

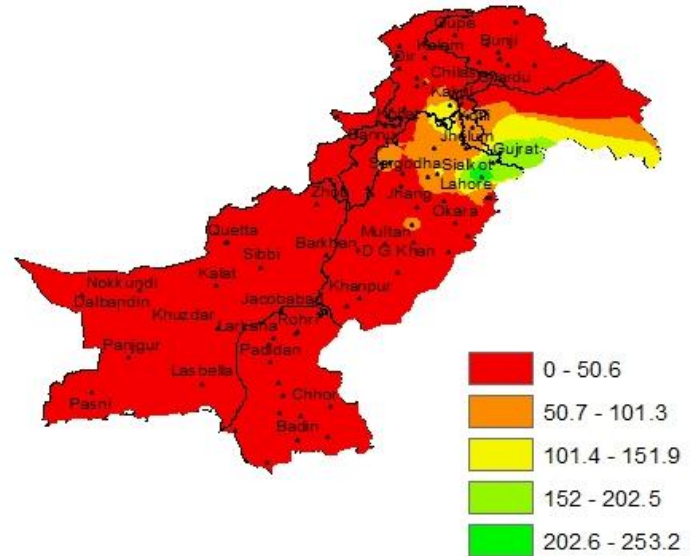
Weekly Weather and Crop Bulletin for Pakistan

**NATIONAL AGROMET CENTRE
PAKISTAN METEOROLOGICAL
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**Rainfall Distribution (mm) during the
Previous Week (from 25th to 31st July, 2016)**



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Highlights of Past Weather (from 25th to 31st July, 2016)

Slightly above normal day time temperature was reported in different parts of the country during the week.

Province wise distribution of rainfall reported as follows:

- Light to moderate rainfall with isolated heavy spells reported in Khyber Pakhtunkhwa, Punjab, Gilgit-Baltistan & Kashmir regions.
- Light to moderate rainfall was reported in Balochistan.
- Light rainfall was reported in Sindh.

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 25th to 31st July, 2016)**Punjab**

Light to moderate rainfall with isolated heavy spells reported in Punjab during the week. Weekly maximum and minimum temperatures recorded 35.8°C & 26.0°C respectively. For the present season average 181.3 growing degree days accumulated by the end of last week. Average relative humidity recorded 71% and wind speed in the morning/evening recorded 3.3/2.4 Knots. During the previous week the highest amount of rainfall was recorded 253.9 mm at Gujranwala & highest maximum temperature recorded 44.2°C at R.Y.Khan.

Sindh

Light rainfall reported at many places in Sindh during the week. Weekly maximum and minimum temperatures recorded 37.5°C & 24.7°C respectively. For the present season average 182.7 growing degree days accumulated by the end of last week. Average relative humidity recorded 64% and wind speed in the morning/evening recorded 4.8/6.9 Knots. During the previous week the highest amount of rainfall was recorded 4.4 mm at Mithi & highest maximum temperature recorded 46.5°C at Dalbandin.

Khyber Pakhtunkhwa

Light to moderate rainfall with isolated heavy spells reported at in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded 33.2°C & 22.2°C respectively. For the present season average 159.0 growing degree days accumulated by the end of last week. Average relative humidity recorded 67% and wind speed in the morning/evening recorded 1.1/3.6 Knots. During the previous week the highest amount of rainfall was recorded 138.5 mm at Kakul & the highest maximum temperature recorded 42.8°C at Bannu.

Balochistan

Light to moderate rainfall reported at many places in Balochistan during the week. Weekly maximum and minimum temperatures recorded 38.9°C & 26.8°C respectively. For the present season average 194.5 growing degree days accumulated by the end of last week. Average relative humidity recorded 53% and wind speed in the morning/evening recorded 1.7/5.4Knots. During the previous week the highest amount of rainfall was recorded 31.0mm at Khuzdar & highest maximum temperature was recorded 44.1°C at Dadu.

Gilgit-Baltistan and Azad Jammu & Kashmir

Light to moderate rainfall with isolated heavy spells reported at many places in Gilgit-Baltistan & Kashmir regions during the week. Weekly maximum and minimum temperatures recorded 32.1°C & 19.7°C respectively. For the present season average 148.0 growing degree days accumulated by the end of last week. Average relative humidity recorded 61% and wind speed in the morning/evening recorded 0.4/2.0 Knots. During the previous week the highest amount of rainfall was recorded 98.1mm at Kotli & highest maximum temperature recorded 43.2°C at Chilas.

**Past Weather for Major Agricultural Plains
(from 25th to 31st July, 2016)****Rawalpindi (Potohar region)**

Rainfall reported as 92.4mm during the week; however cloudiness in the morning/evening recorded 5.9/4.9 Oktas while, average relative humidity observed as 78%. Mean day time temperature recorded 34.8°C & for the present season 169.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.9/1.4 Knots.

Faisalabad (Central Punjab)

Rainfall reported as 72.0mm during the week; however cloudiness in the morning/evening recorded 3.9/2.9 Oktas while, average relative humidity observed as 74%. Mean day time temperature recorded 35.7°C & for the present season 180.7 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.5/1.1 Knots.

