

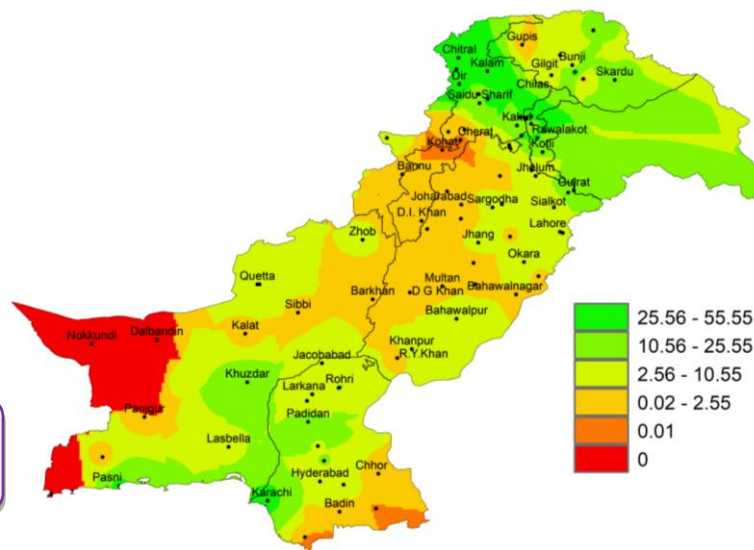
Weekly Weather and Crop Bulletin for Pakistan

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PAKISTAN METEOROLOGICAL
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**Rainfall Distribution (mm) during the Previous
Week (14th January, to 20th January, 2019)**



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Highlights of Past Weather (14th January to 20th January, 2019)

Normal to above normal night time temperatures were observed in Sindh and Baluchistan while mix trend was observed in Punjab. And below normal night time temperatures were observed in GB & Azad Jammu Kashmir and Khyber Pakhtunkhwa during the last week.

Province wise distribution of rainfall reported as follows:

- Light to moderate rainfall observed in most parts of the country.

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

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

Editor: Saeeda Saleh (Assistant Meteorologist)

Past Weather of Provinces (14th January to 20th January, 2019)**Punjab**

Light to moderate rainfall observed in Punjab during the week. Weekly maximum and minimum temperatures recorded as 19.6°C & 4.9°C respectively. For the recent week on average 50.4 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 60% and wind speed in the morning/evening recorded as 1.3/2.8 Knots. During the previous the highest precipitation was recorded as 27.11mm while the lowest minimum temperature was recorded as -3.0°C at Murree.

Baluchistan

Light to moderate rainfall observed in Baluchistan during the week. Weekly maximum and minimum temperatures recorded as 22.8°C & 7.7°C respectively. For the recent week on average 72.3 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 0.9/5.9 Knots. During the previous week the highest precipitation recorded as 28.00mm at Pasni while the lowest minimum temperature was recorded as -8.00°C at Quetta.

Khyber Pakhtunkhwa

Light to moderate rainfall observed in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 13.2°C & -0.1°C respectively. For the recent week on average 17.5 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 76% and wind speed in the morning/evening recorded as 1.5/1.0 Knots. During the previous week the highest precipitation recorded as 53.00 mm while the lowest minimum temperature was recorded as -13.0°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 7.8°C & -2.8°C respectively. Average relative humidity recorded as 66% and wind speed in the morning/evening recorded as 0.3/1.1 Knots. During the previous week the highest precipitation recorded as 27.21 mm at Rawlakot while the lowest minimum temperature was recorded as -14.5°C at Astore.

Sindh

Light to moderate rainfall observed in Sindh during the week. Weekly maximum and minimum temperatures recorded as 24.8°C & 9.2°C respectively. For the recent week, on average 84.2 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 61% and wind speed in the morning/evening recorded as 0.8/2.8 Knots. During the previous week the highest precipitation recorded as 29.00mm at Karachi while lowest minimum temperature was recorded as -2.8°C at Rohri.

Past Weather for Major Agricultural Plains 14th January to 20th January, 2019)

Rawalpindi (Potohar region)

6.20 mm rainfall reported from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 3.9/3.0 Oktas while, average relative humidity observed as 78%. Mean night time temperature recorded as 2.0°C & for the recent week 31.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/1.1 Knots.

Faisalabad (Central Punjab)

4.20mm rainfall reported from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 3.4/2.7 Oktas while, average relative humidity observed as 76%. Mean night time temperature recorded as 4.2°C & for the recent week 50.4 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.2/0.8 Knots.

Tandojam (Lower Sindh)

Dry weather reported from Tandojam during the week; however, cloudiness in the morning/evening recorded as 0.0/1.1 Oktas while, average relative humidity observed as 67%. Mean night time temperature recorded as 7.5°C & for the recent week 80.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/0.8 Knots.

Usta Muhammad (Eastern Baluchistan)

7.00mm rainfall reported from Usta Muhammad during the week; however, cloudiness in the morning/evening recorded as 1.8/3.5 Oktas while, average relative humidity observed as 65%. Mean night time temperature recorded as 6.9°C & for the recent week 64.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.2 Knots.

Quetta (Northern Baluchistan)

15.20mm rainfall reported from Quetta during the week; however, cloudiness in the morning/evening recorded as 4.7/5.1 Oktas while, average relative humidity observed as 39%. Mean night time temperature recorded as 3.3°C & for the recent week

31.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.9/3.1 Knots.

