

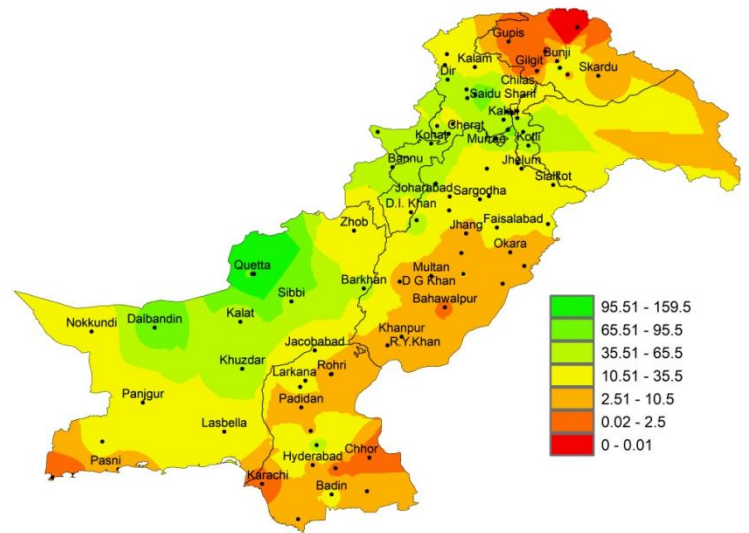
Weekly Weather and Crop Bulletin for Pakistan

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**Rainfall Distribution (mm) during the Previous
Week (28th February to 3rd March, 2019)**



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Highlights of Past Weather (28th February to 3rd March, 2019)

Below normal night time temperatures were observed in GB & Azad Jammu Kashmir and Khyber Pakhtunkhwa, while mix trend was observed in Punjab, Sindh and Baluchistan during the last week.

Province wise distribution of rainfall reported as follows:

- Moderate to high rainfall observed in Baluchistan and Khyber Pakhtunkhwa.
- Light to moderate rainfall observed in GB & Azad Jammu Kashmir, Punjab and Sindh.

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

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

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Past Weather of Provinces (28th February to 3rd March, 2019)**Punjab**

Light to moderate rainfall observed in Punjab during the week. Weekly maximum and minimum temperatures recorded as 18.4°C & 8.1°C respectively. For the recent week on average 56.6 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 70% and wind speed in the morning/evening recorded as 0.1/3.5 Knots. During the previous the highest precipitation was recorded as 71.3 mm while the lowest minimum temperature was recorded as -3.5°C at Murree.

Baluchistan

Moderate to heavy rainfall observed in Baluchistan during the week. Weekly maximum and minimum temperatures recorded as 19.3°C & 8.3°C respectively. For the recent week on average 60.8 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 1.4/5.0 Knots. During the previous week the highest precipitation recorded as 174 mm at Samugli while the lowest minimum temperature was recorded as -6.0°C at Kalat.

Khyber Pakhtunkhwa

Moderate to heavy rainfall observed in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 12.2°C & -2.1°C respectively. For the recent week on average 15.0 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 72% and wind speed in the morning/evening recorded as 1.7/2.1 Knots. During the previous week the highest precipitation recorded as 99.00 mm at MalamJabba while the lowest minimum temperature was recorded as -11.5°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 10.0°C & 0.2°C respectively. Average relative humidity recorded as 65% and wind speed in the morning/evening recorded as 0.2/2.6 Knots. During the previous week the highest precipitation recorded as 67.70 mm at Rawalakot while the lowest minimum temperature was recorded as -11.0°C at Astore.

Sindh

Light to moderate rainfall observed in Sindh during the week. Weekly maximum and minimum temperatures recorded as 25.7°C & 12.8°C respectively. For the recent week, on average 98.5 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 59% and wind speed in the morning/evening recorded as 1.5/2.9 Knots. During the previous week the highest precipitation recorded as 47.00mm at Dadu while lowest minimum temperature was recorded as 07°C at Rohri.

Past Weather for Major Agricultural Plains (28th February to 3rd March, 2019)

Rawalpindi (Potohar region)

35.4 mm rainfall reported from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 5.7/5.3 Oktas while, average relative humidity observed as 79%. Mean night time temperature recorded as 4.7°C & for the recent week 36.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/1.4 Knots.

Faisalabad (Central Punjab)

17.6mm rainfall reported from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 2.9/5.6 Oktas while, average relative humidity observed as 77%. Mean night time temperature recorded as 9.7°C & for the recent week 63.6 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.9 Knots.

Tandojam (Lower Sindh)

6.0mm rainfall reported from Tandojam during the week; however, cloudiness in the morning/evening recorded as 3.0/3.1 Oktas while, average relative humidity observed as 66%. Mean night time temperature recorded as 11.6°C & for the recent week 99.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/1.1 Knots.

Usta Muhammad (Eastern Baluchistan)

20.0mm rainfall reported from Usta Muhammad during the week; however, cloudiness in the morning/evening recorded as 4.2/3.8 Oktas while, average relative humidity observed as 67%. Mean night time temperature recorded as 10.6°C & for the recent week 81.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.4/1.7 Knots.

