

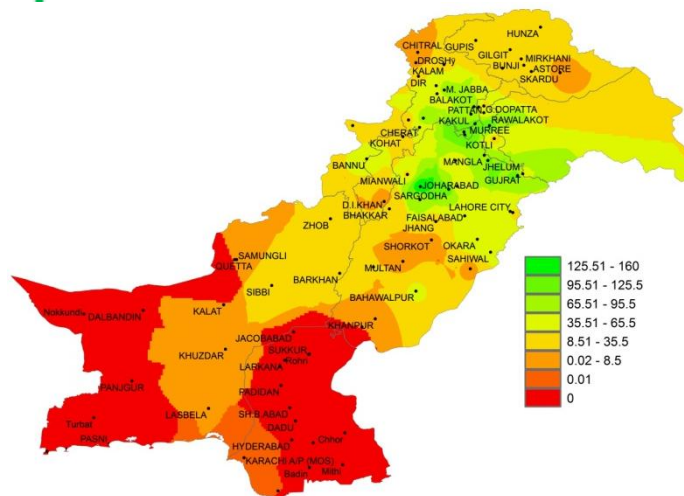
Weekly Weather and Crop Bulletin for Pakistan

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PAKISTAN METEOROLOGICAL
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**Rainfall Distribution (mm) during the Previous
Week (23rd July to 29th July, 2018)**



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Highlights of Past Weather (23rd July to 29th July, 2018)

Below normal day temperature was observed in Gilgit-Baltistan and Azad Jammu & Kashmir, Punjab and Khyber Pakhtun Khwa however mix trend was observed in Baluchistan and Sindh during the previous week.

Province wise distribution of rainfall reported as follows:

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

Past Weather of Provinces (23rd July to 29th July, 2018)**Punjab**

Moderate to heavy rainfall observed in Punjab during the week. Weekly maximum and minimum temperatures recorded as 35.2°C & 26.1°C respectively. For the recent week on average 180.0 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 70% and wind speed in the morning/evening recorded as 3.8/3.1 Knots. During the previous week the highest amount of rainfall was recorded as 159.41 mm at Joharabad & highest maximum temperature was recorded as 43.5°C at RahimYar Khan.

Sindh

Light to moderate rainfall observed in Sindh during the week. Weekly maximum and minimum temperatures recorded as 37.8°C & 27.0°C respectively. For the recent week, on average 192.1 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 5.7/7.7 Knots. During the previous week the highest amount of rainfall was recorded as 0.01mm at Karachi & highest maximum temperature was recorded as 44.4°C at Dadu.

Khyber Pakhtunkhwa

Light to moderate rainfall observed in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 31.6°C & 21.0°C respectively. For the recent week on average 149.1 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 1.6/3.2 Knots. During the previous week the highest amount of rainfall was recorded as 92.3 mm at Balakot & highest

maximum temperature was recorded as 42.0°C at D.I.Khan.

Baluchistan

Light to moderate rainfall observed in Baluchistan during the week. Weekly maximum and minimum temperatures recorded as 37.8°C & 25.2°C respectively. For the recent week on average 181.5 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 2.8/6.4 Knots. During the previous week the highest amount of rainfall was recorded as 28.0 mm Sibbi & highest maximum temperature was recorded as 47.0°C at Nokkundi.

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 29.0°C & 19.6°C respectively. For the recent week on average 128.7 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 67% and wind speed in the morning/evening recorded as 1.9/1.9 Knots. During the previous week the highest amount of rainfall was recorded as 117.41 mm at Rawalakot & highest maximum temperature was recorded as 41.0°C at Chilas.

Past Weather for Major Agricultural Plains (23rd July to 29th July, 2018)

Rawalpindi (Potohar region)

Rainfall reported as 98.5 mm from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 7.3/6.0 Oktas while, average relative humidity observed as 79%. Mean day time temperature recorded as 33.4°C & for the recent week 161.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.4/1.7 Knots.

Faisalabad (Central Punjab)

Rainfall reported as 28.8 mm from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 4.6/3.1 Oktas while, average relative humidity observed as 72%. Mean day time temperature recorded as 36.0°C & for the recent week 183.7 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.4/1.2 Knots.

Tandojam (Lower Sindh)

Dry weather reported from Tandojam during the week; however, cloudiness recorded in the morning/evening as 2.1/2.0 Oktas while, average relative humidity observed as 69%. Mean day time temperature recorded as 36.4°C & for the recent week 179.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 5.2/9.6 Knots.

Usta Muhammad (Eastern Baluchistan)

Dry weather reported from Usta Muhammad during the week; however, cloudiness in the morning/evening recorded as 0.6/1.1 Oktas while, average relative humidity observed as 63%. Mean day time temperature recorded as 41.1°C & for the recent week 211.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/3.7 Knots.

Quetta (Northern Baluchistan)

Dry weather reported from Quetta during the week; however, cloudiness in the morning/evening recorded as 1.4/2.7 Oktas while, average relative humidity observed as 29%. Mean day time

temperature recorded as 35.5°C & for the recent week 163.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.6/3.8 Knots.

Past Weather for Sub-Regional Agricultural Plains (23rd July to 29th July, 2018)

Multan

Rainfall reported as 0.01 mm from Multan during the week; however, cloudiness in the morning/evening recorded as 3.3/1.8 Oktas while, average relative humidity observed as 60%. Mean day time temperature recorded as 37.9°C & for the recent week 203.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 5.4/9.3 Knots.

