

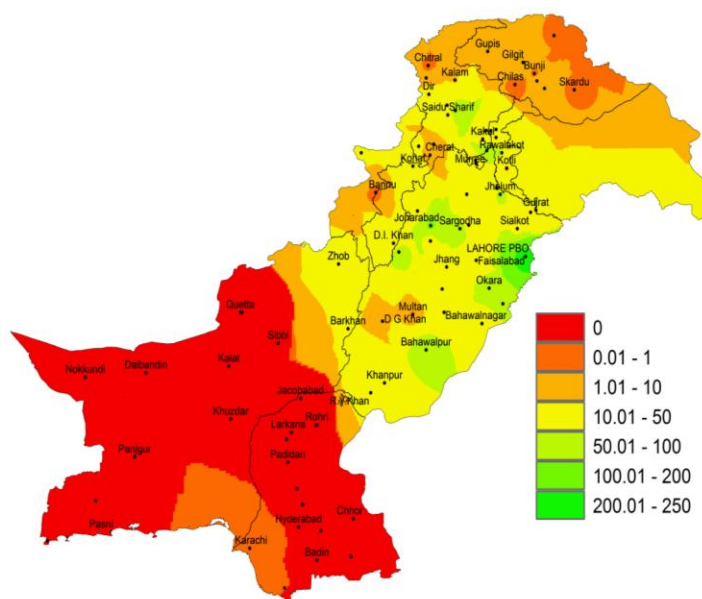
Weekly Weather and Crop Bulletin for Pakistan

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PAKISTAN METEOROLOGICAL
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**Rainfall Distribution (mm) during the Previous
Week (2nd July to 8th July, 2018)**



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Highlights of Past Weather (2nd July to 8th July, 2018)

Above normal day temperature was observed in Khyber Pakhtunkhwa, Baluchistan and Sindh however, normal to below normal day temperature was observed in Punjab, Gilgit-Baltistan and Azad Jammu & Kashmir

Province wise distribution of rainfall reported as follows:

- Light to moderate rainfall observed in Khyber Pakhtunkhwa, Gilgit-Baltistan and Azad Jammu & Kashmir however, light rainfall observed in Baluchistan and Sindh during the previous week.
- Moderate to heavy rainfall observed in Punjab during the previous week.

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

Editor-in-Chief: Asma Jawad Hashmi (Director)

Editor: Saeeda Saleh (Assistant Meteorologist)

Past Weather of Provinces (2nd July to 8th July, 2018)**Punjab**

Moderate to heavy rainfall observed in Punjab during the week. Weekly maximum and minimum temperatures recorded as 36.2°C & 25.6°C respectively. For the recent week on average 181.2 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 3.0/4.4 Knots. During the previous week the highest amount of rainfall was recorded as 241.6 mm at Lahore & highest maximum temperature was recorded as 45.0°C at Bhakkar.

Sindh

Light rainfall observed in Sindh during the week. Weekly maximum and minimum temperatures recorded as 38.1°C & 25.4°C respectively. For the recent week, on average 200.4 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 58% and wind speed in the morning/evening recorded as 5.8/6.9 Knots. During the previous week the highest amount of rainfall was recorded as 0.04 mm at Karachi & highest maximum temperature was recorded as 45.1°C at Dadu.

Khyber Pakhtunkhwa

Light to moderate rainfall observed in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 34.9°C & 20.8°C respectively. For the recent week on average 159.7 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 1.1/3.7 Knots. During the previous week the highest amount of rainfall was recorded as 84.00 mm at Malam Jabba & highest

maximum temperature was recorded as 45.0°C at D.I.Khan.

Baluchistan

Light rainfall observed from a single station in Baluchistan during the week. Weekly maximum and minimum temperatures recorded as 38.1°C & 25.4°C respectively. For the recent week on average 185.8 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 47% and wind speed in the morning/evening recorded as 2.7/6.3 Knots. During the previous week the highest amount of rainfall was recorded as 14.00 mm at Zhob & highest maximum temperature was recorded as 48.0°C at Sibbi.

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 32.0°C & 17.9°C respectively. For the recent week on average 132.6 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 0.9/2.5 Knots. During the previous week the highest amount of rainfall was recorded as 51 mm at Rawlakot & highest maximum temperature was recorded as 44.0°C at Chilas.

Past Weather for Major Agricultural Plains (2nd July to 8th July, 2018)

Rawalpindi (Potohar region)

Rainfall reported as 20.7 mm from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 3.2/3.9 Oktas while, average relative humidity observed as 61%. Mean day time temperature recorded as 36.1°C & for the recent week 172.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.6/1.6 Knots.

Faisalabad (Central Punjab)

Rainfall reported as 26.0 mm from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 2.1/1.7 Oktas while, average relative humidity observed as 66%. Mean day time temperature recorded as 35.6°C & for the recent week 179.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.6/1.1 Knots.

Tandojam (Lower Sindh)

Dry weather reported from Tandojam during the week; however, cloudiness recorded in the morning/evening as 1.7/0.9 Oktas while, average relative humidity observed as 64%. Mean day time temperature recorded as 38.4°C & for the recent week 189.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 5.7/6.8 Knots.

Usta Muhammad (Eastern Baluchistan)

Dry weather reported from Usta Muhammad during the week; however, cloudiness in the morning/evening recorded as 2.5/3.7 Oktas while, average relative humidity observed as 58%. Mean day time temperature recorded as 40.7°C & for the recent week 40.7 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.2/2.8 Knots.

Quetta (Northern Baluchistan)

Dry weather reported from Quetta during the week; however, cloudiness in the morning/evening recorded as 1.6/1.9 Oktas while, average relative humidity observed as 27%. Mean day time

temperature recorded as 34.8°C & for the recent week 159.4 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.1/3.6 Knots.

