

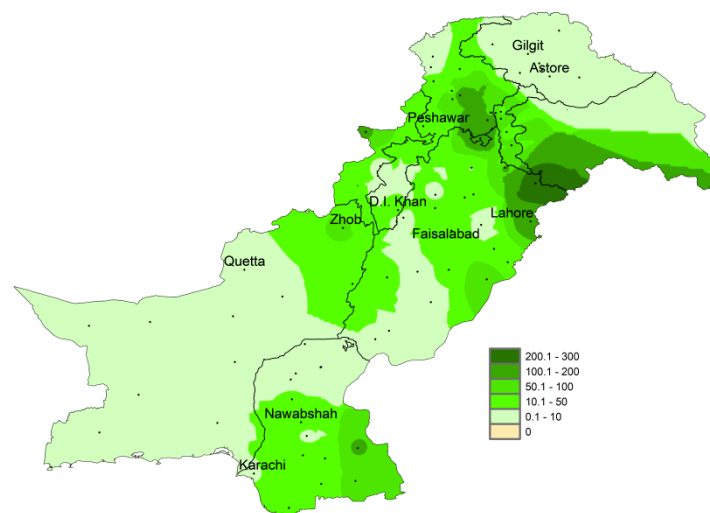
Weekly Weather and Crop Bulletin for Pakistan

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**Rainfall Distribution (mm) during the
Previous Week (22nd July- 28th July, 2019)**



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Highlights of Past Weather (22nd July -28th July, 2019)

Mix trend day time temperatures were observed all over the country during the last week.

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

1. Light to moderate rainfall observed in Baluchistan.
2. Moderate to heavy rainfall observed over rest of the provinces.

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

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Past Weather of Provinces (22nd July-28th July, 2019)**Punjab**

Moderate to heavy rainfall observed in Punjab during the week. Weekly maximum and minimum temperatures recorded as 35.3°C & 26.9°C respectively. For the recent week on average 182.5 growing degree days were accumulated. Average relative humidity recorded as 77% and wind speed in the morning/evening recorded as 2.4/4.5 Knots. During the previous week the highest precipitation was recorded as 276.00 mm at Sialkot while maximum temperature was recorded as 44.0°C at Noorpur Thal.

Baluchistan

Light to moderate rainfall observed in Baluchistan during the week. Weekly maximum and minimum temperatures recorded as 37.4°C & 25.2°C respectively. For the recent week on average 183.9 growing degree days were accumulated. Average relative humidity recorded as 57% and wind speed in the morning/evening recorded as 0.8/4.0 Knots. During the previous week the highest precipitation was recorded as 52.00 mm at Zhob while maximum temperature was recorded as 46.0°C at Sibbi.

Khyber Pakhtunkhwa

Moderate to heavy rainfall observed in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 32.6°C & 22.0°C respectively. For the recent week on average 154.2 growing degree days were accumulated. Average relative humidity recorded as 75% and wind speed in the morning/evening recorded as 1.3/2.0 Knots. During the previous week the highest precipitation recorded as 181.01 mm at Kakul while maximum temperature was recorded as 43.4°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

32.7°C & 20.5°C respectively. For the recent week on average 142.3 growing degree days were accumulated. Average relative humidity recorded as 62% and wind speed in the morning/evening recorded as 1.8/3.5 Knots. During the previous week the highest precipitation recorded as 111.00 mm at Muzaffarabad while maximum temperature was recorded as 44.5°C at Chilas.

Sindh

Moderate to heavy rainfall observed in Sindh during the week. Weekly maximum and minimum temperatures recorded as 39.9°C & 28.3°C respectively. For the recent week, on average 204.4 growing degree days were accumulated. Average relative humidity recorded as 60% and wind speed in the morning/evening recorded as 5.0/4.7 Knots. During the previous week the highest precipitation recorded as 106.20 mm at Chhor while the maximum temperature was recorded as 46.0°C at Larkana.

Past Weather for Major Agricultural Plains **(22nd July-28th July, 2019)**

Rawalpindi (Potohar region)

47.10 mm rainfall reported from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 7.0/5.6 Oktas while, average relative humidity observed as 77%. Mean day time temperature recorded 34.8°C & for the recent week 174.6 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.9/1.1 Knots.