Tandojam (Lower Sindh)

Dry weather was reported during the week; however cloudiness in the morning/evening recorded 1.3/1.6 Oktas while, average relative humidity observed as 64%. Mean day time temperature recorded 38.5°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 3.1/5.2 Knots.

Quetta (Northern Baluchistan)

Rainfall reported as "Trace" (not measureable) during the week; however cloudiness in the morning/evening recorded 2.4/4.3 Oktas while, average relative humidity observed as 38%. Mean day time temperature recorded 35.7°C & for the present season 164.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.5/3.3 Knots.

Usta Muhammad (Eastern Balochistan)

Rainfall reported as 12.0mm during the week; however cloudiness in the morning/evening recorded 2.6/1.1 Oktas while, average relative humidity observed as 72%. Mean day time temperature recorded 39.6°C & for the present season 198.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 3.0/3.0 Knots.

**Past Weather for Sub-Regional Agricultural
Plains (from 25th to 31st July, 2016)****Multan**

Rainfall reported as 14.4mm during the week; however cloudiness in the morning/evening recorded 3.0/2.0 Oktas while, average relative humidity observed as 58%. Mean day time temperature recorded 39.3°C & for the present season 204.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 5.4/6.6 Knots.

Lahore

Rainfall reported as 26.2mm during the week; however cloudiness in the morning/evening recorded 3.7/5.3 Oktas while, average relative humidity observed as 68%. Mean day time temperature recorded 34.3°C & for the present season 175.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.4/1.6 Knots.

Zhob

Rainfall reported as 8.0mm during the week; however cloudiness in the morning/evening recorded 0.0/6.0 Oktas while, average relative humidity observed as 55%. Mean day time temperature recorded 36.1°C & for the present season 166.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 5.0/5.7 Knots.

D.I. Khan

Rainfall reported as 7.0mm during the week; however cloudiness in the morning/evening recorded 2.9/2.0 Oktas while, average relative humidity observed as 71%. Mean day time temperature recorded 36.5°C & for the present season 184.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.9/0.9 Knots.

Peshawar

Rainfall reported as 28.1mm during the week; however cloudiness in the morning/evening recorded 4.9/4.3 Oktas while, average relative humidity observed as 70%. Mean day time temperature recorded 35.2°C & for the present season 179.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.0/2.3 Knots.

Murree

Rainfall reported as 106.6mm during the week; however cloudiness in the morning/evening recorded 5.7/6.7 Oktas while, average relative humidity observed as 87%. Mean day time temperature recorded 22.0°C & for the present season 94.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/0.9 Knots.

Kalam

Rainfall reported as 3.0mm during the week; however cloudiness in the morning/evening recorded 4.1/5.0 Oktas while, average relative humidity observed as 69%. Mean day time temperature recorded 26.4°C & for the present season 112.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/3.3 Knots.

Gilgit

Rainfall reported as 3.3mm during the week; however cloudiness in the morning/evening recorded 3.4/6.4 Oktas while, average relative humidity observed as 60%. Mean day time temperature recorded 35.8°C & for the present season 157.4 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/2.9 Knots.

Skardu

Rainfall reported as 3.5mm during the week; however cloudiness in the morning/evening recorded 4.6/7.0 Oktas while, average relative humidity observed as 50%. Mean day time temperature recorded 30.6°C & for the present season 127.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/2.0 Knots.

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 at *Flowering* stage completed.

Lower Sindh (Tandojam)

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

Cotton: Good condition at *Flowering* stage.

Northern Balochistan (Quetta)

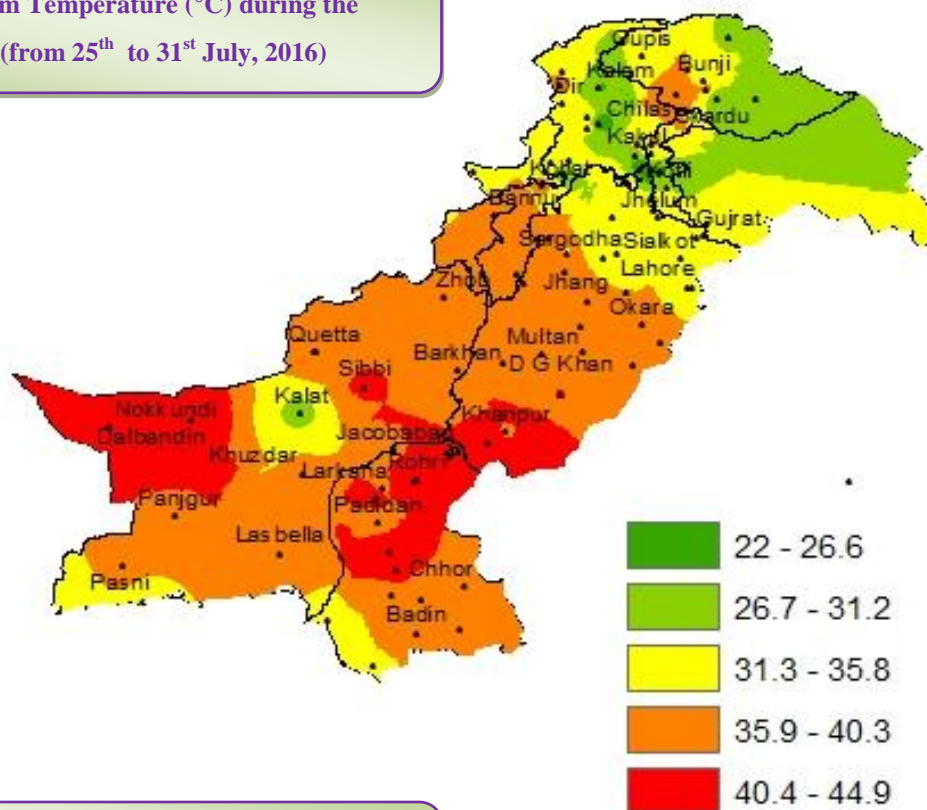
There is presently no crop grown in the fields of RAMC Quetta.