Lahore

Rainfall reported as 25.0 mm from Lahore during the week; however, cloudiness in the morning/evening recorded as 5.7/4.8 Oktas while, average relative humidity observed as 76%. Mean day time temperature recorded as 34.2°C & for the recent week 177.4 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening 0.6/1.7 Knots.

Zhob

Rainfall reported as 10.0 mm from during the week; however, cloudiness in the morning/evening recorded as 5.1/5.7 Oktas while, average relative humidity observed as 38%. Mean day time temperature recorded as 34.9°C & for the recent week 166.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 5.0/7.5 Knots.

Murree

Rainfall reported as 113.0 mm from Murree during the week; however, cloudiness in the morning/evening recorded as 7.3/7.0 Oktas while, average relative humidity observed as 84%. Mean day time temperature recorded as 22.1°C & for the recent week 96.4 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.7/0.7 Knots.

D.I. Khan

Rainfall reported as 0.02 mm from D.I. Khan during the week; however, cloudiness in the morning/evening recorded as 5.4/4.0 Oktas while, average relative humidity observed as 73%. Mean day time temperature recorded as 37.0°C & for the recent week 187.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.7/2.0 Knots.

Peshawar

Rainfall reported as 20.03 mm from Peshawar during the week; however, cloudiness in the morning/evening recorded as 6.7/5.0 Oktas while, average relative humidity observed as 77%. Mean day time temperature recorded as 32.6°C & for the recent week 62.6 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.9/1.7 Knots.

Kalam

Rainfall reported as 23.5 mm from Kalam during the week; however, cloudiness in the morning/evening recorded as 5.3/6.2 Oktas while, average relative humidity observed as 78%. Mean day time temperature recorded as 25.5°C & for the recent week 106.7 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/1.3 Knots.

Gilgit

Rainfall reported as 8.53 mm from Gilgit during the week; However, cloudiness in the morning/evening recorded as 7.4/6.2 Oktas while, average relative humidity observed as 66%. Mean day time temperature recorded as 29.4°C & for the recent week 137.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as .3/3.0 Knots.

Skardu

Rainfall reported as 3.92 mm from Skardu during the week; however, cloudiness in the morning/evening recorded as 6.7/7.0 Oktas while, average relative humidity observed as 63%. Mean day time temperature recorded as 26.0°C & for the recent week 111.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/1.7 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*, Flowering stage completed .

Lower Sindh (Tandojam)

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

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

Northern Baluchistan (Quetta)

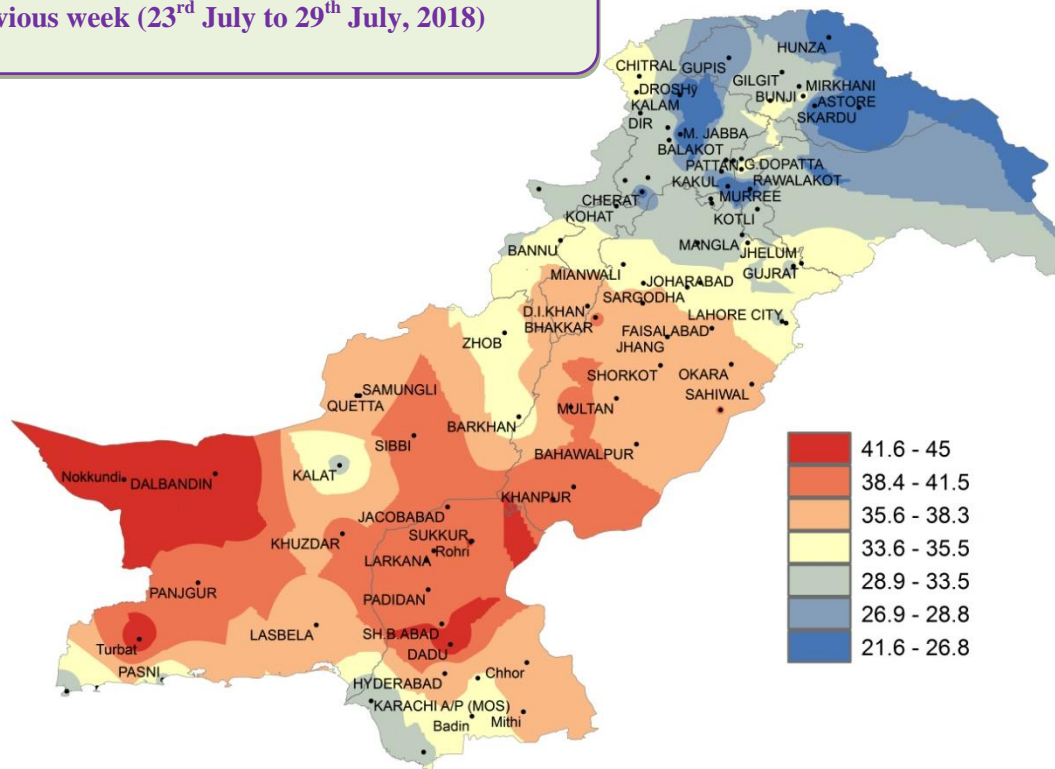
There is presently no crop grown in the fields of RAMC Quetta.

