

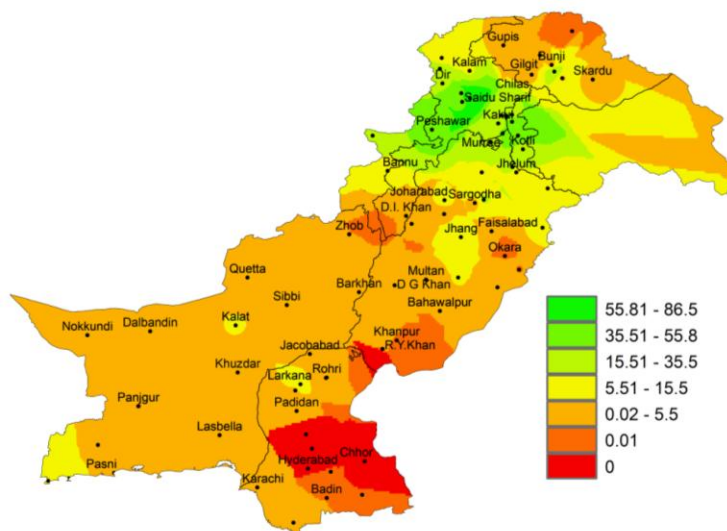
Weekly Weather and Crop Bulletin for Pakistan

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**Rainfall Distribution (mm) during the Previous
Week (11th March to 17th March, 2019)**



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Highlights of Past Weather (11th March to 17th March, 2019)

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

Province wise distribution of rainfall reported as follows:

- Light to moderate rainfall observed all over the country.

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Past Weather of Provinces (11th March to 17th March, 2019)**Punjab**

Light to moderate rainfall observed in Punjab during the week. Weekly maximum and minimum temperatures recorded as 23.6°C & 10.5°C respectively. For the recent week on average 84.5 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 64% and wind speed in the morning/evening recorded as 1.8/3.4 Knots. During the previous the highest precipitation was recorded as 39.01 mm while the lowest minimum temperature was recorded as -1.0°C at Murree.

Baluchistan

Light to moderate rainfall observed in Baluchistan during the week. Weekly maximum and minimum temperatures recorded as 22.6°C & 10.0°C respectively. For the recent week on average 70.0 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 50% and wind speed in the morning/evening recorded as 1.3/4.1 Knots. During the previous week the highest precipitation recorded as 17.3 mm at Khuzdar while the lowest minimum temperature was recorded as -3.0°C at Kalat.

Khyber Pakhtunkhwa

Light to moderate rainfall observed in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 16.9°C & -3.3°C respectively. For the recent week on average 43.5 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 71% and wind speed in the morning/evening recorded as 1.3/1.6 Knots. During the previous week the highest precipitation recorded as 86.00 mm at MalamJabba while the lowest minimum temperature was recorded as -7.0°C at MalamJabba.

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 15.0°C & 2.9°C respectively. For the recent week on average 41.2 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 57% and wind speed in the morning/evening recorded as 1.0/2.0 Knots. During the previous week the highest precipitation recorded as 54.41 mm at Rawalakot while the lowest minimum temperature was recorded as -5.5°C at Astore.

Sindh

Light to moderate rainfall observed in Sindh during the week. Weekly maximum and minimum temperatures recorded as 28.4°C & 14.2°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 58% and wind speed in the morning/evening recorded as 1.0/1.6 Knots. During the previous week the highest precipitation recorded as 8.00mm at Larkana while lowest minimum temperature was recorded as 08°C at Dadu.

Past Weather for Major Agricultural Plains (11th March to 17th March, 2019)

Rawalpindi (Potohar region)

16.6 mm rainfall reported from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 4.4/4.4 Oktas while, average relative humidity observed as 71%. Mean night time temperature recorded as 6.6°C & for the recent week 62.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/0.9 Knots.

Faisalabad (Central Punjab)

0.01mm rainfall reported from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 2.3/2.6 Oktas while, average relative humidity observed as 59%. Mean night time temperature recorded as 11.1°C & for the recent week 91.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/1.6 Knots.

Tandojam (Lower Sindh)

Dry weather reported from Tandojam during the week; however, cloudiness in the morning/evening recorded as 1.0/1.1 Oktas while, average relative humidity observed as 56%. Mean night time temperature recorded as 13.0°C & for the recent week 111.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.8/1.1 Knots.

Usta Muhammad (Eastern Baluchistan)

2.0mm rainfall reported from Usta Muhammad during the week; however, cloudiness in the morning/evening recorded as 1.4/1.0 Oktas while, average relative humidity observed as 68%. Mean night time temperature recorded as 13.4°C & for the recent week 100.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.8/0.5 Knots.

Quetta (Northern Baluchistan)

1.9mm rainfall reported from Quetta during the week; however, cloudiness in the morning/evening recorded as 3.1/4.7 Oktas while, average relative humidity observed as 55%. Mean night time temperature recorded as 3.4°C & for the recent week

24.7 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.1/3.3 Knots.