Eastern Balochistan (Usta Muhammad)

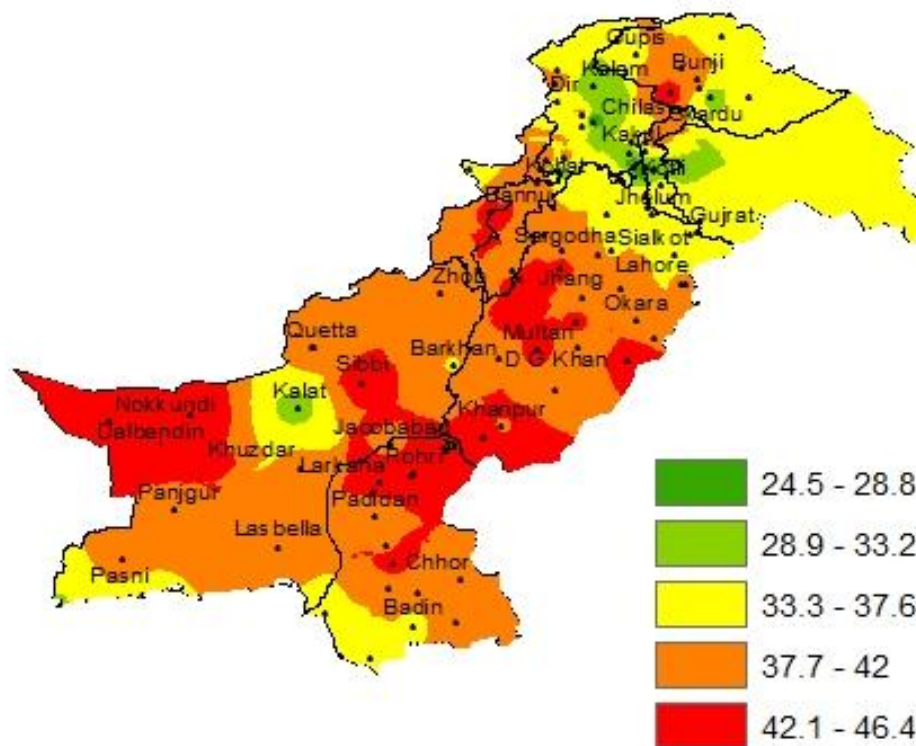
There is presently one crop (irrigated condition) grown in the fields of RAMC Usta Muhammad.

Rice: Plant transferring in field.