Eastern Baluchistan (Usta Muhammad)

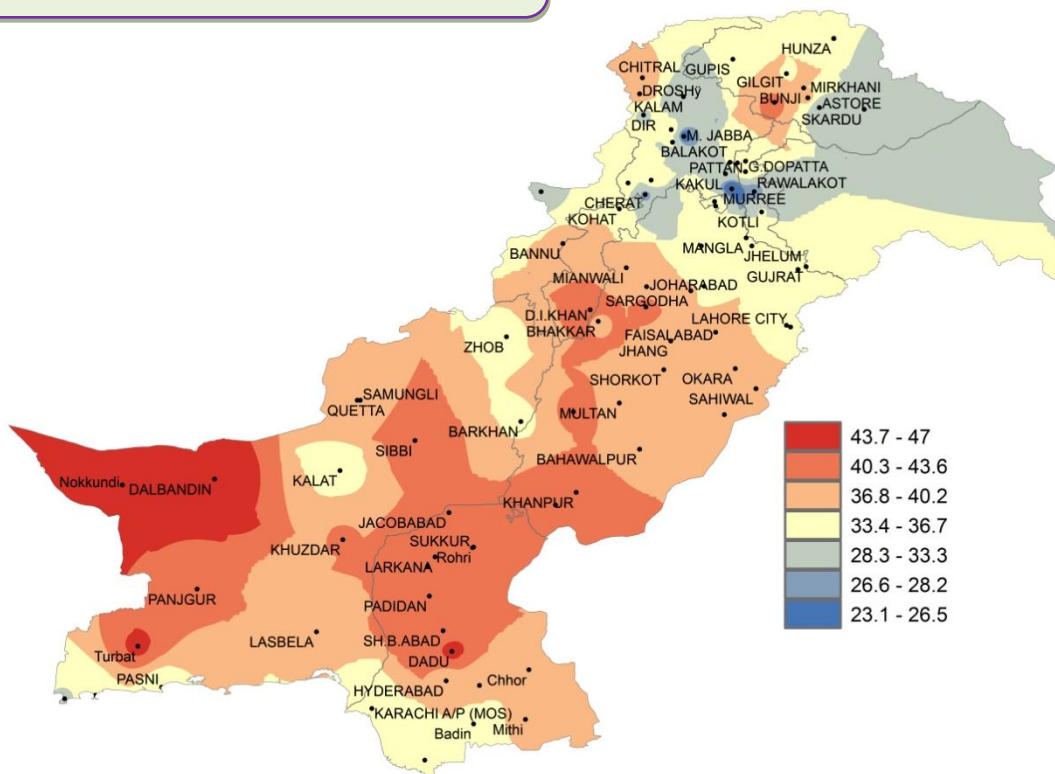
There is presently one crop in the fields of RAMC Usta Muhammad .

Rice; *True leaf stage*.

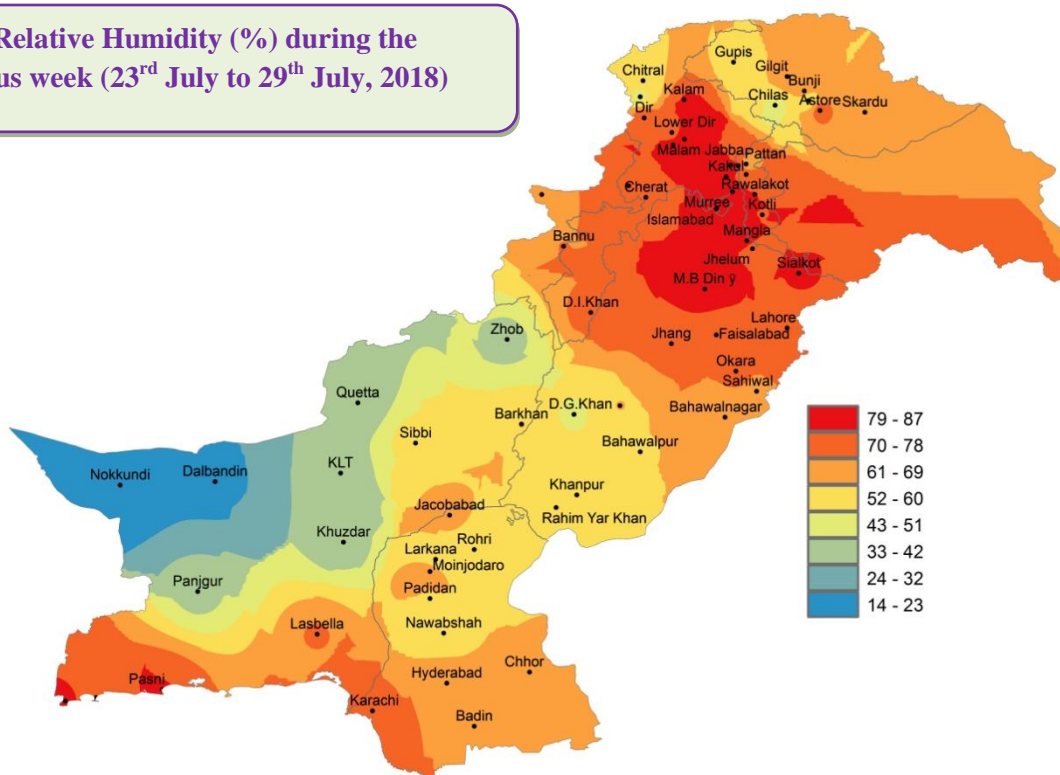
Mean Maximum Temperature (°C) during the Previous week (23rd July to 29th July, 2018)



