

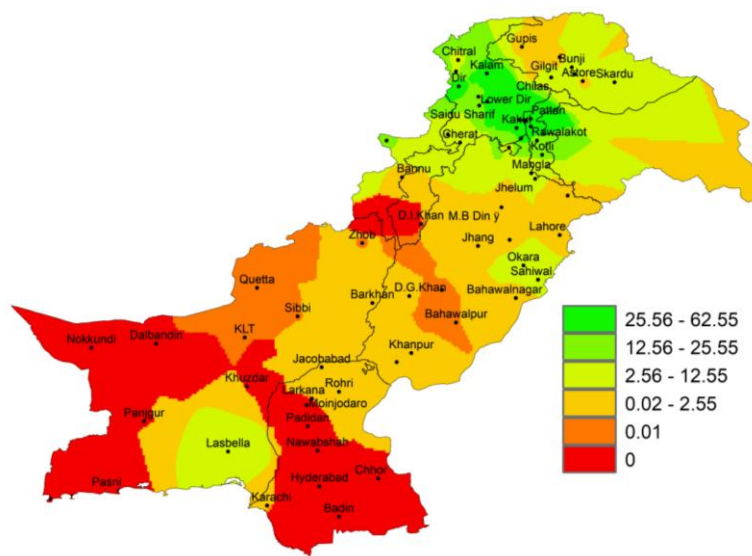
Weekly Weather and Crop Bulletin for Pakistan

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**Rainfall Distribution (mm) during the Previous
Week (7th January, to 13th January, 2019)**



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Highlights of Past Weather (7th January to 13th January, 2019)

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

Province wise distribution of rainfall reported as follows:

- Light to moderate rainfall observed in Punjab , GB & Azad Jammu Kashmir , and Khyber Pakhtunkhwa during the previous week.
- Light rainfall observed at Baluchistan and Sindh during the previous week.

Past Weather of Provinces (7th January to 13th January, 2019)

Punjab

Light to moderate rainfall observed in Punjab during the week. Weekly maximum and minimum temperatures recorded as 19.0°C & 5.4°C respectively. For the recent week on average 50.3 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 1.0/1.6 Knots. During the previous the highest precipitation was recorded as 27.60mm while the lowest minimum temperature was recorded as -3.8°C at Murree.

Baluchistan

Light rainfall observed in Baluchistan during the week. Weekly maximum and minimum temperatures recorded as 20.9°C & 6.2°C respectively. For the recent week on average 60.3 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 49% and wind speed in the morning/evening recorded as 1.2/8.0 Knots. During the previous week the highest precipitation recorded as 7.00mm at Lasbella while the lowest minimum temperature was recorded as -10.5°C at Kalat.

Khyber Pakhtunkhwa

Light to moderate rainfall observed in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 11.9°C & -0.1°C respectively. For the recent week on average 10.6 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 1.5/1.8 Knots. During the previous week the highest precipitation recorded as 62.00mm at Balakot while the lowest minimum temperature was recorded as -12.0°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 7.2°C & -2.4°C respectively. Average relative humidity recorded as 73% and wind speed in the morning/evening recorded as 0.4/0.9 Knots. During the previous week the highest precipitation recorded as 40.80mm at Garhi Dopata while the lowest minimum temperature was recorded as -14.8°C at Skardu.

Sindh

Light rainfall observed in Sindh during the week. Weekly maximum and minimum temperatures recorded as 23.9°C & 9.4°C respectively. For the recent week, on average 81.0 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 64% and wind speed in the morning/evening recorded as 1.3/2.9 Knots. During the previous week the highest precipitation recorded as 1.00mm at Jacobabad while lowest minimum temperature was recorded as -3.5°C at Moin-Jo-Daro.

Past Weather for Major Agricultural Plains 7th January to 13th January, 2019)

Rawalpindi (Potohar region)

8.60 mm rainfall reported from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 3.0/4.9 Oktas while, average relative humidity observed as 80%. Mean night time temperature recorded as 2.1°C & for the recent week 33.5 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)

0.40mm rainfall reported from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 3.4/3.0 Oktas while, average relative humidity observed as 71%. Mean night time temperature recorded as 6.2°C & for the recent week 58.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.6/1.0 Knots.

Tandojam (Lower Sindh)

Dry weather reported from Tandojam during the week; however, cloudiness in the morning/evening recorded as 1.1/1.0 Oktas while, average relative humidity observed as 69%. Mean night time temperature recorded as 9.1°C & for the recent week 79.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.9/2.0 Knots.

Usta Muhammad (Eastern Baluchistan)

Dry weather reported from Usta Muhammad during the week; however, cloudiness in the morning/evening recorded as 1.0/0.0 Oktas while, average relative humidity observed as 69%. Mean night time temperature recorded as 6.1°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 0.9/2.0 Knots.

Quetta (Northern Baluchistan)

Trace rainfall reported from Quetta during the week; however, cloudiness in the morning/evening recorded as 4.1/4.3 Oktas while, average relative humidity observed as 39%. Mean night time temperature recorded as 0.6°C & for the recent week

10.4 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.2/4.4 Knots.

