

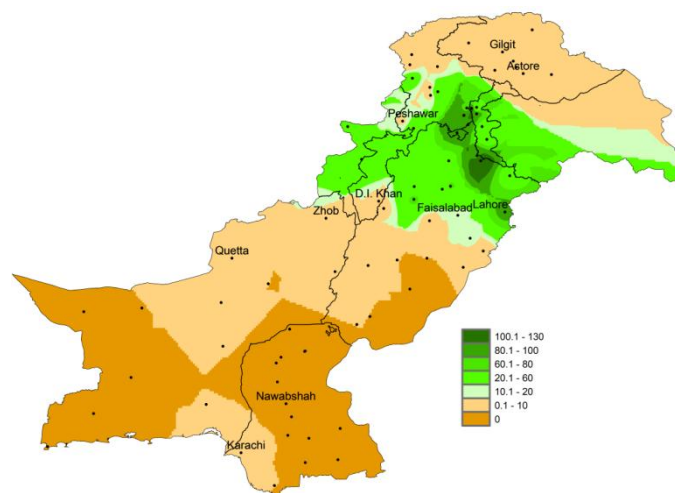
Weekly Weather and Crop Bulletin for Pakistan

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**Rainfall Distribution (mm) during the
Previous Week (8th July – 14th July, 2019)**



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Highlights of Past Weather (8th July -14th July, 2019)

Above normal day time temperatures were observed all over the country except Punjab where mix trend was observed during the last week.

Province wise distribution of rainfall reported as follows during the last week:

1. Moderate to heavy rainfall observed in Punjab, Khyber Pakhtunkhwa and Gilgit Baltistan.
2. Light rainfall observed over Balochistan and Sindh.

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

Editor-in-Chief: Dr Muhammad Afzaal (Director)

Editor: Saeeda Saleh (Asst. Meteorologist)

Past Weather of Provinces (8th July -14th July, 2019)**Punjab**

Moderate to heavy rainfall observed in Punjab during the week. Weekly maximum and minimum temperatures recorded as 37.0 °C & 26.5°C respectively. For the recent week on average 186.5 growing degree days were accumulated. Average relative humidity recorded as 71% and wind speed in the morning/evening recorded as 6.0/4.5 Knots. During the previous week the highest precipitation was recorded as 30.5 mm at Jhelum while maximum temperature was recorded as 43.5°C at Bahawalpur.

Baluchistan

Light rainfall was observed in Baluchistan during the week. Weekly maximum and minimum temperatures recorded as 39.5 °C & 27.2°C respectively. For the recent week on average 204.1 growing degree days were accumulated. Average relative humidity recorded as 43% and wind speed in the morning/evening recorded as 0.9/6.4 Knots. During the previous week the highest precipitation was recorded as 9.0 mm at Zhob while maximum temperature was recorded as 48.5°C at Sibbi.

Khyber Pakhtunkhwa

Moderate to heavy rainfall observed in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 35.7°C & 21.9°C respectively. For the recent week on average 164.7 growing degree days were accumulated. Average relative humidity recorded as 64% and wind speed in the morning/evening recorded as 1.6/3.7 Knots. During the previous week the highest precipitation recorded as 102.01 mm at Kakul while maximum temperature was recorded as 44.5°C at Bannu.

Gilgit-Baltistan and Azad Jammu & Kashmir

Moderate to heavy rainfall observed in Gilgit-Baltistan & Kashmir during the week. Weekly maximum and minimum temperatures recorded as 34.6°C & 19.6°C respectively. For the recent week

on average 145.4 growing degree days were accumulated. Average relative humidity recorded as 53% and wind speed in the morning/evening recorded as 1.5/5.8 Knots. During the previous week the highest precipitation recorded as 123.0 mm at Muzaffarabad while maximum temperature was recorded as 43.5°C at Chilas.

Sindh

Light rainfall was observed at a single station in Sindh during the week. Weekly maximum and minimum temperatures recorded as 40.9°C & 28.1°C respectively. For the recent week, on average 198.4 growing degree days were accumulated. Average relative humidity recorded as 55% and wind speed in the morning/evening recorded as 6.5/7.4 Knots. During the previous week the highest precipitation recorded as 0.01 mm (Trace) at Karachi while maximum temperature was recorded as 47.5°C at Larkana.

