

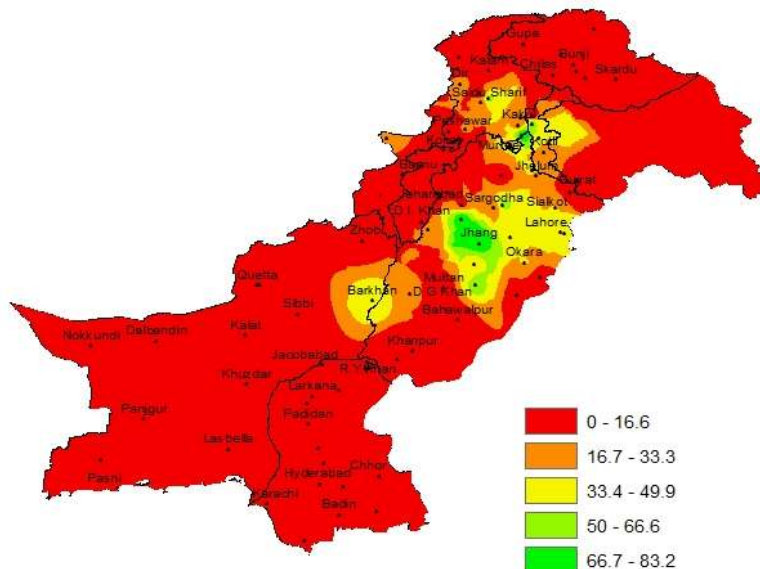
Weekly Weather and Crop Bulletin for Pakistan

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**Rainfall Distribution (mm) during the
Previous Week (from 4th to 10th July, 2016)**



Contents

Highlights of past weather (General)	1-2
Past weather for Agri Plains	3-4
Crop progress	4
Min Temperature maps	5
R.H and GDD	6
Wind speed maps	7
Cloudiness maps	8
Farmers advisory	9
National data for selected stations	10-12
AgMIP findings	13

Highlights of Past Weather (from 4th to 10th 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 was reported at many places in Khyber Pakhtunkhwa, Punjab, and Gilgit-Baltistan & Kashmir regions.
- Moderate rainfall was reported only at single station (Barkhan=47.0mm) in Balochistan.
- Light rainfall was reported at many places in Sindh.

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

Chief Editor: (Director)

Editor: Asma Jawad Hashmi (Deputy Director)

Past Weather of Provinces (from 4th to 10th July, 2016)**Punjab**

Light to moderate rainfall reported at many places in Punjab during the week. Weekly maximum and minimum temperatures recorded 37.2°C & 26.2°C respectively. For the present season average 187.1 growing degree days accumulated by the end of last week. Average relative humidity recorded 65% and wind speed in the morning/evening recorded 3.0/2.4 Knots. During the previous week the highest amount of rainfall was recorded 83.8mm at Murree & highest maximum temperature recorded 44.2°C at R.Y.Khan.

Sindh

Light rainfall was reported at many places in Sindh during the week. Weekly maximum and minimum temperatures recorded 39.0°C & 27.7°C respectively. For the present season average 197.5 growing degree days accumulated by the end of last week. Average relative humidity recorded 67% and wind speed in the morning/evening recorded 7.0/10.0 Knots. During the previous week the highest amount of rainfall was recorded 4.0mm at Shaheed Benazirabad & highest maximum temperature recorded 45.1°C at Dadu.

Khyber Pakhtunkhwa

Light to moderate rainfall reported at many places in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded 35.0°C & 22.0°C respectively. For the present season average 164.3 growing degree days accumulated by the end of last week. Average relative humidity recorded 60% and wind speed in the morning/evening recorded 0.7/3.5 Knots. During the previous week the highest amount of rainfall was recorded 59.0mm at Malam Jabba & the highest maximum temperature recorded 41.2°C at Peshawar.

Balochistan

Moderate rainfall was reported only at single station (Barkhan=47.0mm) in Balochistan during the week. Weekly maximum and minimum temperatures recorded 39.0°C & 26.2°C respectively. For the present season average 193.2 growing degree days accumulated by the end of last week. Average relative humidity recorded 48% and wind speed in the morning/evening recorded 1.6/6.0 Knots. During the previous week the highest amount of rainfall was recorded 47.0mm at Barkhan & highest maximum temperature was recorded 49.0°C at Dalbandin.

Gilgit-Baltistan and Azad Jammu & Kashmir

Light to moderate rainfall reported at many places in Gilgit-Baltistan & Kashmir regions during the week. Weekly maximum and minimum temperatures recorded 31.8°C & 18.2°C respectively. For the present season average 139.9 growing degree days accumulated by the end of last week. Average relative humidity recorded 51% and wind speed in the morning/evening recorded 0.8/2.9 Knots. During the previous week the highest amount of rainfall was recorded 66.0mm at Garhi Dopatta & highest maximum temperature recorded 42.0°C at Garhi Dopatta.

