

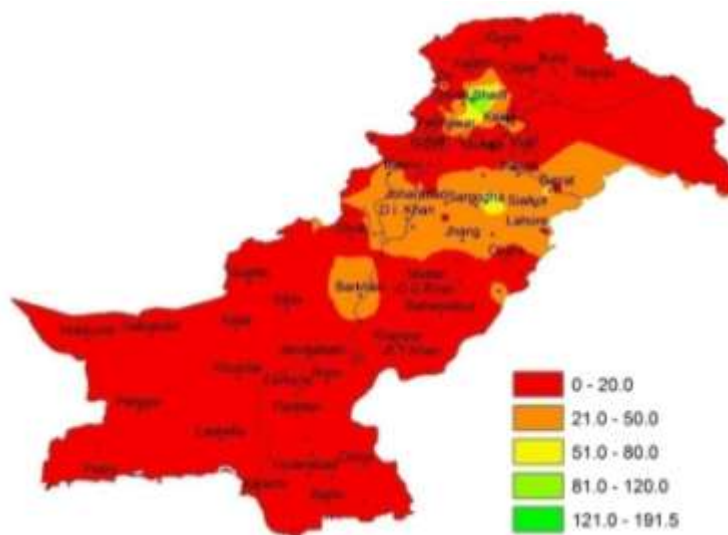
Weekly Weather and Crop Bulletin for Pakistan

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PAKISTAN METEOROLOGICAL
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**Rainfall Distribution (mm) during the
Previous Week (from 8th to 14th August, 2016)**



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Highlights of Past Weather (from 8th to 14th August, 2016)

Slightly above normal day time temperature was reported in north to northwestern parts while slightly below normal in rest of the country during the week.

Province wise distribution of rainfall reported as follows:

- Moderate to heavy rainfall was reported at many places in Khyber Pakhtunkhwa, Punjab, and Gilgit-Baltistan & Kashmir regions.
- Light rainfall was reported at few places in Sindh and Balochistan.

Patron-in-Chief: Dr. Ghulam Rasul (Director General)

Editor-in-Chief: Dr. Azmat Hayat Khan (Director)

Editor: Asma Jawad Hashmi (Deputy Director)

Past Weather of Provinces (from 8th to 14th August, 2016)

Punjab

Moderate to heavy rainfall was reported at many places in Punjab during the week. Weekly maximum and minimum temperatures recorded as 35.1°C & 25.9°C respectively. For the present season on average 178.5 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 63% and wind speed in the morning/evening recorded as 2.2/4.5 Knots. During the previous week the highest amount of rainfall was recorded as 102.0mm at Mandi Bahu Din & highest maximum temperature was recorded as 41.0°C at Rahim Yar Khan.

Sindh

Lightrainfall was reported at few places in Sindh during the week. Weekly maximum and minimum temperatures recorded as 36.4°C & 26.4°C respectively. For the present season, on average 184.0 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 55% and wind speed in the morning/evening recorded as 2.1/4.1 Knots. During the previous week the highest amount of rainfall was recorded as 8.0 mm at Chorr & highest maximum temperature recorded as 42.2°C at Dadu.

Khyber Pakhtunkhwa

Moderate to heavy rainfall was reported at many places in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 32.9°C & 21.1°C respectively. For the present season on average 153.5 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 69% and wind speed in the morning/evening recorded as 1.1/4.9 Knots. During the previous week the highest amount of rainfall was recorded as 195.0mm at Malam Jabba & the highest maximum temperature recorded as 38.5°C at Risalpur.

Balochistan

Lightrainfall was reported at few places in Balochistan during the week. Weekly maximum and minimum temperatures recorded as 36.6°C & 24.0°C respectively. For the present season, on average 178.7 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 69% and wind speed in the morning/evening recorded as 1.4/3.2 Knots. During the previous week the highest amount of rainfall was recorded as 59.0 mm at Barkhan & highest maximum temperature recorded as 44.0°C at Turbat.

Gilgit-Baltistan and Azad Jammu & Kashmir

Moderate to heavy rainfall was reported at many places in Gilgit-Baltistan & Kashmir regions during the week. Weekly maximum and minimum temperatures recorded as 29.7°C & 19.3°C respectively. For the present season on average 142.3 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 63% and wind speed in the morning/evening recorded as 1.3/3.7 Knots. During the previous week the highest amount of rainfall was recorded as 66.5mm at Garhi Dopatta & highest maximum temperature recorded as 39.0°C at Chilas.

Past Weather for Major Agricultural Plains (from 8th to 14th August, 2016)

Rawalpindi (Potohar region)

Rainfall reported as 48.8mm during the week, cloudiness in the morning/evening recorded as 3.4/4.6 Oktas while, average relative humidity observed as 68%. Mean day time temperature recorded as 33.9°C & for the present season 169.4 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.9/1.7 Knots.

Faisalabad (Central Punjab)

Rainfall reported as 23.0mm during the week, cloudiness in the morning/evening recorded as 3.3/4.0 Oktas while, average relative humidity observed as 75%. Mean day time temperature recorded as 34.8°C & for the present season 179.6 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/0.8 Knots.