Past Weather for Major Agricultural Plains
(8th July -14th July, 2019)**Rawalpindi (Potohar region)**

83.5 mm rainfall reported from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 6.1/5.6 Oktas while, average relative humidity observed as 68%. Mean day time temperature recorded 36.1°C & for the recent week 180.8 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.0/1.4 Knots.

Faisalabad (Central Punjab)

15.0 mm rainfall reported from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 2.4/2.6 Oktas while, average relative humidity observed as 67%. Mean day time temperature recorded as 37.3°C & for the recent week 191.2 growing degree days accumulated. Wind speed recorded in the morning/evening as 1.1/1.9 Knots.

Tandojam (Lower Sindh)

Dry weather reported from Tandojam during the week; however, clear sky was observed in the morning/evening while, average relative humidity observed as 63%. Mean day time temperature recorded as 38.4°C & for the recent week 192.3 growing degree days accumulated. Wind speed recorded in the morning/evening as 4.2/5.7 Knots.

Usta Muhammad (Eastern Baluchistan)

Dry weather reported from Usta Muhammad during the week; however, cloudiness in the morning/evening recorded as 0.4/0.2 Oktas while, average relative humidity observed as 59%. Mean day time temperature recorded as 42.1°C & for the recent week 221.8 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.5/1.7 Knots.

Quetta (Northern Baluchistan)

7.0mm rainfall reported from Quetta during the week; however, cloudiness in the morning/evening recorded as 1.9/2.4 Oktas while, average relative humidity observed as 22%. Mean day time temperature recorded as 36.6°C & for the recent week 173.5 growing degree days accumulated. Wind speed recorded in the morning/evening as 2.5/3.1 Knots.

Past Weather for Sub-Regional Agricultural Plains (8th July -14th July, 2019)**Multan**

Dry weather reported from Multan during the week; however, cloudiness in the morning/evening recorded as 1.6/0.9 Oktas while, average relative humidity observed as 58%. Mean day time temperature recorded as 38.6°C & for the recent week 207.6 growing degree days accumulated. Wind speed recorded in the morning/evening as 12.6/10.0 Knots.

Lahore

87.31 mm rainfall was reported from Lahore during the week; however, however, cloudiness in the morning/evening recorded as 5.1/3.7 Oktas while, average relative humidity observed as 73%. Mean day time temperature recorded as 34.6°C & for the recent week 170.9 growing degree days accumulated. Wind speed recorded in the morning/evening as 4.9/2.0 Knots.

Zhob

9.00 mm rainfall reported from reported from Zhob during the week; however, cloudiness in the morning/evening recorded as 1.1/1.4 Oktas while, average relative humidity observed as 35%. Mean day time temperature recorded as 41.4°C & for the recent week 204.0 growing degree days accumulated. Wind speed recorded in the morning/evening as 1.9/5.9 Knots.

Murree

98.00 mm rainfall was reported from Murree during the week; however, cloudiness in the morning/evening recorded as 5.6/7.4 Oktas while, average relative humidity observed as 82%. Mean day time temperature recorded as 24.3°C & for the recent week 103.5 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.6/1.4 Knots.

D.I. Khan

6.00 mm rainfall reported from D.I. Khan during the week; however, cloudiness in the morning/evening recorded as 3.4/0.0 Oktas while, average relative humidity observed as 65%. Mean day time temperature recorded as 40.5°C & for the recent week 203.5 growing degree days accumulated. Wind speed recorded in the morning/evening as 1.7/2.3 Knots.

Peshawar

7.01 mm rainfall reported from Peshawar during the week; however, cloudiness in the morning/evening recorded as 3.0/2.7 Oktas while, average relative humidity observed as 60%. Mean day time temperature recorded as 39.4°C & for the recent week 163.0 growing degree days accumulated. Wind speed recorded in the morning/evening as 1.7/3.1 Knots.

Kalam

3.00 mm rainfall reported from Kalam during the week; however, cloudiness in the morning/evening recorded as 0.6/3.9 Oktas while, average relative humidity observed as 63%. Mean day time temperature recorded as 28.1°C & for the recent 110.5 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.0/4.6 Knots.

Gilgit

0.01 mm rainfall reported from Gilgit during the week. However, cloudiness in the morning/evening recorded as 1.7/4.1 Oktas while, average relative humidity observed as 44%. Mean day time temperature recorded as 38.6°C & for the recent week 165.8 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.0/4.0 Knots.