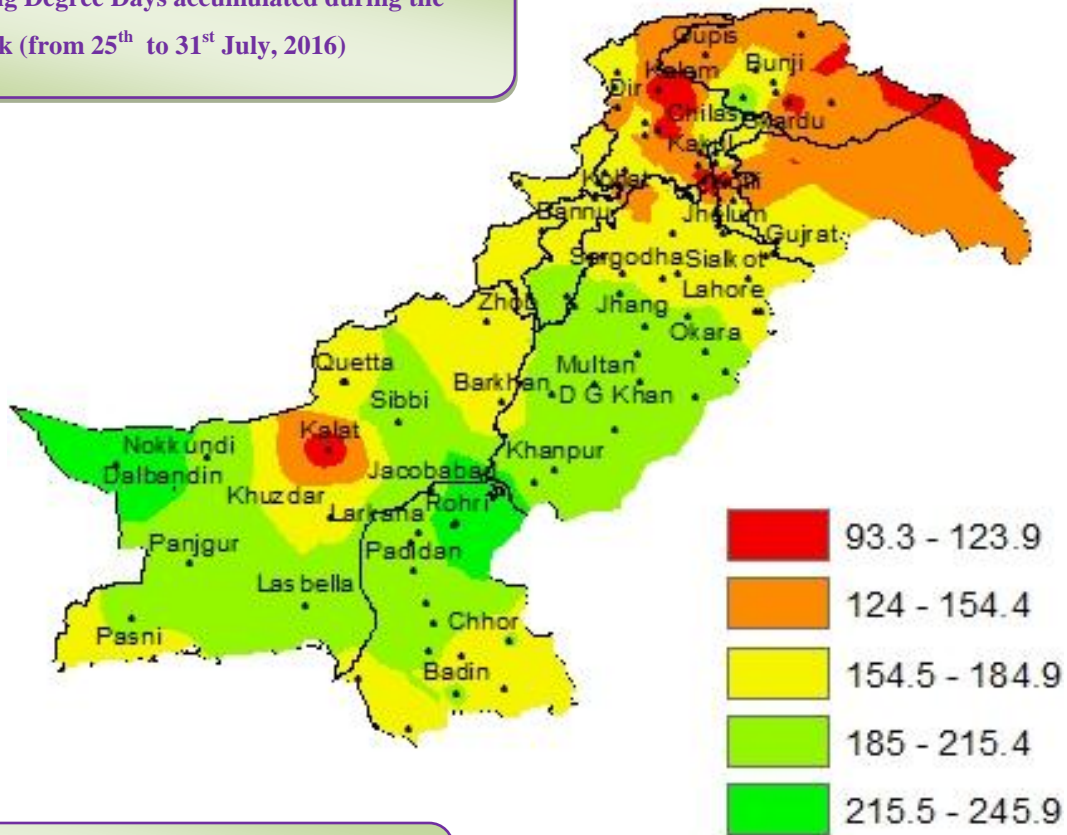
Mean Maximum Temperature (°C) during the Previous week (from 25th to 31st July, 2016)



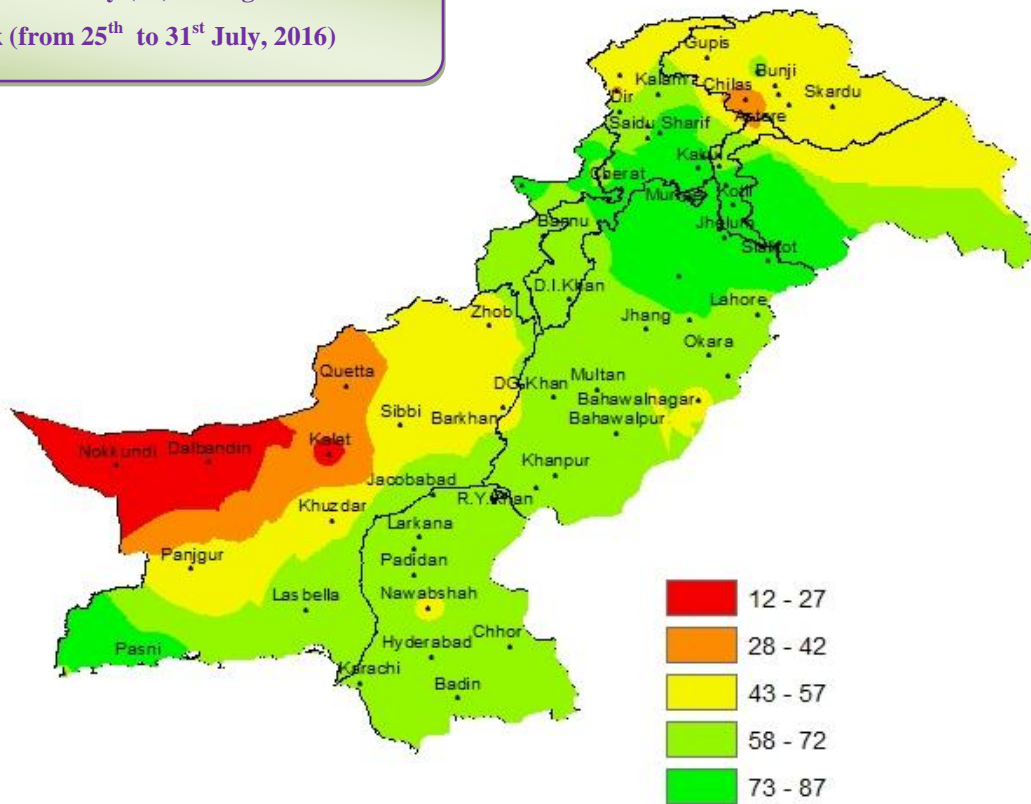
Highest Maximum Temperature (°C) during the Previous week (from 25th to 31st July, 2016)