Past Weather for Major Agricultural Plains (from 4th to 10th July, 2016)

Rawalpindi (Potohar region)

Rainfall reported as 18.4mm during the week; however cloudiness in the morning/evening recorded 1.4/2.0 Oktas while, average relative humidity observed as 61%. Mean day time temperature recorded 37.1°C & for the present season 185.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.9/1.1 Knots.

Faisalabad (Central Punjab)

Rainfall reported as 42.3mm during the week; however cloudiness in the morning/evening recorded 5.0/2.4 Oktas while, average relative humidity observed as 71%. Mean day time temperature recorded 37.4°C & for the present season 184.7 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.3/1.0 Knots.

Tandojam (Lower Sindh)

Dry weather was reported during the week; however cloudiness in the morning/evening recorded 3.7/2.4 Oktas while, average relative humidity observed as 70%. Mean day time temperature recorded 26.8°C & for the present season 188.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 4.5/6.6 Knots.

Quetta (Northern Baluchistan)

Dry weather was reported during the week however cloudiness in the morning/evening recorded 2.0/2.0 Oktas while, average relative humidity observed as 25%. Mean day time temperature recorded 35.9°C & for the present season 173.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.2/3.9 Knots.

Usta Muhammad (Eastern Balochistan)

Dry weather was reported during the week; however cloudiness in the morning/evening recorded 0.5/0.3 Oktas while, average relative humidity observed as 59%. Mean day time temperature recorded 40.9°C & for the present season 209.6 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.5/2.0 Knots.

Past Weather for Sub-Regional Agricultural Plains (from 4th to 10th July, 2016)

Multan

Rainfall reported as 0.1mm during the week; however cloudiness in the morning/evening recorded 4.9/2.9 Oktas while, average relative humidity observed as 62%. Mean day time temperature recorded 38.5°C & for the present season 202.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 7.4/5.4 Knots.

Lahore

Rainfall reported as 35.5mm during the week; however cloudiness in the morning/evening recorded 4.0/4.5 Oktas while, average relative humidity observed as 67%. Mean day time temperature recorded 36.1°C & for the present season 177.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.0/2.7 Knots.

Zhob

Dry weather was reported during the week; however cloudiness in the morning/evening recorded 1.0/3.1 Oktas while, average relative humidity observed as 51%. Mean day time temperature recorded 37.2°C & for the present season 178.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 5.0/9.6 Knots.

D.I. Khan

Rainfall reported as 12.2mm during the week; however cloudiness in the morning/evening recorded 4.6/3.4 Oktas while, average relative humidity observed as 72%. Mean day time temperature recorded 36.8°C & for the present season 180.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/0.9 Knots.

Peshawar

Rainfall reported as 7.0mm during the week; however cloudiness in the morning/evening recorded 2.1/2.7 Oktas while, average relative humidity observed as 64%. Mean day time temperature recorded 38.0°C & for the present season 193.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/3.1 Knots.

Murree

Rainfall reported as 83.8mm during the week; however cloudiness in the morning/evening recorded 3.6/4.7 Oktas while, average relative humidity observed as 80%. Mean day time temperature recorded 24.7°C & for the present season 107.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/1.1 Knots.

Kalam

Rainfall reported as 5.0mm during the week; however cloudiness in the morning/evening recorded 0.9/4.6 Oktas while, average relative humidity observed as 56%. Mean day time temperature recorded 27.6°C & for the present season 106.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/3.4 Knots.

Gilgit

Rainfall reported as 1.4mm during the week; however cloudiness in the morning/evening recorded 3.4/5.6 Oktas while, average relative humidity observed as 47%. Mean day time temperature recorded 34.1°C & for the present season 148.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/4.0 Knots.

Skardu

Rainfall reported as 0.2mm during the week; however cloudiness in the morning/evening recorded 4.3/6.1 Oktas while, average relative humidity observed as 36%. Mean day time temperature recorded 29.5°C & for the present season 121.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/4.9 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 *Budding* stage.

Northern Balochistan (Quetta)