Tandojam (Lower Sindh)

Dry weather reported during the week, cloudiness in the morning/evening recorded as 2.9/2.6 Oktas while, average relative humidity observed as 73%. Mean day time temperature recorded as 34.9°C & for the present season 283.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.8/4.5 Knots.

Quetta (Northern Baluchistan)

Dry weather reported during the week, cloudiness in the morning/evening recorded as 0.1/1.0 Oktas while, average relative humidity observed as 29%. Mean day time temperature recorded as 34.1°C & for the present season 151.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.8/4.1 Knots.

Usta Muhammad (Eastern Balochistan)

Dry weather reported during the week, cloudiness in the morning/evening recorded 0.6/1.9 Oktas while, average relative humidity observed as 67%. Mean day time temperature recorded as 37.8°C & for the present season 190.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.6/2.3 Knots.

Past Weather for Sub-Regional Agricultural Plains (from 8th to 14th August, 2016)

Multan

Rainfall reported as 35.7mm during the week, cloudiness in the morning/evening recorded as 1.7/3.1 Oktas while, average relative humidity observed as 68%. Mean day time temperature recorded as 37.0°C & for the present season 192.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.0/5.1 Knots.

Lahore

Rainfall reported as 21.5mm during the week, cloudiness in the morning/evening recorded as 5.3/5.3 Oktas while, average relative humidity observed as 79%. Mean day time temperature recorded as 33.4°C & for the present season 170.6 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/0.3 Knots.

Zhob

Rainfall reported as 35.0mm during the week, cloudiness in the morning/evening recorded as 1.0/2.1 Oktas while, average relative humidity observed as 47%. Mean day time temperature recorded as 35.9°C & for the present season 165.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 4.3/5.6 Knots.

D.I. Khan

Rainfall reported as 41.1mm during the week, cloudiness in the morning/evening recorded as 2.7/2.1 Oktas while, average relative humidity observed as 73%. Mean day time temperature recorded as 36.1°C & for the present season

179.3growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/0.6 Knots.

Peshawar

Rainfall reported as 3.1mm during the week, cloudiness in the morning/evening recorded as 3.9/6.3Oktas while, average relative humidity observed as 69%. Mean day time temperature recorded as 36.2°C & for the present season 183.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.0/3.7Knots.

Murree

Rainfall reported as 23.3mm during the week, cloudiness in the morning/evening recorded as 3.6/7.1Oktas while, average relative humidity observed as 86%. Mean day time temperature recorded as 22.1°C & for the present season 97.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.4/1.1Knots.

Kalam

Rainfall reported as 12.0mm during the week, cloudiness in the morning/evening recorded as 4.0/6.3 Oktas while, average relative humidity observed as 73%. Mean day time temperature recorded as 25.7°C & for the present season 101.7 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/1.1 Knots.

Gilgit

Rainfall reported as 5.7mm during the week, cloudiness in the morning/evening recorded as 6.0/7.0 Oktas while, average relative humidity observed as 64%. Mean day time temperature recorded as 29.9°C & for the present season 135.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/6.9 Knots.

Skardu

Rainfall reported as 1.9mm during the week, cloudiness in the morning/evening recorded as 5.4/5.4Oktas while, average relative humidity observed as 48%. Mean day time temperature

recorded as 30.6°C & for the present season 130.3growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/6.0Knots.

Crop Situation for Major Agricultural Plains **(Based on data from Regional Agromet Centres)**

Potohar Region (Rawalpindi)

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

Central Punjab (Faisalabad)

There is presently one crop (irrigated condition) grown in the fields of RAMC Faisalabad.

Cotton: Very good condition, *flowering* stage completed.

Lower Sindh (Tandojam)

There is presently one crop (irrigated condition) grown in the fields of RAMC Tandojam.

Cotton: Good condition at *Boll formation* stage.

Northern Balochistan (Quetta)