Past Weather for Sub-Regional Agricultural Plains 14th January to 20th January, 2019)

Multan

0.20mm rainfall reported from Multan during the week; however, cloudiness in the morning/evening recorded as 3.5/3.0 Oktas while, average relative humidity observed as 64%. Mean night time temperature recorded as 6.4°C & for the recent week 57.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/1.6 Knots.

Lahore

7.60 mm rainfall was reported from Lahore during the week; however, however, cloudiness in the morning/evening recorded as 3.0/3.3 Oktas while, average relative humidity observed as 62%. Mean night time temperature recorded as 7.0°C & for the recent week 49.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/3.5 Knots.

Zhob

3.00 mm rainfall was reported from Zhob during the week; however, cloudiness in the morning/evening recorded as 1.5/3.0 Oktas while, average relative humidity observed as 40%. Mean night time temperature recorded as 0.4°C & for the recent week 29.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.7/4.7 Knots.

Murree

27.11 mm rainfall was reported from Murree during the week; however, cloudiness in the morning/evening recorded as 2.8/5.2 Oktas while, average relative humidity observed as 54%. Mean night time temperature recorded as 0.7° C & for the recent week 2.7 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 4.0/3.3 Knots.

D.I. Khan

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

morning/evening recorded as 3.8/2.2 Oktas while, average relative humidity observed as 74%. Mean night time temperature recorded as 5.5°C & for the recent week 61.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.7/0.3 Knots.

Peshawar

0.02 mm rainfall was reported from Peshawar during the week; however, cloudiness in the morning/evening recorded as 5.3/4.6 Oktas while, average relative humidity observed as 68%. Mean night time temperature recorded as 4.7°C & for the recent week 47.4 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.4 Knots.

Kalam

53.00mm rainfall was reported from Kalam during the week; however, cloudiness in the morning/evening recorded as 4.5/5.0 Oktas while, average relative humidity observed as 77%. Mean night time temperature recorded as -8.5°C by the end of last week. Calm weather recorded in the morning/evening.

Gilgit

7.60mm rainfall was reported from Gilgit during the week; However, cloudiness in the morning/evening recorded as 6.5/6.7 Oktas while, average relative humidity observed as 67%. Mean night time temperature recorded as -1.5°C by the end of last week. Wind speed recorded in the morning/evening as 0.7/0.7 Knots.

Skardu

12.71mm rainfall was reported from Skardu during the week; however, cloudiness in the morning/evening recorded as 5.7/6.2 Oktas while, average relative humidity observed as 79%. Mean night time temperature recorded as -9.3 °C by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.3 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)

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

Wheat: *Very Good, Tillering stage completed and crop irrigated.*

Lower Sindh (Tandojam)

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

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

Northern Baluchistan (Quetta)

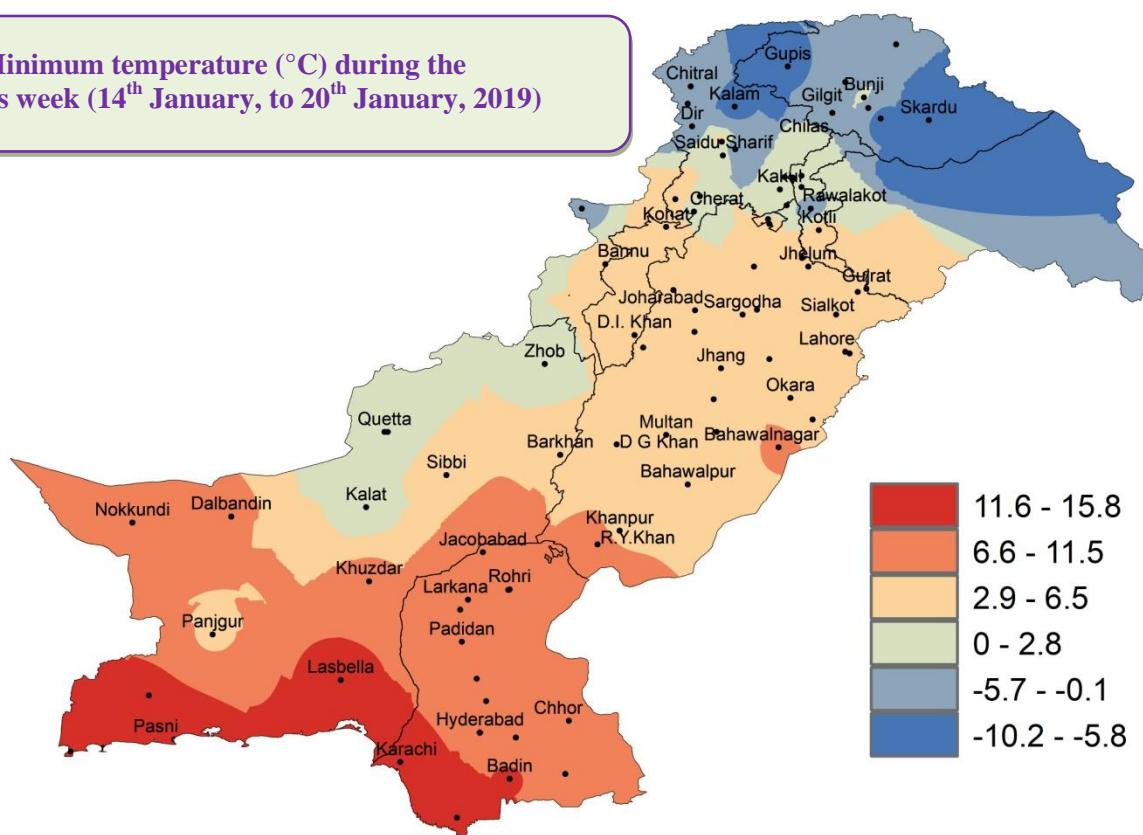
There is presently no crop grown in the fields of RAMC Quetta.