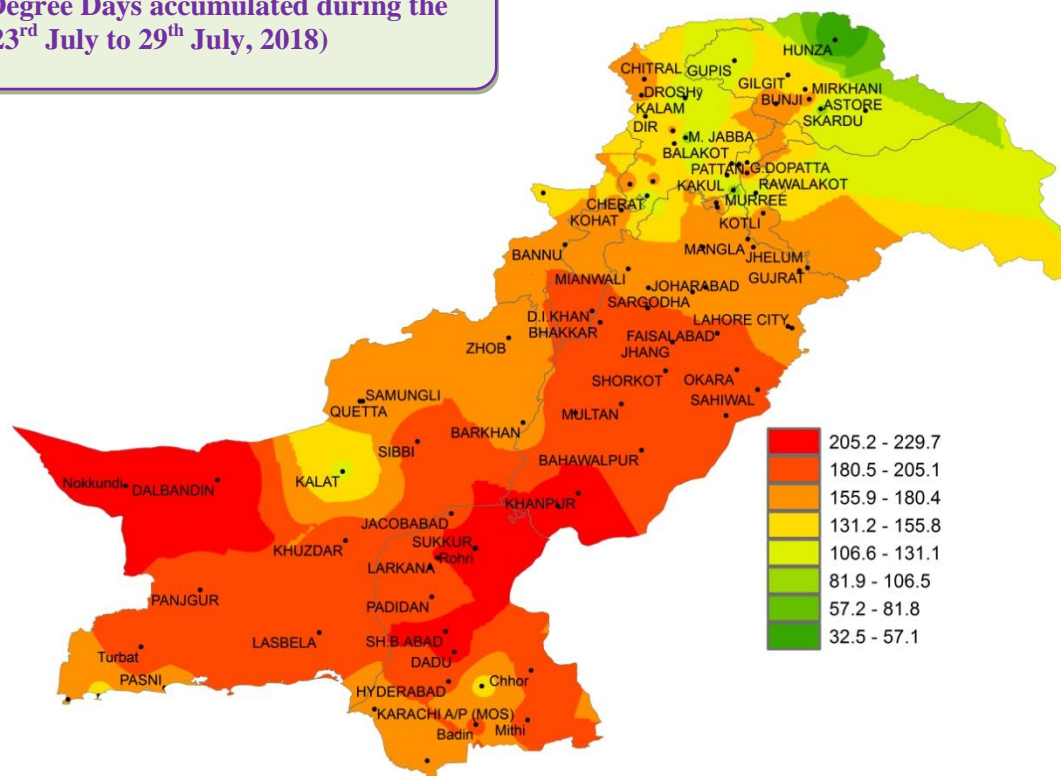
Highest maximum Temperature (°C) during the Previous week (23rd July to 29th July, 2018)



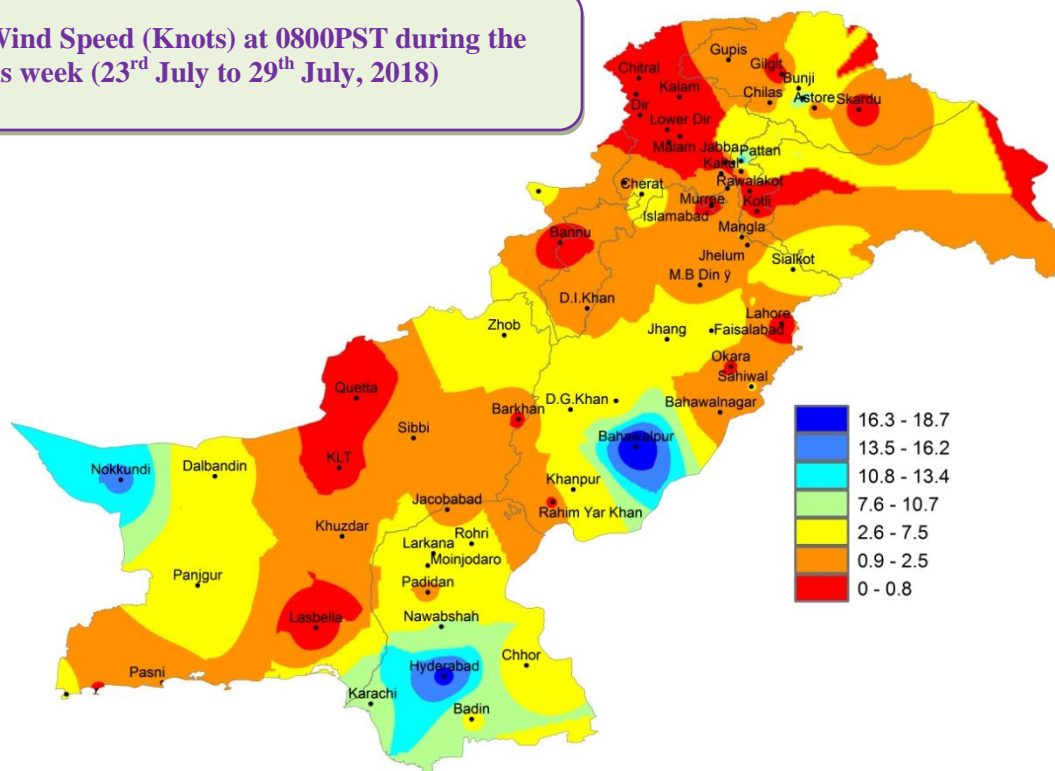
Mean Relative Humidity (%) during the
Previous week (23rd July to 29th July, 2018)