Quetta (Northern Baluchistan)

77.6mm rainfall reported from Quetta during the week; however, cloudiness in the morning/evening recorded as 3.1/5.0 Oktas while, average relative humidity observed as 57%. Mean night time temperature recorded as 1.5°C & for the recent week

1.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.3/3.6 Knots.

Past Weather for Sub-Regional Agricultural Plains (28th February to 3rd March, 2019)

Multan

5.00mm rainfall reported from Multan during the week; however, cloudiness in the morning/evening recorded as 0.7/4.8 Oktas while, average relative humidity observed as 65%. Mean night time temperature recorded as 10.0°C & for the recent week 67.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/5.0 Knots.

Lahore

11.82 mm rainfall was reported from Lahore during the week; however, however, cloudiness in the morning/evening recorded as 2.8/4.2 Oktas while, average relative humidity observed as 65%. Mean night time temperature recorded as 10.4°C & for the recent week 64.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/3.2 Knots.

Zhob

22.00 mm rainfall was reported from Zhob during the week; however, cloudiness in the morning/evening recorded as 3.2/4.6 Oktas while, average relative humidity observed as 47%. Mean night time temperature recorded as 2.2°C & for the recent week 11.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.5/7.4 Knots.

Murree

71.30 mm rainfall was reported from Murree during the week; however, cloudiness in the morning/evening recorded as 3.2/6.0 Oktas while, average relative humidity observed as 78%. Mean night time temperature recorded as -1.4° C by the end of last week. Wind speed recorded in the morning/evening as 0.4/2.4 Knots.

D.I. Khan

31.01 mm rainfall was reported from D.I. Khan during the week; however, cloudiness in the morning/evening recorded as 4.0/2.8 Oktas while,

average relative humidity observed as 74%. Mean night time temperature recorded as 7.6°C & for the recent week 53.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.7/2.8 Knots.

Peshawar

35.00 mm rainfall was reported from Peshawar during the week; however, cloudiness in the morning/evening recorded as 6.0/5.8 Oktas while, average relative humidity observed as 68%. Mean night time temperature recorded as 6.6°C & for the recent week 32.7 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.7/1.6 Knots.

Kalam

12.00mm rainfall was reported from Kalam during the week; however, cloudiness in the morning/evening recorded as 4.5/6.2 Oktas while, average relative humidity observed as 76%. Mean night time temperature recorded as -8.4°C by the end of last week. Calm weather recorded in the morning/evening.

Gilgit

0.02mm rainfall was reported from Gilgit during the week; However, cloudiness in the morning/evening recorded as 5.6/6.2 Oktas while, average relative humidity observed as 52%. Mean night time temperature recorded as 2.8°C & for the recent week 17.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/2.4 Knots.

Skardu

4.11mm rainfall was reported from Skardu during the week; however, cloudiness in the morning/evening recorded as 5.7/6.0 Oktas while, average relative humidity observed as 67%. Mean night time temperature recorded as -5.9 °C by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.4 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, shooting stage completed.*

Lower Sindh (Tandojam)

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

Wheat (TJ-83): *Good, Maturity stage.*

Northern Baluchistan (Quetta)

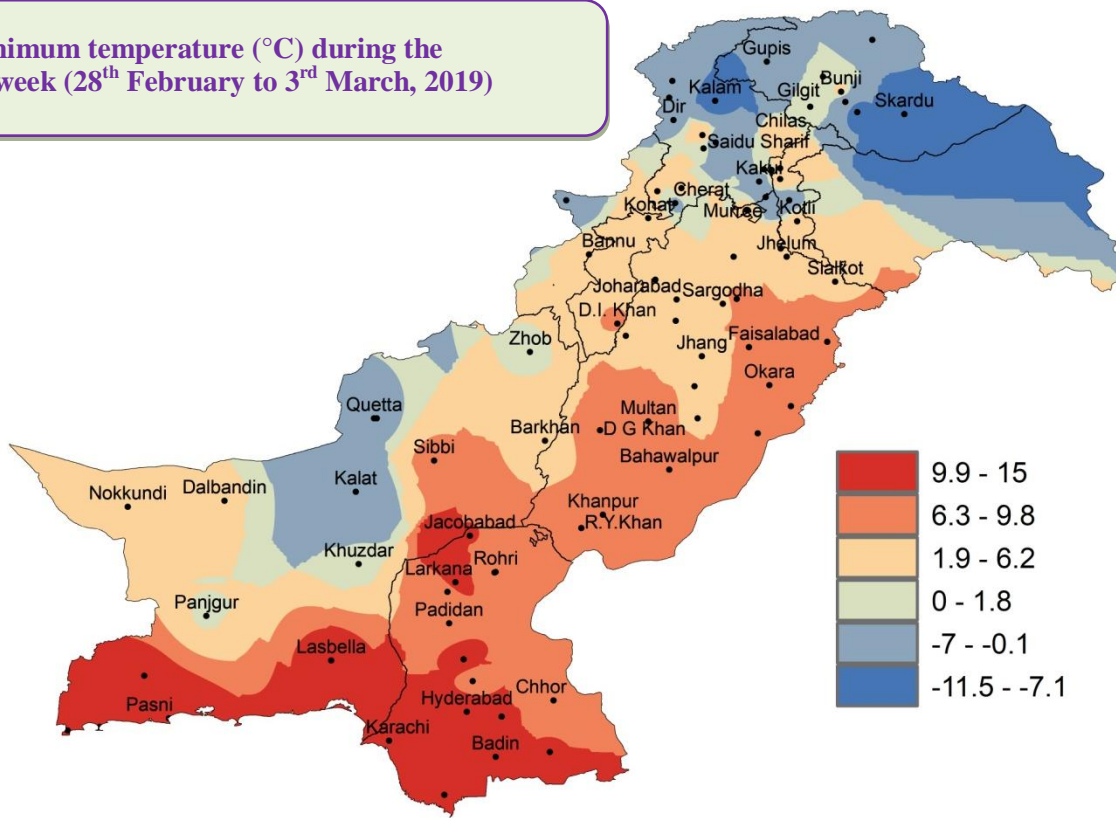
There is presently no crop grown in the fields of RAMC Quetta.

