

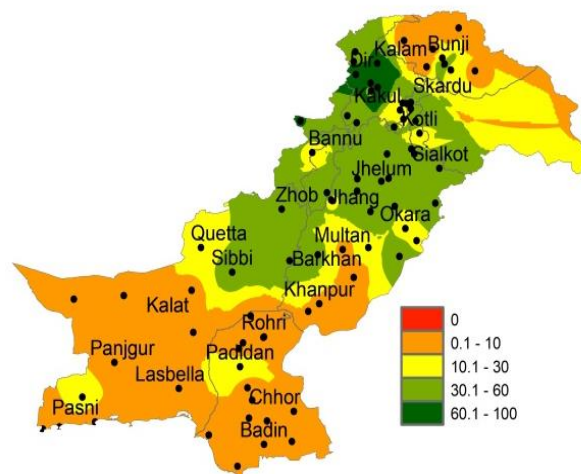
Weekly Weather and Crop Bulletin for Pakistan

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**Rainfall Distribution (mm) during the Previous
Week (15th to 21st April, 2019)**



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Highlights of Past Weather (15th to 21st April, 2019)

Below normal day time temperatures were observed all over the country while mix trend was observed in Gilgit Baltistan during the last week.

Province wise distribution of rainfall reported as follows:

1. Light to moderate rainfall observed all over the country, while moderate to heavy rainfall was observed in Khyber Pakhtunkhwa during last week.

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

Editor: Saeeda Saleh (Assistant Meteorologist)

Past Weather of Provinces (15th to 21st April, 2019)**Punjab**

Light to moderate rainfall observed in Punjab during the week. Weekly maximum and minimum temperatures recorded as 30.5°C & 17.1°C respectively. For the recent week on average 132.9 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 61% and wind speed in the morning/evening recorded as 3.2/3.2 Knots. During the previous the highest precipitation was recorded as 68.4 mm at Kasor while the highest maximum temperature was recorded as 40.5°C at Khanpur.

Baluchistan

Light to moderate rainfall observed in Baluchistan during the week. Weekly maximum and minimum temperatures recorded as 29.1°C & 15.9°C respectively. For the recent week on average 121.7 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 62% and wind speed in the morning/evening recorded as 1.9/3.4 Knots. During the previous the highest precipitation was recorded as 55.0 mm at Barkhan while the highest maximum temperature was recorded as 40.0°C at Lasbella.

Khyber Pakhtunkhwa

Moderate to heavy rainfall observed in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 22.7°C & 10.5°C respectively. For the recent week on average 83.7 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 1.4/1.5 Knots. During the previous week the highest precipitation recorded as 98.0 mm at Malam Jaba while the highest maximum temperature was recorded as 36.5°C at D I Khan.

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 24.0°C & 10.7°C respectively. For the recent week on average 86.3 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 52% and wind speed in the morning/evening recorded as 0.9/2.3 Knots. During the previous week the highest precipitation recorded as 54.9 mm at Rawlakot while the highest maximum temperature was recorded as 33.6°C at Kotli.

Sindh

Light to moderate rainfall observed in Sindh during the week. Weekly maximum and minimum temperatures recorded as 35.4°C & 21.0°C respectively. For the recent week, on average 162.2 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 2.9/3.2 Knots. During the previous week the highest precipitation recorded as 32.0 mm at Padidan while the highest maximum temperature was recorded as 42.5°C at Sukkur.

Past Weather for Major Agricultural Plains (15th to 21st April, 2019)

Rawalpindi (Potohar region)

27.4 mm rainfall reported from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 3/3.6 Oktas while, average relative humidity observed as 69%. Mean day time temperature recorded as 28.8°C & for the recent week 117.7 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.9/0.9 Knots.

Faisalabad (Central Punjab)

33.0mm rainfall reported from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 2.9/3.9 Oktas while, average relative humidity observed as 63%. Mean day time temperature recorded as 31.1°C & for the recent week 135.6 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.8/1.5 Knots.

Tandojam (Lower Sindh)

2.0mm rainfall reported from Tandojam during the week; however, cloudiness in the morning/evening recorded as 1.3/1.6 Oktas while, average relative humidity observed as 51%. Mean day time temperature recorded as 35.9°C & for the recent week 158.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.4/3.9 Knots.

Usta Muhammad (Eastern Baluchistan)

9.0mm rainfall reported from Usta Muhammad during the week; however, cloudiness in the morning/evening recorded as 2.5/1.7 Oktas while, average relative humidity observed as 53%. Mean day time temperature recorded as 35.4°C & for the recent week 160.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.8/0.8 Knots.