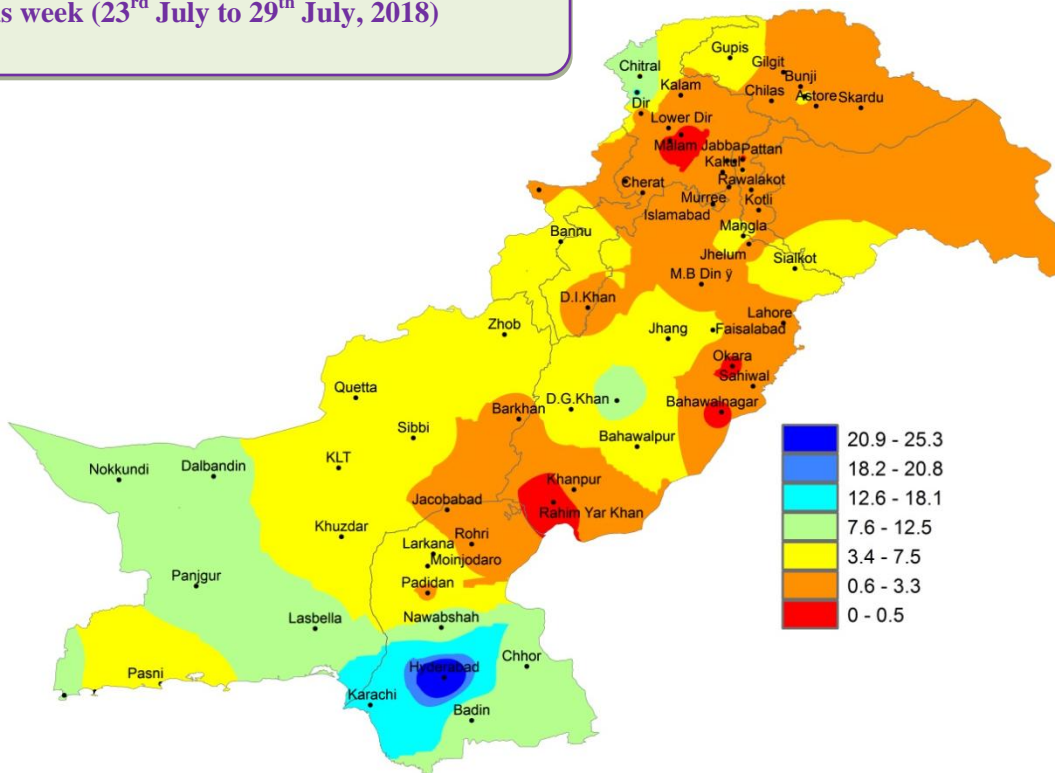
Total Growing Degree Days accumulated during the
Previous week (23rd July to 29th July, 2018)



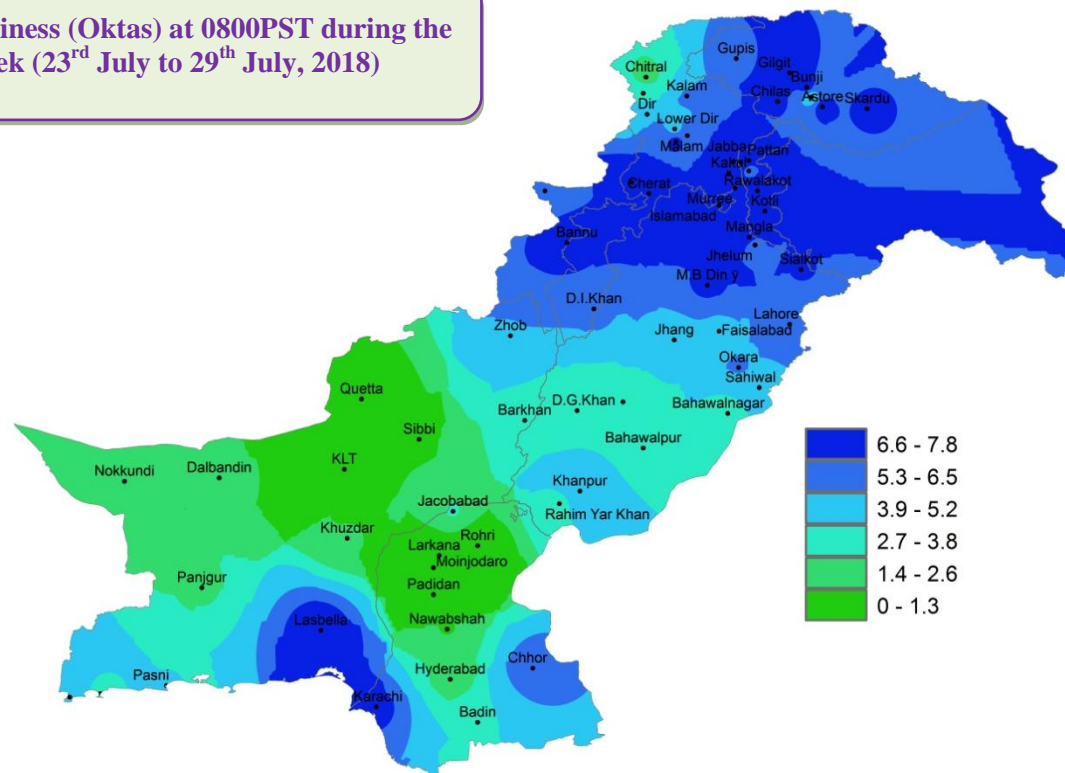
Mean Wind Speed (Knots) at 0800PST during the Previous week (23rd July to 29th July, 2018)