Past Weather for Sub-Regional Agricultural Plains (11th March to 17th March, 2019)

Multan

0.01mm rainfall reported from Multan during the week; however, cloudiness in the morning/evening recorded as 2.3/3.8 Oktas while, average relative humidity observed as 67%. Mean night time temperature recorded as 12.9°C & for the recent week 64.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.5/5.0 Knots.

Lahore

8.71 mm rainfall was reported from Lahore during the week; however, however, cloudiness in the morning/evening recorded as 3.1/4.3 Oktas while, average relative humidity observed as 60%. Mean night time temperature recorded as 13.2°C & for the recent week 96.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.9/3.7 Knots.

Zhob

Dry weather was reported from Zhob during the week; however, cloudiness in the morning/evening recorded as 2.4/4.1 Oktas while, average relative humidity observed as 49%. Mean night time temperature recorded as 4.7°C & for the recent week 41.4 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 4.0/5.0 Knots.

Murree

39.01 mm rainfall was reported from Murree during the week; however, cloudiness in the morning/evening recorded as 2.4/6.6 Oktas while, average relative humidity observed as 65%. Mean night time temperature recorded as 0.8° C & for the recent week 5.4 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.0/1.4 Knots.

D.I. Khan

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

morning/evening recorded as 2.0/2.0 Oktas while, average relative humidity observed as 68%. Mean night time temperature recorded as 10.9°C & for the recent week 89.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.9/1.7 Knots.

Peshawar

52.01 mm rainfall was reported from Peshawar during the week; however, cloudiness in the morning/evening recorded as 3.6/3.7 Oktas while, average relative humidity observed as 65%. Mean night time temperature recorded as 8.9°C & for the recent week 73.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.6/1.7 Knots.

Kalam

11.50mm rainfall was reported from Kalam during the week; however, cloudiness in the morning/evening recorded as 4.0/4.9 Oktas while, average relative humidity observed as 75%. Mean night time temperature recorded as -5.4°C by the end of last week. Calm weather recorded in the morning/evening.

Gilgit

0.01mm rainfall was reported from Gilgit during the week; However, cloudiness in the morning/evening recorded as 5.7/4.4 Oktas while, average relative humidity observed as 40%. Mean night time temperature recorded as 5.0°C & for the recent week 43.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/3.1 Knots.

Skardu

0.01mm rainfall was reported from Skardu during the week; however, cloudiness in the morning/evening recorded as 6.1/5.6 Oktas while, average relative humidity observed as 55%. Mean night time temperature recorded as -0.6°C & for the recent week 0.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/0.9 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, heading 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)

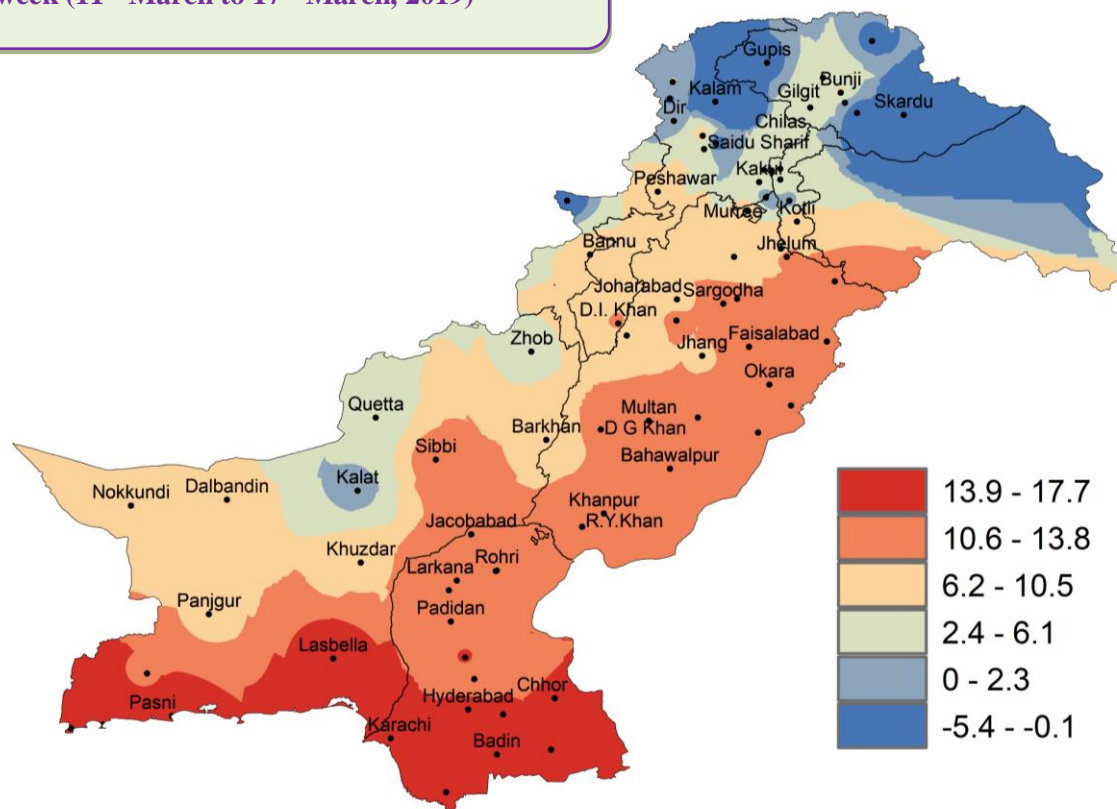
There is presently no crop grown in the fields of RAMC Quetta.