Quetta (Northern Baluchistan)

27.4mm rainfall reported from Quetta during the week; however, cloudiness in the morning/evening recorded as 3.4/3.9 Oktas while, average relative humidity observed as 50%. Mean day time temperature recorded as 38.0°C & for the recent

week 67.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.1/2.1 Knots.

Past Weather for Sub-Regional Agricultural Plains (15th to 21st April, 2019)

Multan

6.6mm rainfall reported from Multan during the week; however, cloudiness in the morning/evening recorded as 2.0/3.3 Oktas while, average relative humidity observed as 59%. Mean day time temperature recorded as 31.6°C & for the recent week 142.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 4.3/4.6 Knots.

Lahore

52.0 mm rainfall was reported from Lahore during the week; however, however, cloudiness in the morning/evening recorded as 3.7/3.4 Oktas while, average relative humidity observed as 55%. Mean day time temperature recorded as 30.9°C & for the recent week 141.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.7/3.1 Knots.

Zhob

34.0 mm rainfall was reported from Zhob during the week; however, cloudiness in the morning/evening recorded as 2.0/3.1 Oktas while, average relative humidity observed as 56%. Mean day time temperature recorded as 23.9°C & for the recent week 88.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 4.0/5.0 Knots.

Murree

19.2 mm rainfall was reported from Murree during the week; however, cloudiness in the morning/evening recorded as 3.7/4.6 Oktas while, average relative humidity observed as 68%. Mean day time temperature recorded as 17.1° C & for the recent week 55.4 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 3.4/1.9 Knots.

D.I. Khan

51.0 mm rainfall was reported from D.I. Khan during the week; however, cloudiness in the morning/evening recorded as 3.1/3.0 Oktas while, average relative humidity observed as 72%. Mean day time temperature recorded as 30.0°C & for the recent week 132.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/2.0 Knots.

Peshawar

36.0 mm rainfall was reported from Peshawar during the week; however, cloudiness in the morning/evening recorded as 4.0/5.0 Oktas while, average relative humidity observed as 72%. Mean day time temperature recorded as 28.3°C & for the recent week 108.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.6/1.4 Knots.

Kalam

69.3 mm rainfall was reported from Kalam during the week; however, cloudiness in the morning/evening recorded as 5.9/6.1 Oktas while, average relative humidity observed as 70%. Mean day time temperature recorded as 16.4°C & for the recent week 35.4 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.0 Knots

Gilgit

0.4 mm rainfall was reported from Gilgit during the week. However, cloudiness in the morning/evening recorded as 4.3/6.3 Oktas while, average relative humidity observed as 46%. Mean day time temperature recorded as 26.9°C & for the recent week 97.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/2.6 Knots.

Skardu

0.0 mm rainfall was reported from Skardu during the week; however, cloudiness in the morning/evening recorded as 4.0/4.3 Oktas while, average relative humidity observed as 35%. Mean day time temperature recorded as 22.9°C by the end of last week. Wind speed recorded in the morning/evening as 1.1/2.0 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, Milk maturity completed stage.*

Irrigated: *Nil.*

Lower Sindh (Tandojam)

The land is prepared for new crop in the fields of RAMC Tandojam.

Northern Baluchistan (Quetta)

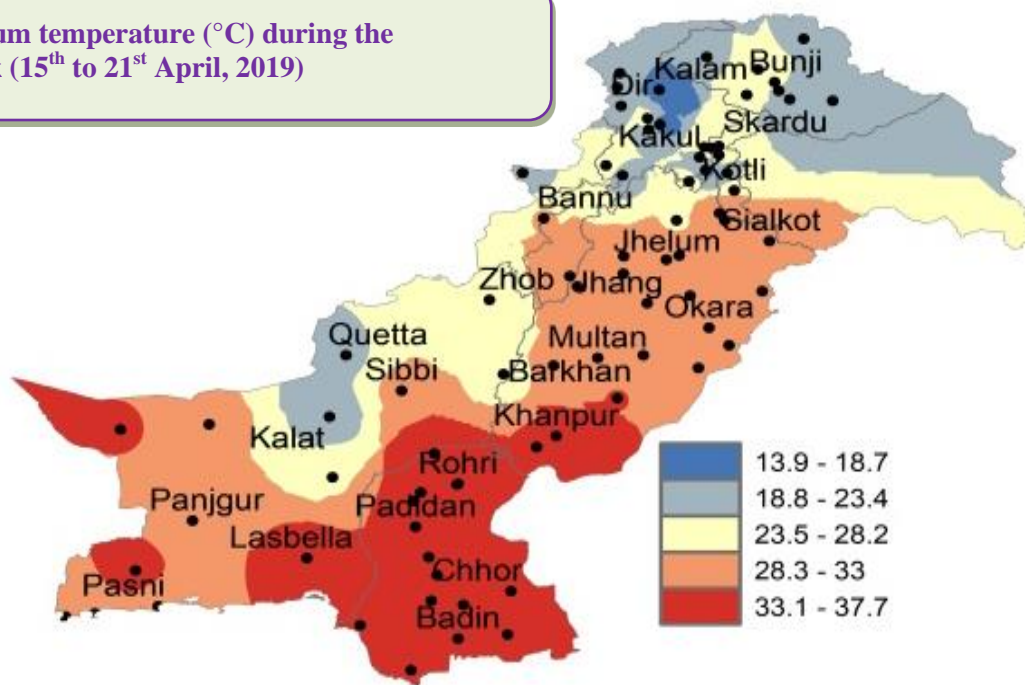
There is presently no crop grown in the fields of RAMC Quetta.