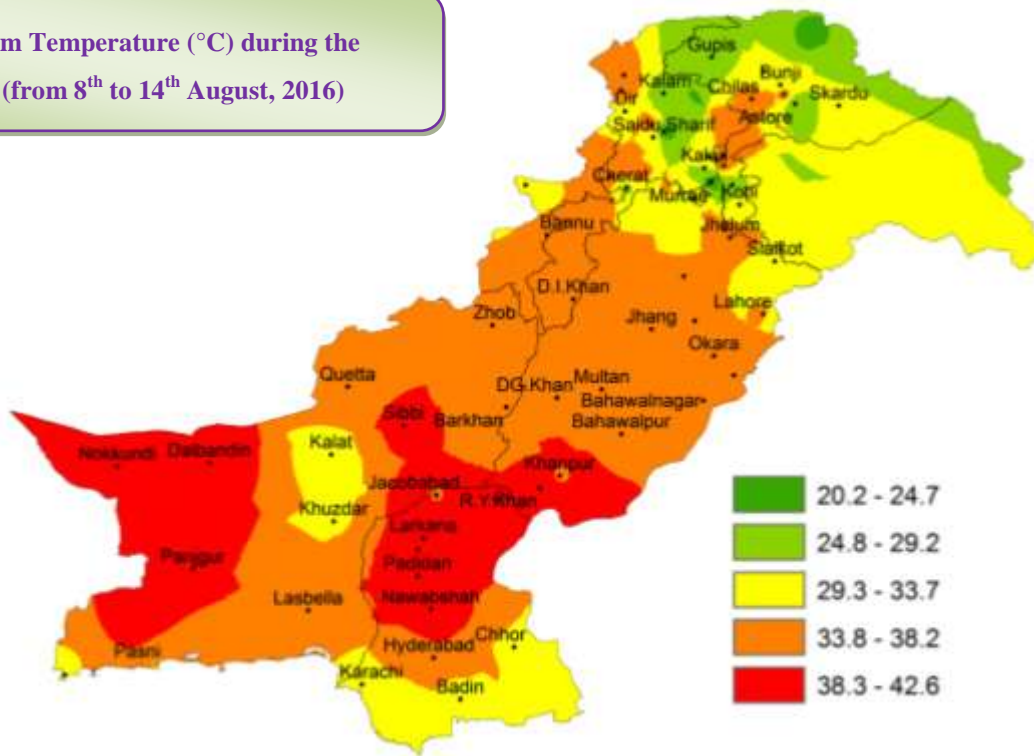
There is presently no crop grown in the fields of RAMC Quetta.

Eastern Balochistan (Usta Muhammad)

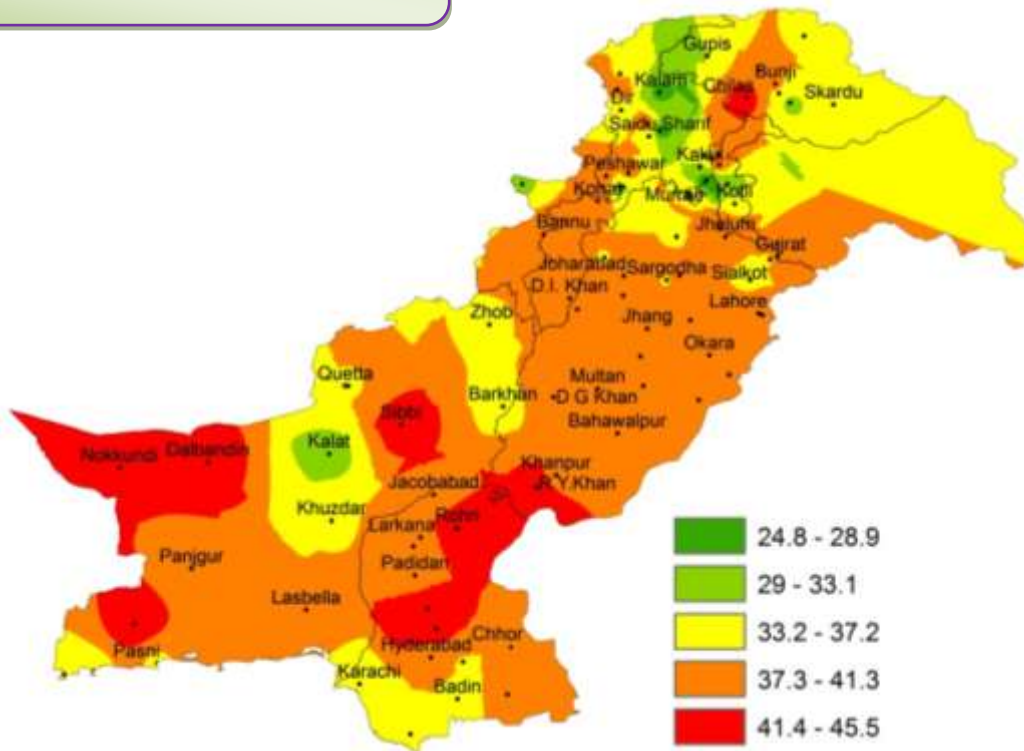
There is presently one crop (irrigated condition) grown in the fields of RAMC Usta Muhammad.

Rice: Good condition, *Third Leaf* stage.