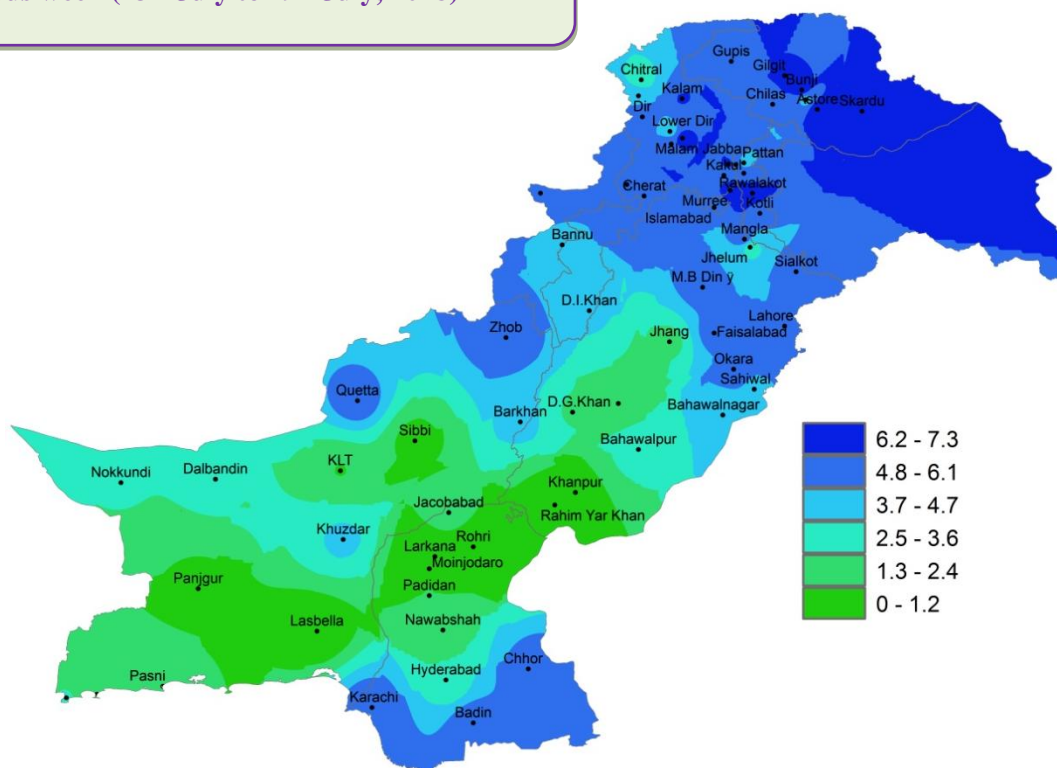
Mean Wind Speed (Knots) at 1700PST during the Previous week (23rd July to 29th July, 2018)



Mean Cloudiness (Oktas) at 0800PST during the Previous week (23rd July to 29th July, 2018)



Mean Cloudiness (Oktas) at 1700PST during the Previous week (23rd July to 29th July, 2018)



Weekly Weather Advisory for Farmers**(30th July to 5th August, 2018)**

Seasonal Low lies over Northwest Balochistan. Weak monsoon currents are penetrating upper parts of the country.

MONDAY**30-07-2018**

Mainly hot and humid weather is expected in most parts of the country. However, rain-thundershower is expected at isolated places in Kohat, Bannu divisions, Gilgit-Baltistan and Kashmir.

TUESDAY**31-07-2018**

Mainly hot and humid weather is expected in most parts of the country.

WEDNESDAY**01-08-2018**

Mainly hot and humid weather is expected in most parts of the country. However, rain-thundershower with gusty winds is expected at isolated places in Kohat, Peshawar, Rawalpindi divisions and Kashmir.

THURSDAY**02-08-2018**

Mainly hot and humid weather is expected in most parts of the country. However, rain-thundershower with gusty winds is expected at isolated places in Sargodha and Gujranwala divisions.

FRIDAY**03-08-2018.**

Mainly hot and humid weather is expected in most parts of the country. However, rain-thundershower with gusty winds is expected at isolated places in Sargodha and Gujranwala divisions.

SATURDAY**04-08-2018**

Mainly hot and humid weather is expected in most parts of the country. However, rain-thundershower with gusty winds is expected at isolated places in Hazara division and Kashmir.

SUNDAY**05-08-2018**

Mainly hot and humid weather is expected in most parts of the country. However, rain-thundershower with gusty winds is expected at isolated places in Hazara division and Kashmir.