Eastern Baluchistan (Usta Muhammad)

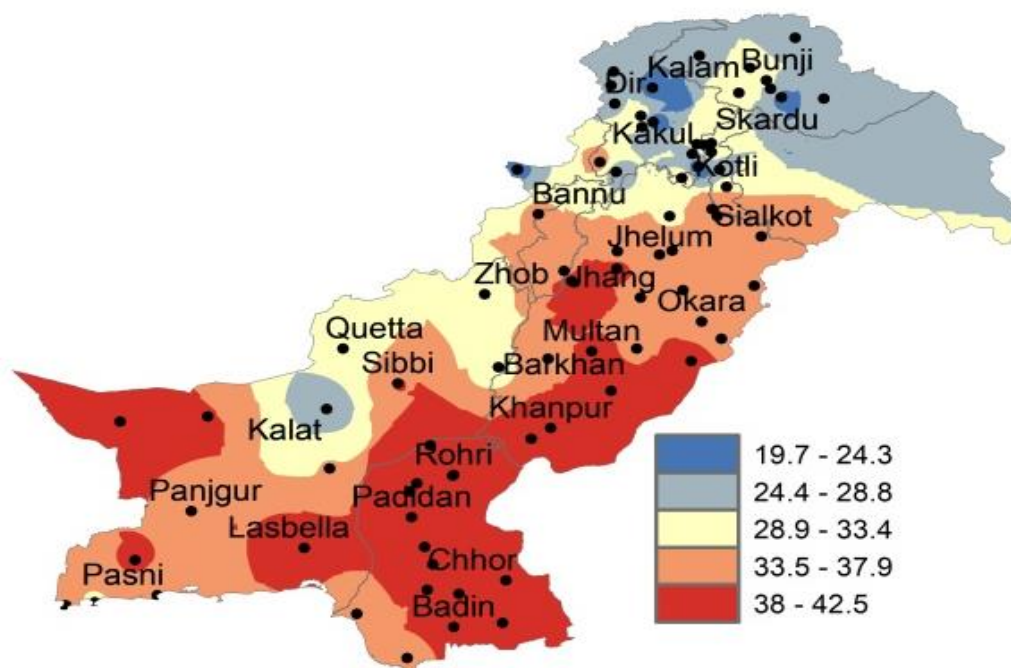
Presently wheat crop is sown in the fields of RAMC Usta Muhammad.

Wheat: *Good, Wax maturity stage.*

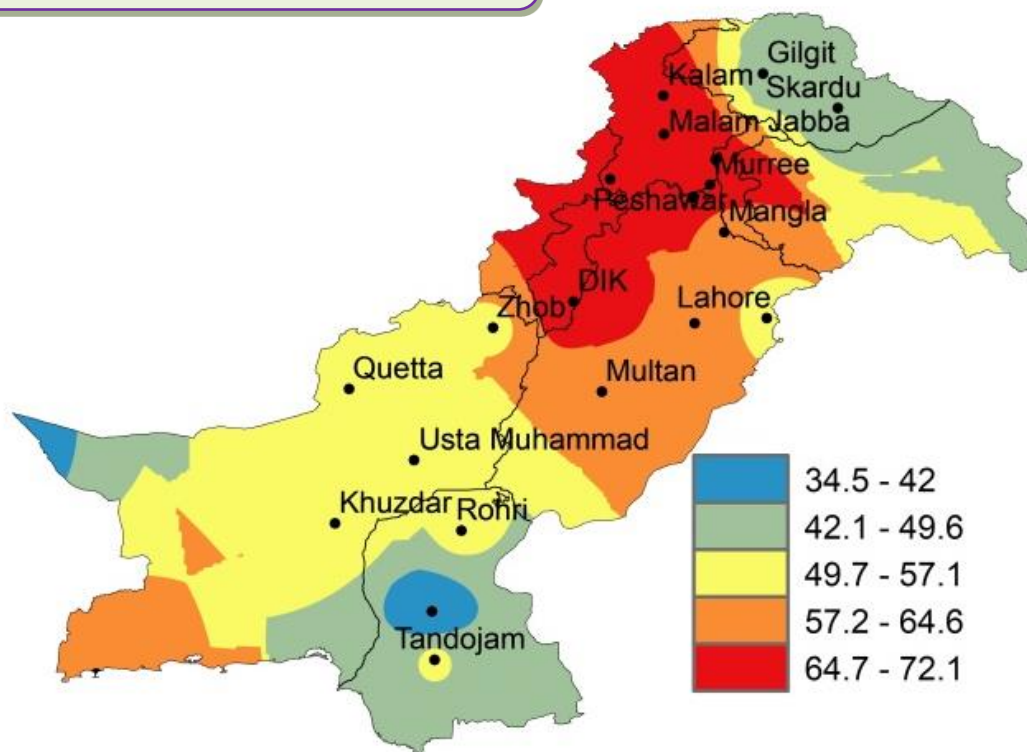
Mean Maximum temperature (°C) during the Previous week (15th to 21st April, 2019)