Skardu

Dry weather reported from Skardu during the week; however, cloudiness in the morning/evening recorded as 0.6/5.3 Oktas while, average relative humidity observed as 34%. Mean day time temperature recorded as 33.6°C & for the recent week 137.8 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.0/5.4 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 cotton crop is sown in the fields of RAMC Faisalabad.

Cotton: V.Good, *Flowering Stage*.

Lower Sindh (Tandojam)

Presently cotton crop is sown in the fields of RAMC Tandojam.

Cotton (Shahbaz 95): Good, *Flowering Stage*.

Northern Baluchistan (Quetta)

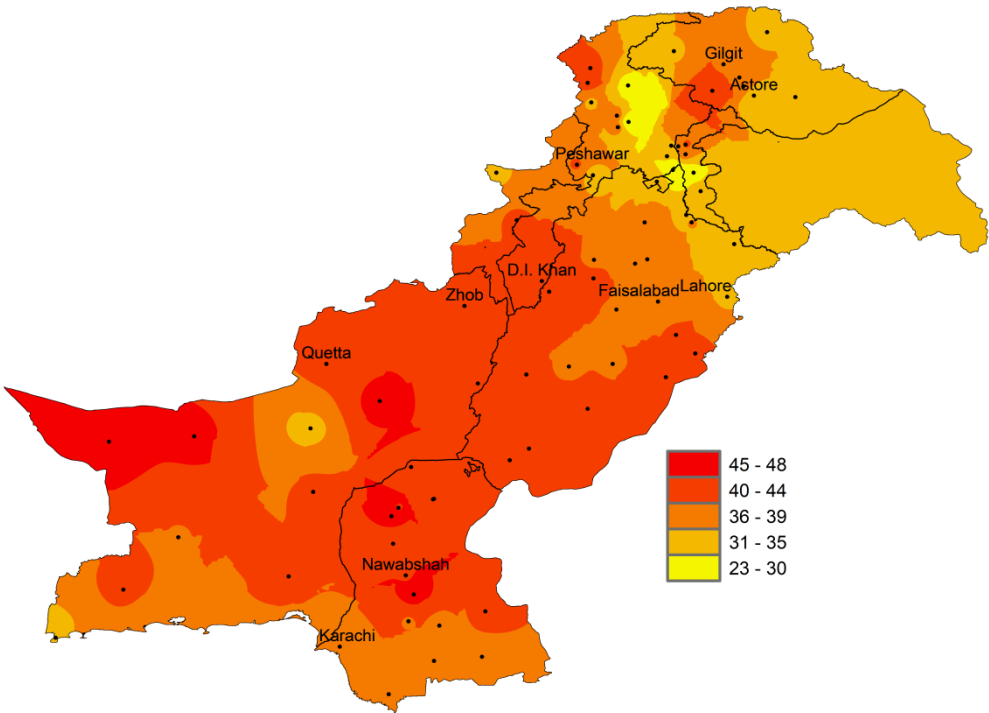
There is presently no crop grown in the fields of RAMC Quetta.

Eastern Baluchistan (Usta Muhammad)

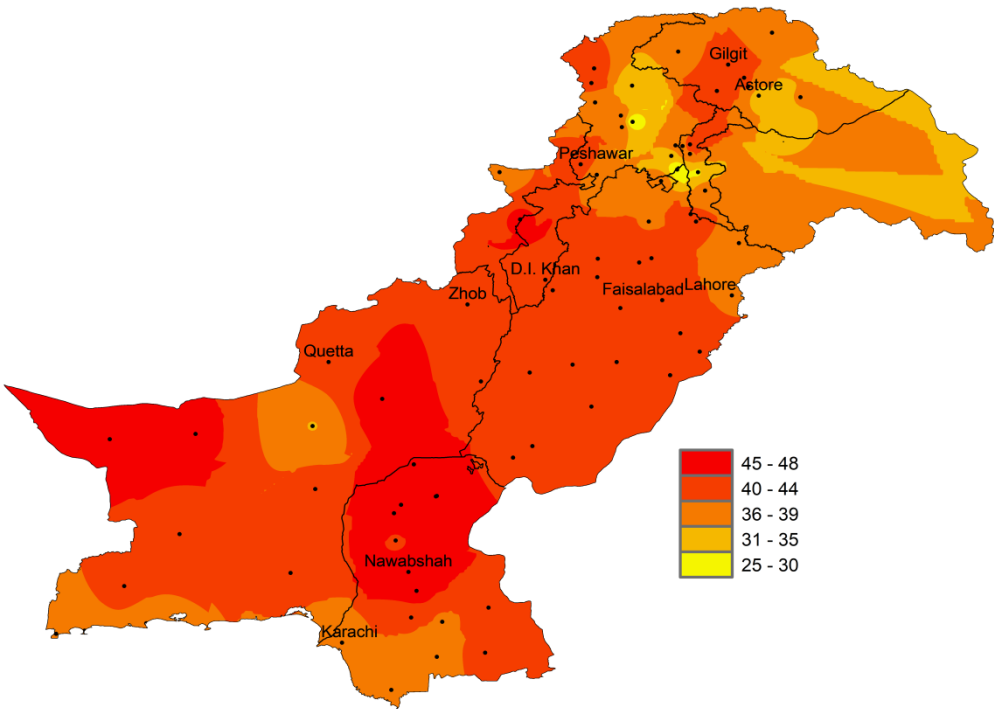
Presently rice crop is sown in the fields of RAMC Usta Muhammad.