Eastern Baluchistan (Usta Muhammad)

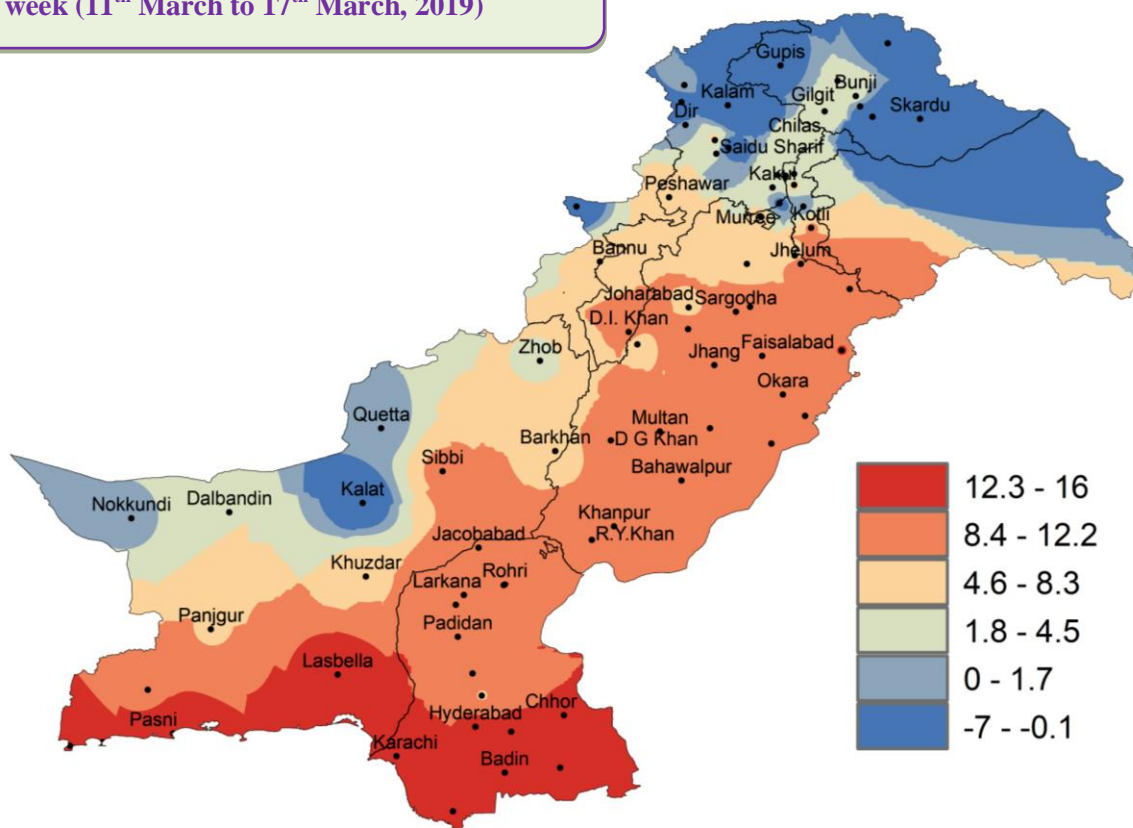
Presently wheat crop is sown in the fields of RAMC Usta Muhammad.