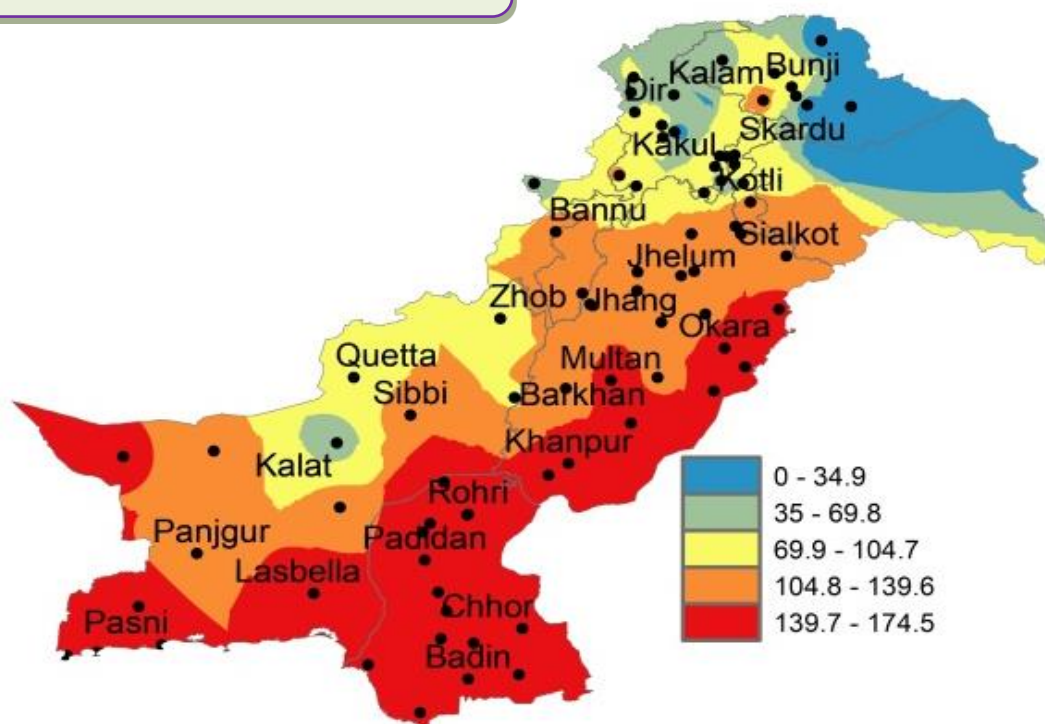
Highest Maximum Temperature (°C) during the Previous week (15th to 21st April, 2019)