Past Weather for Sub-Regional Agricultural Plains (25th June to 1st July, 2018)

Multan

Rainfall reported as 0.0 mm from Multan during the week; however, cloudiness in the morning/evening recorded as 2.3/2.0 Oktas while, average relative humidity observed as 57%. Mean day time temperature recorded as 37.6°C & for the recent week 195.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 9.1/8.6 Knots.

Lahore

Rainfall reported as 241.6 mm from Lahore during the week; however, cloudiness in the morning/evening recorded as 2.6/2.6 Oktas while, average relative humidity observed as 72%. Mean day time temperature recorded as 33.3°C & for the recent week 170.4 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.9/1.1 Knots.

Zhob

Rainfall reported as 14.00 mm from during the week; however, cloudiness in the morning/evening recorded as 1.3/2.9 Oktas while, average relative humidity observed as 50%. Mean day time temperature recorded as 36.2°C & for the recent week 174.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 4.1/7.6 Knots.

Murree

Rainfall reported as 7.01 mm from Murree during the week; however, cloudiness in the morning/evening recorded as 4.1/3.9 Oktas while, average relative humidity observed as 70%. Mean day time temperature recorded as 23.9°C & for the recent week 100.6 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.6/0.6 Knots.

D.I. Khan

Rainfall reported as 10.01 mm from D.I. Khan during the week; however, cloudiness in the morning/evening recorded as 1.6/3.7 Oktas while, average relative humidity observed as 60%. Mean day time temperature recorded as 39.4°C & for the recent week 195.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.9/2.3 Knots.

Peshawar

Rainfall reported as 13.00 mm from Peshawar during the week; however, cloudiness in the morning/evening recorded as 1.1/2.7 Oktas while, average relative humidity observed as 58%. Mean day time temperature recorded as 38.2°C & for the recent week 189.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.9/2.6 Knots.

Kalam

Rainfall reported as 9.00 mm from Kalam during the week; however, cloudiness in the morning/evening recorded as 1.9/5.9 Oktas while, average relative humidity observed as 59%. Mean day time temperature recorded as 26.5°C & for the recent week 102.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/2.3 Knots.

Gilgit

Rainfall reported as 9.00 mm from Gilgit during the week; However, cloudiness in the morning/evening recorded as 3.0/5.3 Oktas while, average relative humidity observed as 54%. Mean day time temperature recorded as 33.9°C & for the recent week 140.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/3.4 Knots.

Skardu

Rainfall reported as 0.02 mm from Skardu during the week; however, cloudiness in the morning/evening recorded as 3.9/6.0 Oktas while, average relative humidity observed as 40%. Mean day time temperature recorded as 28.9°C & for the recent week 118.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.4 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 ; *Very Good*, Budding stage completed.

Lower Sindh (Tandojam)

There is presently one crop in the fields of RAMC Tandojam.

Cotton (CIM 602); *Good*, Budding stage .

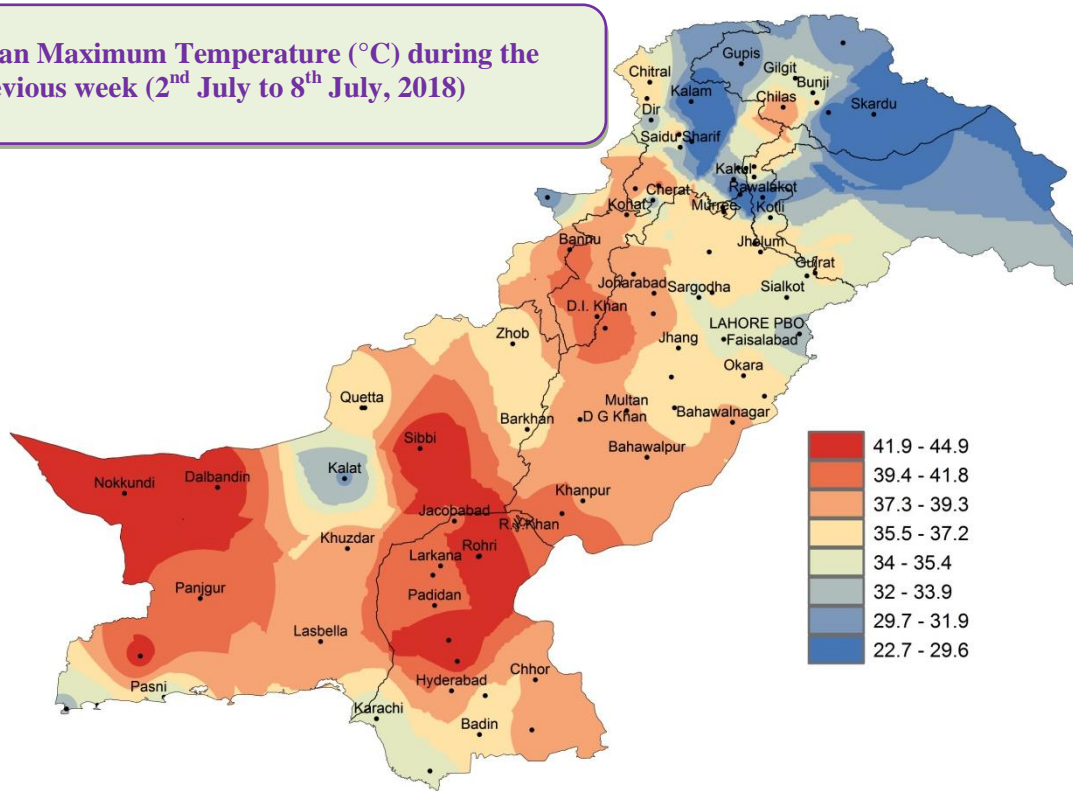
Northern Baluchistan (Quetta)