Faisalabad (Central Punjab)

24.40 mm rainfall reported from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 4.3/4.6 Oktas while, average relative humidity observed as 64%. Mean day time temperature recorded as 35.5°C & for the recent week 190.8 growing degree days accumulated. Wind speed recorded in the morning/evening as 1.8/1.6 Knots.

Tandojam (Lower Sindh)

21.00 mm rainfall reported from Tandojam during the week; however, cloudiness in the morning/evening recorded as 1.0/1.4 Oktas while, average relative humidity observed as 65%. Mean day time temperature recorded as 38.4°C & for the recent week 193.3 growing degree days accumulated. Wind speed recorded in the morning/evening as 5.1/4.3 Knots.

Usta Muhammad (Eastern Baluchistan)

Dry weather reported from Usta Muhammad during the week; however, cloudiness in the morning/evening recorded as 0.8/2.0 Oktas while, average relative humidity observed as 60%. Mean day time temperature recorded as 40.1°C & for the recent week 211.8 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.8/2.0 Knots.

Quetta (Northern Baluchistan)

0.01 mm (Trace) reported from Quetta during the week; however, cloudiness in the morning/evening recorded as 2.3/5.1 Oktas while, average relative humidity observed as 33%. Mean day time temperature recorded as 34.5°C & for the recent week 175.6 growing degree days accumulated. Wind speed recorded in the morning/evening as 3.8/3.8 Knots.

Past Weather for Sub-Regional Agricultural Plains (22nd July-28th July, 2019)

Multan

0.02 mm rainfall reported from Multan during the week; however, cloudiness in the morning/evening recorded as 3.0/2.7 Oktas while, average relative humidity observed as 59%. Mean day time temperature recorded as 38.4°C & for the recent week 203.9 growing degree days accumulated. Wind speed recorded in the morning/evening as 4.6/6.6 Knots.

Lahore

146.41 mm rainfall was reported from Lahore during the week; however, however, cloudiness in the morning/evening recorded as 4.3/6.0 Oktas while, average relative humidity observed as 81%. Mean day time temperature recorded as 33.6°C & for the recent week 174.3 growing degree days accumulated. Wind speed recorded in the morning/evening as 2.3/3.1 Knots.

Zhob

52.00 mm rainfall reported from Zhob during the week; however, cloudiness in the morning/evening recorded as 2.1/2.9 Oktas while, average relative humidity observed as 70%. Mean day time temperature recorded as 35.4°C & for the recent week 169.0 growing degree days accumulated. Wind speed recorded in the morning/evening as 1.9/6.0 Knots.

Murree

112.00 mm rainfall was reported from Murree during the week; however, cloudiness in the morning/evening recorded as 7.1/7.6 Oktas while, average relative humidity observed as 89%. Mean day time temperature recorded as 22.7°C & for the recent week 102.2 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.3/3.7 Knots.

D.I. Khan

16.00 mm rainfall reported from D.I. Khan during the week; however, cloudiness in the morning/evening recorded as 3.0/3.9 Oktas while, average relative humidity observed as 67%. Mean day time temperature recorded as 37.9°C & for the recent week 194.5 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.9/1.7 Knots.

Peshawar

24.01 mm rainfall reported from Peshawar during the week; however, cloudiness in the morning/evening recorded as 6.4/5.1 Oktas while, average relative humidity observed as 73%. Mean day time temperature recorded as 36.2°C & for the recent week 151.2 growing degree days accumulated. Wind speed recorded in the morning/evening as 1.7/3.1 Knots.

Kalam

31.10 mm rainfall reported from Kalam during the week; however, cloudiness in the morning/evening recorded as 4.7/5.4 Oktas while, average relative humidity observed as 81%. Mean day time temperature recorded as 25.9°C & for the recent 111.1 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.0/0.0 Knots.

Gilgit

3.41 mm rainfall reported from Gilgit during the week. However, cloudiness in the morning/evening recorded as 2.7/5.6 Oktas while, average relative humidity observed as 54%. Mean day time temperature recorded as 36.1°C & for the recent week 162.8 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.6/2.9 Knots.