Past Weather for Sub-Regional Agricultural Plains 7th January to 13th January, 2019)

Multan

0.01mm rainfall reported from Multan during the week; however, cloudiness in the morning/evening recorded as 3.4/3.2 Oktas while, average relative humidity observed as 70%. Mean night time temperature recorded as 6.5°C & for the recent week 56.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.9/2.4 Knots.

Lahore

0.91 mm rainfall was reported from Lahore during the week; however, however, cloudiness in the morning/evening recorded as 3.0/3.4 Oktas while, average relative humidity observed as 66%. Mean night time temperature recorded as 7.9°C & for the recent week 62.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/2.8 Knots.

Zhob

Dry weather reported from Zhob during the week; however, cloudiness in the morning/evening recorded as 0.3/1.9 Oktas while, average relative humidity observed as 49%. Mean night time temperature recorded as 4.4°C & for the recent week 58.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.9/7.0 Knots.

Murree

27.60mm rainfall was reported from Murree during the week; however, cloudiness in the morning/evening recorded as 2.6/4.8 Oktas while, average relative humidity observed as 73%. Mean night time temperature recorded as -2.7°C by the end of last week. Wind speed recorded in the morning/evening as 2.0/0.4 Knots.

D.I. Khan

Dry weather reported from D.I. Khan during the week; however, cloudiness in the morning/evening recorded as 3.7/4.0 Oktas while, average relative

humidity observed as 78%. Mean night time temperature recorded as 4.4°C & for the recent week 58.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.6/1.3 Knots.

Peshawar

8.02 mm rainfall was reported from Peshawar during the week; however, cloudiness in the morning/evening recorded as 2.9/4.4 Oktas while, average relative humidity observed as 70%. Mean night time temperature recorded as 4.6°C & for the recent week 40.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/1.7 Knots.

Kalam

33.00mm rainfall was reported from Kalam during the week; however, cloudiness in the morning/evening recorded as 4.6/5.1 Oktas while, average relative humidity observed as 82%. Mean night time temperature recorded as -9.1°C by the end of last week. Calm weather recorded in the morning/evening.

Gilgit

0.81mm rainfall was reported from Gilgit during the week; However, cloudiness in the morning/evening recorded as 7.1/6.3 Oktas while, average relative humidity observed as 75%. Mean night time temperature recorded as -2.2°C by the end of last week. Wind speed recorded in the morning/evening as 0.9/0.0 Knots.

Skardu

Dry weather reported from Skardu during the week; however, cloudiness in the morning/evening recorded as 6.6/4.8 Oktas while, average relative humidity observed as 83%. Mean night time temperature recorded as -9.1 °C by the end of last week. Calm weather recorded in the morning/evening.

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.*

Lower Sindh (Tandojam)

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

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

Northern Baluchistan (Quetta)

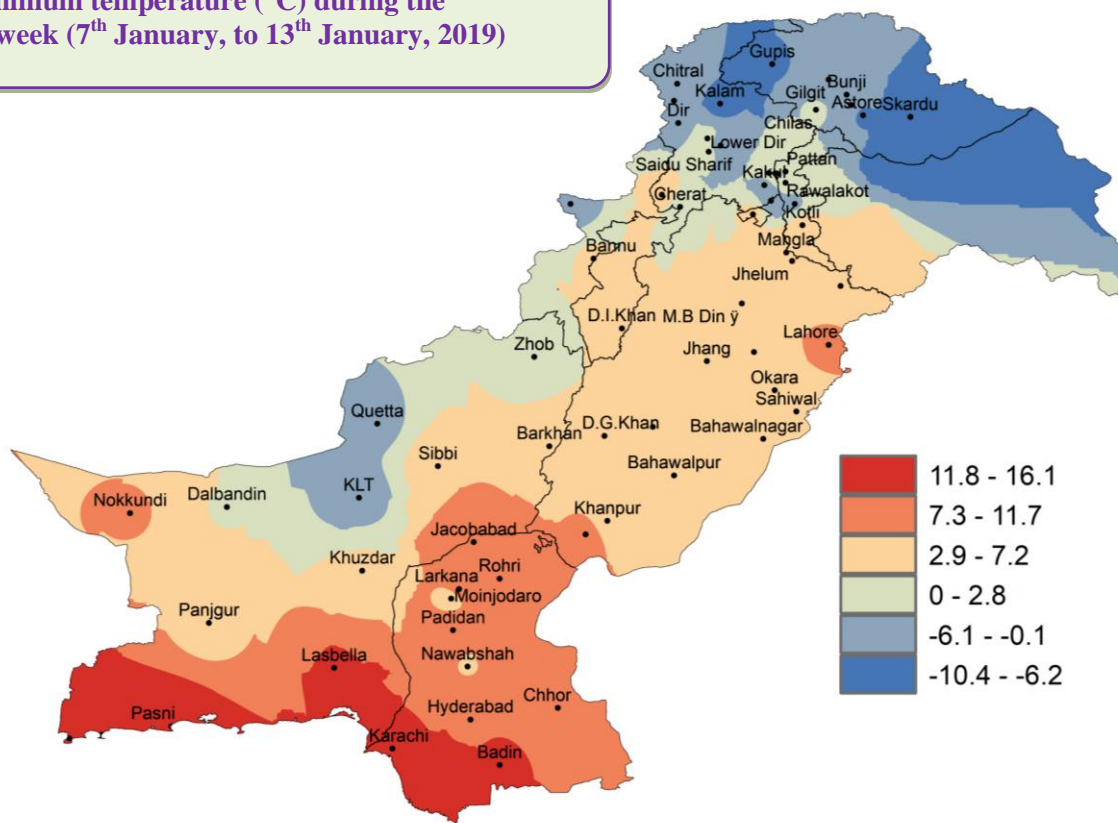
There is presently no crop grown in the fields of RAMC Quetta.