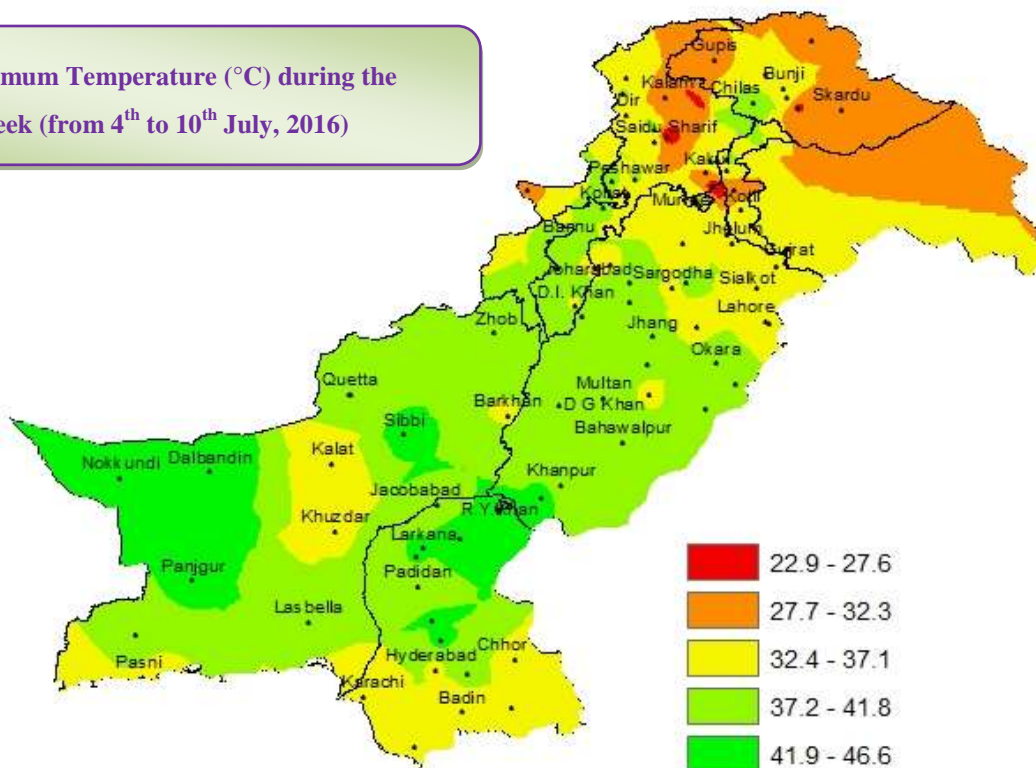
There is presently no crop grown in the fields of RAMC Quetta.

Eastern Balochistan (Usta Muhammad)

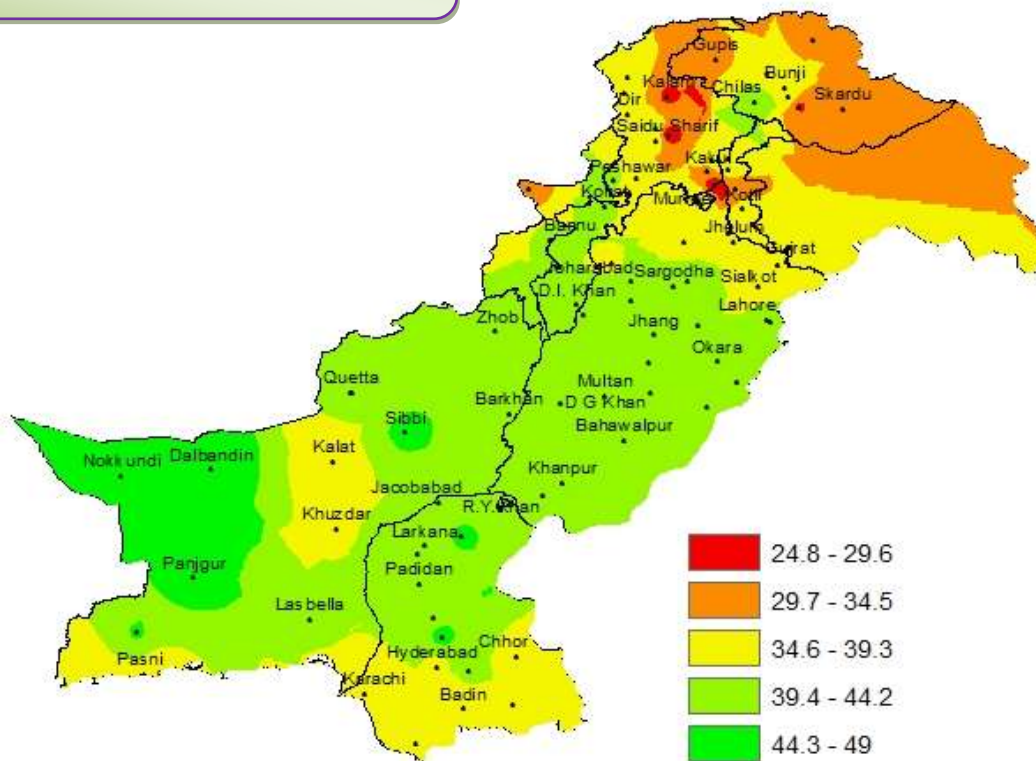
There is presently one crop (irrigated condition) grown in the fields of RAMC Usta Muhammad.

Rice: Good condition at *Paniri* stage.