Skardu

0.02 mm rainfall reported from Skardu during the week; however, cloudiness in the morning/evening recorded as 4.4/5.9 Oktas while, average relative humidity observed as 44%. Mean day time temperature recorded as 32.0°C & for the recent week 136.4 growing degree days accumulated. Wind speed recorded in the morning/evening as 0.0/2.0 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 cotton crop is sown in the fields of RAMC Faisalabad.

Cotton: V.Good, Flowering Stage completed.

Lower Sindh (Tandojam)

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

Cotton(Shahbaz 95): Good, Flowering Stage.

Northern Baluchistan (Quetta)

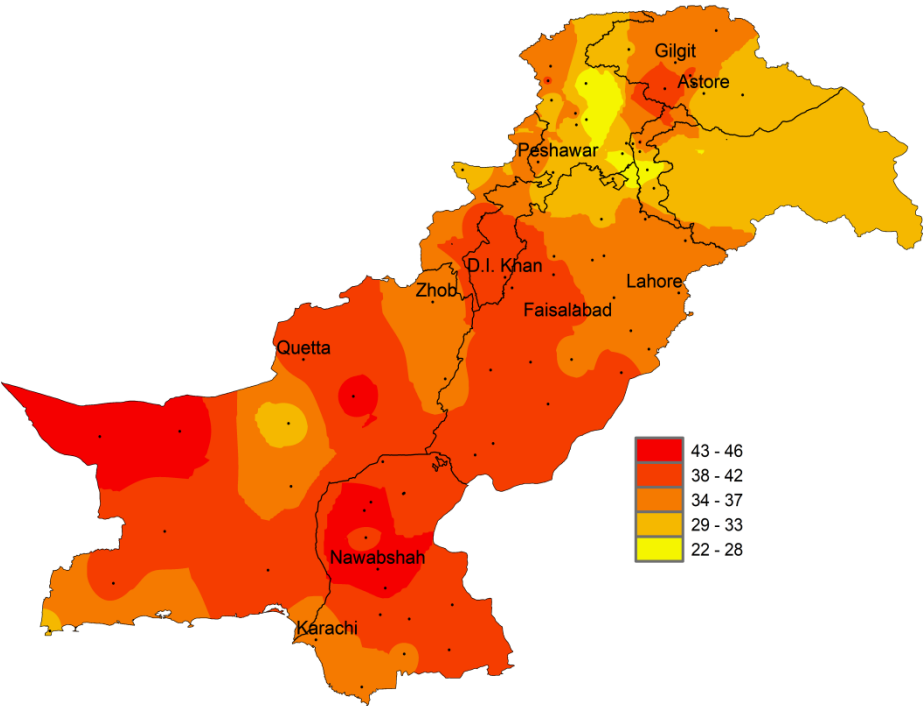
There is presently no crop grown in the fields of RAMC Quetta.

Eastern Baluchistan (Usta Muhammad)

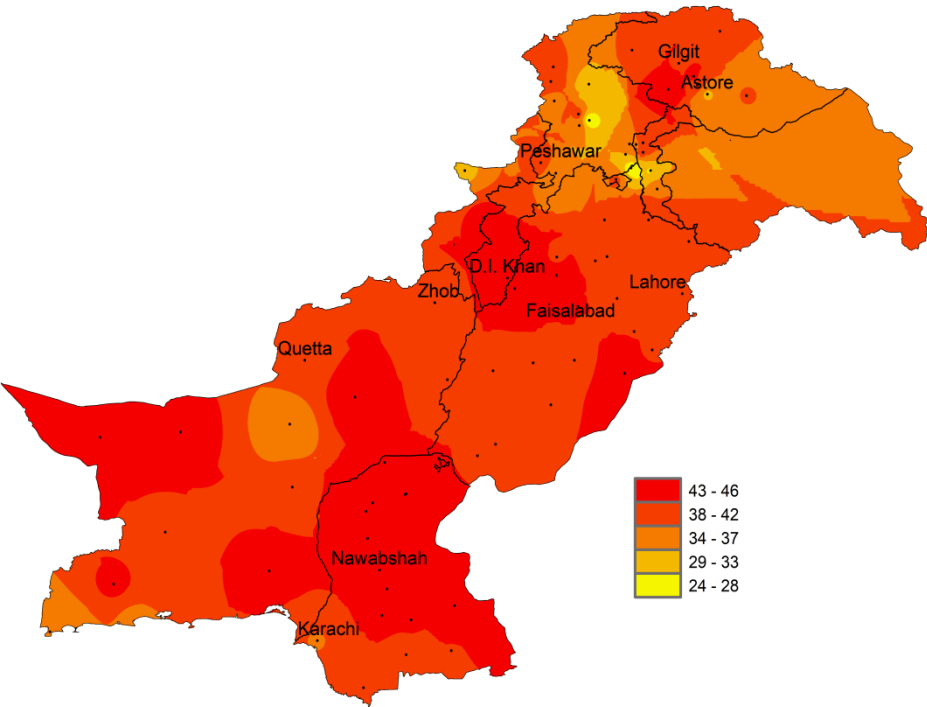
Presently rice crop is sown in the fields of RAMC Usta Muhammad.