Eastern Baluchistan (Usta Muhammad)

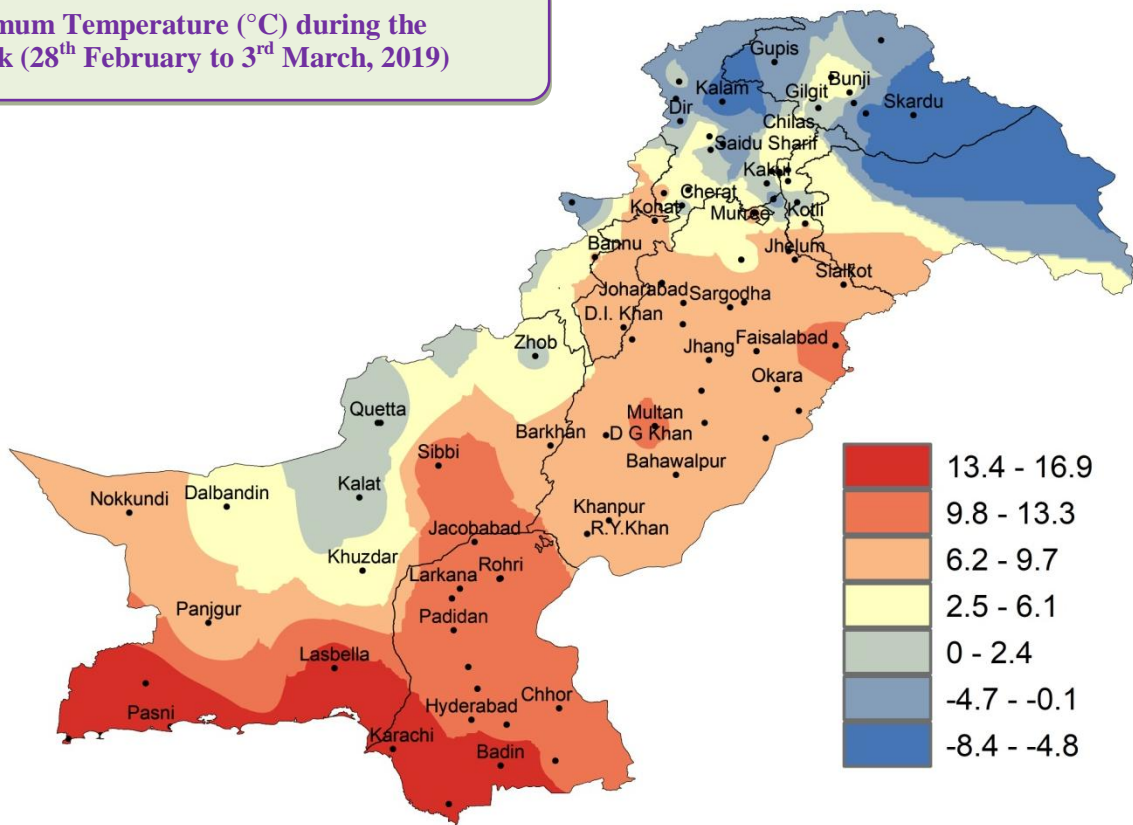
Presently wheat crop is sown in the fields of RAMC Usta Muhammad.