Eastern Baluchistan (Usta Muhammad)

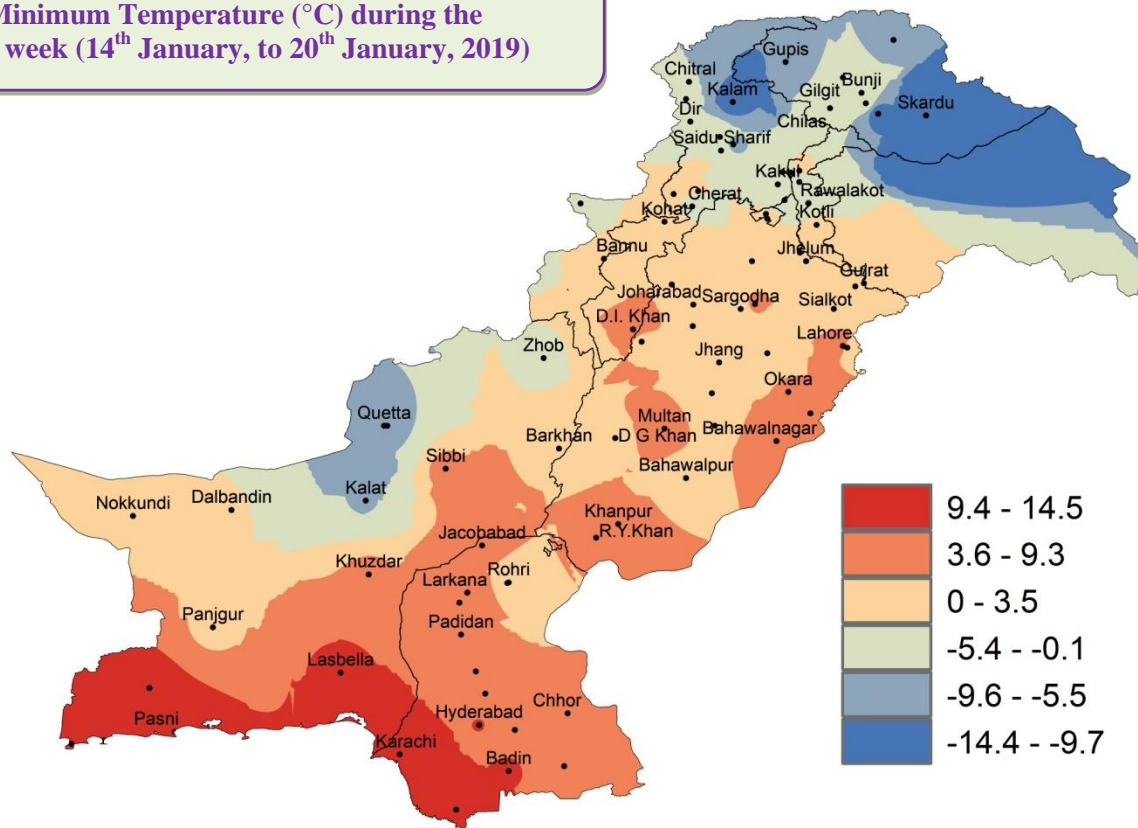
Presently wheat crop is sown in the fields of RAMC Usta Muhammad.