Wheat: *Good, Shooting stage.*

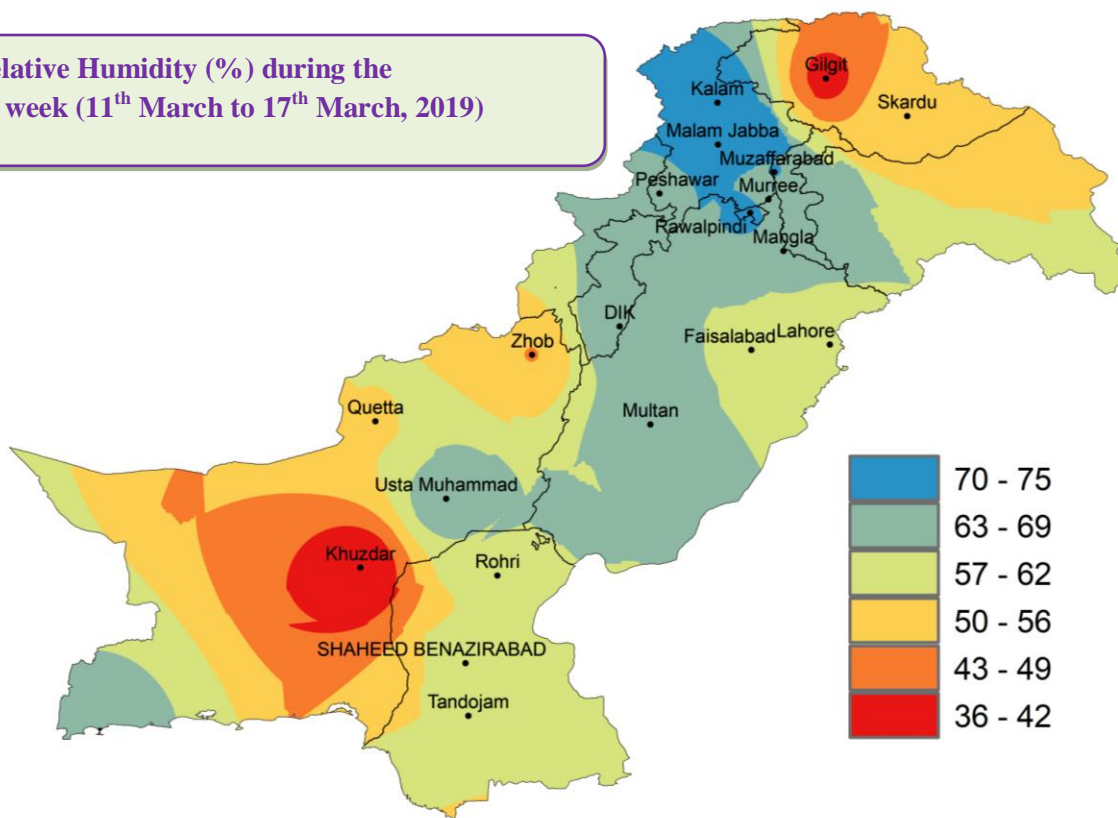
**Mean Minimum temperature (°C) during the
Previous week (11th March to 17th March, 2019)**



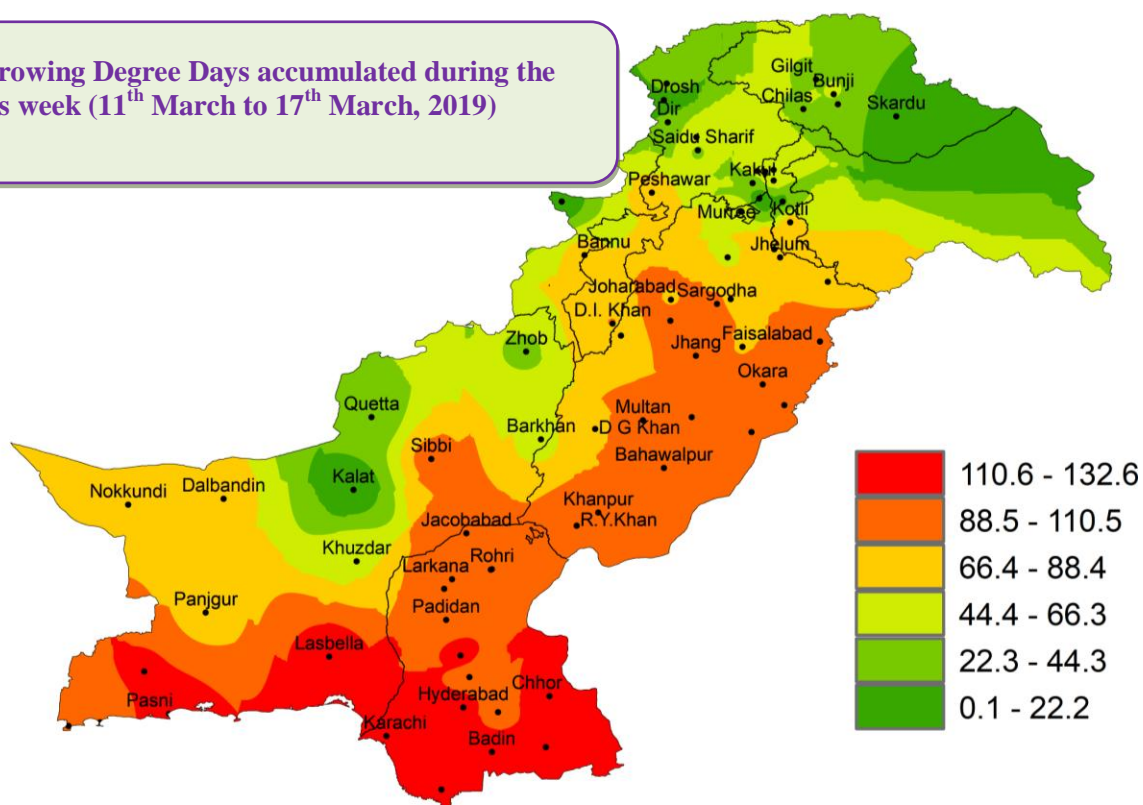
**Lowest Minimum Temperature (°C) during the
Previous week (11th March to 17th March, 2019)**