Wheat: *Good, Shooting stage.*

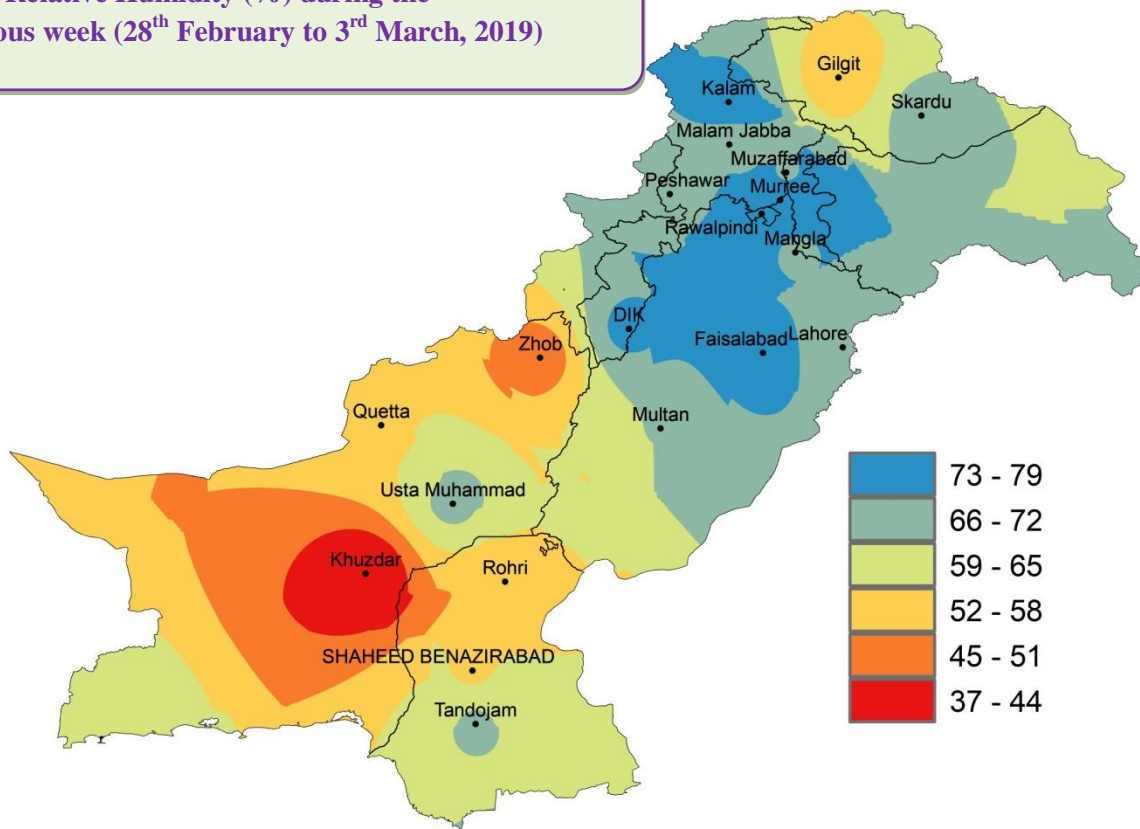
Mean Minimum temperature (°C) during the Previous week (28th February to 3rd March, 2019)



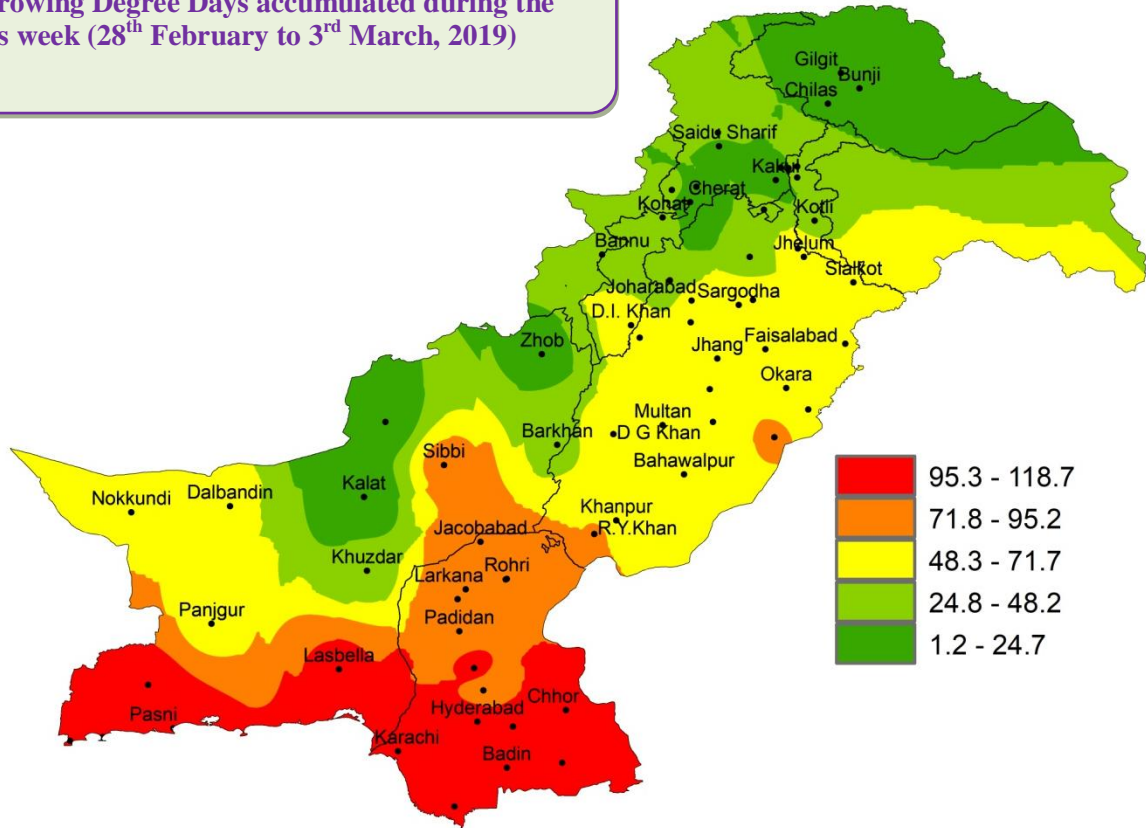
Lowest Minimum Temperature (°C) during the Previous week (28th February to 3rd March, 2019)