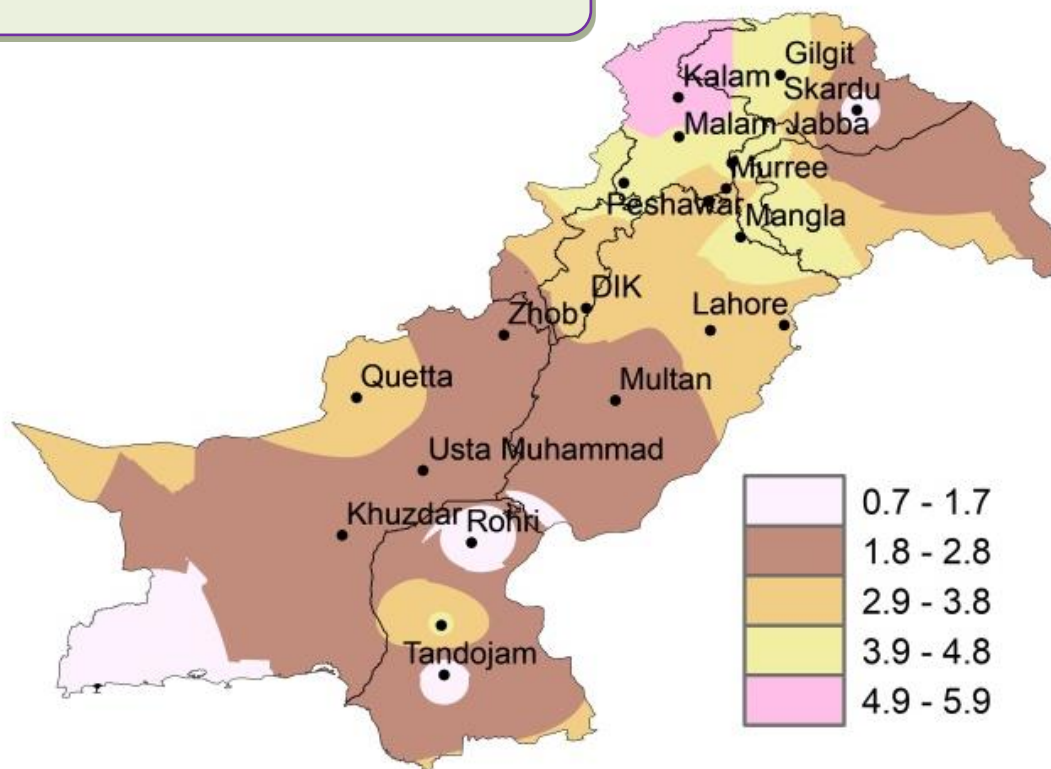
Mean Relative Humidity (%) during the
Previous week (15th to 21st April, 2019)



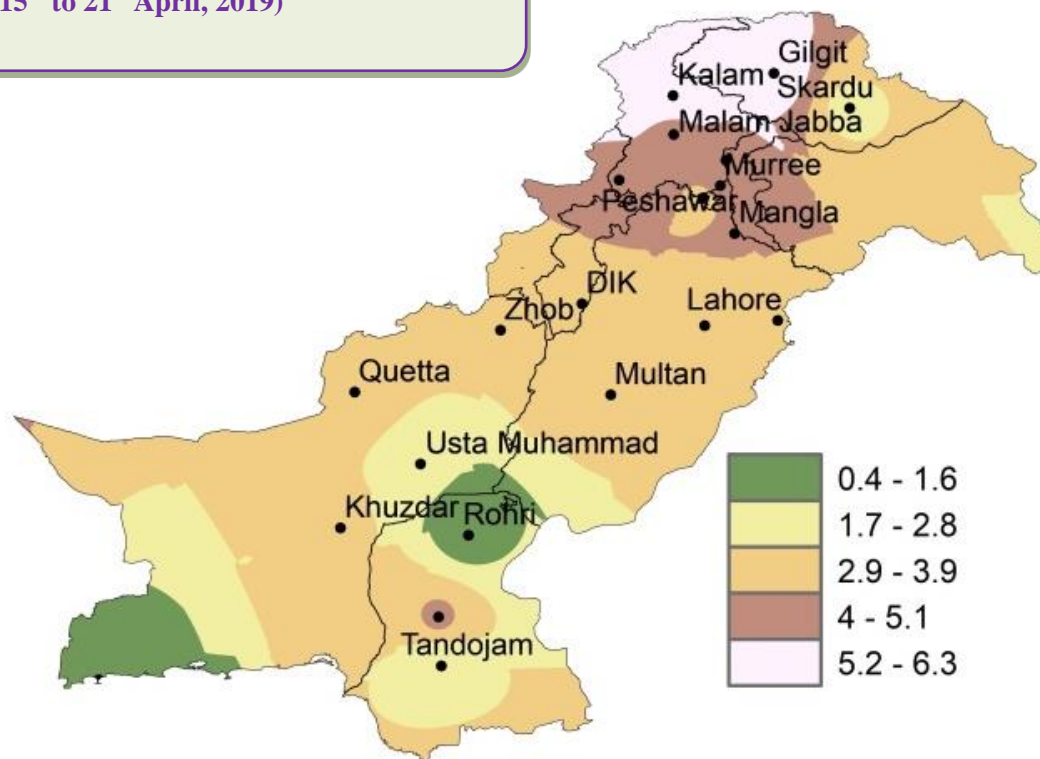
Total Growing Degree Days accumulated during the
Previous week (15th to 21st April, 2019)