Rice: Good, Third Leaf Stage.

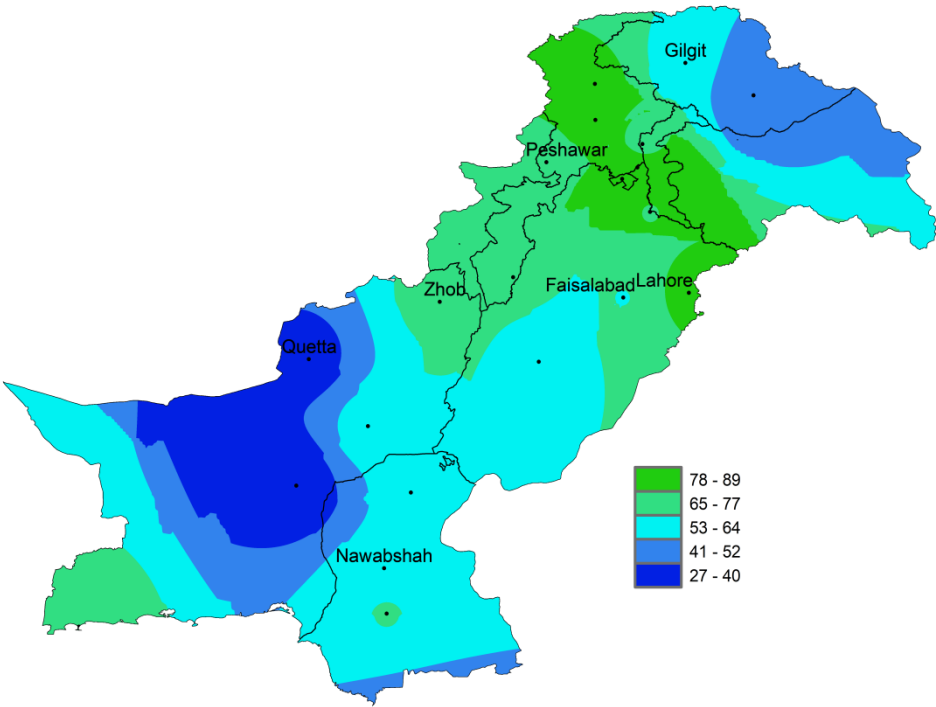
Mean Maximum temperature (°C) during the
Previous week (22nd July-28th July, 2019)