Wheat: *Good, Tillering stage.*

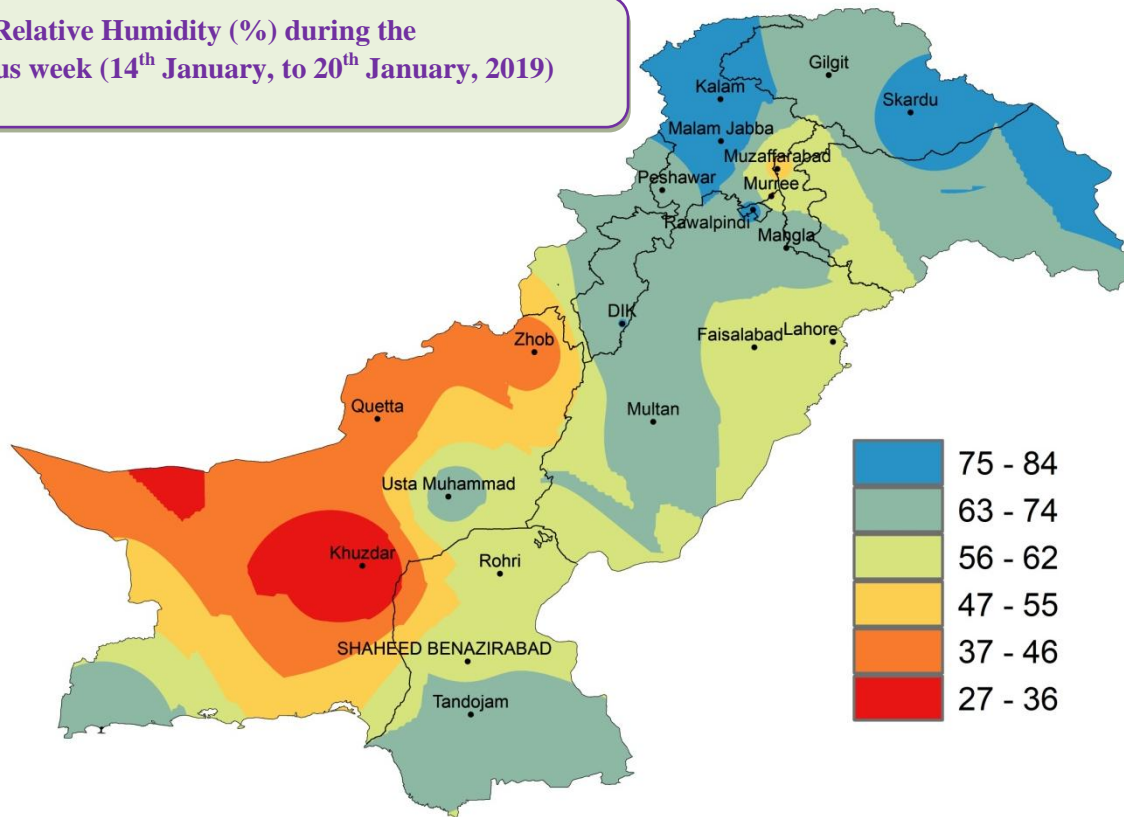
**Mean Minimum temperature (°C) during the
Previous week (14th January, to 20th January, 2019)**



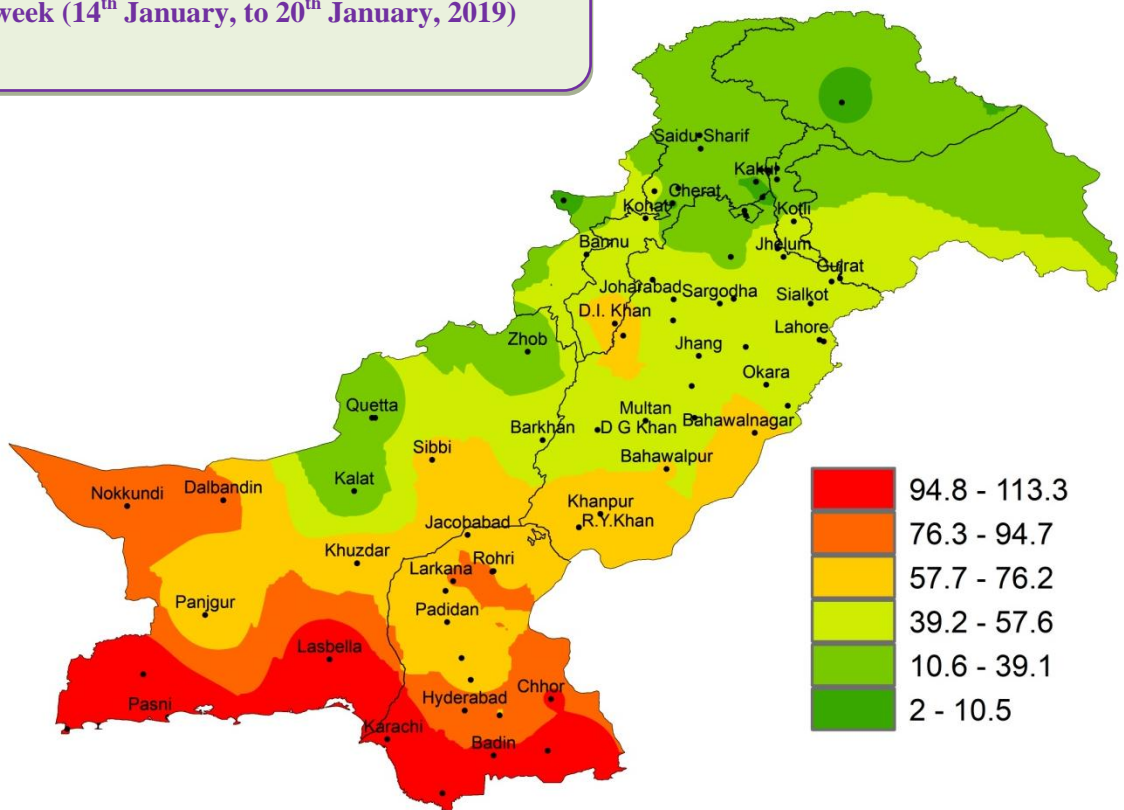
**Lowest Minimum Temperature (°C) during the
Previous week (14th January, to 20th January, 2019)**