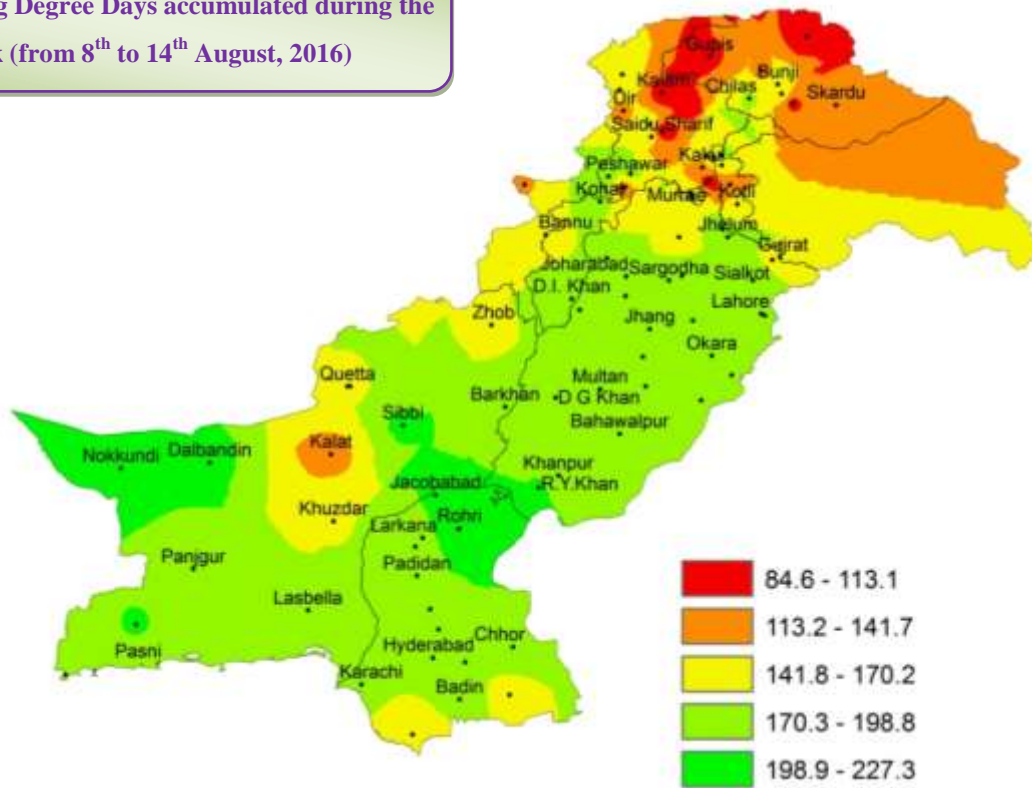
Mean Maximum Temperature (°C) during the Previous week (from 8th to 14th August, 2016)



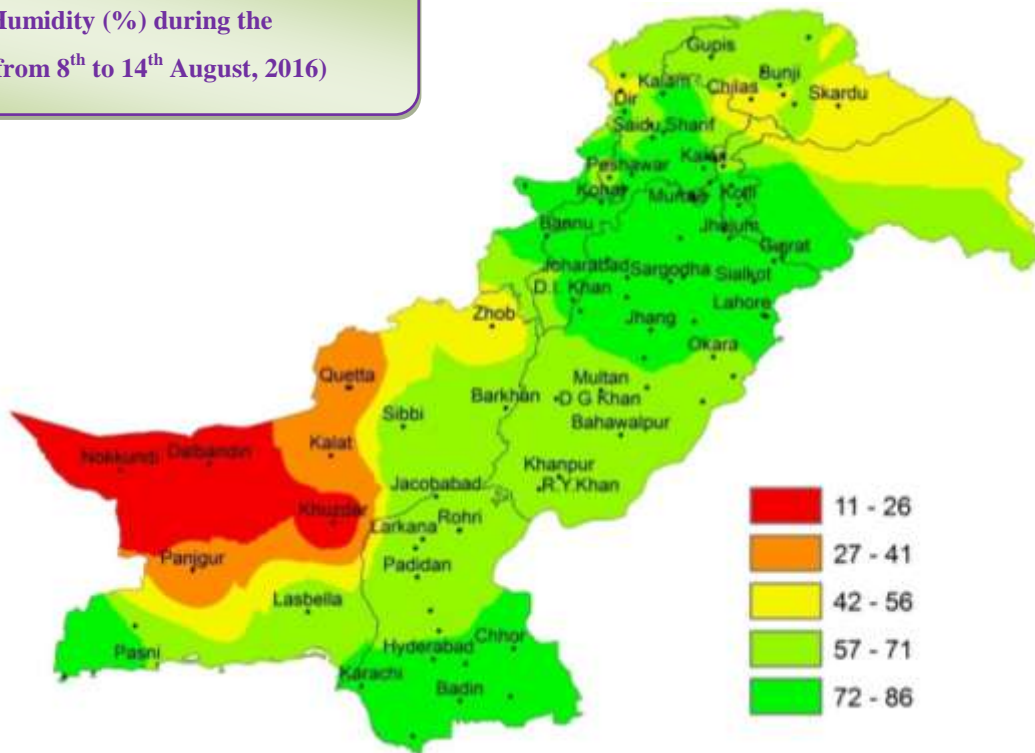
Highest Maximum Temperature (°C) during the Previous week (from 8th to 14th August, 2016)