Rice: Good, *Germination Stage*.

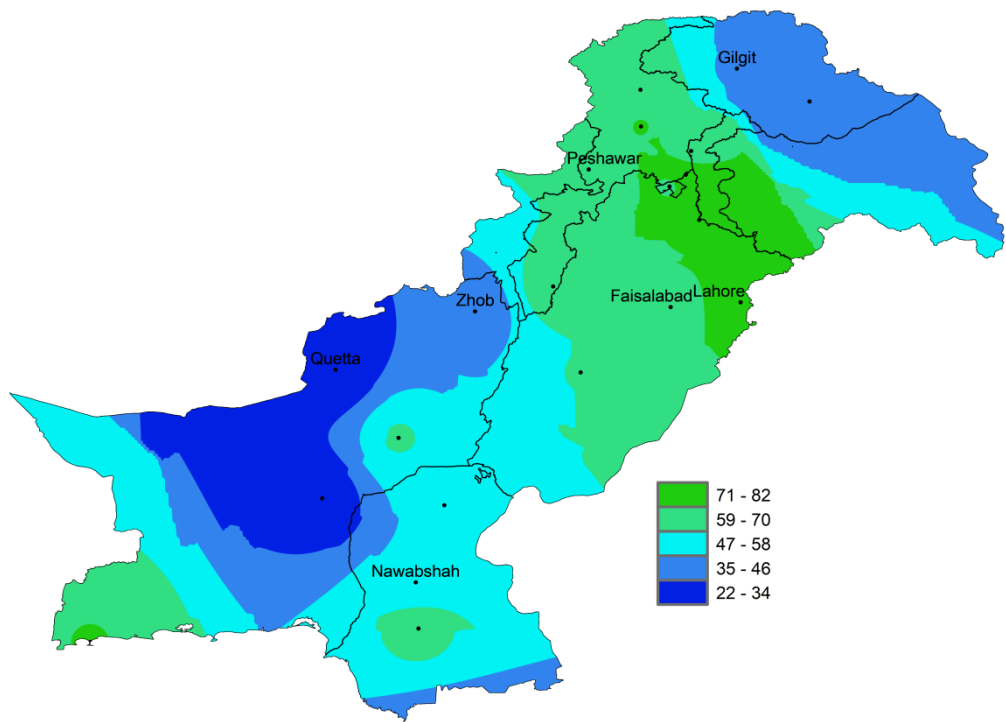
Mean Maximum temperature (°C) during the Previous week (8th July – 14th July, 2019)



