00	4.0	4.9	4.3	5.3
Zhob	13.6	12.0	103.3	68	7.00	3.4	3.7	0.3	1.7

*** 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)