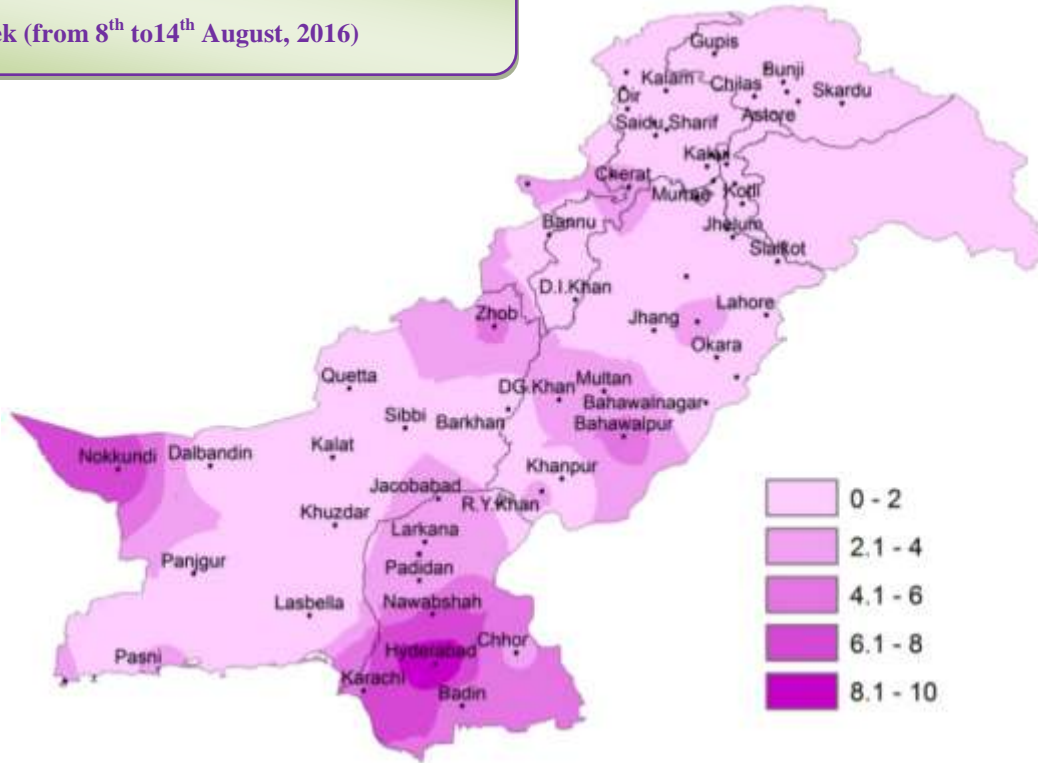
Total Growing Degree Days accumulated during the Previous week (from 8th to 14th August, 2016)



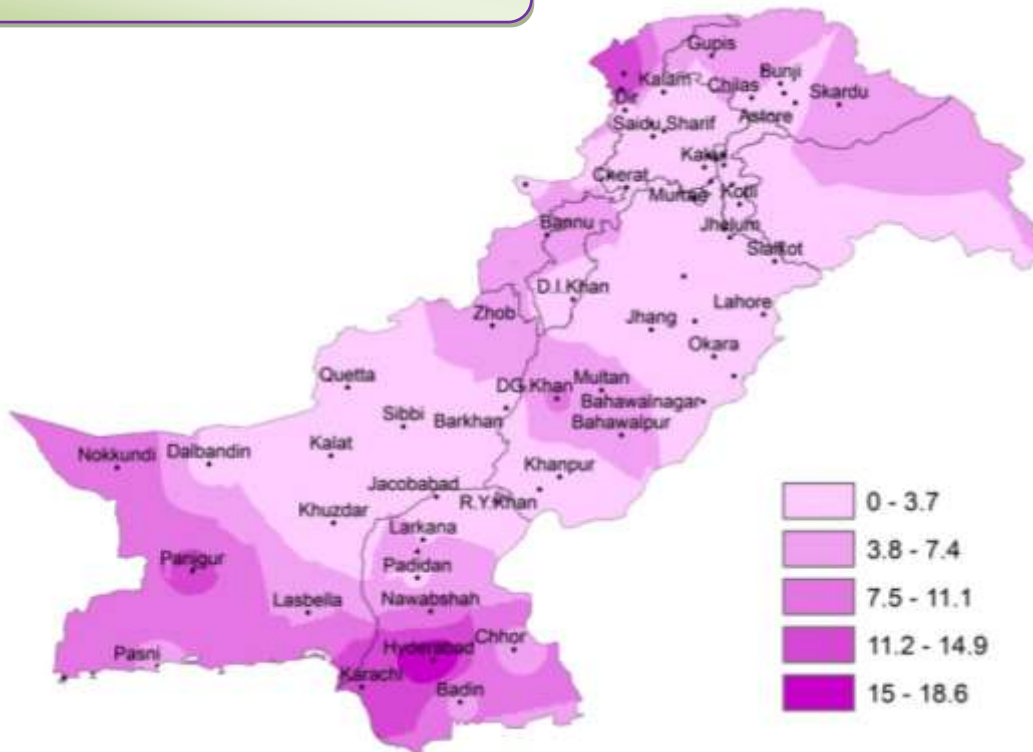
Mean Relative Humidity (%) during the Previous week (from 8th to 14th August, 2016)