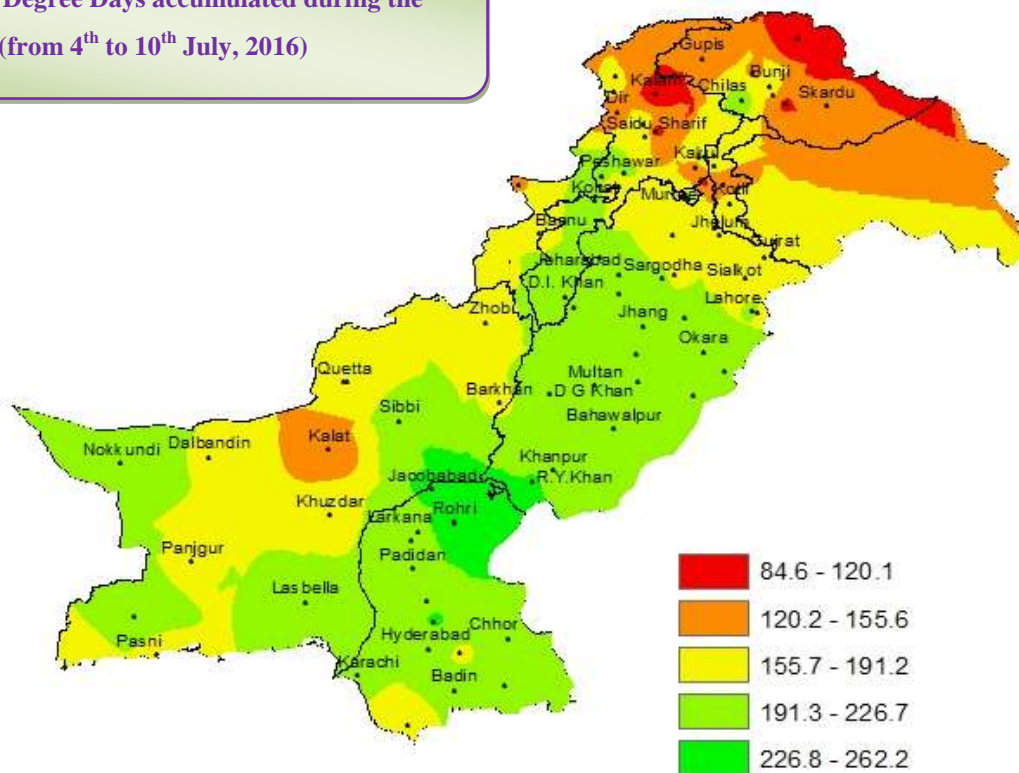
Mean Maximum Temperature (°C) during the Previous week (from 4th to 10th July, 2016)



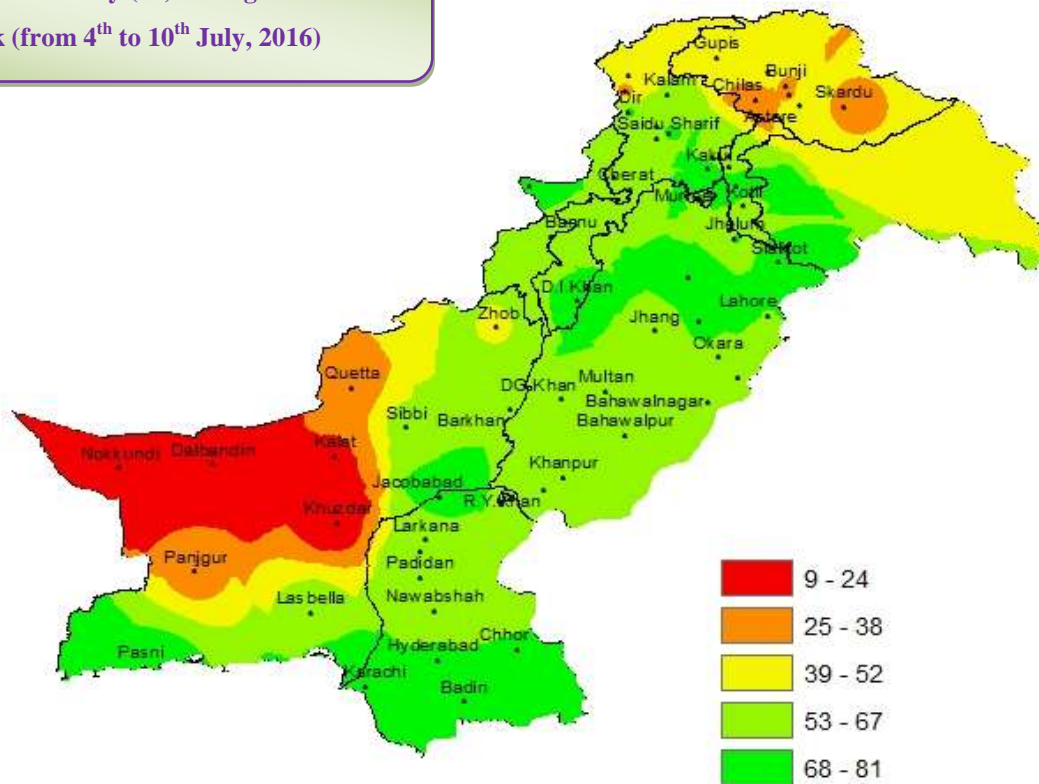
Highest Maximum Temperature (°C) during the Previous week (from 4th to 10th July, 2016)