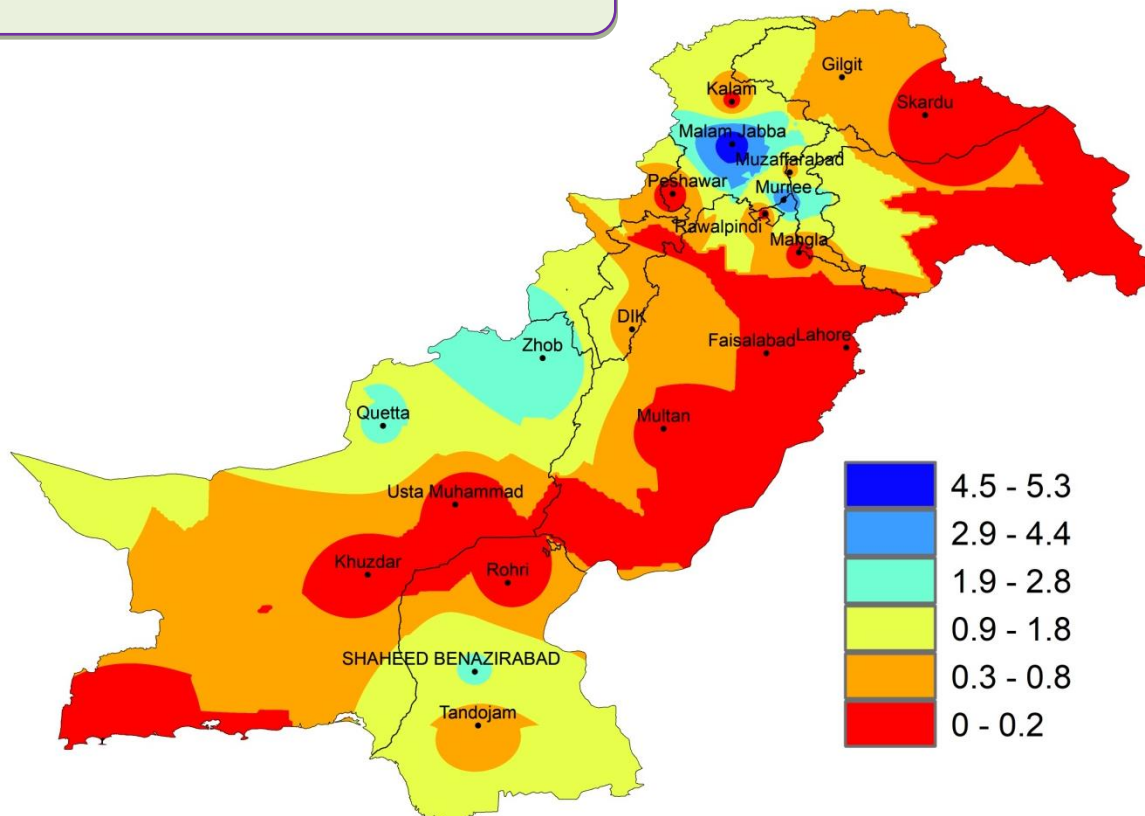
Mean Relative Humidity (%) during the
Previous week (14th January, to 20th January, 2019)



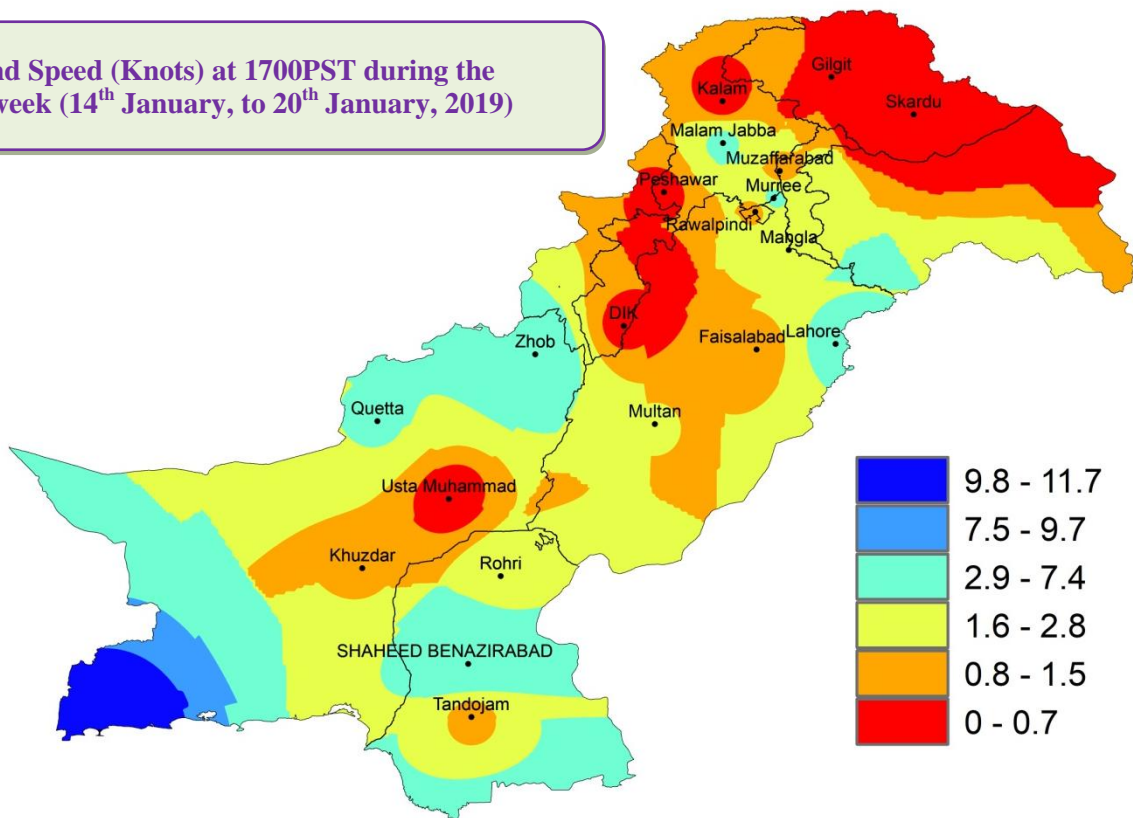
Total Growing Degree Days accumulated during the
Previous week (14th January, to 20th January, 2019)