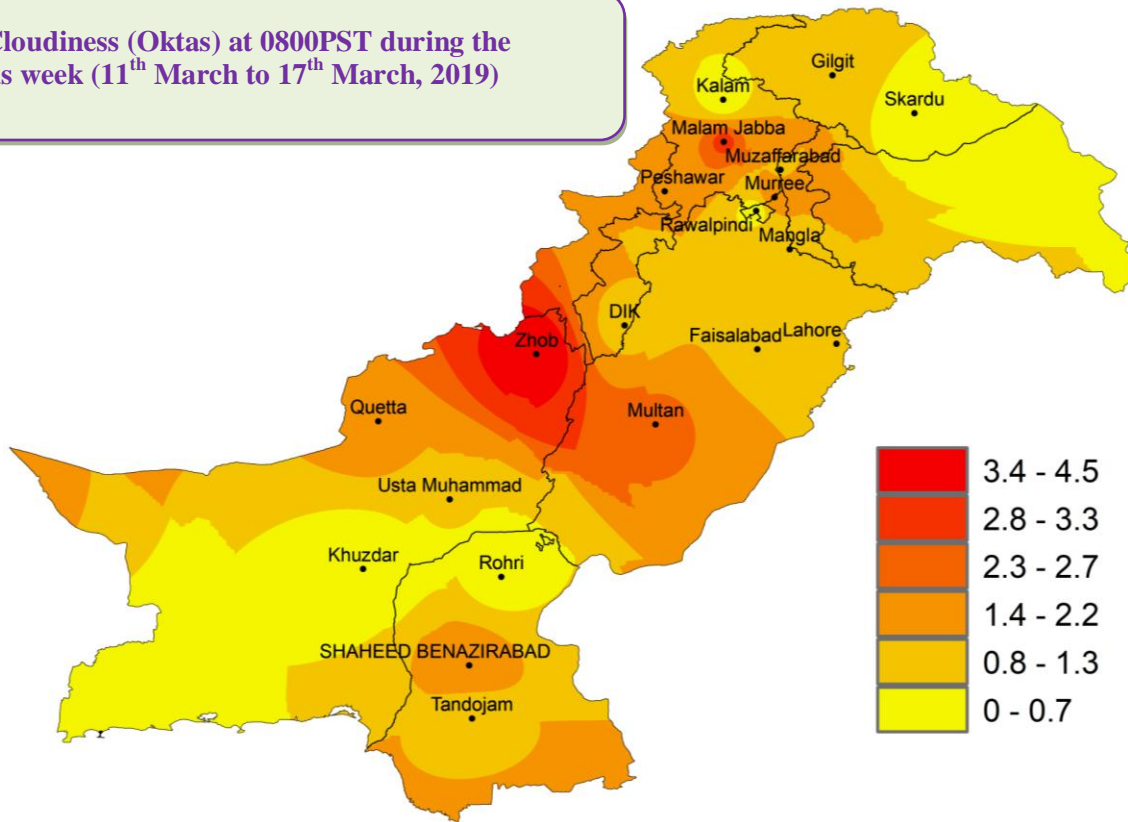
Mean Relative Humidity (%) during the
Previous week (11th March to 17th March, 2019)



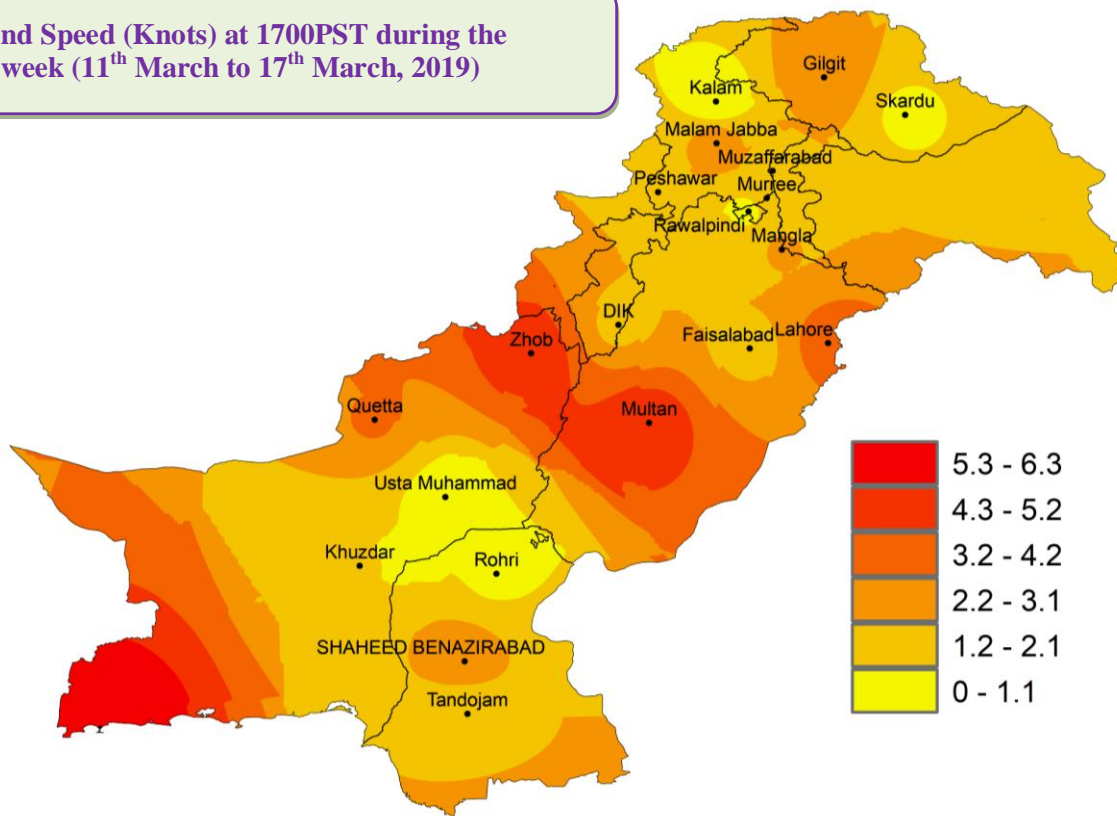
Total Growing Degree Days accumulated during the
Previous week (11th March to 17th March, 2019)