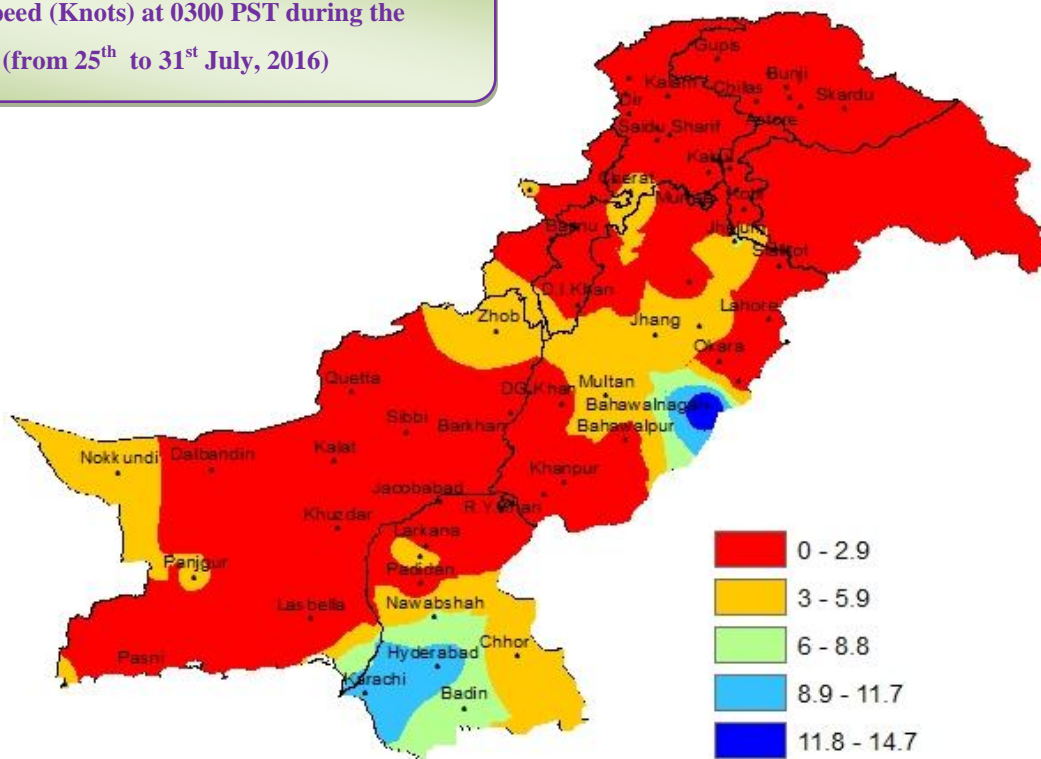
Total Growing Degree Days accumulated during the Previous week (from 25th to 31st July, 2016)



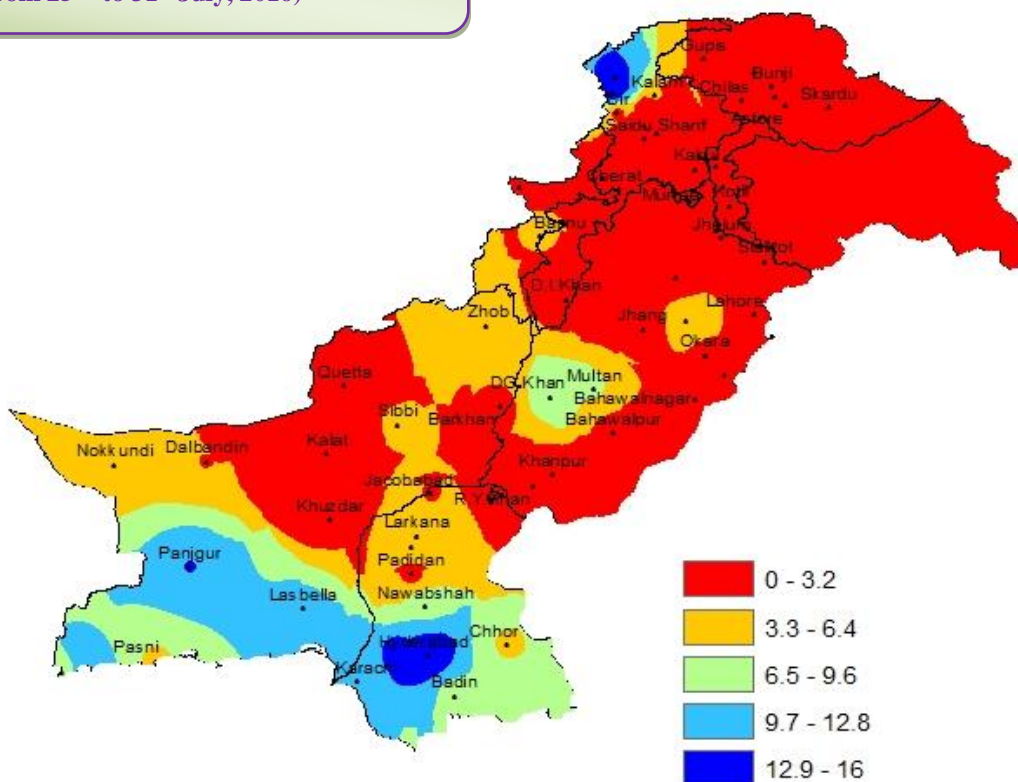
Mean Relative Humidity (%) during the Previous week (from 25th to 31st July, 2016)