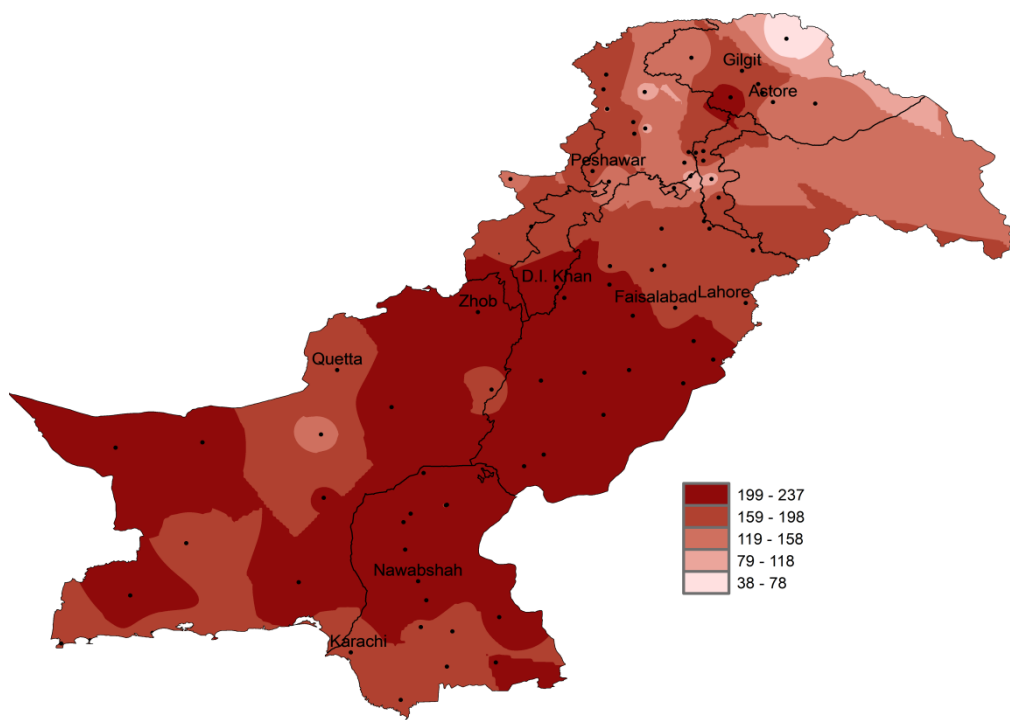
Highest Maximum Temperature (°C) during the Previous week (8th July – 14th July, 2019)



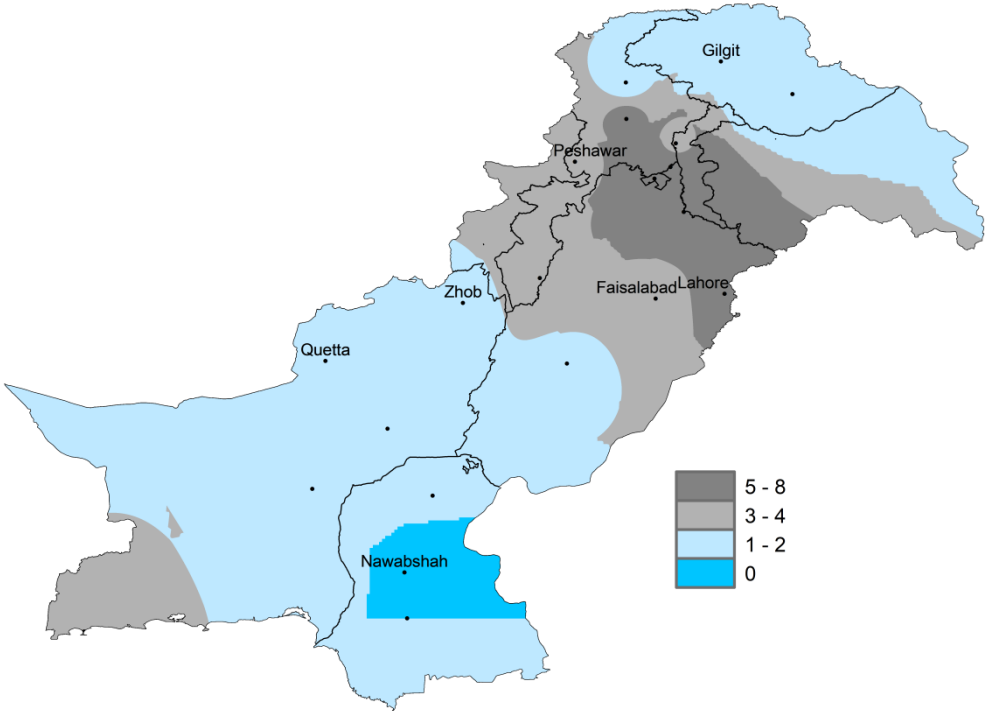
Mean Relative Humidity (%) during the
Previous week (8th July – 14th July, 2019)