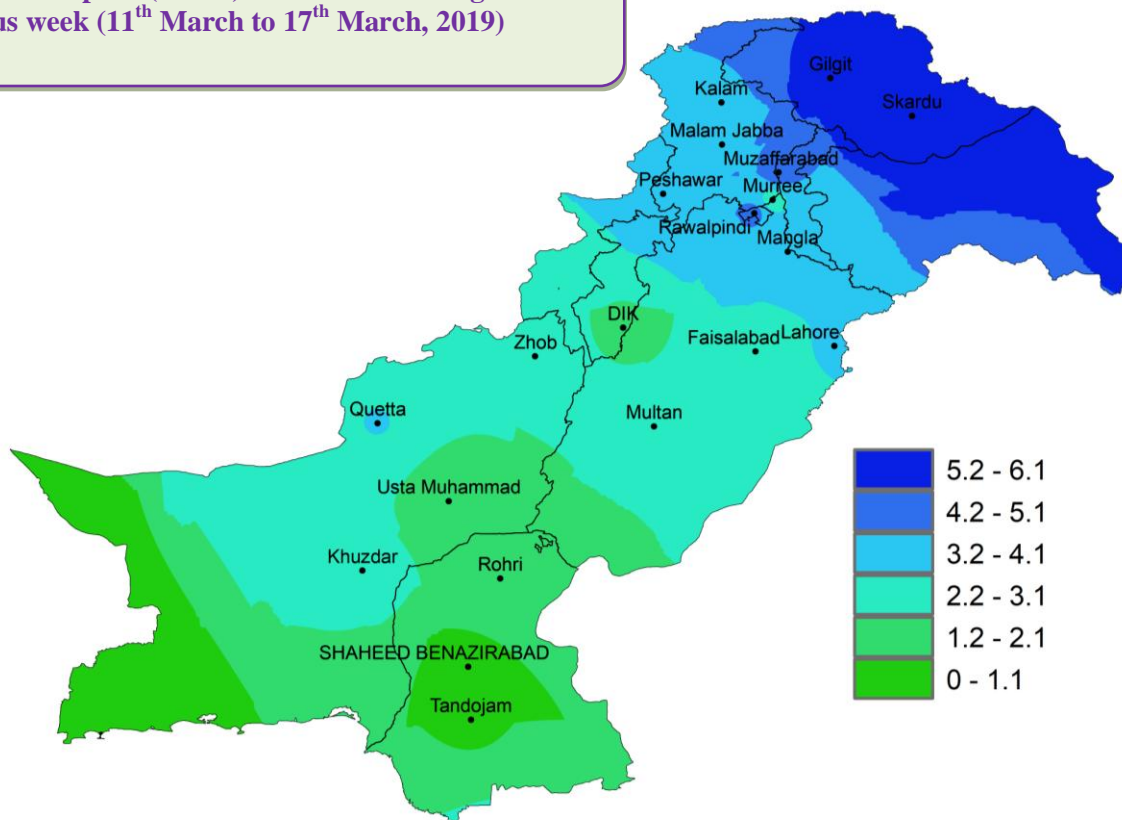
Mean Cloudiness (Oktas) at 0800PST during the Previous week (11th March to 17th March, 2019)