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

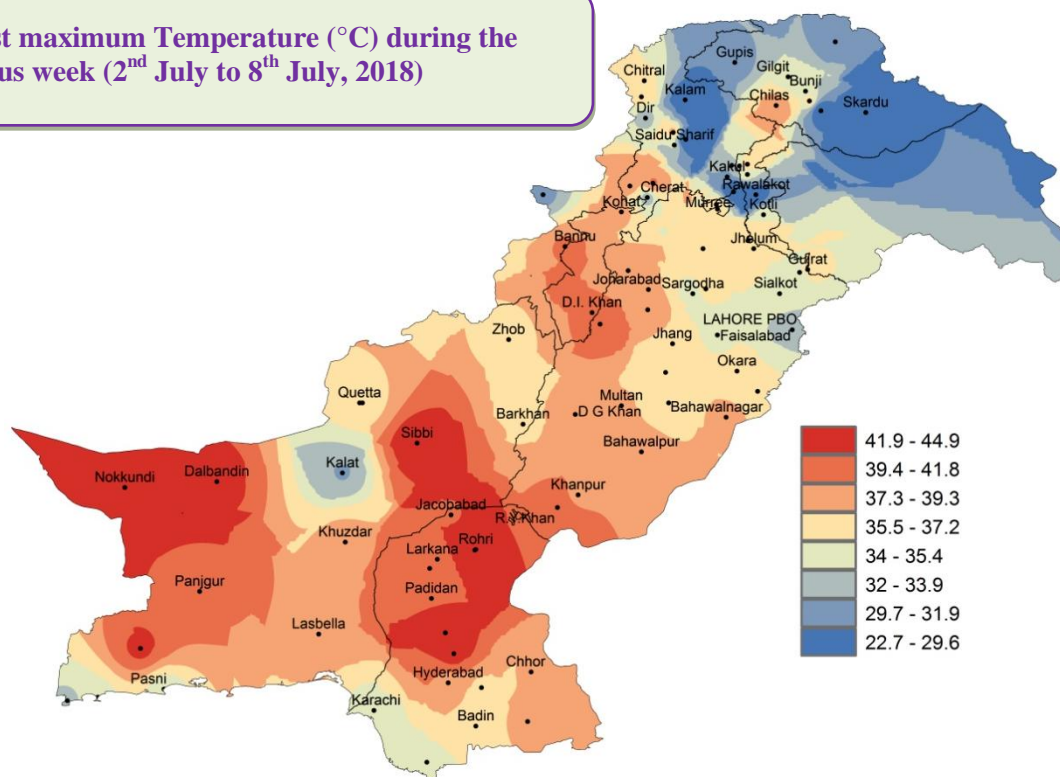
Eastern Baluchistan (Usta Muhammad)

Rice saplings are transferred in the fields of RAMC Usta Muhammad.

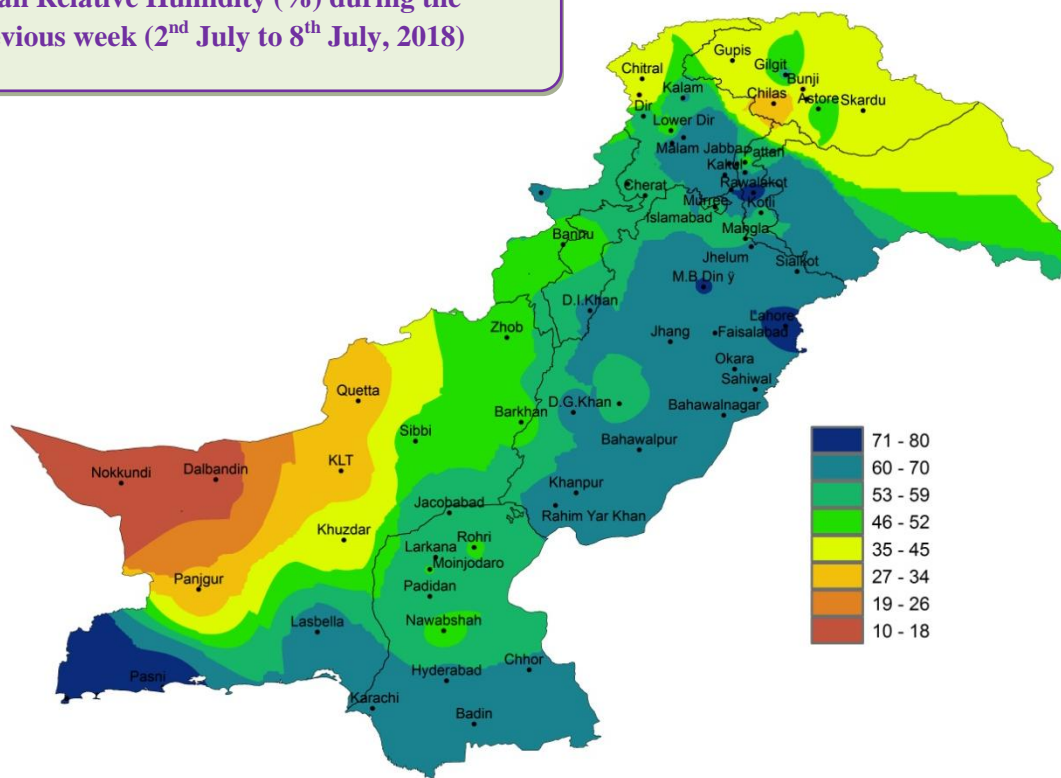
Mean Maximum Temperature (°C) during the Previous week (2nd July to 8th July, 2018)