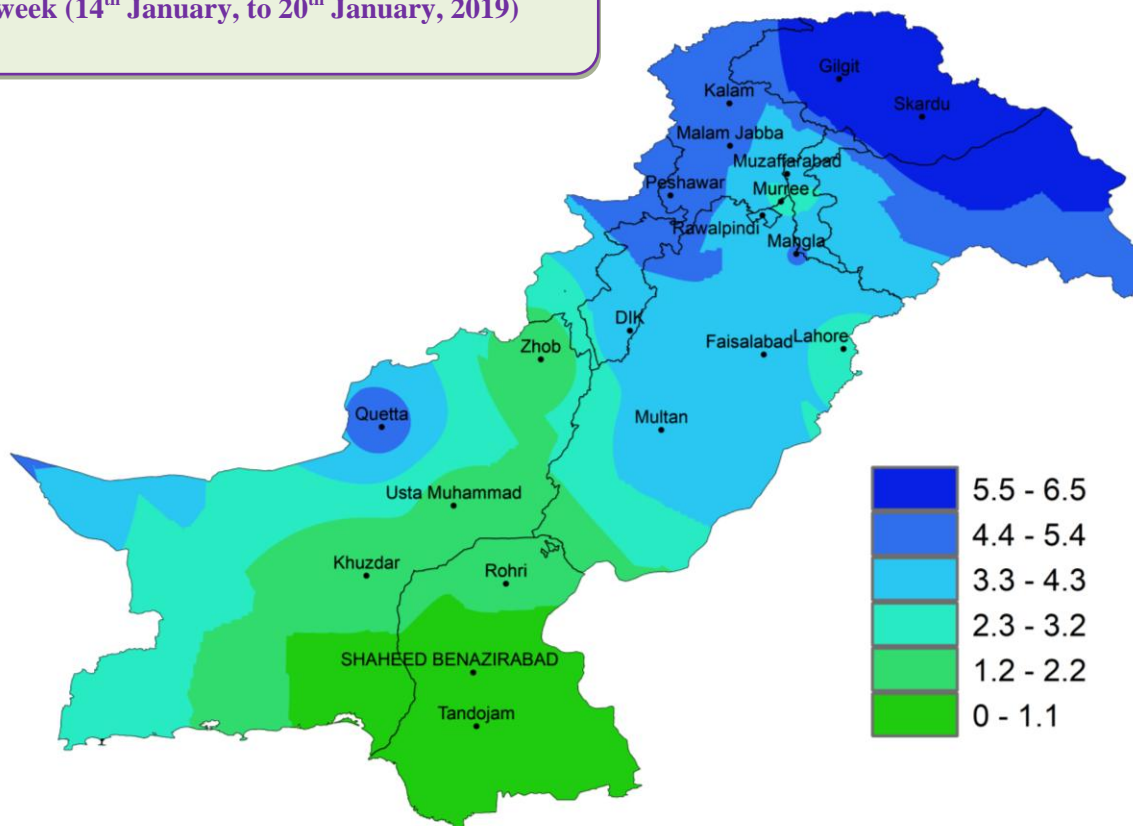
Mean Wind Speed (Knots) at 0800PST during the Previous week (14th January, to 20th January, 2019)