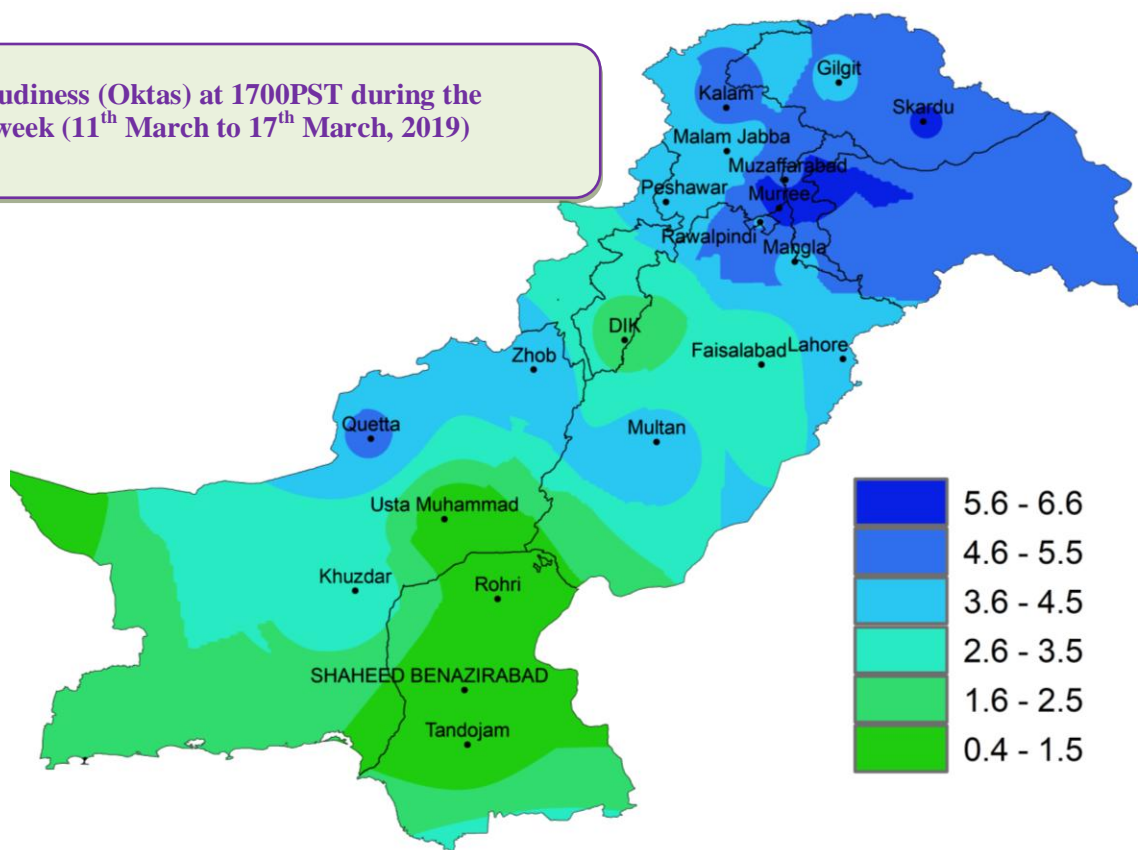
Mean Wind Speed (Knots) at 1700PST during the Previous week (11th March to 17th March, 2019)



Mean Wind Speed (Knots) at 0800PST during the Previous week (11th March to 17th March, 2019)



Mean Cloudiness (Oktas) at 1700PST during the Previous week (11th March to 17th March, 2019)



Weekly Weather Advisory for Farmers
(18th March to 24th March, 2019)

A westerly wave is affecting western parts of the country and likely to affect upper parts on Tuesday and Wednesday.

MONDAY

18-03-2019

Cloudy weather conditions are expected in most parts of the country. However, rain-thunderstorm with light snowfall over the hills is expected at isolated places in Quetta, Zhob, Kalat, Kohat divisions and Kashmir.

TUESDAY

19-03-2019

Cloudy weather conditions are expected in upper parts of the country. However, rain-thunderstorm with light snowfall over the hills is expected at isolated places in Malakand, Hazara, Peshawar, Kohat, Bannu, Rawalpindi, Gujranwala, Sargodha divisions, Islamabad, Kashmir and Gilgit Baltistan.

WEDNESDAY

20-03-2019

Mainly cold and dry weather is expected in most parts of the country. However, rain/thunderstorm (with light snowfalls over the hills) is expected at isolated places in Malakand, Hazara, Rawalpindi, Gujranwala divisions, Kashmir and Gilgit Baltistan.

THURSDAY

21-03-2019

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

FRIDAY

22-03-2019

Mainly cold and dry weather is expected in most parts of the country. However, rain/thunderstorm is expected at isolated places in Malakand, Kohat, Quetta and Zhob divisions.

SATURDAY

23-03-2019

Mainly dry weather is expected in most parts of the country. However, rain/thunderstorm is expected at isolated places in Quetta division.

SUNDAY

24-03-2019

Mainly dry weather is expected in most parts of the country. However, rain thunderstorm is expected at isolated places in Quetta, Kalat and Zhob divisions.