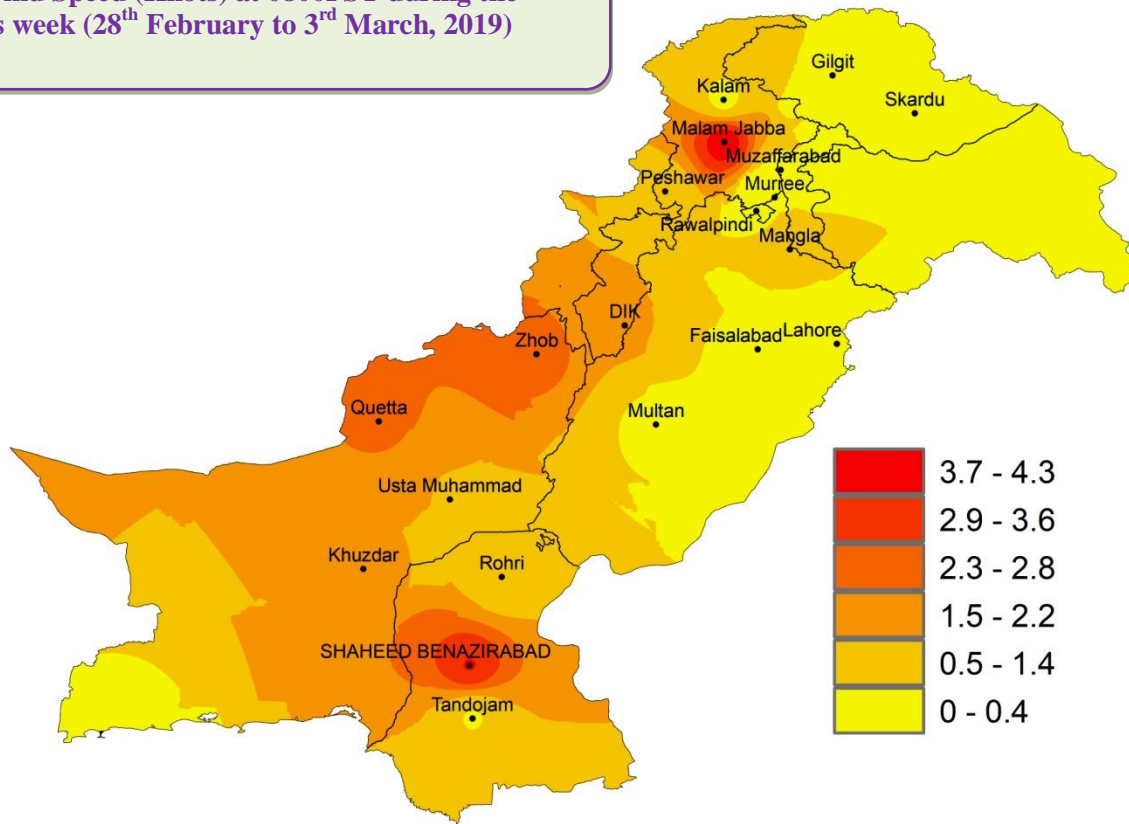
Mean Relative Humidity (%) during the Previous week (28th February to 3rd March, 2019)



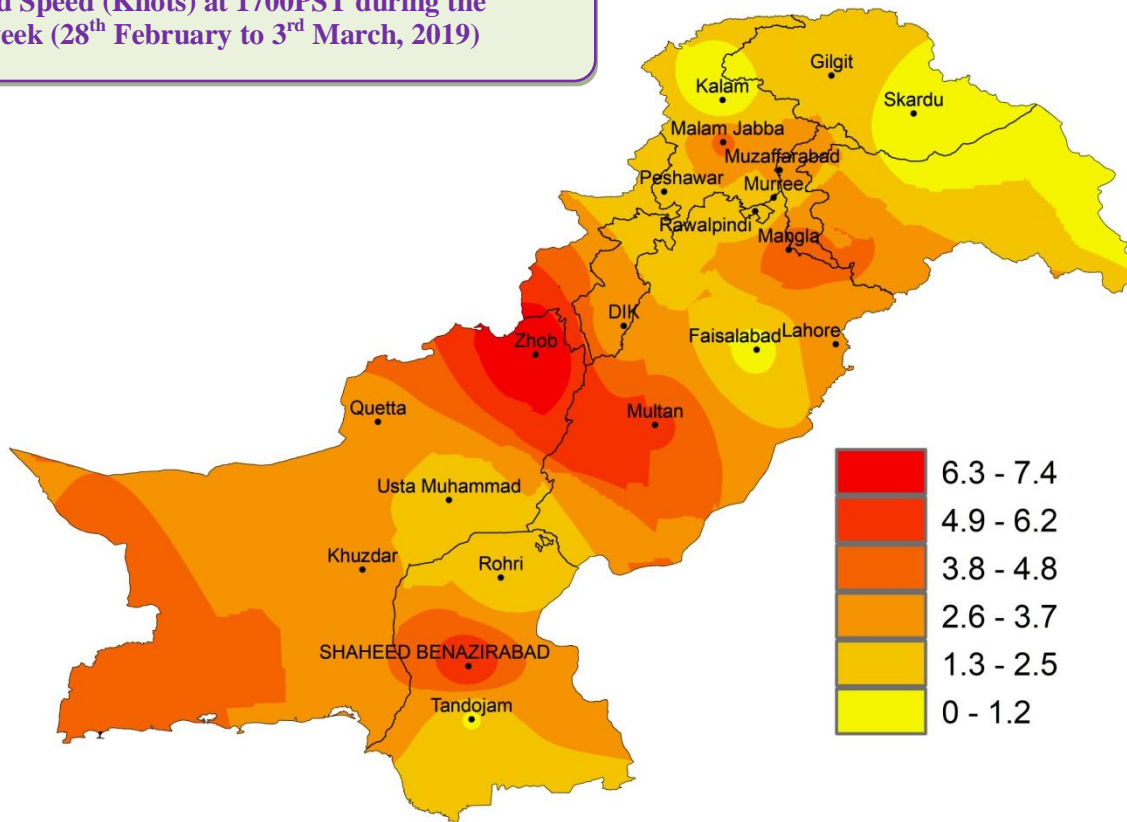
Total Growing Degree Days accumulated during the Previous week (28th February to 3rd March, 2019)