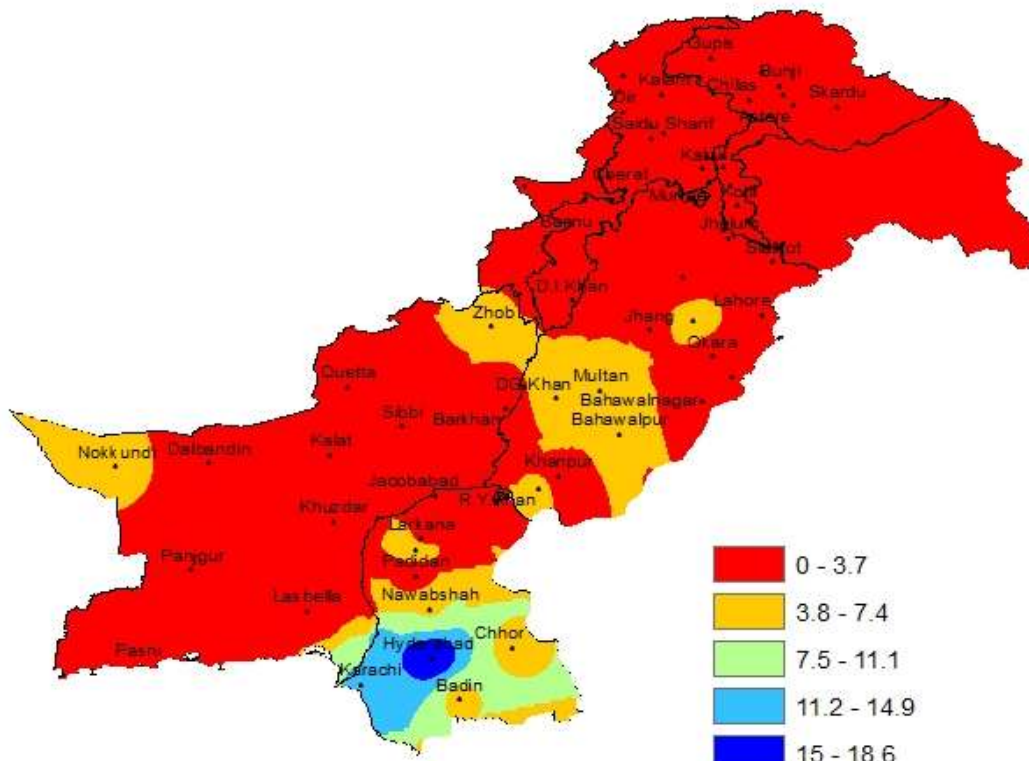
Total Growing Degree Days accumulated during the Previous week (from 4th to 10th July, 2016)



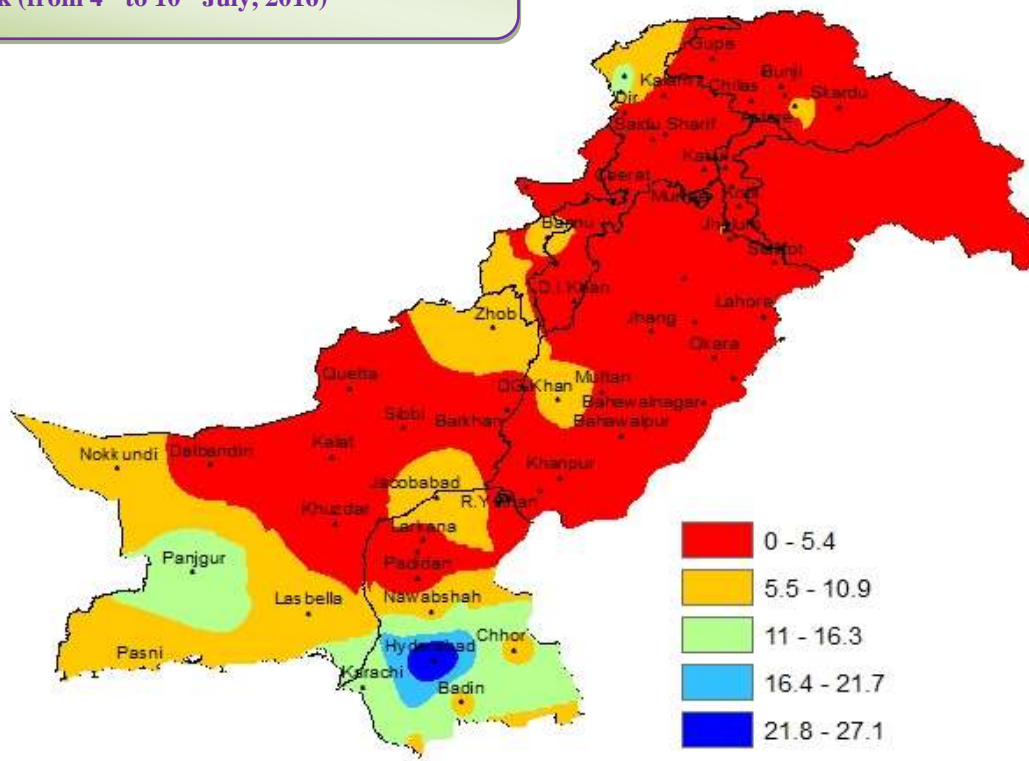
Mean Relative Humidity (%) during the Previous week (from 4th to 10th July, 2016)