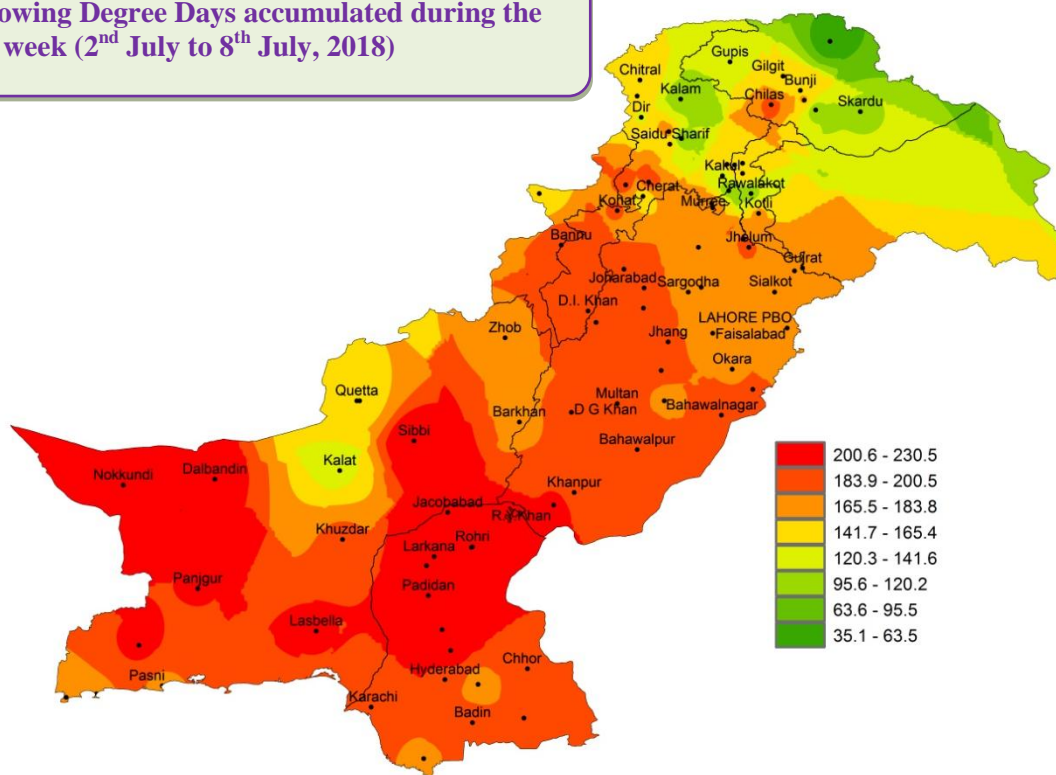
Highest maximum Temperature (°C) during the Previous week (2nd July to 8th July, 2018)



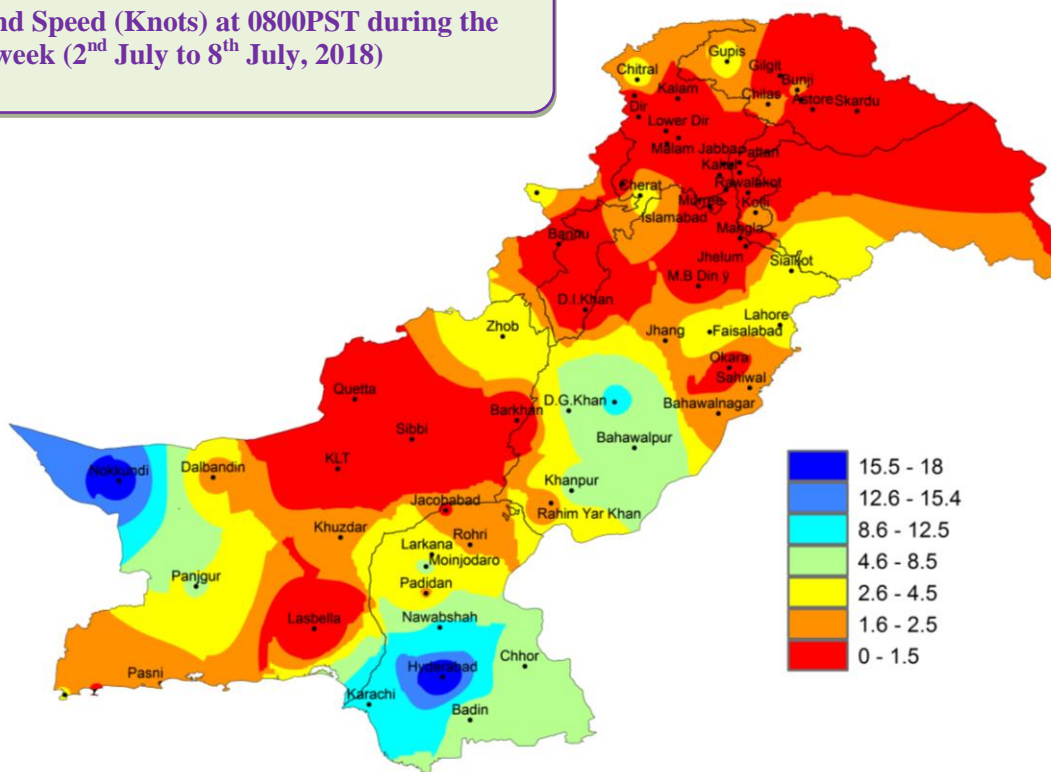
Mean Relative Humidity (%) during the
Previous week (2nd July to 8th July, 2018)