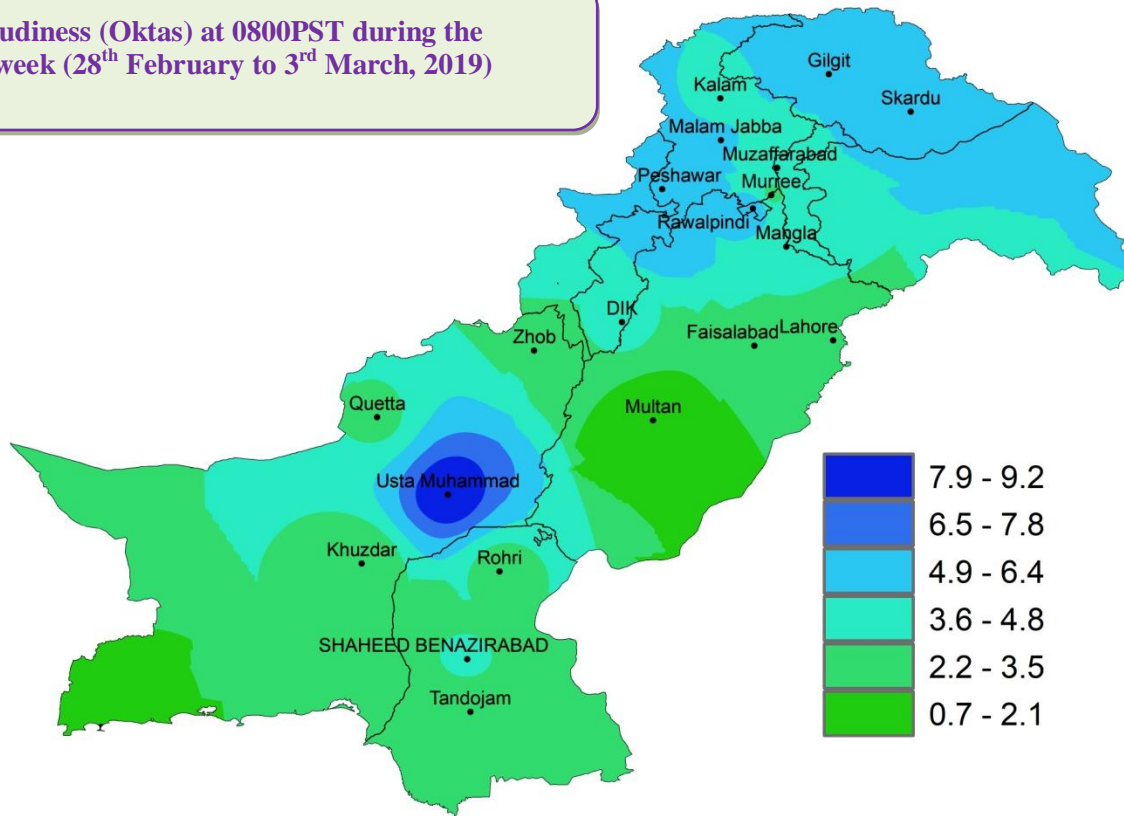
Mean Wind Speed (Knots) at 0800PST during the Previous week (28th February to 3rd March, 2019)