Eastern Baluchistan (Usta Muhammad)

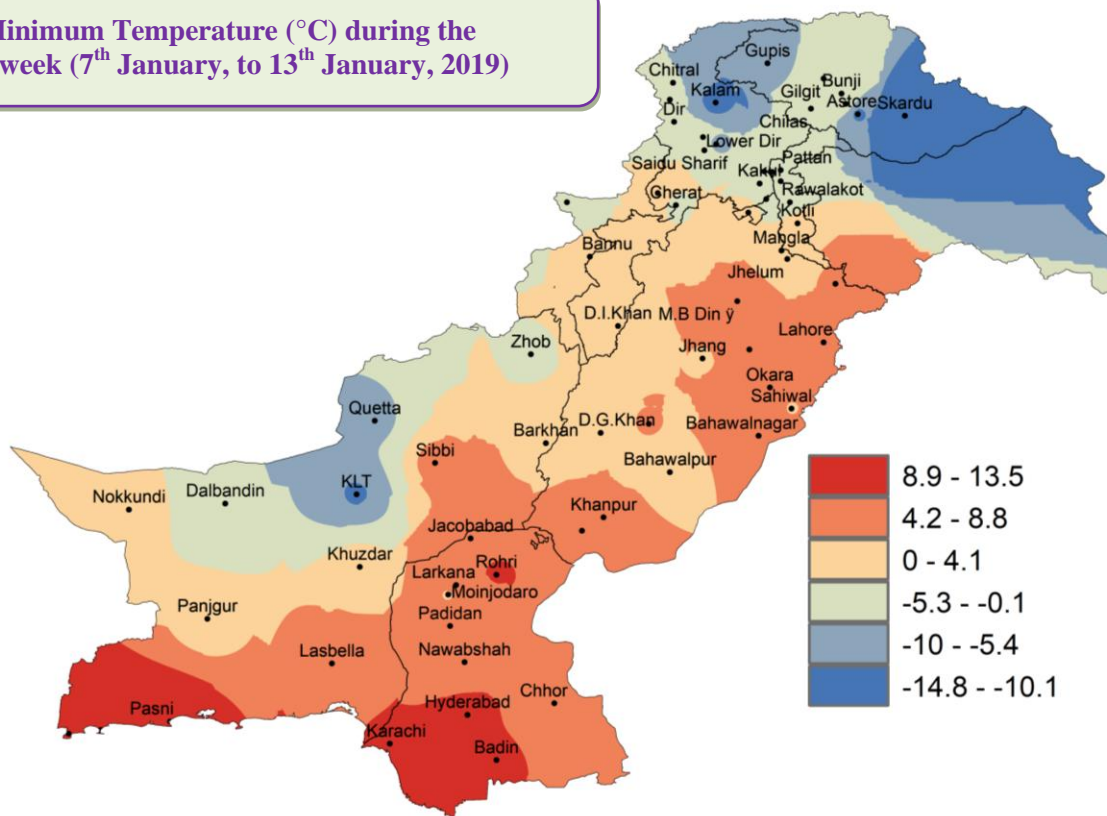
Presently wheat crop is sown in the fields of RAMC Usta Muhammad.