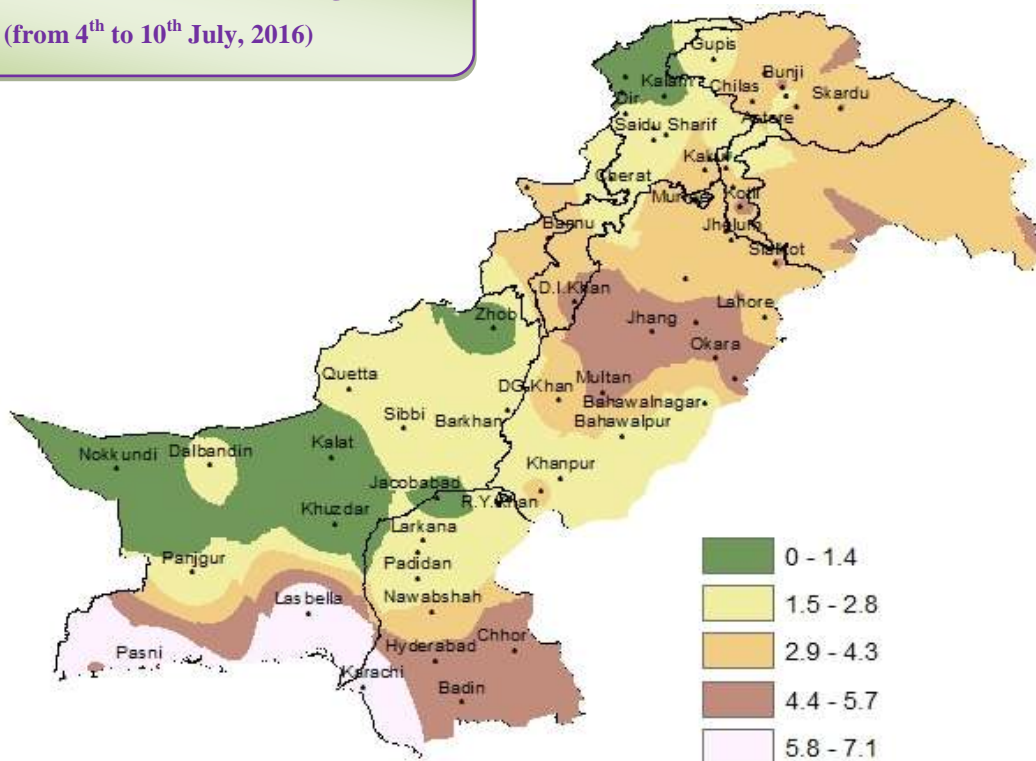
Mean Wind Speed (Knots) at 0300 PST during the Previous week (from 4th to 10th July, 2016)



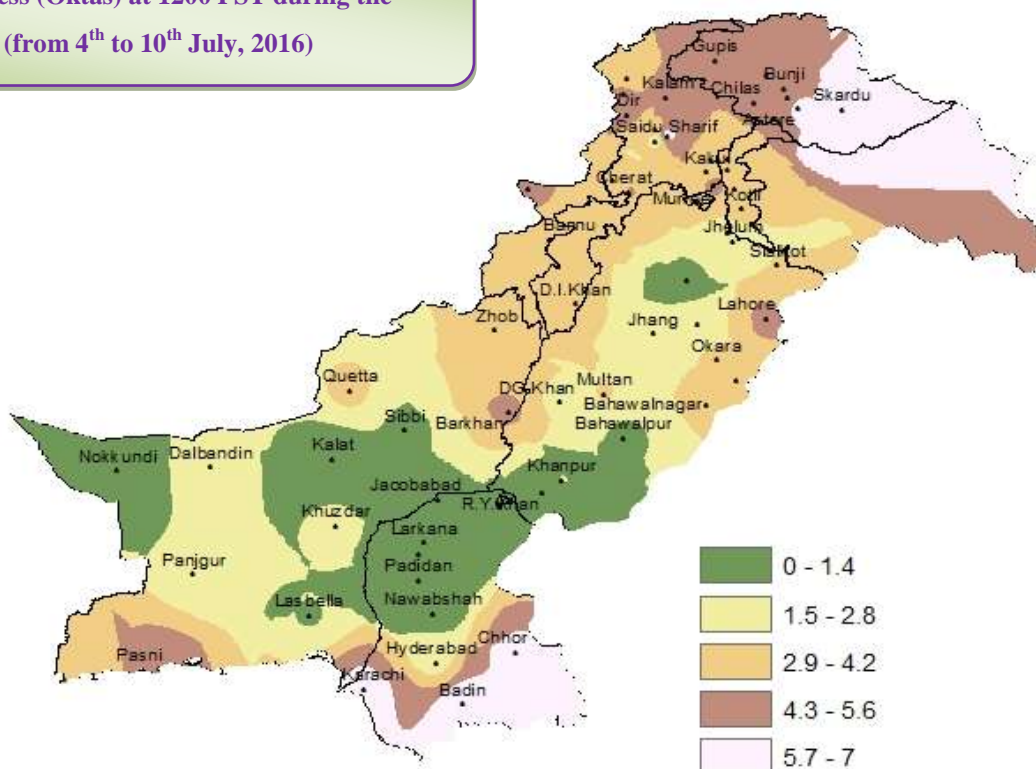
Mean Wind Speed (Knots) at 1200 PST during the Previous week (from 4th to 10th July, 2016)