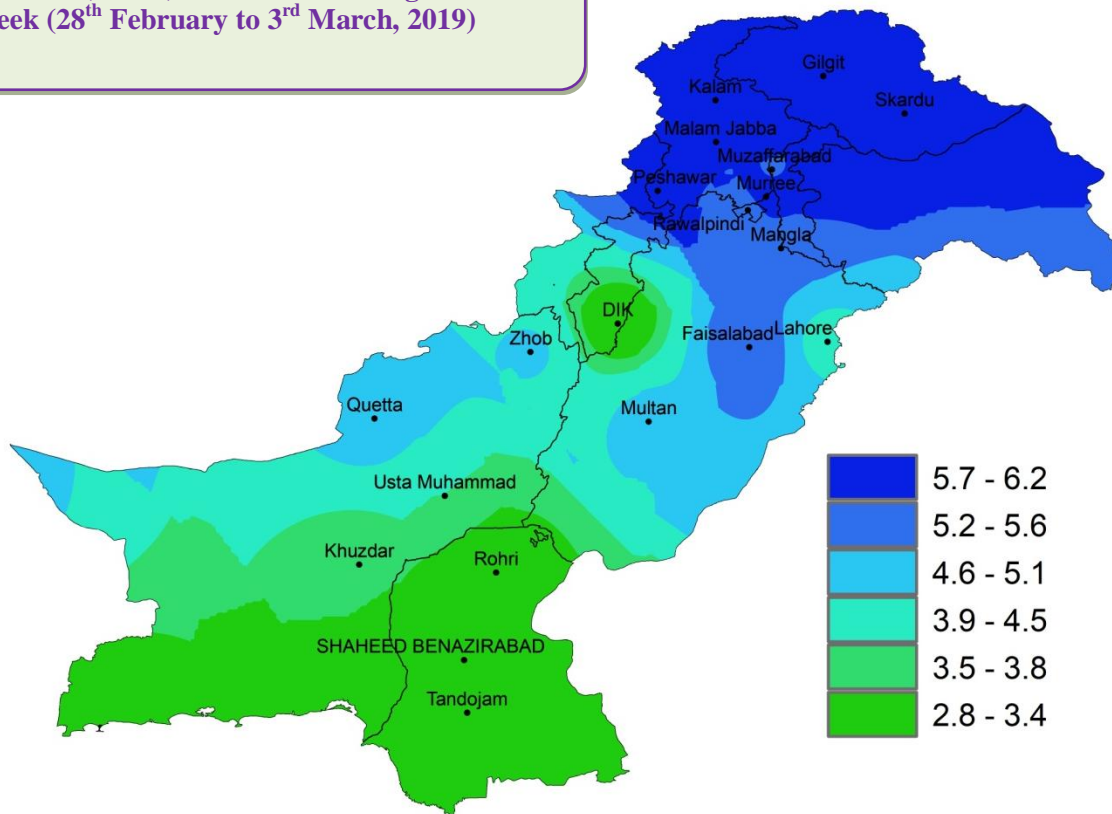
Mean Wind Speed (Knots) at 1700PST during the Previous week (28th February to 3rd March, 2019)



Mean Cloudiness (Oktas) at 0800PST during the Previous week (28th February to 3rd March, 2019)



Mean Cloudiness (Oktas) at 1700PST during the Previous week (28th February to 3rd March, 2019)



Weekly Weather Advisory for Farmers
(4th March to 10th March, 2019)

Continental air is prevailing over most parts of the country till Wednesday. A shallow westerly wave is likely to affect western and upper parts of the country from Thursday.

MONDAY

04-03-2019

Mainly cold and dry weather is expected in most parts of the country. However, light rain is expected at few places in Kashmir and its adjoining hilly areas.

TUESDAY

05-03-2019

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

WEDNESDAY

06-03-2019

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

THURSDAY

07-03-2019

Mainly cold and dry weather is expected in most parts of the country. However, rain/thunderstorm (with snowfall over hills) is expected at isolated places in Quetta, Zhob, Kalat, Makran, D.G.Khan, Malakand, Kohat divisions and Gilgit-Baltistan.

FRIDAY

08-03-2019

Rain/thunderstorm (with snowfall over hills) is expected at isolated places in Khyber Pakhtunkhwa, Quetta, Zhob, Rawalpindi, Sargodha

divisions, Islamabad, Gilgit Baltistan and Kashmir. Cold and dry weather is expected elsewhere in the country.

SATURDAY

09-03-2019

Mainly cold and dry weather is expected in most parts of the country. However, rain / thunderstorm (with snowfall over hills) is expected at isolated places in Kalat division.

SUNDAY

10-03-2019

Mainly cold and dry weather is expected in most parts of the country. However, rain / thunderstorm (with snowfall over hills) is expected at isolated places in Kalat, Zhob, Quetta and Kohat divisions.

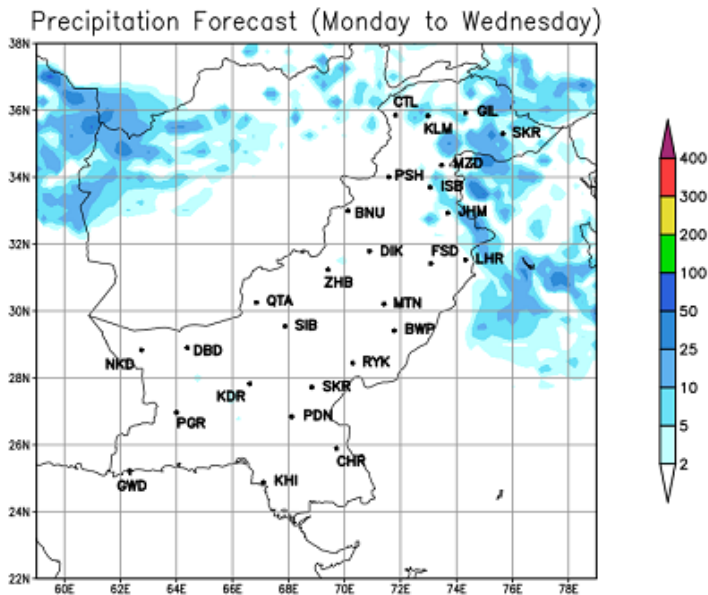
ADVISES FOR FARMERS

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.