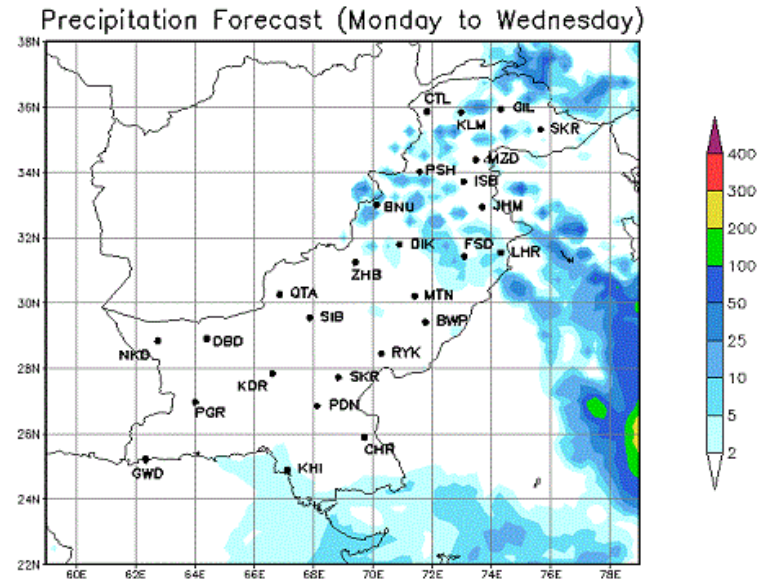
ADVISES FOR FARMERS

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.

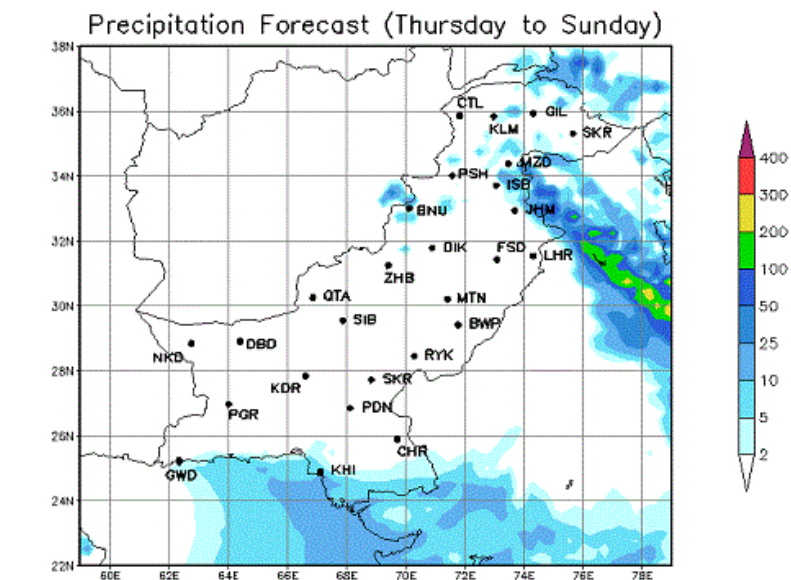
- Farmers of southern Punjab and Sindh are advised to complete the sowing of cotton and other Kharif crops to utilize the maximum soil moisture.
- Farmers of upper regions are advised to complete the cultivation of millet and sorghum in the upper regions because of the moister availability in field.
- Extra water from the fields of Cotton and vegetables should be removed.
- Use pesticides to avoid the attack from pests on the cotton crop as advised by the agriculture department.

Weather Outlook from (30th July to 5th August, 2018)

The forecast from 30th July to 1st August, 2018 shows that light to moderate rainfall is expected in scattered places of GB & Kashmir, FATA, central Punjab and KP.



The outlook from 2nd August to 5th August, 2018 shows that light to moderate rainfall is expected in scattered places of GB, Kashmir and KP. However, dry weather will prevail in rest of the country.



National Weather Data of Selected Cities (Weekly Data from 23rd July to 29th 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	22.6	28.5	96.2	74	24.32	7.3	7.3	0.3	1.3
Badin	35.0	36.0	182.0	68	0.00	3.7	5.5	7.1	8.0
Bahawalnagar	38.4	40.0	200.0	64	0.00	3.0	4.5	0.9	0.3
Bahawalpur	37.8	39.2	197.7	59	40.00	3.1	3.0	18.7	3.3
Balakot	31.4	33.5	149.1	79	92.30	7.4	6.5	0.0	0.3
Bannu	34.7	38.0	177.0	69	48.00	7.3	4.3	0.3	5.7
Barkhan	34.4	36.0	172.5	60	19.00	3.3	4.2	0.7	2.0
Bunji	30.0	36.7	146.5	66	19.61	7.4	7.3	2.0	1.0
Cherat	25.8	27.0	107.0	76	56.00	7.4	6.0	3.7	3.0
Chhor	36.3	37.2	187.1	64	0.00	6.1	5.3	5.4	9.3
Chilas	33.7	41.0	169.5	48	17.60	6.9	5.2	1.7	2.0
Chitral	34.9	38.4	161.9	56	0.01	2.0	3.0	0.3	7.3
D.I.Khan	38.8	41.0	193.7	49	9.00	3.0	2.3	5.7	5.7
Dalbandin	37.0	42.0	187.3	73	0.02	5.4	4.0	1.7	2.0
DG.Khan	45.0	47.0	229.5	21	0.00	1.6	2.8	3.1	8.3
Dir	29.9	32.5	137.5	78	27.00	5.1	5.8	0.0	2.0
Drosh	35.5	38.6	159.5	47	4.00	3.4	4.3	0.0	13.2
Faisalabad	36.0	40.0	183.7	72	28.80	4.6	3.1	1.4	1.2
Garidopatta	33.9	36.0	162.3	71	53.20	6.1	5.5	0.0	3.7
Gawader	34.1	34.5	149.5	76	0.00	3.6	1.4	0.6	6.8
Gilgit	29.4	36.5	137.8	66	8.53	7.4	6.2	0.3	3.0
Gupis	27.6	34.0	122.8	55	13.50	6.1	5.7	1.7	4.7