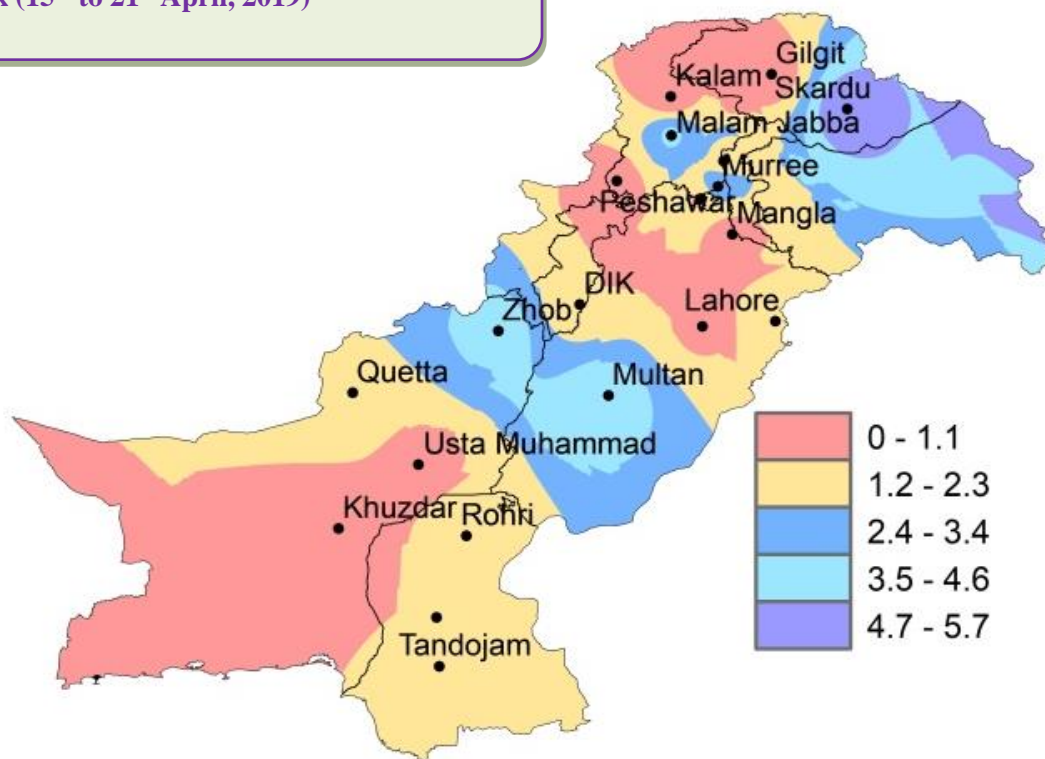
Mean Cloudiness (Oktas) at 0800PST during the Previous week (15th to 21st April, 2019)



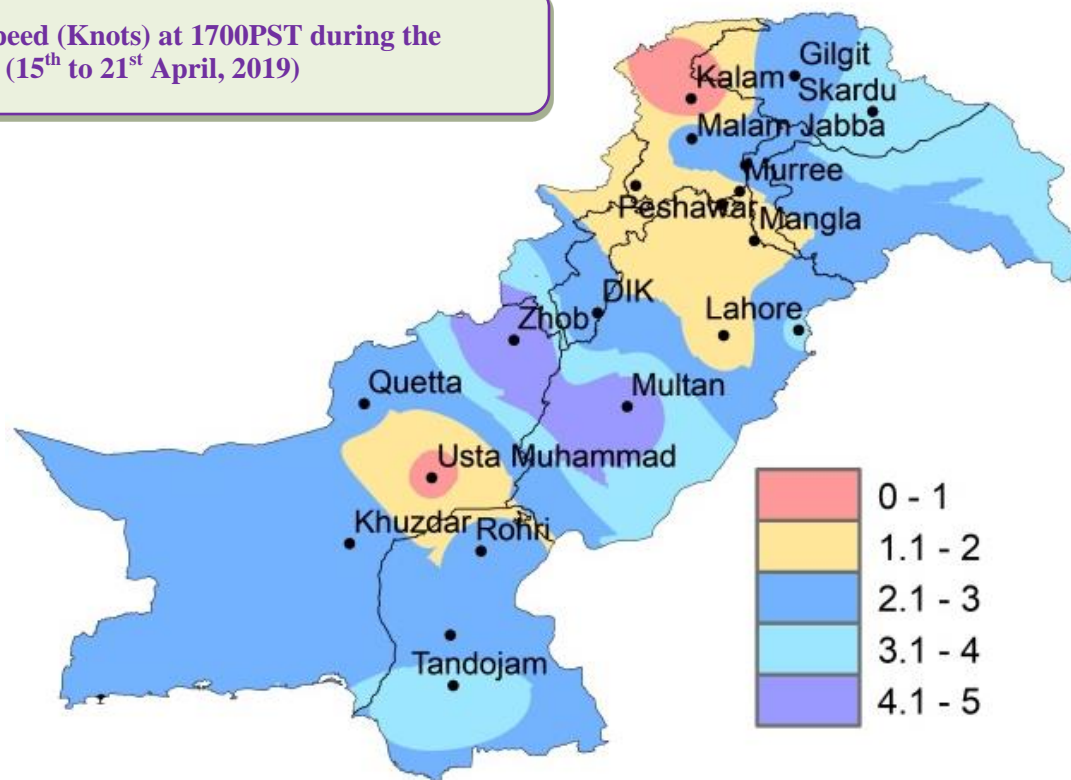
Mean Cloudiness (Oktas) at 1700PST during the Previous week (15th to 21st April, 2019)