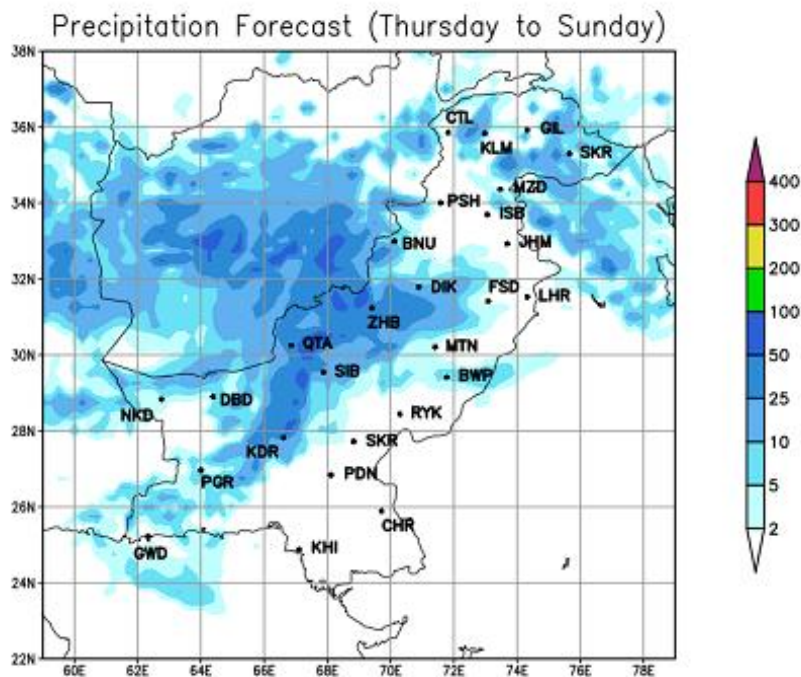
- Farmers are advised to use ensured the proper removal of weeds from the Rabi crops.
- Precautions should be taken to keep the nurseries & vegetables from severe frost conditions.
- Irrigate the crops when needed.

Weather Outlook from 4th March to 10th March, 2019

The outlook from 4th March to 6th March, 2019 shows that light to moderate rain is expected in scattered areas of GB, Upper Khyber Pakhtunkhwa and Kashmir. However, cold and dry weather will prevail over rest of the country.



The outlook from 7th March to 10th March, 2019 shows that light to moderate rainfall is expected in KP, GB, Baluchistan and Punjab. However, cold and dry weather will prevail over Sindh.



National Weather Data of Selected Cities Weekly Data from 25th February to 3rd 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	7.6	6.5	53.8	74	31.01	4.0	2.8	1.7	2.8
Faisalabad	9.7	6.0	63.6	77	17.60	2.9	5.6	0.0	0.9
Gawader	16.6	14.5	116.0	65	0.01	1.8	3.0	0.0	4.8
Gilgit	2.8	0.5	17.8	52	0.02	5.6	6.2	0.0	2.4
Kalam	-8.4	-11.5	-44.5	76	12.00	4.5	6.2	0.0	0.0
Khuzdar	2.9	0.5	32.3	37	52.00	2.2	3.4	1.7	2.8
Lahore	10.4	8.7	64.1	65	11.82	2.8	4.2	0.0	3.2
Malam Jabba	-4.2	-5.0	***	69	99.00	5.0	5.8	4.3	4.0
Mangla	7.7	5.0	53.4	70	24.61	4.3	5.4	0.7	4.8
Multan (PBO)	10.0	7.5	67.5	65	5.00	0.7	4.8	0.0	5.0
Murree	-1.4	-3.5	-25.5	78	71.30	3.2	6.0	0.4	2.4
Muzaffarabad	2.9	0.5	23.5	71	35.50	3.7	5.6	0.0	2.8
Nawabshah	12.5	10.5	101.0	57	6.20	3.7	3.2	3.7	6.0
Peshawar	6.6	2.0	32.7	68	35.00	6.0	5.8	0.7	1.6
Quetta	1.5	-2.2	1.1	57	77.60	3.1	5.0	2.3	3.6
Rawalakot	4.7	2.0	36.9	79	35.40	5.7	5.3	0.3	1.4
Rawalpindi	10.5	7.0	82.3	53	7.80	2.7	2.8	0.7	1.6
Rohri	-5.9	-7.6	***	68	4.11	5.7	6.0	0.0	0.4
Skardu	11.6	9.5	99.8	66	6.00	3.0	3.1	0.3	1.1
Tandojam	10.6	10.0	81.8	67	20.00	3.1	5.0	2.3	3.6
Usta.M	2.2	1.0	11.5	47	22.00	3.2	4.6	2.5	7.4
Zhob	7.6	6.5	53.8	74	31.01	4.0	2.8	1.7	2.8

*** 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)