Wheat: *Good, Third leaf stage.*

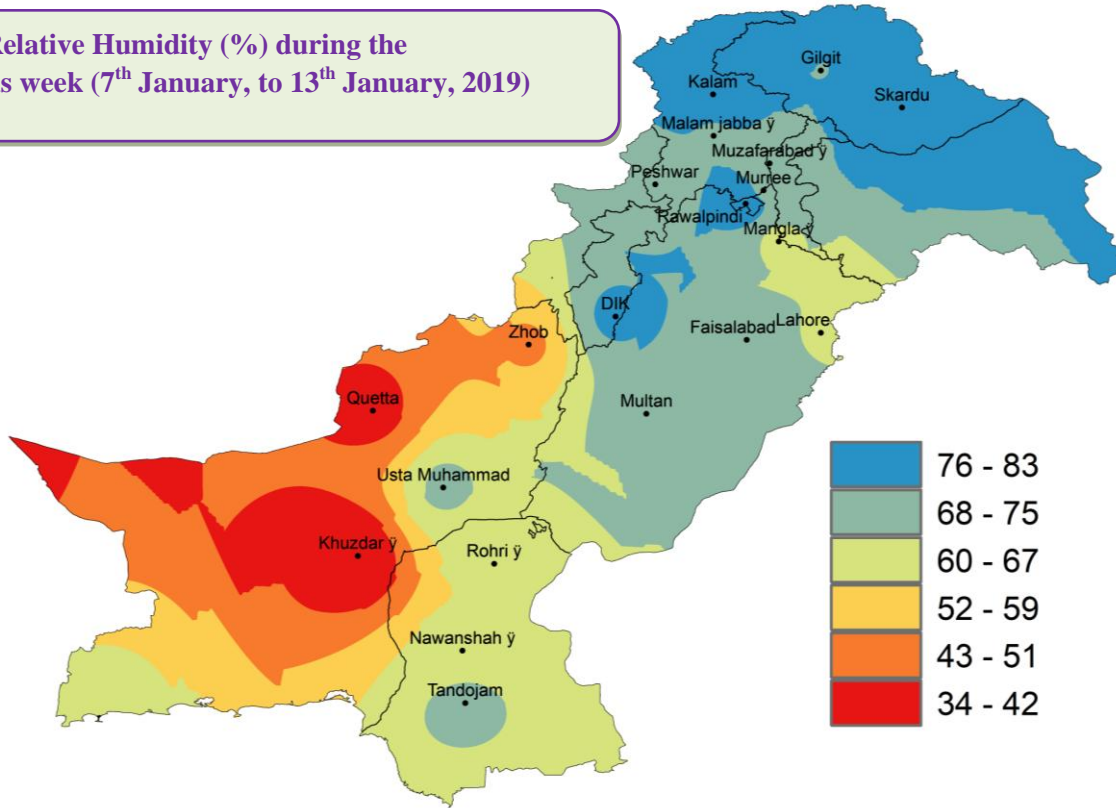
Mean Minimum temperature (°C) during the Previous week (7th January, to 13th January, 2019)



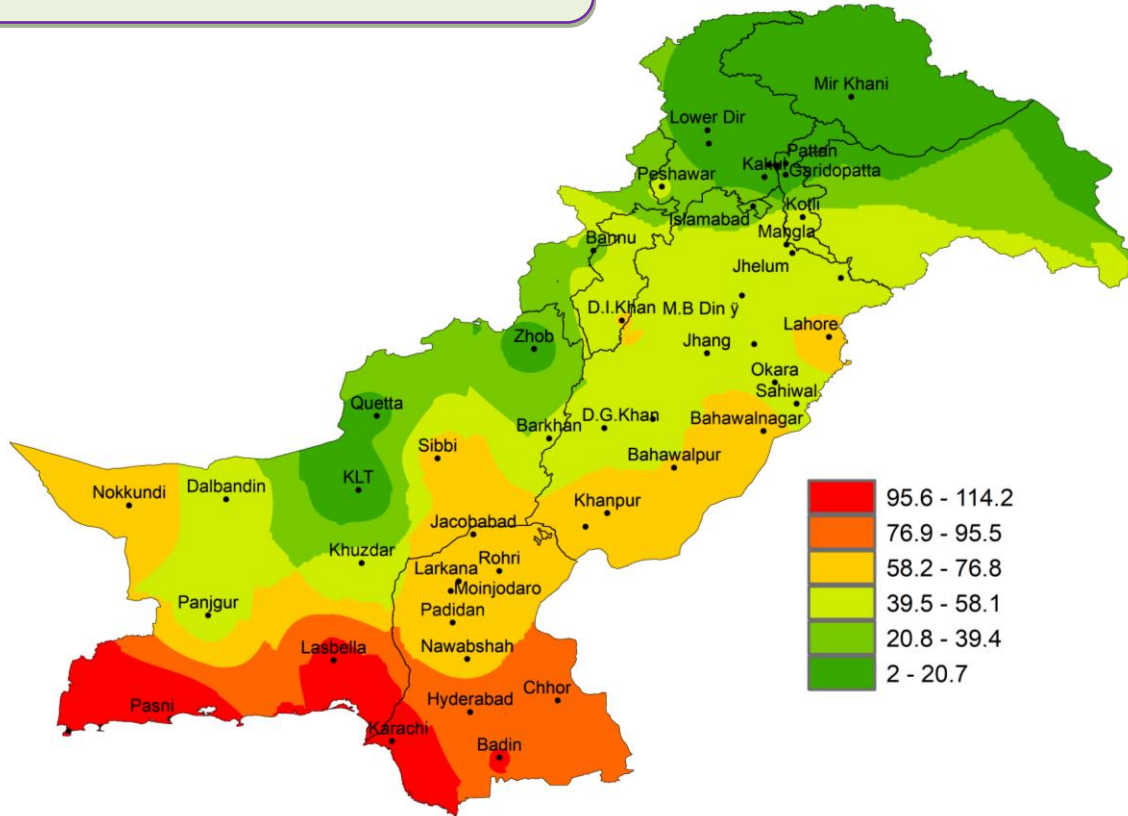
Lowest Minimum Temperature (°C) during the Previous week (7th January, to 13th January, 2019)