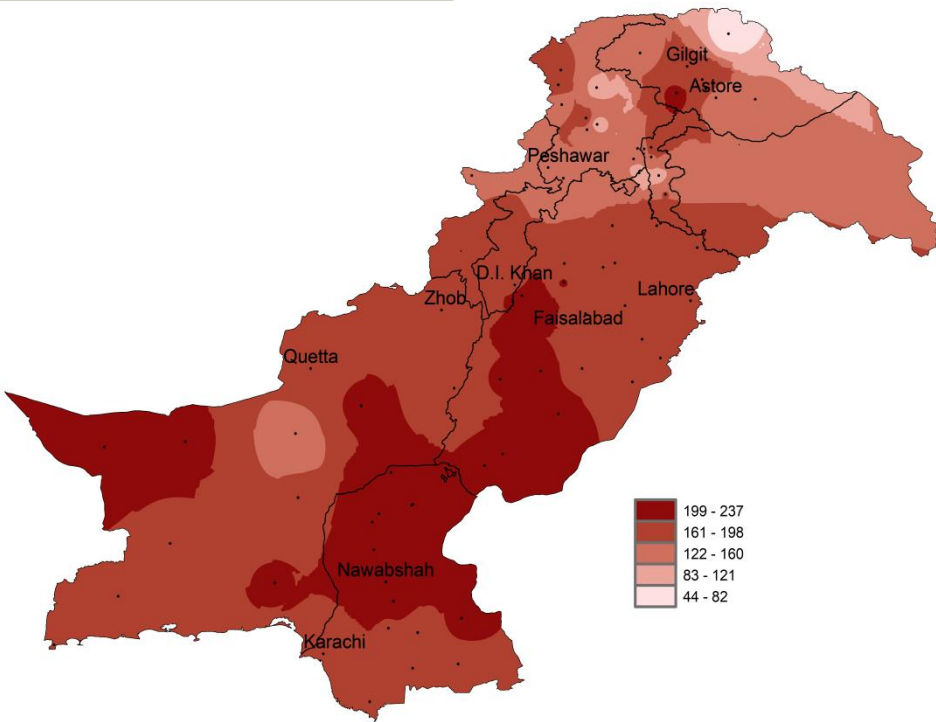
Highest Maximum Temperature (°C) during the
Previous week (22nd July-28th July, 2019)



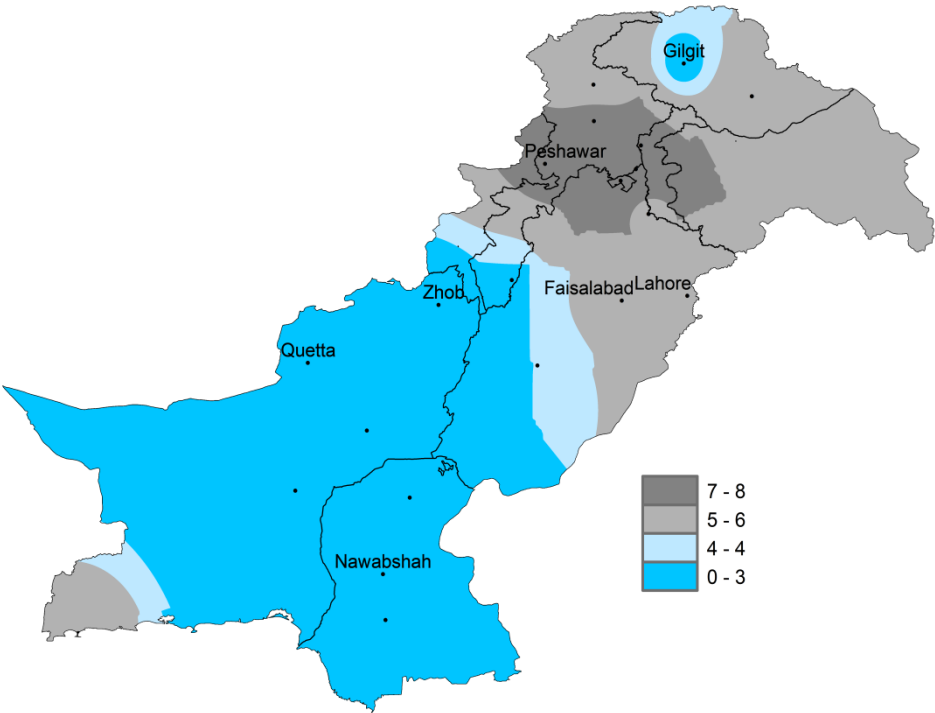
Mean Relative Humidity (%) during the
Previous week (22nd July-28th July, 2019)