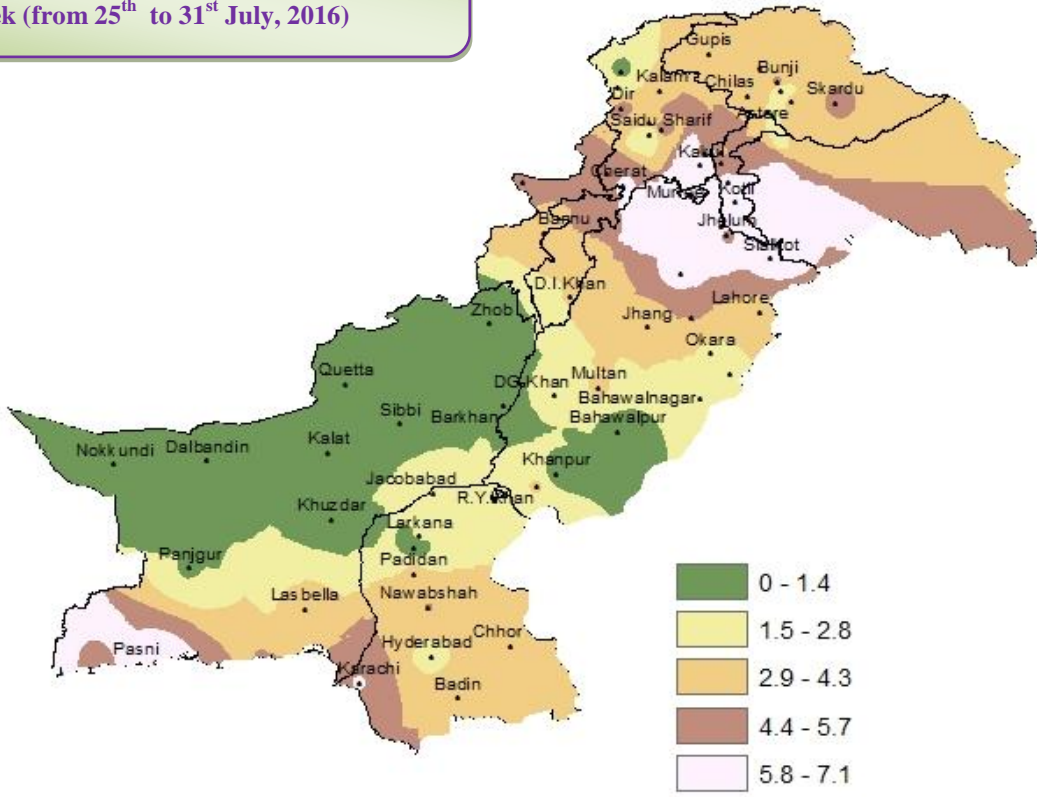
Mean Wind Speed (Knots) at 0300 PST during the Previous week (from 25th to 31st July, 2016)



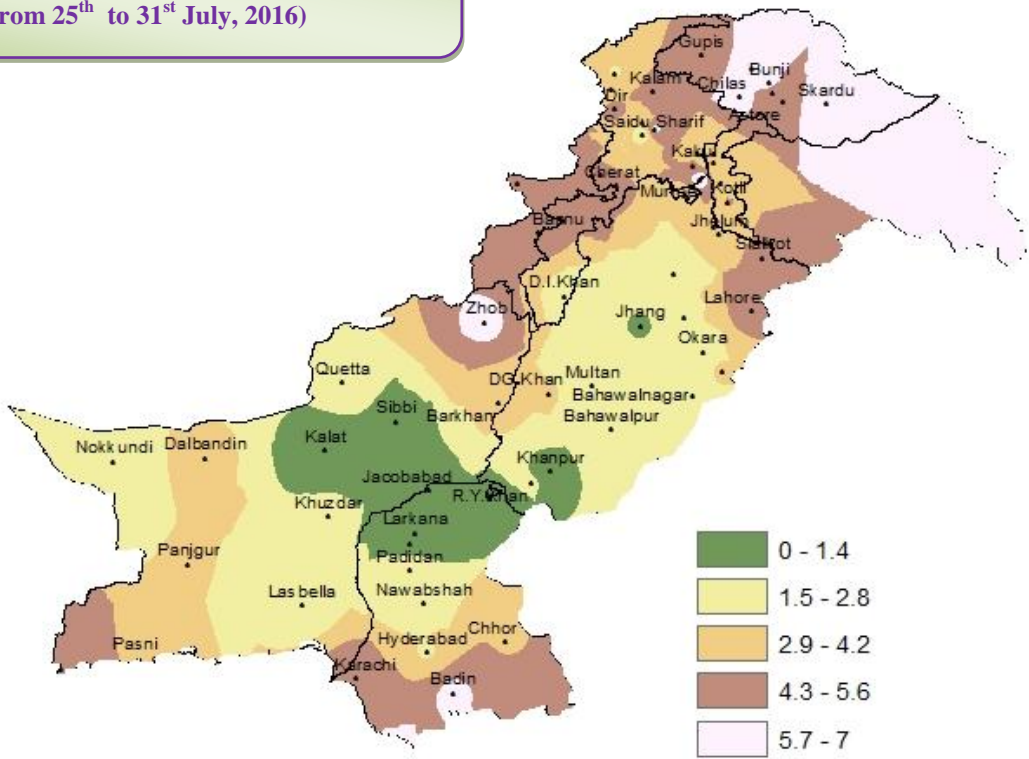
Mean Wind Speed (Knots) at 1200 PST during the Previous week (from 25th to 31st July, 2016)