Mean Cloudiness (Oktas) at 0800PST during the Previous week (from 4th to 10th July, 2016)



Mean Cloudiness (Oktas) at 1200 PST during the Previous week (from 4th to 10th July, 2016)



Weekly Weather Advisory for Farmers**(from 20th to 26th June, 2016)**

Seasonal low lies over North Balochistan and its adjoining areas with its trough extending south-eastward. Weak moist currents are penetrating into north-eastern parts of the country. Moderate moist currents are expected to enter eastern parts of the country from Monday to Thursday. A fresh westerly wave is also likely to enter upper parts of the country on Tuesday and may persist till there 2-3 days. Under the influence of such meteorological conditions weather will remain as following:

MONDAY**20-06-2016**

Mainly hot and humid weather is expected in most parts of the country. However, rain-thundershower with gusty winds is expected at few places in Lahore, Gujranwala, Rawalpindi, Sargodha, Malakand, Hazara, Peshawar, Kohat divisions, Islamabad, FATA, Kashmir and Gilgit-Baltistan.

TUESDAY**21-06-2016**

Rain-thundershower with dust-storm/strong gusty winds is expected at scattered places of upper KP (Malakand, Hazara, Mardan, Kohat, Peshawar divisions), upper Punjab (Rawalpindi, Gujranwala, Lahore, Sargodha divisions), Islamabad, FATA, Gilgit-Baltistan and Kashmir, while at isolated places of Bannu, D. I. Khan, D. G. Khan, Faisalabad, Sahiwal, Multan, Zhob and Quetta divisions. Hot and dry weather is likely elsewhere in the country.

WEDNESDAY**22-06-2016**

Rain-thundershower with dust-storm/strong gusty winds is expected at scattered places of upper KP (Malakand, Hazara, Mardan, Kohat, Peshawar divisions), upper Punjab (Rawalpindi, Gujranwala, Lahore, Sargodha divisions), Islamabad, FATA, Gilgit-Baltistan and Kashmir, While at isolated places of Bannu, D. I. Khan, D. G. Khan, Faisalabad, Sahiwal, Multan, Zhob and Quetta divisions. Hot and dry weather is likely elsewhere in the country.

THURSDAY**23-06-2016**

Rain-thundershower with dust-storm/strong gusty winds is expected at scattered places of upper KP (Malakand, Hazara, Mardan, Kohat, Peshawar divisions), upper Punjab (Rawalpindi, Gujranwala, Lahore, Sargodha divisions), Islamabad, FATA, Gilgit-Baltistan and Kashmir, while at isolated places of Bannu, D. I. Khan, D. G. Khan, Faisalabad, Sahiwal, Multan, Zhob, Quetta, Mirpurkhas divisions. Hot and dry weather is likely elsewhere in the country.

FRIDAY**24-06-2016**

Mainly and dry weather is expected in most parts of the country. However, isolated rain-thundershowers with gusty winds are expected in Malakand, Hazara, Peshawar, Rawalpindi, Gujranwala, Lahore, Zhob, Kalat and Mirpurkhas divisions, Islamabad, FATA, Kashmir and Gilgit-Baltistan.

SATURDAY**25-06-2016**

Mainly hot and dry weather is expected in most parts of the country. However, rain-thundershower with gusty winds is expected at isolated places in Hazara, Gujranwala divisions 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 decade.
- ❖ 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 4th to 10th July, 2016)

Stations	Maximum/Day time Temperature (°C)		Growing Degree Days	Relative Humidity (%)	Rainfa ll (mm)	Cloudiness (Oktas) 0800PST	Cloudiness (Oktas) 1700PST	Wind Speed (Knots) 0800PST	Wind Speed (Knots) 1700PST
	Mean	Highest							
Astore	26.6	28.5	105.5	47	4.1	3.9	6.0	1.1	6.6
Badin	35.4	36.0	185.5	67	0.1	5.6	7.0	6.3	10.0
Bahawalnagar	39.2	43.0	205.0	59	6.0	2.1	3.0	0.3	0.6
Bahawalpur	39.3	40.1	206.5	60	0.0	2.3	1.0	4.9	1.4
Balakot	35.3	37.0	159.6	64	31.0	3.4	3.3	0.0	0.6
Bannu	38.2	40.4	181.4	57	0.0	3.3	2.9	0.6	6.3
Barkhan	36.9	39.5	185.5	66	47.0	2.3	4.4	0.3	2.0
Bunji	34.5	37.2	162.3	37	2.8	5.0	5.6	1.1	1.1
Cherat	32.7	35.0	153.8	63	2.0	2.9	4.3	2.3	2.9
Chhor	36.3	37.8	188.6	67	0.0	5.1	6.0	6.3	10.3
Chilas	39.5	42.0	106.7	32	0.1	3.4	4.9	2.0	4.3
Chitral	36.0	36.4	161.7	43	4.0	0.3	3.6	0.0	11.1
D.I.Khan	36.8	40.0	180.3	72	12.2	4.6	3.4	1.1	0.9
Dalbandin	46.6	49.0	197.5	16	0.0	1.6	2.0	2.3	2.9
DG.Khan	39.0	41.4	204.9	66	23.0	3.3	2.4	7.1	7.1
Dir	33.7	35.0	139.3	69	26.0	1.7	4.6	0.0	2.0
Drosh	37.4	38.7	171.9	34	0.0	1.0	4.4	0.0	12.1
Faisalabad	37.4	40.5	184.7	71	42.3	5.0	2.4	1.3	1.0
Garidopatta	37.0	39.2	195.0	60	66.0	3.4	3.9	0.3	2.6
Gawader	35.2	35.5	187.5	74	0.0	5.6	3.4	0.0	10.6
Gilgit	34.1	36.0	148.0	47	1.4	3.4	5.6	1.1	4.0
Gupis	30.6	33.0	130.0	42	2.0	2.4	5.0	2.0	4.6