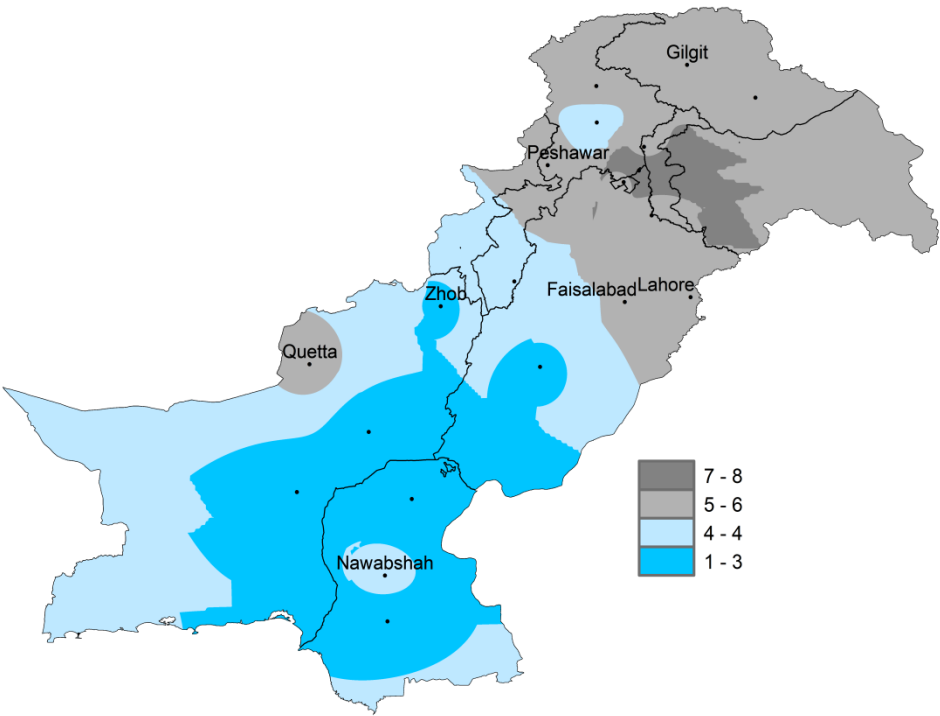
Total Growing Degree Days accumulated during the
Previous week (22nd July-28th July, 2019)



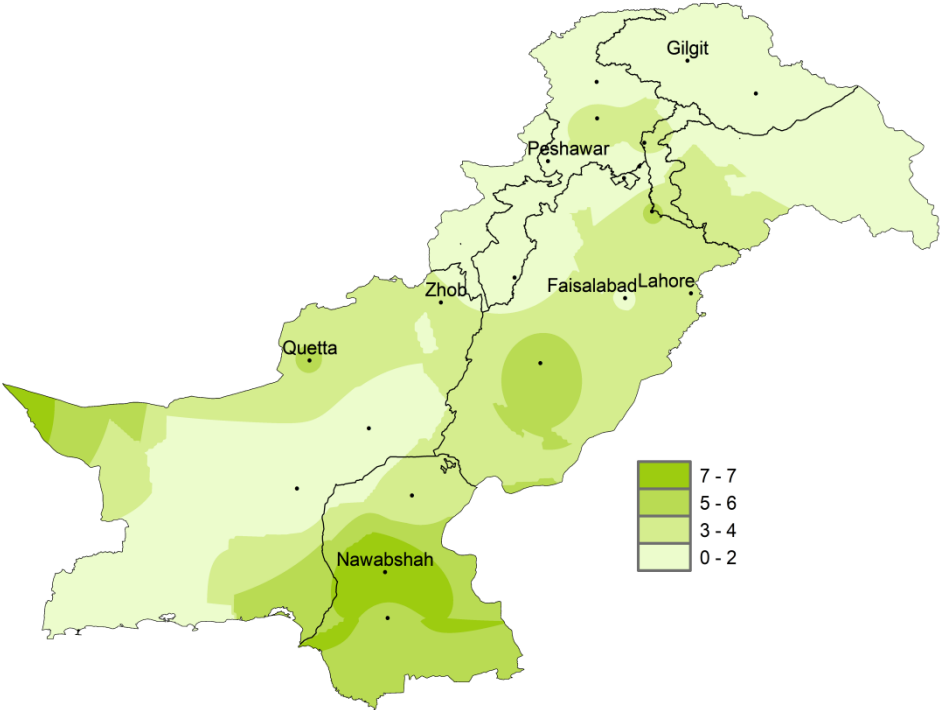
Mean Cloudiness (Oktas) at 0800PST during the
Previous week (22nd July-28th July, 2019)