Mean Cloudiness (Oktas) at 0800PST during the Previous week (from 25th to 31st July, 2016)



Mean Cloudiness (Oktas) at 1200 PST during the Previous week (from 25th to 31st July, 2016)



Weekly Weather Advisory for Farmers**(From 1st to 7th August, 2016)****MONDAY****01-08-2016**

Mainly hot and humid weather is expected in most parts of the country. However, rain-thundershower is expected at isolated places in Rawalpindi, Gujranwala, Lahore, Sargodha, Sahiwal, Bahawalpur, Hazara divisions, Islamabad, FATA and Kashmir. Light rain/drizzle also expected along Sindh-Makran coast.

TUESDAY**02-08-2016**

Rain-thundershower with isolated heavy falls is expected at scattered places in Khyber-Pakhtunkhwa, upper Punjab (Rawalpindi, Gujranwala, Lahore, Sargodha, Faisalabad divisions), Islamabad, FATA and Kashmir, while at isolated places in Zhob, Bahawalpur and Mirpurkhas divisions. Light rain is also expected along Sindh-Makran coast. Hot and humid weather is expected in other parts of the country.

WEDNESDAY**03-08-2016**

Rain-thundershower is expected at scattered places in Khyber-Pakhtunkhwa, FATA, eastern Balochistan (Kalat, Zhob divisions), south Punjab (Bahawalpur, Multan, D.G Khan divisions), Sindh (Mirpurkhas, Hyderabad, Sukkur divisions), while at isolated places in upper Punjab (Rawalpindi, Gujranwala, Lahore, Sargodha divisions) and Kashmir.

THURSDAY**04-08-2016**

Rain-thundershower is expected at scattered places in eastern Balochistan (Kalat, Zhob, Sibbi, Naseerabad divisions), south Punjab, Sindh, lower KP, while at isolated places in upper Punjab (Rawalpindi, Gujranwala, Lahore, Sargodha divisions), upper KP and Kashmir.

FRIDAY**05-08-2016**

Rain-thundershower is expected at scattered places in Hyderabad, Karachi, Kalat, Zhob, Sibbi, Naseerabad, Bahawalpur, D.G. Khan, and while at isolated places in upper Punjab (Rawalpindi, Gujranwala, Lahore divisions), upper KP and Kashmir.

SATURDAY**06-08-2016**

Rain-thundershower with isolated heavy falls is expected at scattered places in Hyderabad, Kalat, Zhob, Sibbi, Naseerabad, Bahawalpur, D.G. Khan, while at isolated places in upper Punjab, upper KP and Kashmir.

SUNDAY**07-08-2016**

Rain-thundershower with isolated heavy falls is expected at scattered places in upper Punjab, upper KP, FATA, Gilgit-Baltistan and Kashmir.

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 over the crops. Weeds removing practices should be started soon after expected rains in the mentioned.
- ❖ 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 should take suitable measures to resolve the issue.

National Weather Data of Selected Cities
(Weekly Data from 25th to 31st July, 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	26.4	30.5	109.0	55	5.6	3.1	5.4	0.0	2.6
Badin	36.2	37.0	186.8	67	0.0	4.0	6.0	6.0	8.3
Bahawalnagar	40.2	42.5	210.1	55	0.0	1.7	2.3	14.7	0.6
Bahawalpur	40.4	41.5	207.0	59	0.1	0.7	2.3	2.3	1.1
Balakot	32.1	34.0	154.1	76	33.5	5.0	4.3	0.0	1.4
Bannu	37.3	42.8	175.7	60	0.0	3.9	5.1	1.4	3.4
Barkhan	36.4	37.5	171.0	55	0.1	0.6	3.3	0.0	2.0
Bunji	34.4	39.4	164.1	52	5.1	4.7	6.7	0.9	2.9
Cherat	27.2	30.5	124.1	83	48.0	6.0	4.4	4.3	2.6
Chhor	37.6	39.7	185.5	68	0.0	4.0	4.2	3.1	6.0
Chilas	39.0	43.2	195.2	35	0.6	3.9	5.9	1.7	3.1
Chitral	35.5	37.4	163.0	49	1.5	1.0	2.7	0.0	13.4
D.I.Khan	36.5	40.5	184.3	71	7.0	2.9	2.0	2.9	0.9
Dalbandin	44.9	46.5	214.2	18	0.0	0.3	3.3	1.3	3.1
DG.Khan	39.3	41.5	200.4	63	3.1	2.0	2.9	2.6	8.9
Dir	31.5	35.0	139.8	71	31.0	4.7	4.7	0.3	2.3
Drosh	36.9	38.8	172.5	40	0.0	2.3	3.1	0.6	15.7
Faisalabad	35.7	40.0	180.7	74	72.0	3.9	2.9	1.5	1.1
Garidopatta	33.9	36.5	161.2	71	27.0	4.7	2.7	0.0	0.0
Gawader	33.7	34.0	176.8	74	0.0	5.1	4.6	0.0	11.1
Gilgit	35.8	38.5	157.4	60	3.3	3.4	6.4	0.0	2.9
Gupis	31.7	37.0	130.1	48	17.0	3.4	4.4	0.9	3.1