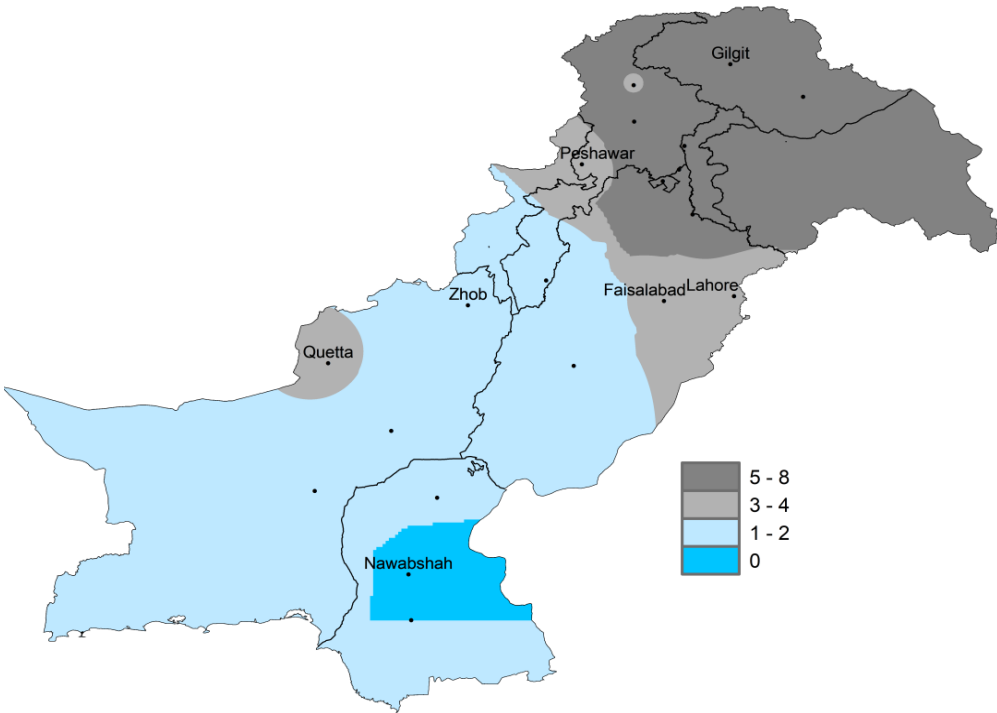
Total Growing Degree Days accumulated during the
Previous week (8th July – 14th July, 2019)



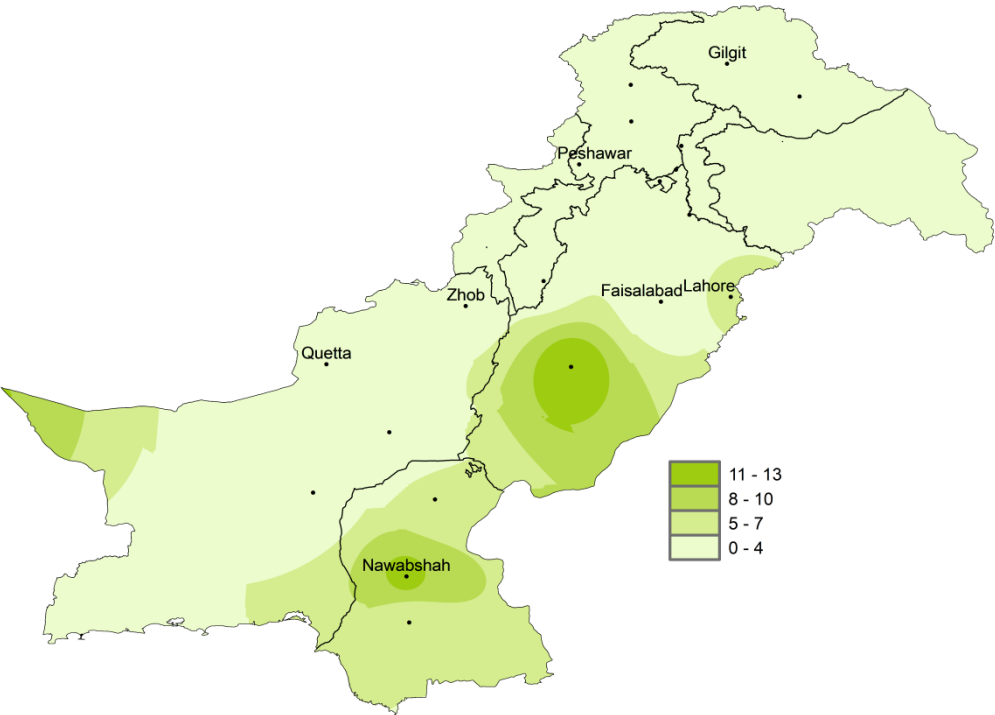
Mean Cloudiness (Oktas) at 0800PST during the Previous week (8th July – 14th July, 2019)