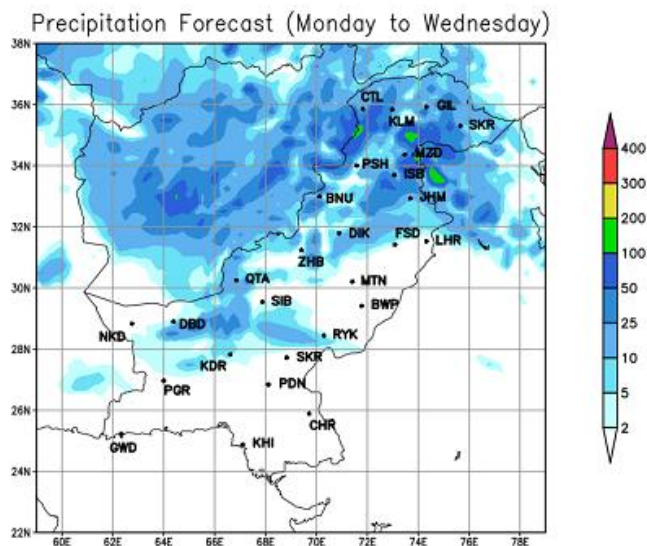
ADVISES FOR FARMERS

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.

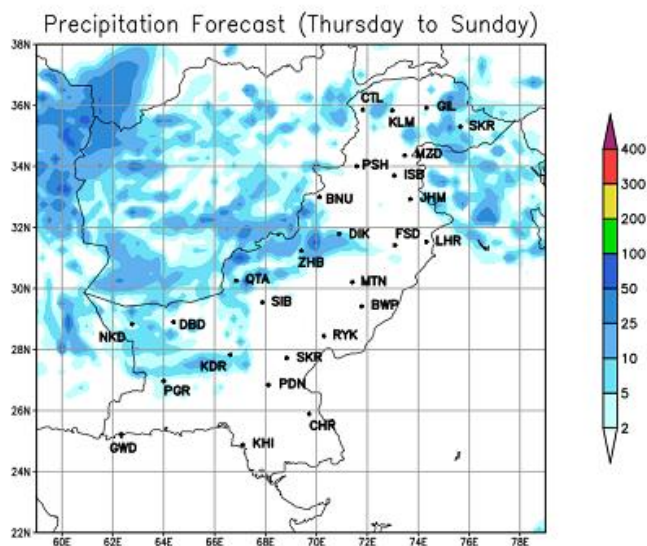
- Farmers are advised to use ensured the proper removal of weeds from the Rabi crops.
- Precautions should be taken to keep the nurseries & vegetables from severe frost conditions.
- Irrigate the crops when needed.

Weather Outlook from 18th March to 24th March, 2019

The outlook from 18th March to 20th March, 2019 shows that light to moderate rain is expected in most parts of the country except Sindh and lower Punjab.



The outlook from 21st March to 24th March, 2019 shows that light to moderate rainfall is expected in isolated places of Upper KP, GB, Kashmir and Baluchistan. However, dry weather will prevail over rest of the country.



National Weather Data of Selected Cities Weekly Data from 11th March to 17th 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	10.9	9.5	89.0	68	0.01	2.0	2.0	0.9	1.7
Faisalabad	11.1	10.0	91.0	59	0.01	2.3	2.6	1.1	1.6
Gawader	13.8	12.5	93.0	65	10.00	0.0	2.1	0.0	6.3
Gilgit	5.0	2.0	43.0	40	0.01	5.7	4.4	1.1	3.1
Kalam	-5.4	-7.0	***	75	11.50	4.0	4.9	0.0	0.0
Khuzdar	9.3	7.5	63.0	36	0.00	2.6	3.1	0.0	1.1
Lahore	13.2	12.2	96.8	60	8.71	3.1	4.3	0.9	3.7
Malam Jabba	-2.2	-3.0	***	75	86.00	3.6	3.6	2.9	2.9
Mangla	9.9	7.2	***	64	20.40	4.0	4.3	1.1	2.3
Multan (PBO)	12.9	12.0	94.5	67	0.01	2.3	3.8	2.5	5.0
Murree	0.8	-1.0	5.4	65	39.01	2.4	6.6	2.0	1.4
Muzaffarabad	4.6	3.5	45.5	69	44.00	4.9	5.4	1.3	1.7
Nawabshah	8.9	8.0	73.8	65	52.01	3.6	3.7	1.6	1.7
Peshawar	3.4	1.0	24.7	55	1.90	3.1	4.7	2.1	3.3
Quetta	6.6	5.0	62.5	71	16.60	4.4	4.4	0.3	0.9
Rawalakot	13.6	12.8	105.7	60	0.00	1.9	1.0	0.3	0.9
Rawalpindi	-0.6	-2.8	0.1	55	0.01	6.1	5.6	0.3	0.9
Rohri	14.1	12.0	117.5	57	0.00	0.9	0.4	2.0	2.9
Skardu	13.0	11.0	111.3	56	0.00	1.0	1.1	0.8	1.1
Tandojam	13.4	12.2	100.1	68	2.00	1.4	1.0	0.8	0.5
Usta.M	4.7	4.0	41.4	49	0.00	2.4	4.1	4.0	5.0
Zhob	10.9	9.5	89.0	68	0.01	2.0	2.0	0.9	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)