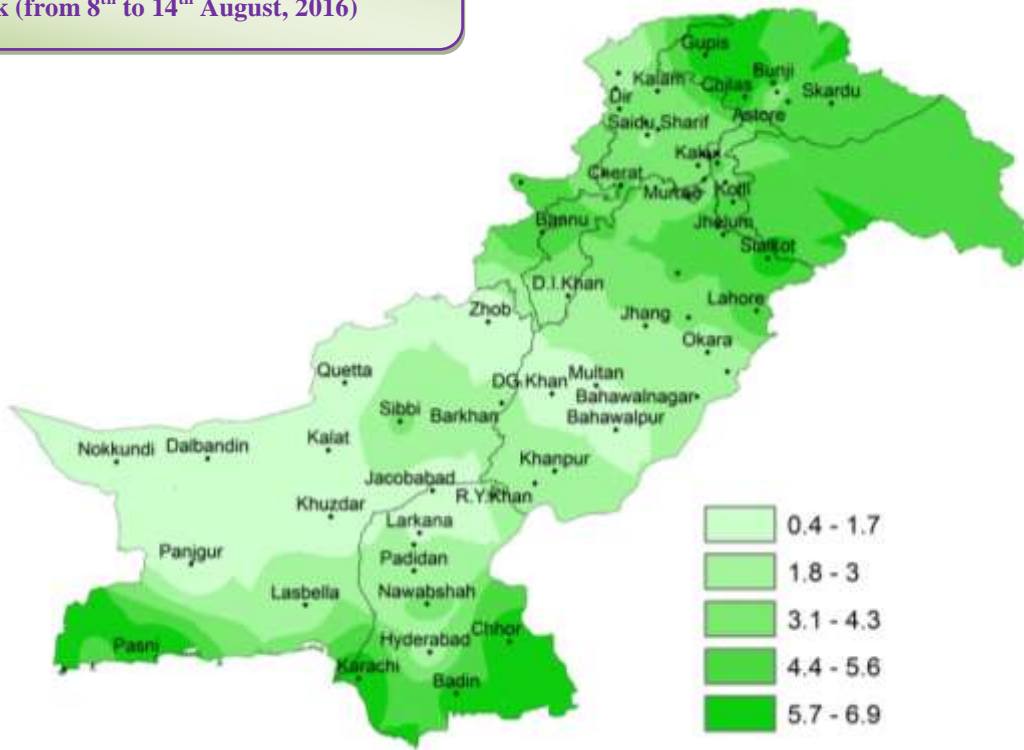
Mean Wind Speed (Knots) at 0300 PST during the Previous week (from 8th to 14th August, 2016)



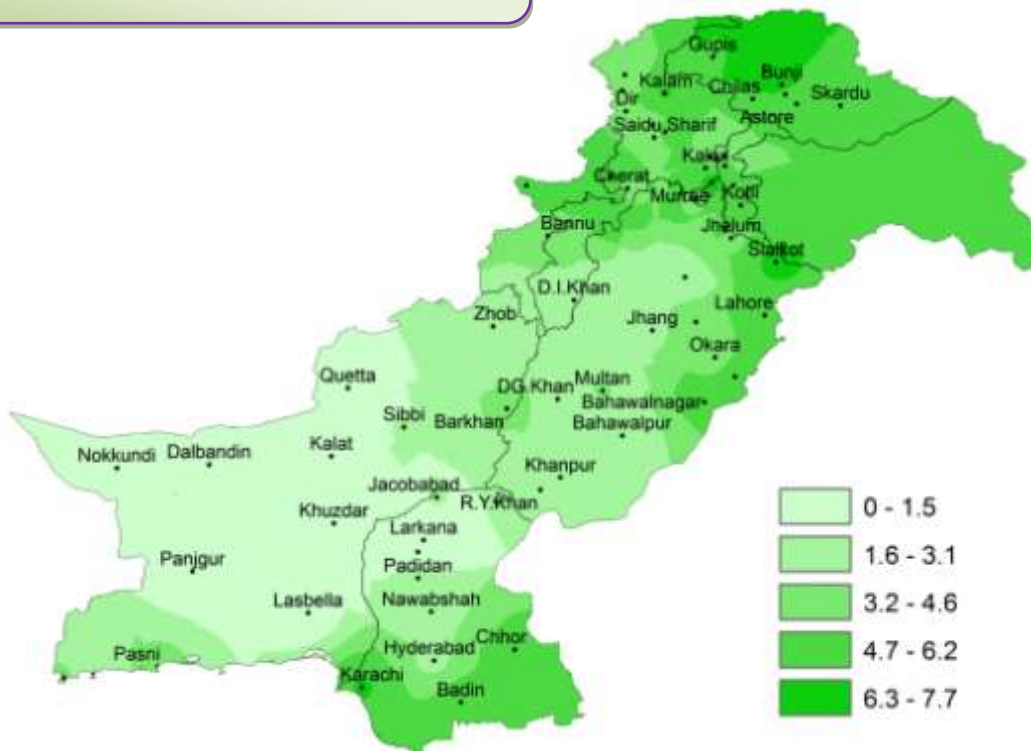
Mean Wind Speed (Knots) at 1200 PST during the Previous week (from 8th to 14th August, 2016)



Mean Cloudiness (Oktas) at 0800PST during the Previous week (from 8th to 14th August, 2016)



Mean Cloudiness (Oktas) at 1200 PST during the Previous week (from 8th to 14th August, 2016)



Weekly Weather Advisory for Farmers**(From 15th to 21st August, 2016)**

Weak seasonal low lies over Balochistan. Weak monsoon currents are penetrating over upper parts of the country. A weak westerly wave is still prevailing over upper parts of the country and likely to persist during next 24 to 48 hours. Under the influence of these meteorological conditions weather will remain as follows:

MONDAY**15-08-2016**

Mainly hot and humid weather is expected in most parts of the country. However, rain-thunderstorm is expected at few places of upper KP (Malakand, Hazara, Kohat divisions), upper Punjab (Rawalpindi, Gujranwala, Lahore, Sargodha divisions), FATA, Kashmir and Gilgit-Baltistan.