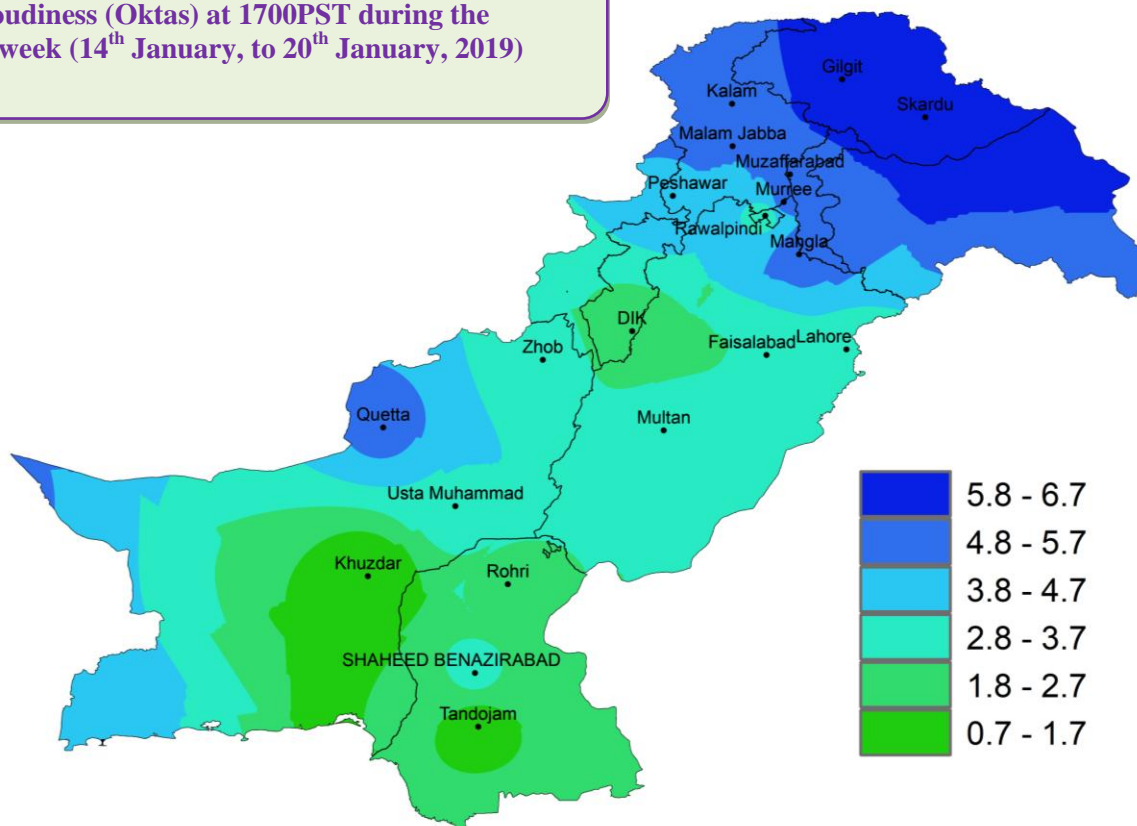
Mean Wind Speed (Knots) at 1700PST during the Previous week (14th January, to 20th January, 2019)



Mean Cloudiness (Oktas) at 0800PST during the Previous week (14th January, to 20th January, 2019)



Mean Cloudiness (Oktas) at 1700PST during the Previous week (14th January, to 20th January, 2019)



Weekly Weather Advisory for Farmers
(21st January to 27th January, 2019)

A westerly wave is still affecting most upper and central parts of the country and likely to persist in upper parts till Wednesday.

MONDAY

21-01-2019

More widespread rain is expected in Malakand, Hazara, Peshawar, Mardan, Kohat, Rawalpindi, Gujranwala, Lahore, Sargodha, Faisalabad divisions, Islamabad, Kashmir and Gilgit-Baltistan, while at scattered places in Bahawalpur, Multan, Sahiwal, D.G.Khan, D.I.Khan, Bannu divisions and at isolated places in Sukkur and Zhob divisions.

Few moderate to heavy falls are also expected in Malakand, Hazara, Rawalpindi, Gujranwala divisions, Islamabad and Kashmir. More snowfall over hills is also expected in Malakand division (Swat, Chitral, Kalam, Malamjabba & upper Dir), Hazara division, Murree, Galliyat, Kashmir and Gilgit-Baltistan during the period.

TUESDAY

22-01-2019

More widespread rain is expected in Malakand, Hazara, Peshawar, Mardan, Kohat, Rawalpindi, Gujranwala, Lahore, Sargodha, Faisalabad divisions, Islamabad, Kashmir and Gilgit-Baltistan.

Few moderate to heavy falls are also expected in Malakand, Hazara, Rawalpindi, Gujranwala divisions, Islamabad and Kashmir. More snowfall over hills is also expected in Malakand division (Swat, Chitral, Kalam, Malamjabba & upper Dir), Hazara division, Murree, Galliyat, Kashmir and Gilgit-Baltistan during the period.

WEDNESDAY

23-01-2019

Mainly cold and dry weather is expected in most parts of the country. However rain with snow over hills is expected at scattered places in Malakand, Hazara, Mardan, Peshawar, Kohat, Rawalpindi, Gujranwala, Lahore divisions, Islamabad, Kashmir and Gilgit-Baltistan.

THURSDAY

24-01-2019

Mainly cold and dry weather is expected in most parts of the country. However rain with snow over hills is expected at isolated places in Malakand, Hazara, Kohat, Peshawar, Rawalpindi divisions, Kashmir and Gilgit-Baltistan.

FRIDAY

25-01-2019

Mainly cold and dry weather is expected in most parts of the country. However light rain with light snow over hills is expected at isolated places in Kashmir and Gilgit-Baltistan.

SATURDAY

26-01-2019

Mainly cold and dry weather is expected in most parts of the country. However partly cloudy weather conditions are expected in Malakand, Hazara, Rawalpindi divisions, Kashmir and Gilgit-Baltistan.