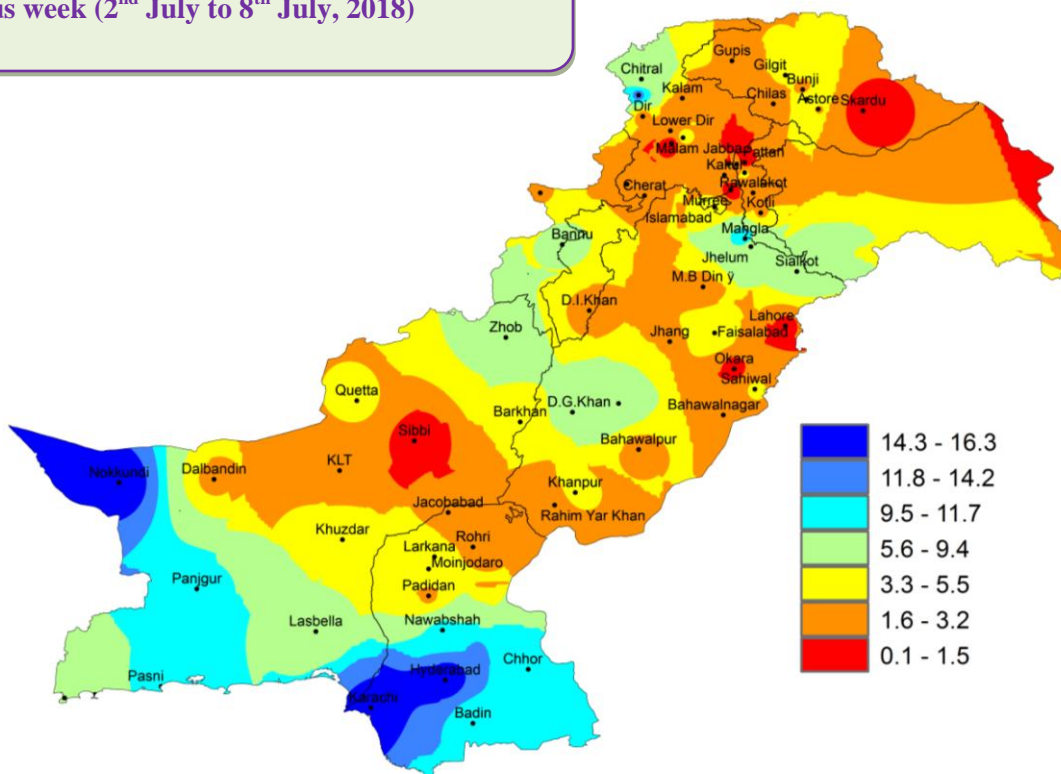
Total Growing Degree Days accumulated during the
Previous week (2nd July to 8th July, 2018)



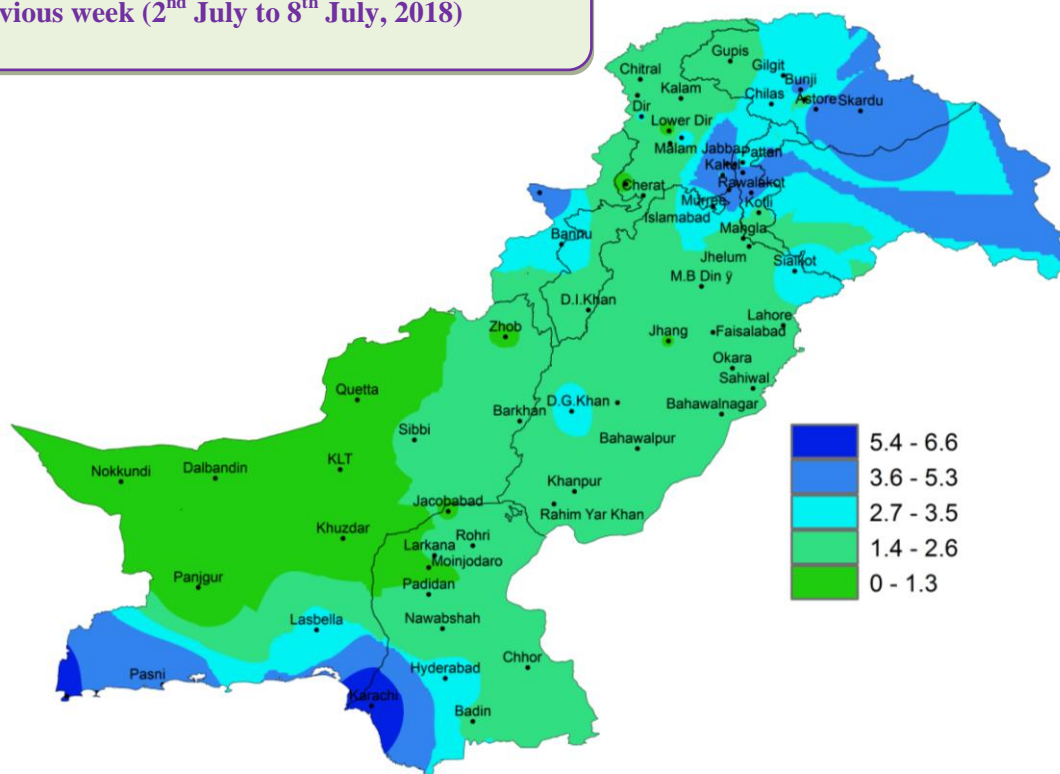
Mean Wind Speed (Knots) at 0800PST during the Previous week (2nd July to 8th July, 2018)