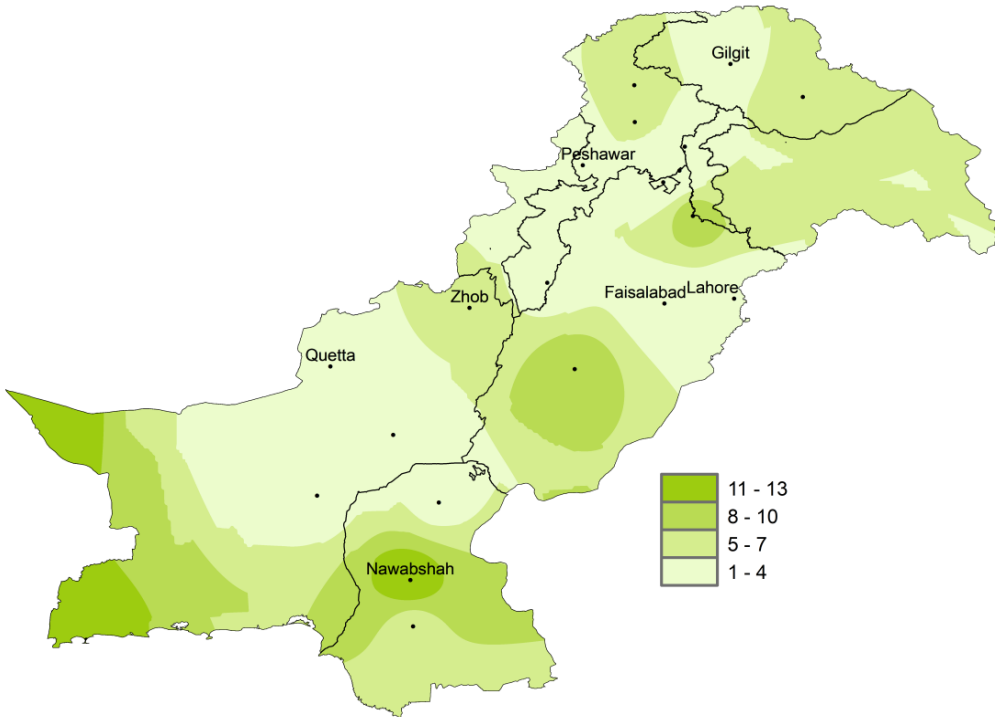
Mean Cloudiness (Oktas) at 1700PST during the Previous week (8th July – 14th July, 2019)



Mean Wind Speed (Knots) at 0800PST during the Previous week (8th July – 14th July, 2019)



Mean Wind Speed (Knots) at 1700PST during the Previous week (8th July – 14th July, 2019)



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

Seasonal low lies over north Balochistan. Monsoon currents are reaching upper parts of the country. Westerly wave is also present over upper parts of the country.

MONDAY

15-07-2019

Wind-thunder/storm rain with isolated heavy falls is expected at scattered places in Kashmir, Islamabad, Hazara, Rawalpindi, Gujranwala, Sargodha, Faisalabad, Lahore divisions, while at isolated places in Malakand, Peshawar, Kohat, Mardan, Bannu, Zhob, D.G.Khan and Sahiwal divisions. Hot and humid weather is expected elsewhere in the country.

TUESDAY

16-07-2019

Wind-thunder/storm rain with isolated heavy falls is expected at scattered places in Kashmir, Islamabad, Hazara, Rawalpindi, Gujranwala, Sargodha, Faisalabad, Lahore divisions, while at isolated places in Malakand, Peshawar, Kohat, Mardan, Bannu, Zhob, D.G.Khan and Sahiwal divisions. Hot and humid weather is expected elsewhere in the country.

WEDNESDAY

17-07-2019

Wind-thunder/storm rain with few moderate to heavy falls is expected at scattered places in Kashmir, Islamabad, Hazara, Rawalpindi, Gujranwala, Lahore, Sargodha divisions, while at isolated places in Faisalabad, Malakand, Peshawar, Kohat, Bannu, D.G.Khan, Zhob and Kalat divisions. Hot and humid weather is expected elsewhere in the country.

THURSDAY

18-07-2019

Widespread wind-thunder/storm rain with few moderate to heavy falls is expected in Kashmir, Islamabad, Rawalpindi, Sargodha, Gujranwala, Lahore, Faisalabad, Hazara divisions. Wind-thunder/storm rain is expected scattered places in Malakand, Peshawar and Mardan divisions, while at isolated places in Zhob, Kohat, Bannu, D.I.Khan, D.G.Khan, Multan, Bahawalpur and Sahiwal divisions. Hot and humid weather is expected elsewhere in the country.