SUNDAY

27-01-2019

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

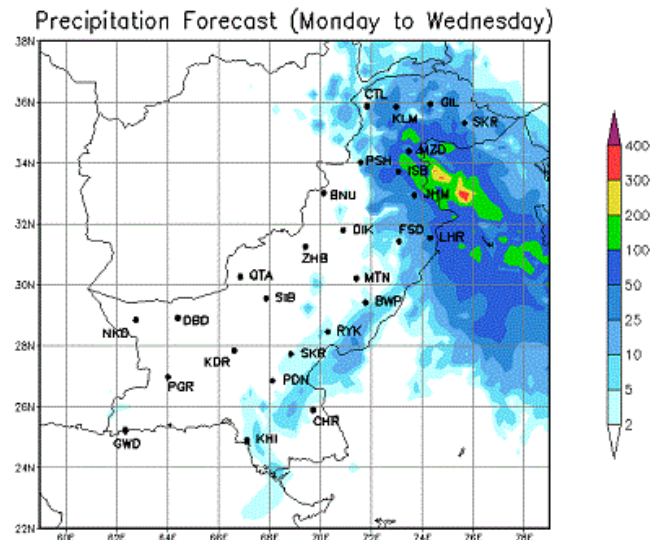
ADVISES FOR FARMERS

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.

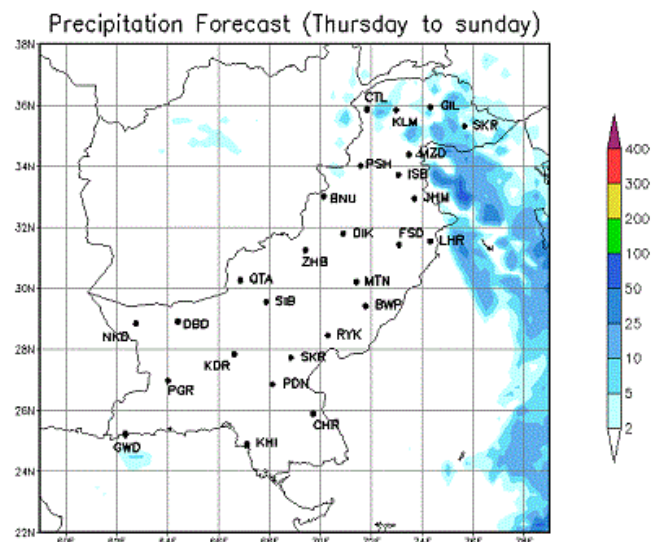
- Farmers are advised to use ensured and certified seed for the sowing of Rabi crops in accordance with the proper moisture conditions.
- Store cotton crop in proper and dry place because the cost of good and clean quality cotton is high than that of the filthy one.
- Protect your nurseries from frost.

Weather Outlook from 21st January to 27th January, 2019

The outlook from 21st January to 23rd January, 2019 shows that light to moderated rain is expected in GB, upper KP, upper & central parts of Punjab and some areas of Sindh. While moderate to heavy is expected in Potohar region and Kashmir.



The outlook from 24th January to 27th January, 2019 shows that light to moderate rainfall is expected at scattered places of upper KP, GB and Kashmir while cold and dry weather may prevail over rest of the country.



National Weather Data of Selected Cities Weekly Data from 14th January to 20th January, 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	5.5	4.5	61.3	74	0.40	3.8	2.2	0.7	0.3
Faisalabad	4.2	1.5	50.4	56	4.20	3.4	2.7	0.2	0.8
Gawader	14.3	13.5	111.3	67	0.00	2.5	4.2	0.0	11.7
Gilgit	-1.5	-4.0	-12.8	67	7.60	6.5	6.7	0.7	0.7
Kalam	-8.5	-13.0	-45.4	77	53.00	4.5	5.0	0.0	0.0
Khuzdar	7.8	4.5	71.9	27	19.00	1.3	0.7	0.0	1.3
Lahore	7.0	5.5	49.9	62	7.60	3.0	3.3	0.0	3.5
Malam Jabba	-4.4	-8.5	***	84	34.00	4.5	4.7	5.3	3.3
Mangla	4.6	2.5	52.2	64	7.60	4.4	5.3	0.0	2.3
Multan (PBO)	6.4	4.3	57.1	64	0.20	3.5	3.0	0.0	1.6
Murree	0.7	-3.0	2.7	54	27.11	2.8	5.2	4.0	3.3
Muzaffarabad	0.9	-1.0	17.8	54	17.00	3.4	5.2	0.6	1.0
Nawabshah	7.6	6.5	76.1	60	10.00	0.7	3.0	2.0	5.3
Peshawar	4.7	1.0	47.4	68	0.02	5.3	4.6	0.0	0.4
Quetta	3.3	-1.0	31.8	39	15.20	4.7	5.1	1.9	3.1
Rawalakot	2.0	-0.5	31.3	78	6.20	3.9	3.0	0.0	1.1
Rawalpindi	7.5	-2.8	69.3	57	13.00	1.2	2.3	0.0	2.3
Rohri	-9.3	-14.4	***	79	12.71	5.7	6.2	0.0	0.3
Skardu	7.5	7.0	80.3	67	0.00	0.0	1.1	0.3	0.8
Tandojam	6.9	6.0	69.3	65	7.00	1.8	3.5	0.0	0.2
Usta.M	0.4	-1.0	29.2	40	3.00	1.5	3.0	2.7	4.7
Zhob	5.5	4.5	61.3	74	0.40	3.8	2.2	0.7	0.3

*** 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)