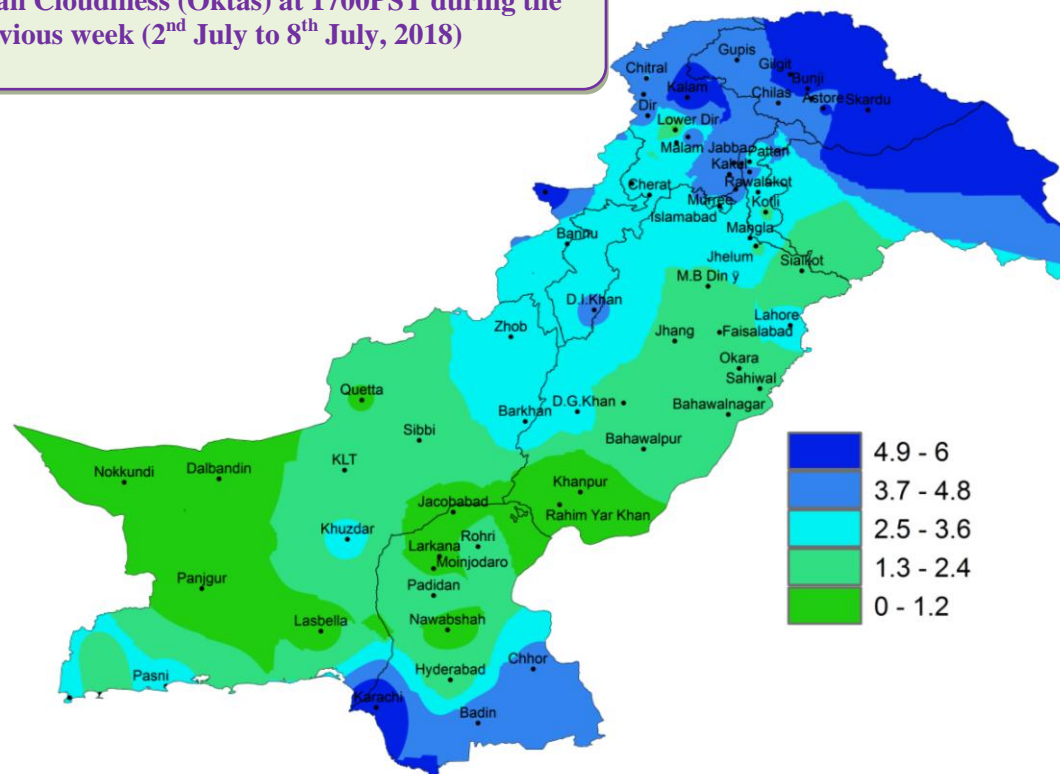
Mean Wind Speed (Knots) at 1700PST during the Previous week (2nd July to 8th July, 2018)



Mean Cloudiness (Oktas) at 0800PST during the Previous week (2nd July to 8th July, 2018)



Mean Cloudiness (Oktas) at 1700PST during the Previous week (2nd July to 8th July, 2018)



Weekly Weather Advisory for Farmers**(9th July to 15th July, 2018)**

Seasonal Low lies over North Balochistan with its trough extending southeastward. A shallow westerly wave is affecting northern areas. Weak monsoon currents are penetrating Kashmir and its adjoining areas.

MONDAY**09-07-2018**

Mainly very hot and humid weather is expected in most parts of the country. However, rain-thundershower is expected at isolated places in Malakand, Hazara divisions, Gilgit-Baltistan, Kashmir and its adjoining hilly areas.

TUESDAY**10-07-2018**

Mainly very hot and humid weather is expected in most parts of the country. However, rain-thundershower is expected at isolated places in Malakand, Hazara, Rawalpindi, Gujranwala, Lahore divisions, Islamabad, Gilgit-Baltistan and Kashmir.

WEDNESDAY**11-07-2018**

Rain-thundershower (with isolated heavy falls) associated with gusty winds is expected at scattered places in Malakand, Hazara, Peshawar, Mardan, Rawalpindi, Gujranwala, Lahore divisions, Islamabad, Kashmir, Gilgit-Baltistan and FATA. Hot and humid weather is expected elsewhere in the country.

THURSDAY**12-07-2018**

Rain-thundershower (with isolated heavy falls) accompanied by gusty winds is expected at scattered places in KP, upper Punjab (Rawalpindi, Gujranwala, Lahore, Sargodha, Faisalabad divisions), Islamabad, Kashmir, FATA, Gilgit-Baltistan while at isolated places in Zhob division.

FRIDAY**13-07-2018.**

Rain-thundershower accompanied by gusty winds is expected at scattered places in KP, upper Punjab (Rawalpindi, Gujranwala, Lahore, Sargodha, Faisalabad divisions), Islamabad, Kashmir, FATA and Gilgit-Baltistan while at isolated places in Zhob division and south Punjab (Multan, Bahawalpur, D G Khan divisions).

SATURDAY**14-07-2018**

Rain-thundershower (with isolated heavy falls) accompanied by gusty winds is expected at scattered places in KP (Malakand, Hazara, Peshawar, Kohat, Mardan, Bannu divisions), Rawalpindi division and FATA, while at isolated places in D I Khan, Sargodha, Gujranwala, Lahore, Faisalabad, Zhob divisions, Islamabad and Kashmir.

SUNDAY**15-07-2018**

Rain-thundershower accompanied by gusty winds is expected at scattered places in Punjab, Sindh, Kashmir, Islamabad, while at isolated places in KP, FATA, Quetta, Zhob divisions, and Gilgit-Baltistan.