Hyderabad	36.3	38.3	183.0	65	0.00	2.3	2.5	16.9	25.3
Islamabad	32.8	35.0	160.9	79	98.01	7.3	4.7	0.6	1.7
Jacobabad	39.5	40.5	203.8	62	0.00	2.7	2.2	2.0	2.0
Jhang	37.5	39.0	194.1	72	29.20	4.6	1.8	3.1	5.7
Jhelum	33.8	34.8	173.3	74	104.00	6.3	2.8	2.0	2.0
Jiwani	32.6	33.0	173.5	79	0.00	4.7	2.5	3.7	9.0
Kakul	28.6	31.0	132.3	79	63.00	7.0	5.2	1.1	1.7
Kalam	25.5	28.5	106.7	78	23.50	5.3	6.2	0.0	1.3
Kalat	33.3	35.0	129.0	37	0.00	0.0	1.2	0.6	5.3
Karachi	32.6	34.0	173.8	73	0.01	7.0	5.8	10.0	13.0
Khanpur	39.4	40.5	206.4	58	0.00	5.0	1.0	5.1	0.7
Khuzdar	38.7	40.5	193.8	35	8.00	1.4	4.0	1.4	5.3
Kotli	32.1	33.6	163.3	78	24.00	7.7	5.2	0.6	1.0
Lahore	34.2	36.5	177.4	76	25.00	5.7	4.8	0.6	1.7
Larkana	40.4	41.0	206.0	56	0.00	0.3	0.0	4.0	5.0
Lasbella	37.6	38.5	191.0	69	0.00	7.7	0.0	0.0	9.0
Lower Dir	33.5	36.5	162.0	74	60.00	4.6	3.5	0.6	2.3
M.B Din	21.4	24.0	92.0	87	78.00	6.9	5.3	1.1	1.7
Malam Jabba	34.1	35.0	170.9	85	34.00	5.7	6.8	0.3	0.0
Mangla	33.0	34.5	166.9	82	70.20	6.7	5.7	2.6	5.3
Mir Khani	35.8	38.5	175.9	49	10.00	3.7	3.7	12.9	4.7
Moinjodaro	40.4	41.0	201.3	62	0.00	0.0	0.0	4.0	5.0
Multan	37.9	39.5	203.3	60	0.01	3.3	1.8	5.4	9.3
Murree	22.1	23.0	96.4	84	113.00	7.3	7.0	1.7	0.7
Muzaffarabad	33.1	34.5	157.8	80	69.00	7.9	5.5	0.3	2.0
Nawabshah	41.4	42.5	205.8	55	0.00	1.3	2.3	7.7	11.0

Nokkundi	44.1	47.0	229.8	14	0.00	1.4	2.5	13.7	12.0
Okara	35.9	39.5	185.0	71	65.00	5.3	4.8	0.6	0.0
Padidan	40.1	41.0	201.0	60	0.00	1.1	1.3	1.7	2.7
Panjgur	40.1	40.5	194.8	38	0.00	2.4	0.8	4.6	8.7
Parachinar	30.1	31.0	136.8	64	14.00	5.6	5.7	3.0	3.0
Pasni	33.3	34.0	172.3	78	0.00	3.9	1.8	2.0	5.8
Pattan	33.4	37.0	152.0	62	22.00	6.6	4.0	13.9	0.0
Peshawar	32.6	35.5	162.6	77	20.03	6.7	5.0	0.9	1.7
Quetta	35.5	37.5	163.5	29	0.00	1.4	2.7	2.6	3.8
R.Y.Khan	41.6	43.5	211.0	58	0.00	3.4	0.0	0.6	0.0
Rawalakot	25.0	26.5	115.9	78	117.41	7.7	7.0	0.6	1.0
Rawalpindi	33.4	35.9	161.5	79	98.50	7.3	6.0	1.4	1.7
Rohri	41.4	42.5	204.8	55	0.00	0.0	0.0	2.6	2.0
Sahiwal	36.8	39.5	192.2	68	45.00	4.9	4.7	2.6	2.7
Saidu Sharif	31.1	34.0	145.4	79	47.00	7.1	6.0	0.0	0.0
Sialkot	33.2	34.9	168.3	79	115.00	6.6	5.5	3.9	5.7
Sibbi	40.7	43.0	190.6	56	28.00	1.1	0.7	2.3	4.3
Skardu	26.0	30.5	111.2	63	3.92	6.7	7.0	0.0	1.7
Tandojam	36.4	38.0	179.0	69	0.00	2.1	2.0	5.2	9.6
Zhob	41.1	42.5	211.9	63	0.00	0.6	1.1	0.0	3.7
Usta.M	34.9	36.0	166.8	38	10.00	5.1	5.7	5.0	7.5

*** 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)