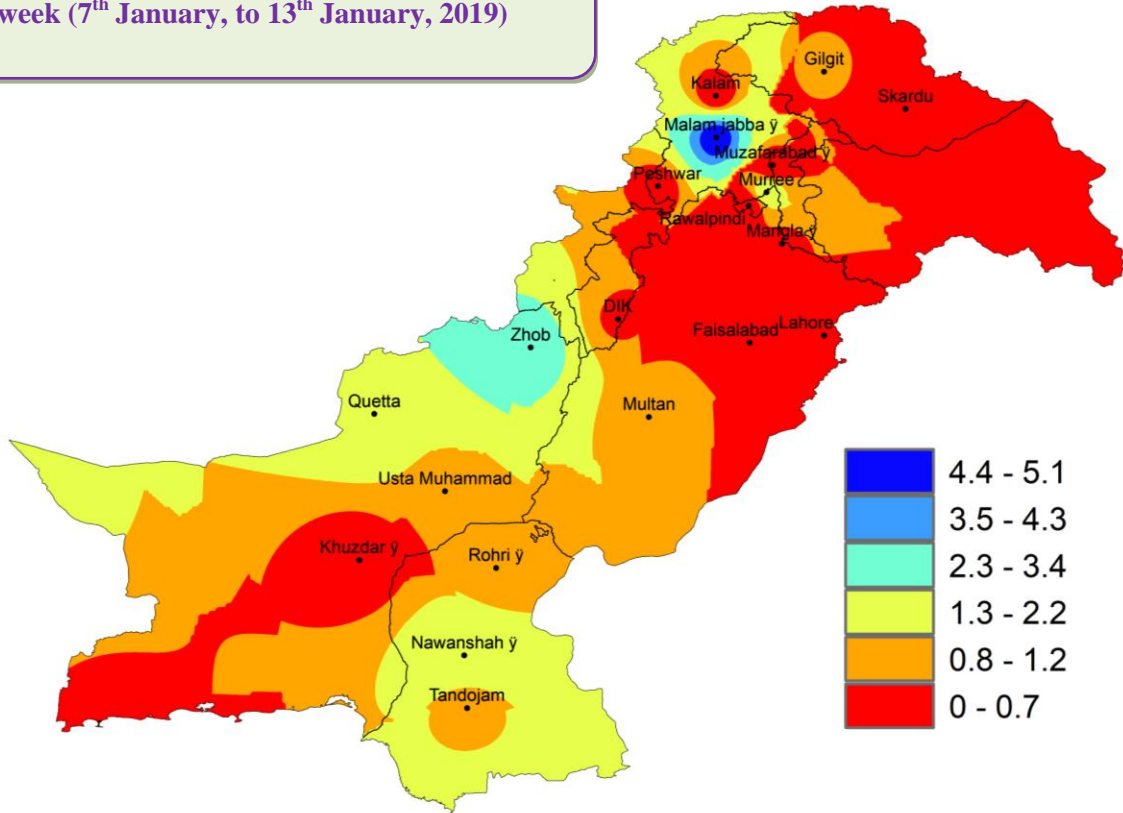
Mean Relative Humidity (%) during the Previous week (7th January, to 13th January, 2019)



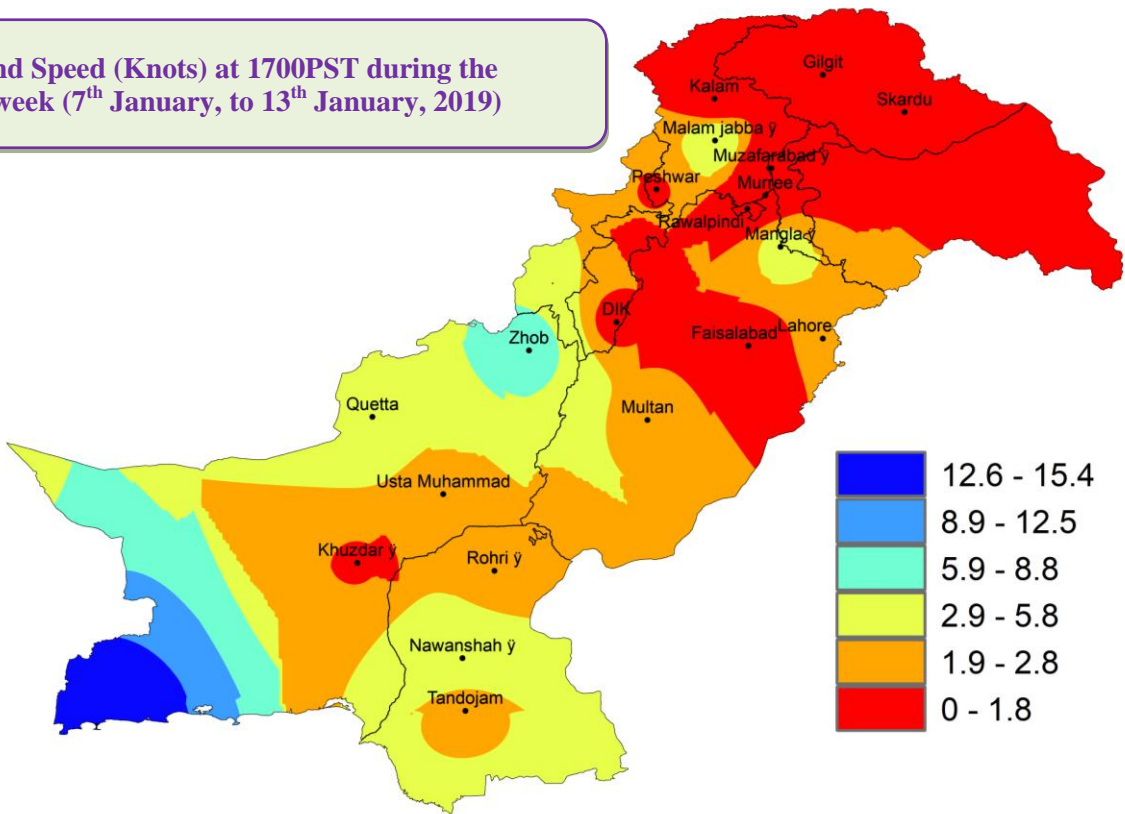
Total Growing Degree Days accumulated during the Previous week (7th January, to 13th January, 2019)