Mean Wind Speed (Knots) at 0800PST during the Previous week (15th to 21st April, 2019)



Mean Wind Speed (Knots) at 1700PST during the Previous week (15th to 21st April, 2019)



Weekly Weather Advisory for Farmers
(22nd April to 28th April, 2019)

Continental air is prevailing over most parts of the country. A westerly wave is likely to enter western parts of the country on Tuesday, likely to affect upper and central parts of the country on Wednesday/Thursday and may persist on Northern areas till Friday.

MONDAY
22-04-2019

Mainly dry weather is expected in most parts of the country, while hot in plain areas of Punjab and Sindh.

TUESDAY
23-04-2019

Mainly dry weather is expected in most parts of the country, while hot in plain areas of Punjab and Sindh. However, rain-thunderstorm with gusty winds is expected scattered places in Khyber Pakhtunkhwa, while at isolated places in Quetta, Zhob divisions, Kashmir and Gilgit Baltistan during evening/night.

WEDNESDAY
24-04-2019

Widespread dust-thunderstorm/rain accompanied by strong gusty winds (with few moderate to isolated heavy falls) is expected in Khyber Pakhtunkhwa, Kashmir and Gilgit-Baltistan, while at scattered places in Northeast Balochistan (Quetta, Kalat, Zhob, Nasirabad & Sibbi divisions), Punjab (Rawalpindi, Gujranwala, Sargodha, Faisalabad, Lahore, Multan, D.G.Khan, Sahiwal, Bahawalpur divisions) and Islamabad, while at isolated places in Sukkur division. Hailstorm is also expected at isolated places in upper Punjab, upper Khyber Pakhtunkhwa and Kashmir during the period.

THURSDAY
25-04-2019

Widespread dust-thunderstorm/rain accompanied by strong gusty winds (with few moderate to isolated heavy falls) is expected in Khyber Pakhtunkhwa, Kashmir and Gilgit-Baltistan, while at scattered places in Northeast Balochistan (Quetta, Kalat, Zhob, Nasirabad &

Sibbi divisions), Punjab (Rawalpindi, Gujranwala, Sargodha, Faisalabad, Lahore, Multan, D.G.Khan, Sahiwal, Bahawalpur divisions) and Islamabad, while at isolated places in Sukkur division. Hailstorm is also expected at isolated places in upper Punjab, upper Khyber Pakhtunkhwa and Kashmir during the period.

FRIDAY
26-04-2019

Mainly dry weather is expected in most parts of the country, while hot in Sindh. However, rain-thunderstorm is expected at isolated places in Malakand, Hazara, Peshawar, Kohat, Rawalpindi divisions, Islamabad, Gilgit-Baltistan and Kashmir.

SATURDAY
27-04-2019

Mainly dry weather is expected in most parts of the country, while hot in Sindh. However, rain-thunderstorm is expected at isolated places in Malakand, Hazara, Peshawar, Kohat, Rawalpindi divisions, Gilgit-Baltistan and Kashmir.

SUNDAY
28-04-2019

Mainly dry weather is expected in most parts of the country, while hot in Sindh. However, rain-thunderstorm is expected at isolated places in Hazara division, Gilgit-Baltistan and Kashmir.

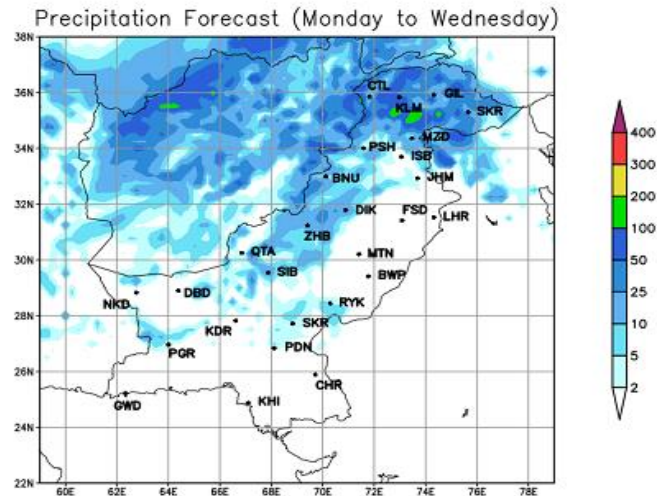
ADVISES FOR FARMERS

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.