TUESDAY**16-08-2016**

Mainly hot and humid weather is expected in most parts of the country. However, rain-thunderstorm is expected at few places of upper KP (Malakand, Hazara, Peshawar, Kohat divisions), upper Punjab (Rawalpindi, Gujranwala, Lahore divisions), FATA, Kashmir and Gilgit-Baltistan.

WEDNESDAY**17-08-2016**

Mainly hot and humid weather is expected in most parts of the country. However, rain-thunderstorm is expected at isolated places in Kashmir and its adjoining areas.

THURSDAY**18-08-2016**

Mainly hot and humid weather is expected in most parts of the country. However, rain-thunderstorm is expected at isolated places in Kashmir and its adjoining areas.

FRIDAY**19-08-2016**

Mainly hot and humid weather is expected in most parts of the country. However, rain-thunderstorm is expected at isolated places in Rawalpindi, Gujranwala, Lahore, Sargodha, Faisalabad,

Malakand, Hazara, Peshawar, Kohat, Bannu, D.I Khan divisions, FATA, Kashmir and Gilgit-Baltistan.

SATURDAY**20-08-2016**

Mainly hot and humid weather is expected in most parts of the country. However, rain-thunderstorm is expected at isolated places in Rawalpindi, Gujranwala, Lahore, Sargodha, Faisalabad, Malakand, Hazara, Peshawar, Kohat, Bannu, D.I Khan divisions, FATA, Kashmir and Gilgit-Baltistan.

SUNDAY**21-08-2016**

Mainly hot and humid weather is expected in most parts of the country. However, rain-thunderstorm is expected at isolated places in Kashmir and its adjoining hilly areas.

ADVISES FOR CROPS

- ❖ Farmers obtaining crop water through tube wells are advised to schedule the irrigation according to the expected weather mentioned during the week.
- ❖ Farmers are advised to control further weeds growth at the present growing stages to stop any negative impact on the crops.
- ❖ Farmers are advised to take in time precautionary measures to protect their crops, livestock and other property from any expected heavy rains.
- ❖ Pest/viral attacks are expected over cotton and sugarcane crops during hot and humid conditions during monsoon. Farmers should be very careful and take in time precautionary measures in this regard.
- ❖ Stagnant water due to heavy monsoon rains is fatal for standing crops like cotton. Farmers are advised to take suitable measures to resolve the issue.

National Weather Data of Selected Cities
(Weekly Data from 8th to 14th August, 2016)

Stations	Maximum/Day time Temperature (°C)		Growing Degree Days	Relative Humidity (%)	Rainfall (mm)	Cloudiness (Oktas) 0800PST	Cloudiness (Oktas) 1700PST	Wind Speed (Knots) 0800PST	Wind Speed (Knots) 1700PST
	Mean	Highest							
Astore	24.6	28.0	102.8	66	2.8	5.3	5.1	0.3	3.3
Badin	32.9	34.0	172.0	76	0.1	6.0	5.6	4.9	6.6
Bahawalnagar	37.5	39.0	195.2	68	42.0	3.0	4.9	0.3	1.4
Bahawalpur	37.8	39.1	196.3	66	0.0	1.3	2.0	4.9	4.3
Balakot	31.7	34.5	147.4	76	106.0	3.3	4.0	0.0	0.4
Bannu	34.9	37.0	160.0	73	44.0	4.9	3.9	0.9	6.6
Barkhan	34.4	36.0	172.3	66	59.0	2.0	3.3	0.0	2.0
Bunji	31.7	35.0	148.5	66	13.6	6.4	7.9	0.6	1.4
Cherat	27.8	30.5	125.5	75	17.0	4.4	4.3	2.6	3.4
Chhor	33.5	35.4	172.7	75	8.0	6.3	5.3	3.7	6.6
Chilas	35.4	39.0	173.0	41	4.3	5.9	5.7	1.4	3.1
Chitral	35.1	36.0	156.9	60	0.0	1.7	3.1	0.9	13.7
D.I.Khan	36.1	38.0	179.3	73	41.1	2.7	2.1	0.3	0.6
Dalbandin	42.6	44.0	204.8	14	0.0	1.0	0.4	1.3	2.9
DG.Khan	37.5	38.7	191.2	68	23.0	1.0	2.9	4.0	8.0
Dir	30.9	33.0	131.3	76	43.0	3.6	4.6	0.0	2.0
Drosh	36.2	37.6	166.2	39	0.0	3.0	4.6	0.0	13.1
Faisalabad	34.8	38.0	179.6	75	23.0	3.3	4.0	1.1	0.8
Garidopatta	34.3	36.2	165.9	70	66.5	5.0	5.3	0.6	3.7
Gawader	34.0	34.5	180.0	72	0.0	5.0	2.0	0.0	10.0
Gilgit	29.9	34.0	135.3	64	5.7	6.0	7.0	1.1	6.9
Gupis	25.7	29.0	105.8	64	6.0	5.9	6.1	1.7	4.0