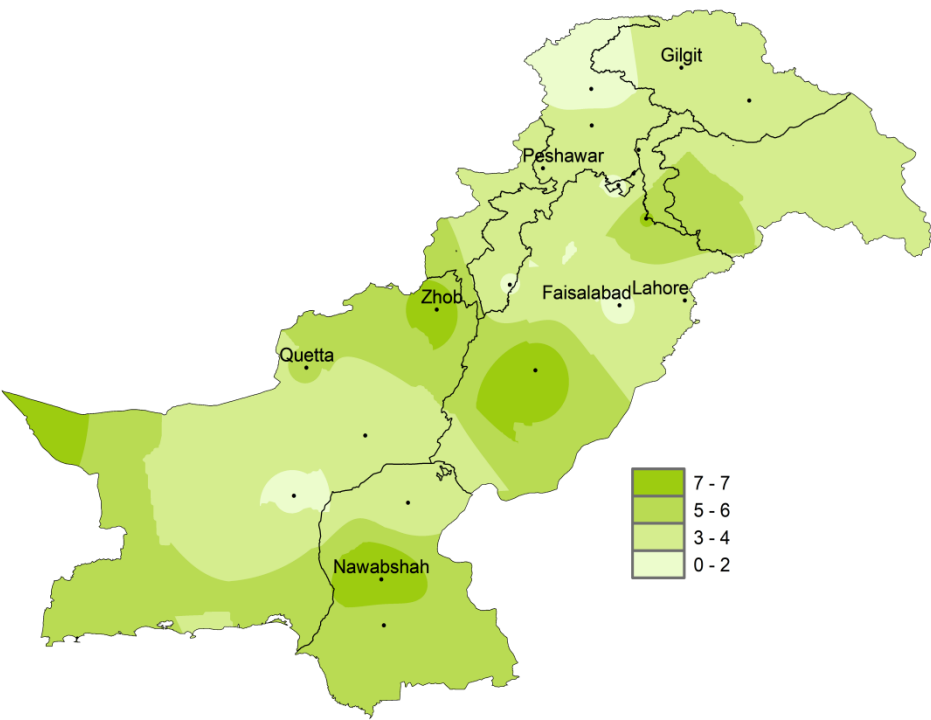
Mean Cloudiness (Oktas) at 1700PST during the
Previous week (22nd July-28th July, 2019)



Mean Wind Speed (Knots) at 0800PST during the Previous week (22nd July-28th July, 2019)



Mean Wind Speed (Knots) at 1700PST during the Previous week (22nd July-28th July, 2019)



Weekly Weather Advisory for Farmers **(29th July to 4th August, 2019)**

Strong monsoon currents from Arabian Sea and Bay of Bengal are penetrating southern parts, while moderate monsoon currents are reaching upper and central parts of the country.

MONDAY

29-07-2019

Widespread rains/wind-thunderstorm with isolated heavy falls is expected in Sindh (Mirpurkhas, Thatta, Hyderabad, Karachi, Shaheed Benazirabad, Sukkur, Larkana divisions), while at scattered places in Makran, Kalat, Sibbi, Naseerabad, Rawalpindi, Lahore, Gujranwala, Sargodha, Faisalabad, Bahawalpur, Malakand, Hazara divisions, Kashmir, Gilgit-Baltistan, and at isolated places in Multan, D.G.Khan, Sahiwal, Zhob divisions and Islamabad.

TUESDAY

30-07-2019

Widespread rains/wind-thunderstorm with isolated heavy falls is expected in Sindh (Mirpurkhas, Thatta, Hyderabad, Karachi, Shaheed Benazirabad, Sukkur, Larkana divisions), while at scattered places in Makran, Kalat, Sibbi, Naseerabad, Rawalpindi, Lahore, Gujranwala, Sargodha, Faisalabad, Bahawalpur, Malakand, Hazara divisions, Kashmir, Gilgit-Baltistan, and at isolated places in Multan, D.G.Khan, Sahiwal, Zhob divisions and Islamabad.

WEDNESDAY

31-07-2019

Rains/wind-thunderstorm is expected at scattered places in Hazara, Rawalpindi, Gujranwala, Lahore, Kalat, Makran divisions, Islamabad and Kashmir, while at isolated places in Sargodha, Sahiwal, Malakand, Kohat, Peshawar divisions and Gilgit Baltistan. Humid weather is expected elsewhere in the country.