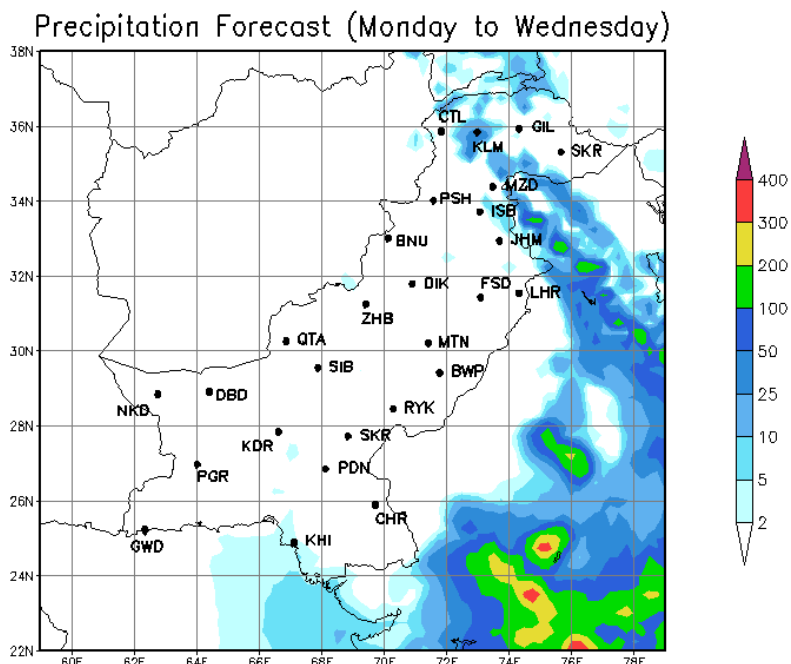
ADVISES FOR FARMERS

During the last week, light to moderate rainfall occurred in upper half of the country while hot 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.

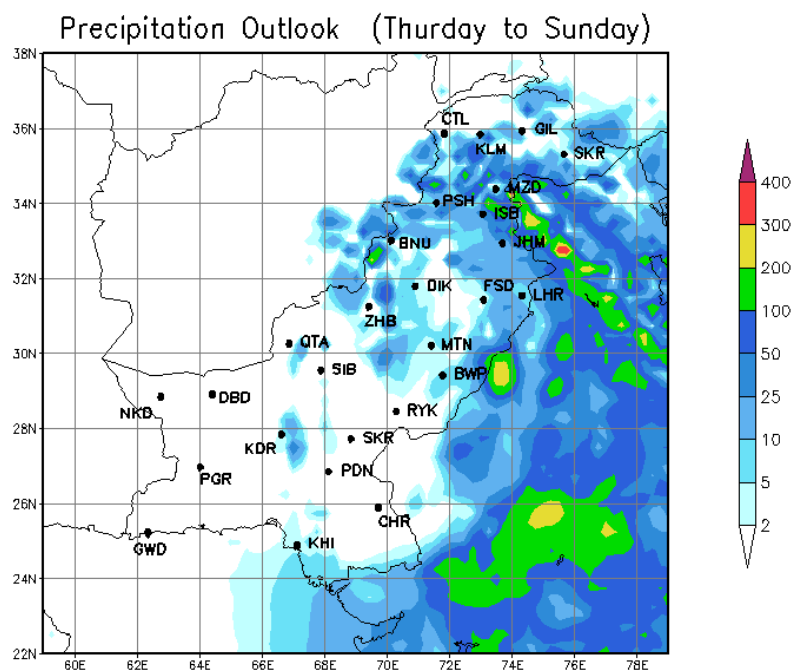
- Farmers of southern Punjab and Sindh are advised to complete the sowing of cotton and other Kharif crops to utilize the maximum soil moisture.
- Farmers of upper regions are advised to complete the cultivation of millet and sorghum in the upper regions because of the moisture availability in field.

Weather Outlook from (9th July to 15th July, 2018)

The forecast from 9th July to 11th July, 2018 shows that light to moderate rainfall is expected in scattered places of Kashmir, FATA and upper KP. However, dry weather will prevail in rest of the country.



The outlook from 12th July to 15th July, 2018 shows that moderate to heavy rainfall is expected in GB, Kashmir, upper & central Punjab, KP and few places of north and northeastern Baluchistan.



National Weather Data of Selected Cities (Weekly Data from 2nd July to 8th July, 2018)

Stations	Maximum/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							
Astore	25.5	31.5	100.0	50	4.40	4.4	4.9	1.1	3.1
Badin	36.4	37.5	190.3	64	0.00	2.6	4.7	6.0	9.4
Bahawalnagar	37.9	43.0	188.8	64	24.01	2.3	2.3	1.7	2.9
Bahawalpur	38.4	42.3	195.2	64	75.01	2.3	2.1	6.0	2.3
Balakot	32.7	37.0	150.0	69	42.00	3.9	4.4	0.0	1.1
Bannu	39.7	43.0	196.7	46	0.01	3.0	2.4	0.3	6.6
Barkhan	36.9	40.0	178.8	50	11.00	2.0	2.9	0.0	3.7
Bunji	34.6	40.0	165.6	33	0.02	4.3	5.9	2.0	2.9
Cherat	32.7	37.0	148.0	56	3.00	2.1	3.0	3.1	2.9
Chhor	37.3	39.2	195.8	59	0.00	1.4	4.0	5.4	9.7
Chilas	38.5	44.0	188.0	27	0.02	3.0	3.9	1.7	2.6
Chitral	36.2	39.1	161.2	41	0.02	2.1	3.6	3.4	6.0
D.I.Khan	39.4	45.0	195.8	60	10.01	1.6	3.7	0.9	2.3
Dalbandin	42.9	45.0	211.0	16	0.00	0.0	0.0	2.0	2.6
D.G.Khan	37.6	42.5	189.5	61	8.60	2.9	2.6	4.6	6.3
Dir	32.9	37.0	138.8	57	19.00	2.7	3.9	0.0	2.0
Drosh	36.6	39.9	158.7	33	1.00	1.7	4.3	0.9	13.0
Faisalabad	35.1	40.0	178.7	66	13.80	2.3	2.3	4.0	4.9
Garidopatta	34.1	39.6	155.3	61	30.20	4.1	4.0	0.0	3.7
Gawader	34.6	35.5	181.5	80	0.00	5.0	2.0	1.4	6.9
Gilgit	33.9	40.5	140.8	54	9.00	3.0	5.3	0.0	3.4
Gupis	30.0	34.5	125.8	36	4.40	1.9	4.1	2.9	3.1