Hyderabad	34.7	35.8	174.7	74	0.0	2.6	2.9	10.0	18.6
Islamabad	33.5	36.0	165.3	74	32.1	3.9	4.1	0.3	0.9
Jacobabad	38.1	38.5	199.8	66	0.0	1.1	1.6	2.0	2.0
Jhang	36.2	37.8	183.8	74	53.2	2.9	2.7	1.4	0.3
Jhelum	35.0	37.5	177.0	78	44.7	4.9	4.3	0.0	2.0
Jiwani	32.3	33.0	170.3	76	0.0	6.3	3.3	3.4	9.4
Kakul	29.1	31.5	134.3	80	27.0	3.3	5.3	0.0	1.7
Kalam	25.7	26.5	101.7	73	12.0	4.0	6.3	0.0	1.1
Kalat	31.7	32.0	131.5	35	0.0	1.1	1.4	0.0	3.1
Karachi	32.3	33.0	172.3	72	0.0	6.4	6.3	6.0	12.0
Khanpur	38.0	38.5	193.8	70	0.0	2.7	2.7	0.9	2.0
Khuzdar	33.4	34.0	165.3	16	0.0	1.2	1.3	0.0	0.9
Kotli	31.8	34.2	161.4	81	12.0	5.6	5.1	0.0	1.9
Lahore	33.4	35.7	170.6	79	21.5	5.3	5.3	1.1	0.3
Larkana	39.6	40.5	197.5	62	0.0	1.6	1.3	2.0	3.1
Lasbella	37.1	38.0	192.7	67	10.0	2.6	0.4	0.0	7.4
Lower Dir	36.4	37.0	172.5	58	0.0	4.3	3.9	2.0	2.0
M.B Din	34.6	37.5	177.0	80	102.0	4.4	1.9	0.6	0.3
Malam Jabba	19.9	20.5	83.0	84	195.0	3.3	5.6	0.0	0.0
Mangla	33.8	36.5	171.9	77	42.7	5.4	4.9	0.6	3.7
Mir Khani	35.9	37.0	163.7	44	3.0	2.0	4.7	0.7	3.4
Moinjodaro	39.4	40.0	192.0	63	0.0	1.7	1.2	4.3	6.0
Multan	37.0	38.3	192.2	68	35.7	1.7	3.1	2.0	5.1
Murree	22.1	23.1	97.3	86	23.3	3.6	7.1	1.4	1.1
Muzaffarabad	33.0	34.4	157.9	72	11.0	4.4	4.4	0.0	1.1
Nawabshah	38.4	40.0	191.5	65	0.0	3.1	2.7	6.6	10.0

Nokkundi	41.9	42.5	212.8	11	0.0	0.4	0.4	7.3	10.4
Okara	37.6	39.5	195.2	68	26.0	2.4	4.3	0.9	1.4
Padidan	38.6	39.0	196.8	70	0.0	2.9	1.9	2.0	2.6
Panjgur	38.3	39.0	181.0	29	0.0	0.7	0.0	1.4	11.7
Parachinar	30.7	31.2	140.1	79	10.1	4.9	5.7	3.0	3.0
Pasni	33.6	34.0	178.3	71	0.0	6.9	3.6	2.3	6.6
Pattan	36.4	38.0	176.8	58	8.1	2.1	3.1	0.0	2.3
Peshawar	36.2	38.1	183.8	69	3.1	3.9	6.3	2.0	3.7
Quetta	34.1	34.5	151.9	29	0.0	0.1	1.0	1.8	4.1
R.Y.Khan	39.8	41.0	200.2	67	0.1	2.1	1.7	2.3	2.0
Rawalakot	26.5	29.0	115.9	82	27.2	3.9	4.7	0.0	1.7
Rawalpindi	33.9	36.2	169.4	68	48.8	3.4	4.6	0.9	1.7
Sahiwal	37.1	39.5	183.5	70	22.1	2.1	5.1	1.7	2.6
Saidu Sharif	33.2	34.3	152.5	74	44.0	2.6	3.9	0.0	0.0
Sialkot	33.0	37.5	170.1	74	96.7	5.7	6.6	0.0	0.3
Sibbi	39.6	40.0	203.3	70	0.0	3.1	1.6	2.0	2.3
Skardu	30.6	36.6	130.3	48	1.9	5.4	5.4	0.0	6.0
Tandojam	34.9	36.5	283.3	73	0.0	0.1	1.0	1.8	4.1
Usta.M	37.8	39.0	190.0	67	0.0	0.6	1.9	0.6	2.3
Zhob	35.9	37.5	165.0	47	35.0	1.0	2.1	4.3	5.6

*** Shows that data was not available.

Findings of AgMIPakistan, 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)