Hyderabad	37.9	38.8	190.3	62	0.0	2.4	2.7	11.1	16.0
Islamabad	32.9	35.0	161.5	77	98.1	6.1	2.9	0.3	2.6
Jacobabad	39.9	41.5	208.0	60	4.0	2.7	0.9	2.0	3.1
Jhang	37.9	40.6	191.5	66	1.7	3.3	1.3	3.1	0.9
Jhelum	33.7	37.2	162.6	80	46.6	5.6	3.1	6.6	0.9
Jiwani	32.1	33.0	169.3	72	0.0	6.4	5.0	4.3	9.1
Kakul	28.6	31.0	133.0	73	138.5	7.1	4.3	0.3	0.9
Kalam	26.4	29.0	112.0	69	3.0	4.1	5.0	0.0	3.3
Kalat	30.2	32.0	112.1	25	0.0	0.0	0.0	0.0	0.0
Karachi	34.0	35.6	180.1	71	0.4	5.7	5.6	9.4	12.0
Khanpur	40.2	41.8	203.5	61	1.1	0.7	1.1	2.0	1.7
Khuzdar	36.7	38.5	178.8	57	31.0	1.0	1.9	0.3	1.1
Kotli	31.4	34.7	158.5	80	98.1	7.0	4.3	1.0	1.6
Lahore	34.3	37.7	175.6	68	26.2	3.7	5.3	1.4	1.6
Larkana	40.1	43.5	199.9	60	0.0	1.6	0.6	2.3	3.1
Lasbella	39.5	41.0	202.3	61	0.0	3.1	1.7	0.0	10.9
Lower Dir	35.3	39.0	174.6	65	32.0	3.6	2.7	1.4	1.7
M.B Din	22.2	25.0	91.8	83	57.0	6.3	2.0	2.0	0.9
Malam Jabba	32.8	37.3	166.4	84	109.0	5.3	6.3	0.0	0.0
Mangla	32.8	35.5	159.5	78	112.4	5.9	3.1	1.7	0.9
Mir Khani	37.6	38.4	168.1	41	0.0	1.3	4.0	0.0	3.0
Moinjodaro	40.7	42.0	205.6	59	1.0	0.7	1.0	4.0	5.4
Multan	39.3	42.3	204.8	58	14.4	3.0	2.0	5.4	6.6
Murree	22.0	24.4	94.2	87	106.6	5.7	6.7	1.1	0.9
Muzaffarabad	33.6	35.7	159.4	74	17.0	6.3	3.1	0.3	1.4
Nawabshah	40.6	41.5	202.9	56	0.0	4.3	2.4	6.0	9.1

Nokkundi	44.7	46.0	234.1	12	2.0	0.7	1.9	4.0	4.9
Okara	37.4	41.5	194.1	68	0.1	2.6	2.0	1.4	2.3
Padidan	40.1	40.5	203.8	61	0.1	3.4	2.3	1.7	2.3
Panjgur	39.7	41.0	199.6	46	12.0	1.3	2.9	3.0	12.9
Parachinar	33.0	33.5	164.0	76	26.0	4.6	4.9	3.0	3.0
Pasni	33.3	34.5	178.1	76	0.0	6.7	3.3	2.0	6.0
Pattan	36.8	40.0	182.6	61	26.0	3.7	4.0	0.0	1.4
Peshawar	35.2	39.5	179.3	70	28.1	4.9	4.3	2.0	2.3
Quetta	35.7	36.6	164.1	38	0.1	2.4	4.3	2.5	3.3
R.Y.Khan	42.1	44.2	214.5	63	0.1	3.0	1.4	1.7	1.4
Rawalpindi	34.8	44.0	169.3	78	92.4	5.9	4.9	0.9	1.4
Rawalakot	25.9	28.6	117.2	86	65.3	6.1	2.9	0.0	0.6
Sahiwal	38.1	42.0	191.2	64	1.0	2.7	3.0	2.0	2.0
Saidu Sharif	32.4	35.5	159.5	72	22.0	1.1	2.0	0.0	0.0
Sialkot	32.5	37.0	166.5	77	146.8	6.4	5.0	0.9	1.1
Sibbi	40.8	44.0	202.7	54	13.0	0.3	0.9	1.1	3.7
Skardu	30.6	35.6	127.9	50	3.5	4.6	7.0	0.0	2.0
Tandojam	38.5	39.6	190.0	64	0.0	1.3	1.6	3.1	5.2
U.Muhammad	39.6	41.5	198.3	72	12.0	2.6	1.1	3.0	3.0
Zhob	36.1	38.5	166.8	55	8.0	0.0	6.0	5.0	5.7

*** 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 سبب باب (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)