Hyderabad	38.4	39.5	193.3	61	0.00	3.3	1.9	18.0	15.7
Islamabad	36.1	40.5	175.3	56	52.00	3.1	3.4	0.9	4.3
Jacobabad	41.7	44.5	209.5	55	0.00	1.3	1.0	1.4	1.7
Jhang	36.5	40.3	185.2	60	34.00	1.3	2.1	2.3	2.9
Jhelum	36.5	40.3	184.4	64	59.00	1.4	2.1	1.1	5.4
Jiwani	33.4	34.5	175.3	74	0.00	5.6	2.7	2.6	8.9
Kakul	31.1	34.3	132.8	67	41.51	3.4	4.0	0.9	2.6
Kalam	26.5	30.0	102.3	59	9.00	1.9	5.9	0.0	2.3
Kalat	31.7	34.0	133.5	28	0.00	0.0	1.7	0.3	2.3
Karachi	34.5	36.0	187.5	68	0.04	6.6	5.9	9.7	15.1
Khanpur	39.0	42.2	199.2	60	22.60	2.0	0.0	5.4	3.7
Khuzdar	38.4	40.5	189.3	40	0.00	0.4	2.6	2.3	4.3
Kotli	35.4	41.1	170.4	57	8.30	2.4	2.3	2.0	2.9
Lahore	33.3	38.4	170.4	72	241.60	2.6	2.6	2.9	1.1
Larkana	41.8	43.5	212.0	57	0.00	1.6	1.0	3.7	4.6
Lasbella	38.6	39.5	202.3	63	0.00	2.9	0.9	0.0	7.1
Lower Dir	38.4	42.5	181.0	45	17.00	0.7	0.9	0.9	2.6
M.B Din	22.4	28.0	87.3	70	84.00	2.3	2.3	0.6	2.3
Malam Jabba	35.8	40.2	177.9	70	18.60	3.1	4.6	1.1	4.0
Mangla	36.9	41.0	184.0	56	29.31	2.7	3.4	1.1	12.0
Mir Khani	36.7	41.2	169.3	40	3.00	1.4	3.9	0.9	4.1
Moinjodaro	40.5	44.5	204.2	51	0.00	0.8	1.1	5.0	5.4
Multan(PBO)	37.6	41.3	195.3	57	0.70	2.3	2.0	9.1	8.6
Murree	23.9	27.5	100.6	70	74.01	4.1	3.9	0.6	0.6
Muzaffarabad	34.3	39.6	151.4	60	40.00	3.9	4.7	0.0	2.9
Nawabshah	42.5	44.5	211.3	49	0.00	1.6	0.9	8.9	10.3

Nokkundi	43.3	45.0	216.8	10	0.00	0.0	0.0	16.3	16.3
Okara	35.8	41.5	182.3	64	69.00	2.6	2.3	0.6	0.9
Padidan	41.8	43.0	209.5	57	0.00	1.6	1.7	2.3	2.6
Panjgur	40.8	43.0	201.0	27	0.00	0.0	0.3	4.6	10.6
Parachinar	31.1	32.5	144.5	60	12.00	4.4	5.6	3.0	3.0
Pasni	34.3	35.0	180.5	77	0.00	4.9	2.7	1.9	11.3
Pattan	37.1	41.5	160.3	48	28.00	2.9	2.7	0.0	0.0
Peshawar	38.2	43.0	189.8	58	13.00	1.1	2.7	0.9	2.6
Quetta	36.7	38.0	139.5	29	0.00	0.0	1.2	0.3	3.7
R. Y. Khan	40.1	44.2	201.7	61	14.10	2.0	0.0	1.7	2.1
Rawalakot	26.5	30.4	108.3	75	51.00	3.7	3.1	0.3	2.3
Rohri	42.3	44.5	213.5	52	0.00	1.6	1.4	2.3	2.3
Sahiwal	36.1	40.5	184.4	66	60.01	2.3	1.9	2.3	3.4
Saidu Sharif	34.3	37.5	152.6	62	31.00	2.3	3.0	0.0	0.3
Sialkot	34.3	38.3	174.3	63	16.20	3.0	1.9	4.1	8.0
Sibbi	44.9	48.0	230.5	49	0.00	1.7	1.7	0.0	0.9
Skardu	28.9	33.6	118.3	40	0.02	3.9	6.0	0.0	0.4
Zhob	36.2	41.0	174.8	50	14.00	1.3	2.9	4.1	7.6
Rawalpindi	36.1	40.0	172.8	61	20.70	3.2	3.9	0.6	1.6
Tandojam	38.4	40.0	189.3	64	0.00	1.0	0.9	5.7	6.8
Usta. M	40.7	3.2	40.0	58	0.00	2.5	3.7	2.2	2.8

*** 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)