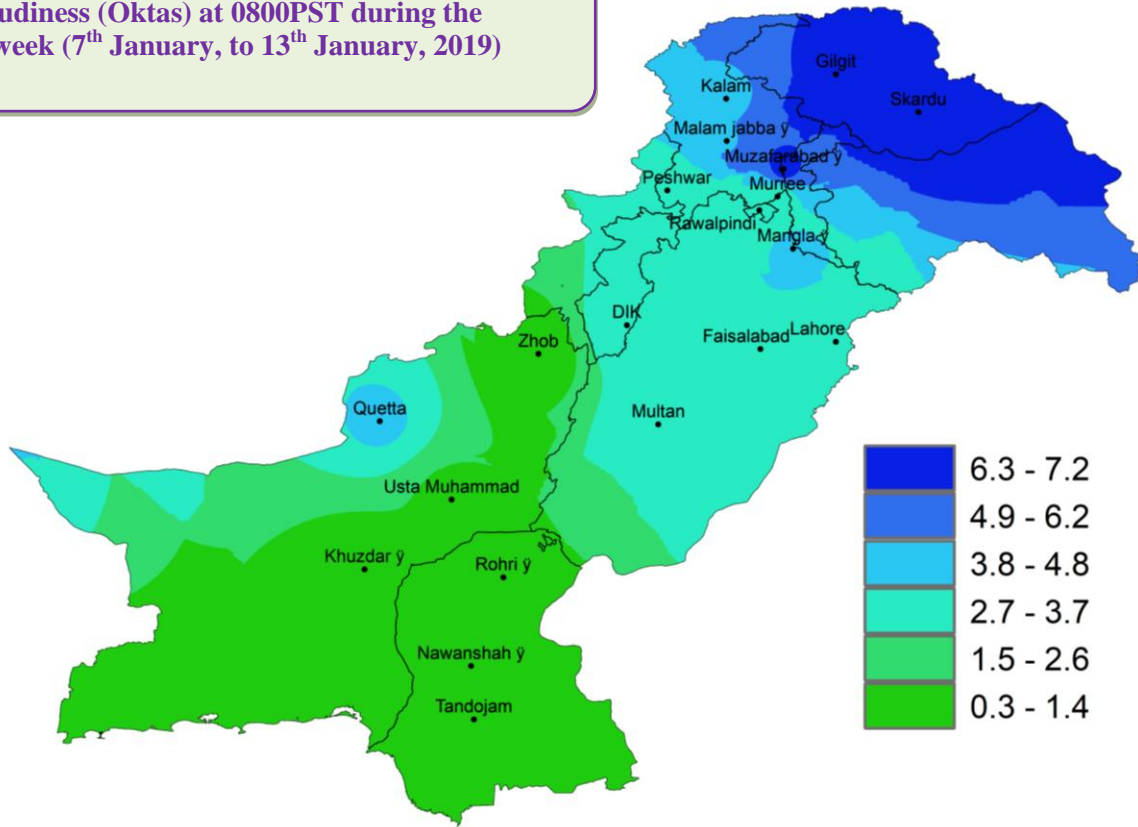
Mean Wind Speed (Knots) at 0800PST during the Previous week (7th January, to 13th January, 2019)