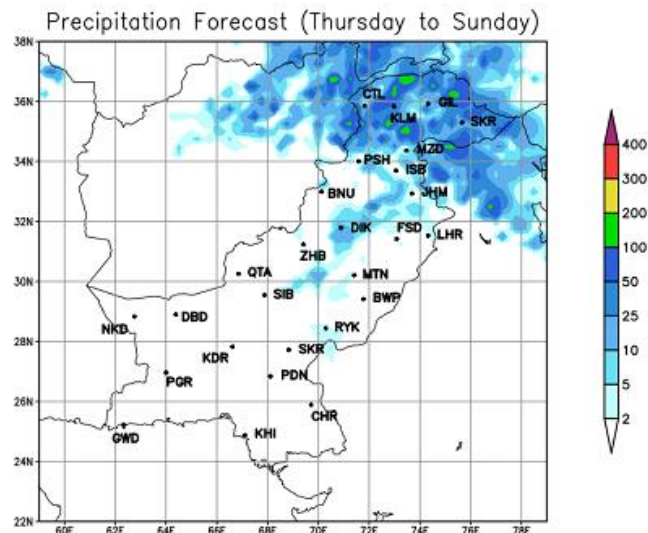
1. Farmers are advised to apply deep ploughing in the fields after harvested the Wheat crops.
2. Irrigate the crops where needed.
3. To obtain the possible yield of wheat crop, weather forecast should be considered before harvesting.

Precipitation Outlook from 22nd April to 28th April, 2019

The outlook from 22nd April to 24th April, 2019 shows that light to moderate rainfall is expected in KP, Gilgit Baltistan, Azad Kashmir and scattered places of Northern Sindh and Baluchistan.



The outlook from 25th April to 28th April, 2019 shows that light to moderate rainfall is expected over upper KP and Gilgit Baltistan and azad Kashmir while in scattered places of lower KP and central Punjab.



National Weather Data of Selected Cities Weekly Data from (15th April to 21st April, 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	highest							
D.I.Khan	30.0	36.5	132.5	72	51.0	3.1	3.0	1.1	2.0
Faisalabad	31.1	37.0	135.6	63	33.0	2.9	3.9	0.8	1.5
Gawader	31.7	33.0	143.5	64	0.0	0.7	0.4	0.0	2.3
Gilgit	26.9	30.0	97.0	46	0.4	4.3	6.3	0.3	2.6
Kalam	16.4	22.5	35.4	70	69.3	5.9	6.1	0.0	0.0
Khuzdar	27.2	33.5	114.3	56	4.3	2.0	3.3	0.6	2.9
Lahore	30.9	36.7	141.8	55	52.0	3.7	3.4	1.7	3.1
Malam Jabba	13.7	19.5	***	72	98.0	4.7	4.7	3.7	2.6
Mangla	30.3	34.8	133.2	61	29.8	4.4	4.0	0.6	1.7
Multan (PBO)	31.6	38.2	142.9	59	6.6	2.0	3.3	4.3	4.6
Murree	17.1	20.8	55.4	68	19.2	3.7	4.6	3.4	1.9
Muzaffarabad	26.0	31.3	95.0	67	28.0	4.1	4.9	1.7	3.0
Nawabshah	36.9	42.0	162.8	47	0.0	1.6	2.3	5.7	3.4
Peshawar	28.3	36.0	108.8	72	36.0	4.0	5.0	0.6	1.4
Quetta	38.0	28.5	67.8	50	27.4	3.4	3.9	2.1	2.1
Rawalpindi	28.8	33.2	117.7	69	27.4	3	3.6	0.9	0.9
Rohri	34.9	42.0	161.0	52	2.4	1.3	1.0	1.7	2.3
Skardu	22.9	25.4	***	35	0.0	4.0	4.3	1.1	2.0
Tandojam	35.9	39.0	158.3	51	2.0	1.3	1.6	1.4	3.9
Usta.M	35.4	42.0	160.5	53	9.0	2.5	1.7	0.8	0.8
Zhob	23.9	31.0	8.8	56	34.0	2.0	3.1	4.0	5.0

*** 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 سدّ باب (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)