FRIDAY

19-07-2019

Widespread wind-thunder/storm rain is expected in Kashmir, Islamabad, Rawalpindi, Gujranwala, Lahore, Hazara divisions. Wind-thunder/storm rain is expected scattered places in Malakand, Peshawar, Mardan, Sargodha, Faisalabad divisions, while at isolated places in Kohat, Bannu, D.G.Khan, Multan, Bahawalpur and

Sahiwal divisions. Hot and humid weather is expected elsewhere in the country.

SATURDAY

20-07-2019

Wind-thunder/storm rain is expected at scattered places in Kashmir, Islamabad, Hazara, Rawalpindi, Gujranwala divisions, while at isolated places in Lahore, Sargodha, Faisalabad, Sahiwal, Malakand, Peshawar, Kohat, Bannu divisions. Hot and humid weather is expected elsewhere in the country.

SUNDAY

21-07-2019

Wind-thunder/storm rain is expected at scattered places in Kashmir, Islamabad, Hazara, Rawalpindi, Gujranwala, Lahore divisions, while at isolated places in Malakand, Peshawar, Kohat, Bannu, D.G.Khan, Zhob divisions. Hot and humid weather is expected elsewhere in the country.

ADVISORY FOR FARMERS

During the last week, moderate to heavy rainfall occurred in Punjab, GB and KPK, while light rainfall occurred in Sindh and Baluchistan. Keeping in view the above expected weather conditions following advisories are suggested for farming community.

1. Rice growers are advised to sow the crop "paneeri" in accordance with the recommendations by the agriculture experts.
2. Farmers of southern Punjab and Sindh are advised to complete the sowing of cotton and other Kharif crops to utilize the maximum soil moisture.
3. In the upper half of the country where the fields which are just vacated after the recent wheat crops, the fields may be ploughed and "Suhaga" applied to conserve the soil moisture for the upcoming Kharif crops.
4. Farmers of upper Sindh and southern Punjab are advised to complete the sowing of cotton crop.

National Weather Data of Selected Cities from (8th July - 14th July, 2019)

Stations	Maximum/Day 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	40.5	43.0	203.5	65	6.00	3.4	0.0	1.7	2.3
Faisalabad	37.3	40.5	191.2	67	15.00	2.4	2.6	1.1	1.9
Gawadar	35.3	36.0	186.8	70	0.00	3.6	1.0	0.6	11.1
Gilgit	38.6	41.0	165.8	44	0.01	1.7	4.1	0.0	4.0
Kalam	28.1	30.0	110.5	63	3.00	0.6	3.9	0.0	4.6
Khuzdar	39.6	40.5	199.3	24	0.00	0.6	2.0	0.3	2.3
Lahore	34.6	38.2	170.9	73	87.31	5.1	3.7	4.9	2.0
Malam Jabba	22.8	25.0	99.5	70	66.00	5.1	5.9	3.1	4.9
Mangla	34.6	39.2	168.4	72	90.70	6.3	5.1	3.4	10.0
Multan (PBO)	38.6	40.3	207.6	58	0.00	1.6	0.9	12.6	10.0
Murree	24.3	26.0	103.5	82	98.00	5.6	7.4	0.6	1.4
Muzaffarabad	34.7	37.5	157.9	61	123.00	3.3	5.5	2.4	3.7
Nawabshah	43.8	45.0	218.0	51	0.00	0.0	0.0	11.1	13.4
Peshawar	39.4	42.3	163.0	60	7.01	3.0	2.7	1.7	3.1
Quetta	36.6	37.2	173.5	22	7.00	1.9	2.4	2.5	3.1
Rawalpindi	36.1	40.4	180.8	68	83.50	6.1	5.6	0.0	1.4
Rohri	43.5	45.5	222.3	51	0.00	0.0	0.0	4.3	3.1
Skardu	33.6	34.6	137.8	34	0.00	0.6	5.3	0.0	5.4
Tandojam	38.4	40.0	192.3	63	0.00	0.0	0.0	4.2	5.7
Usta. M	42.1	43.0	221.8	59	0.00	0.4	0.2	0.5	1.7
Zhob	41.4	43.0	204.0	35	9.00	1.1	1.4	1.9	5.9

*** 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)