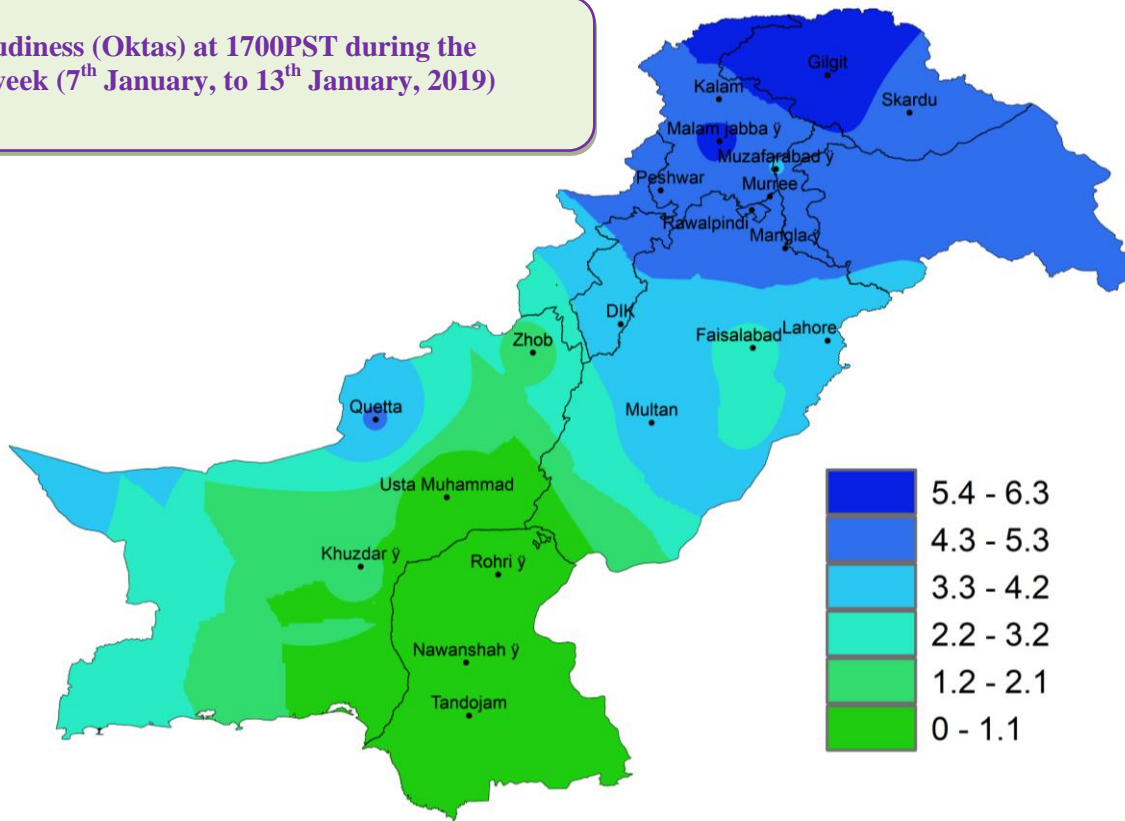
Mean Wind Speed (Knots) at 1700PST during the Previous week (7th January, to 13th January, 2019)



Mean Cloudiness (Oktas) at 0800PST during the Previous week (7th January, to 13th January, 2019)



Mean Cloudiness (Oktas) at 1700PST during the Previous week (7th January, to 13th January, 2019)



Weekly Weather Advisory for Farmers
(15th January to 21st January, 2019)

A shallow westerly wave is likely to affect northern areas of the country tomorrow. A fresh westerly wave is likely to enter western parts of the country from Saturday, likely to grip different parts of the country on Sunday and may persist till Tuesday.

MONDAY
15-01-2019

Mainly cold and dry weather with party cloudy conditions is expected in most parts of the country.

TUESDAY
16-01-2019

Mainly cold and dry weather is expected in most parts of the country. However light rain (with light snowfall over the hills) is expected at isolated places in Malakand, Hazara divisions, Kashmir and Gilgit-Baltistan. Cold/Cloudy weather with chances of drizzle at isolated places in Kohat and Rawalpindi divisions during the period.

WEDNESDAY
17-01-2019

Mainly cold and dry weather is expected in most parts of the country. Shallow foggy conditions are expected at a few places in south Punjab and upper Sindh.

THURSDAY
18-01-2019

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

FRIDAY
19-01-2019

Partly cloudy to cloudy weather conditions are expected in upper parts of the country. However, rain (with snowfall over the hills) is expected at isolated places in Malakand, Hazara, Peshawar, Kohat, Quetta, Zhob, Makran, Rawalpindi divisions, Islamabad, Kashmir and Gilgit-Baltistan. Foggy conditions are expected in plain areas of Punjab, upper Sindh and Peshawar division during night/morning hours.

SATURDAY
20-01-2019

Widespread rain is expected in upper Khyber-Pakhtunkhwa (Malakand, Hazara, Peshawar, Kohat, Mardan divisions), Upper Punjab (Rawalpindi, Gujranwala, Lahore, Sargodha, Faisalabad divisions), Islamabad, Gilgit-Baltistan and Kashmir, while at scattered places in Balochistan, lower Khyber Pakhtunkhwa, South Punjab, and at isolated places in Sindh.

Snowfall over hills is also expected in Malakand division (Swat, Chitral, Kalam, Malamjabba & upper Dir), Hazara division Murree and Galliyat, Kashmir and Gilgit-Baltistan.

SUNDAY
21-01-2019

Fairly widespread rain (with few moderate to isolated heavy falls) is expected in upper Khyber-Pakhtunkhwa (Malakand, Hazara, Peshawar, Kohat, Mardan divisions), Upper Punjab (Rawalpindi, Gujranwala, Lahore, Sargodha, Faisalabad divisions), Islamabad, Gilgit-Baltistan and Kashmir, while at scattered places in Balochistan, lower Khyber Pakhtunkhwa, south Punjab, and at isolated places in Sindh.

Moderate to heavy snowfall over hills is also expected in Malakand division (Swat, Chitral, Kalam, Malamjabba & upper Dir), Hazara division Murree and Galliyat, Kashmir and Gilgit-Baltistan.