THURSDAY

01-08-2019

Rains/wind-thunderstorm with isolated heavy falls is expected at scattered places in upper Punjab (Rawalpindi, Gujranwala, Lahore, Faisalabad, Sargodha divisions), Hazara, Peshawar, Kohat, Bannu, D.I.Khan, Zhob divisions, Islamabad and Kashmir, while at isolated places in Sahiwal, D.G.Khan, Multan, Malakand divisions and Gilgit Baltistan. Humid weather is expected elsewhere in the country.

FRIDAY

02-08-2019

Rains/wind-thunderstorm with isolated heavy falls is expected at scattered places in upper Punjab

(Rawalpindi, Gujranwala, Lahore, Faisalabad, Sargodha divisions), Hazara, Peshawar, Kohat, Bannu, D.I.Khan, Zhob divisions, Islamabad and Kashmir, while at isolated places in Sahiwal, D.G.Khan, Multan, Kalat, Malakand, Mirpurkhas, Hyderabad, Karachi divisions and Gilgit Baltistan. Humid weather is expected elsewhere in the country.

SATURDAY

03-08-2019

Mainly hot and humid weather is expected in most parts of the country. However, rains/wind-thunderstorm at isolated places in Rawalpindi, Gujranwala, Lahore, Faisalabad, Sargodha, Malakand, Hazara, Kalat divisions, Islamabad, Kashmir and Gilgit Baltistan.

SUNDAY

04-08-2019

Mainly hot and humid weather is expected in most parts of the country. However, rains/wind-thunderstorm at isolated places in Rawalpindi, Gujranwala, Lahore, Faisalabad, Sargodha, Malakand, Hazara, Kalat divisions, Islamabad, Kashmir and Gilgit Baltistan.

ADVISORY FOR FARMERS

During the last week, light to moderate rainfall occurred at Baluchistan while moderate to heavy rainfall occurred over rest of the country. 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 (22nd July to 28th 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	37.9	43.0	194.5	67	16.00	3.0	3.9	0.9	1.7
Faisalabad	35.5	40.2	190.8	64	24.40	4.3	4.6	1.8	1.6
Gawadar	33.8	35.5	178.0	74	0.00	4.0	3.6	0.0	4.3
Gilgit	36.1	41.0	162.8	54	3.41	2.7	5.6	0.6	2.9
Kalam	25.9	29.5	111.1	81	31.10	4.7	5.4	0.0	0.0
Khuzdar	36.2	38.5	163.0	27	9.00	0.0	2.3	0.6	1.7
Lahore	33.6	39.2	174.3	81	146.41	4.3	6.0	2.3	3.1
Malam Jabba	21.4	23.5	95.8	80	148.00	6.9	3.4	2.6	3.1
Mangla	33.3	38.7	170.8	76	41.00	5.6	5.4	4.0	5.7
Multan (PBO)	38.4	41.2	203.9	59	0.02	3.0	2.7	4.6	6.6
Murree	22.7	25.2	102.2	89	112.00	7.1	7.6	0.3	3.7
Muzaffarabad	30.9	35.3	141.4	71	111.00	6.6	5.5	2.7	3.5
Nawabshah	42.9	45.5	214.5	59	26.20	2.9	3.7	7.4	7.4
Peshawar	36.2	39.5	151.2	73	24.01	6.4	5.1	1.7	3.1
Quetta	34.5	36.0	175.6	33	0.01	2.3	5.1	3.8	3.8
Rawalpindi	34.8	39.0	174.6	77	47.10	7.0	5.6	0.9	1.1
Rohri	41.6	43.5	256.5	57	0.00	1.9	1.4	2.6	2.3
Skardu	32.0	37.3	136.4	44	0.02	4.4	5.9	0.0	2.0
Tandojam	38.4	41.5	193.3	65	21.00	1.0	1.4	5.1	4.3
Usta. M	40.1	41.5	211.8	60	0.00	0.8	2.0	0.8	2.0
Zhob	35.4	39.0	169.0	70	52.00	2.1	2.9	1.9	6.0

*** 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 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)