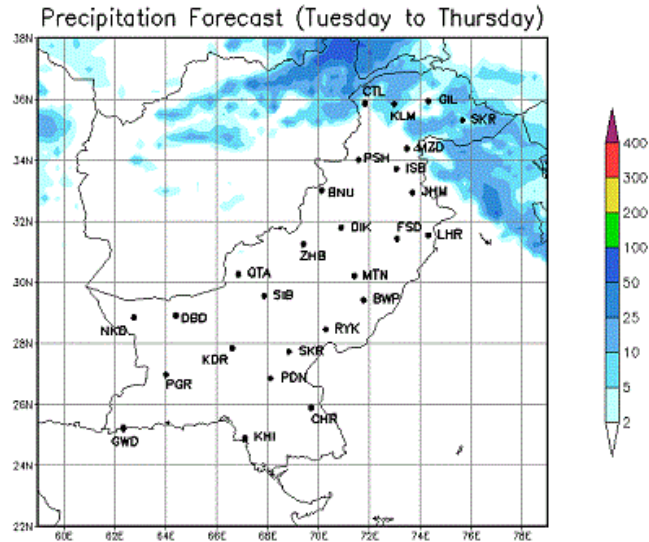
ADVISES FOR FARMERS

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.

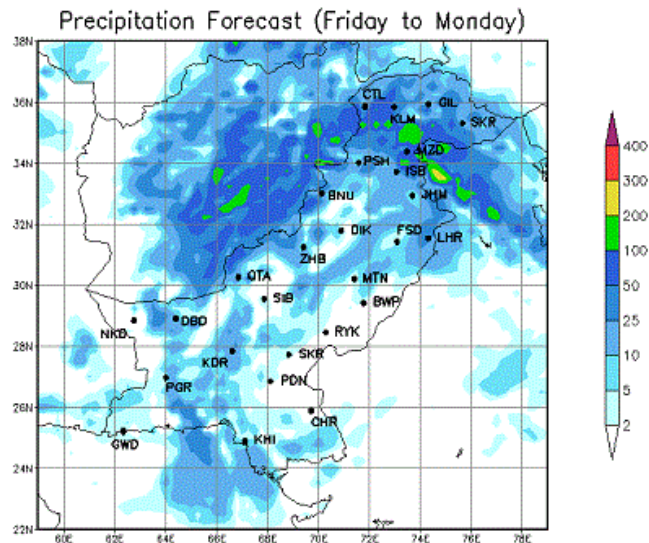
- Farmers are advised to use ensured and certified seed for the sowing of Rabi crops in accordance with the proper moisture conditions.
- Store cotton crop in proper and dry place because the cost of good and clean quality cotton is high than that of the filthy one.
- Protect your nurseries from frost.

Weather Outlook from 15th January to 21th January, 2019

The outlook from 15th January to 17th January, 2019 shows that light to moderated rain is expected in GB, Kashmir and upper KP. However, dry weather may prevail over rest of the country.



The outlook from 18th January to 21st January, 2019 shows that moderate to heavy rainfall is expected over the northern half of the country while light to moderate rainfall is expected over rest of the country.



National Weather Data of Selected Cities Weekly Data from 7th January to 13th 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	4.4	3.5	58.5	78	0.00	3.7	4.0	0.6	1.3
Faisalabad	6.2	4.5	58.5	71	0.40	3.4	3.0	0.6	1.0
Gawader	13.1	11.5	109.8	63	0.00	0.3	2.4	0.6	15.4
Gilgit	-2.2	-3.5	-17.3	75	0.81	7.1	6.3	0.9	0.0
Kalam	-9.1	-12.0	-53.2	82	33.00	4.6	5.1	0.0	0.0
Khuzdar	3.6	2.0	42.0	34	0.00	0.6	1.1	0.3	1.7
Lahore	7.9	6.2	62.8	66	0.91	3.0	3.4	0.0	2.0
Malam Jabba	-4.9	-8.0	***	74	53.00	4.7	5.4	5.1	4.3
Mangla	5.3	3.3	49.1	64	2.60	4.1	4.8	0.6	3.6
Multan (PBO)	6.5	4.2	56.8	70	0.01	3.4	3.2	0.9	2.4
Murree	-2.7	-3.8	-21.2	73	27.60	2.6	4.8	2.0	0.4
Muzaffarabad	0.9	-1.0	12.0	71	41.00	7.2	4.2	0.0	0.0
Nawabshah	7.0	6.5	73.4	62	0.00	1.3	0.9	2.0	4.6
Peshawar	4.6	2.5	40.5	70	8.02	2.9	4.4	0.3	1.7
Quetta	0.6	-5.4	10.4	39	0.01	4.1	4.3	2.2	4.4
Rawalakot	2.1	0.6	33.5	80	8.60	3.0	4.9	0.0	1.1
Rawalpindi	9.7	9.0	76.8	63	1.00	1.1	0.4	0.9	2.0
Rohri	-10.4	-14.8	***	83	2.62	6.6	4.8	0.0	0.0
Skardu	9.1	7.5	79.8	69	0.00	1.1	1.0	0.9	2.0
Tandojam	6.1	5.5	64	69	0.00	1.0	0.0	0.9	2.0
Usta.M	0.1	-1.0	16.0	49	0.00	0.3	1.9	2.9	7.0
Zhob	4.4	3.5	58.5	78	0.00	3.7	4.0	0.6	1.3

*** 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)