Hyderabad	36.4	37.5	188.1	70	0.0	4.7	2.4	18.6	27.1
Islamabad	36.9	39.0	180.8	64	26.1	4.0	3.3	2.0	1.7
Jacobabad	41.0	42.0	212.0	73	3.0	1.3	1.0	2.6	9.4
Jhang	37.7	40.5	184.2	61	82.0	4.9	1.4	2.9	0.9
Jhelum	36.9	38.5	181.7	68	30.0	3.1	1.4	0.9	1.7
Jiwani	34.0	34.5	183.1	72	0.0	6.3	3.6	3.1	8.9
Kakul	31.9	33.0	149.8	70	20.0	4.0	3.4	0.3	0.6
Kalam	27.6	29.0	106.0	56	5.0	0.9	4.6	0.0	3.4
Kalat	34.3	36.0	154.0	20	0.0	0.0	0.0	0.0	0.0
Karachi	32.5	35.0	178.1	77	0.7	7.0	6.3	11.4	12.6
Khanpur	40.4	41.4	207.9	63	0.0	2.3	1.4	2.6	0.9
Khuzdar	36.1	38.5	182.0	13	0.0	0.0	1.7	0.0	0.3
Kotli	35.2	36.7	172.5	62	25.0	4.6	3.7	1.3	1.6
Lahore	36.1	39.5	177.5	67	35.5	4.0	4.5	2.0	2.7
Larkana	41.9	42.5	213.8	60	0.0	1.4	0.3	3.1	4.3
Lasbella	39.6	40.5	206.1	63	0.0	7.1	1.3	0.0	8.9
Lower Dir	39.1	41.0	188.3	58	0.0	2.9	3.4	0.6	2.3
M.B Din	37.7	41.0	183.9	72	59.0	3.3	1.1	1.1	2.0
Malam Jabba	22.6	24.5	92.5	70	59.0	2.7	6.4	0.6	0.6
Mangla	36.8	38.4	183.8	60	36.7	3.4	2.6	3.4	6.1
Mir Khani	37.3	39.0	175.2	36	0.0	1.0	4.6	0.4	3.3
Moinjodaro	41.9	43.0	211.8	56	0.0	1.9	0.9	5.1	5.4
Multan	38.5	40.2	202.9	62	0.1	4.9	2.9	7.4	5.4
Murree	24.7	25.2	107.2	80	83.8	3.6	4.7	1.1	1.1
Muzaffarabad	35.3	37.4	161.8	66	19.0	3.3	4.0	0.0	0.7
Nawabshah	41.9	43.5	209.8	55	4.0	3.1	1.0	7.1	10.3

Nokkundi	45.8	48.0	235.8	9	0.0	0.4	0.4	4.6	6.9
Okara	38.5	42.0	194.0	66	34.0	4.3	3.0	2.0	1.1
Padidan	40.6	41.5	207.3	59	0.0	2.1	0.6	2.0	3.1
Panjgur	43.1	46.0	206.5	30	0.0	1.4	1.6	1.1	14.9
Parachinar	31.1	31.7	155.3	78	30.0	4.0	4.9	3.0	3.0
Pasni	34.7	35.5	188.0	75	0.0	7.1	5.6	2.6	7.7
Pattan	37.6	39.5	178.5	54	0.0	0.6	2.6	0.0	0.6
Peshawar	38.0	40.5	193.9	64	7.0	2.1	2.7	1.1	3.1
Quetta	35.9	37.5	173.2	25	0.0	2.0	2.0	2.2	3.9
R.Y.Khan	42.5	44.2	216.9	61	0.1	3.0	0.3	4.3	1.4
Rawalakot	27.7	29.5	118.0	81	38.0	3.0	3.3	0.0	1.1
Rawalpindi	37.1	40.2	185.1	61	18.4	1.4	2.0	0.9	1.1
Sahiwal	38.1	41.5	192.4	64	8.0	4.9	3.4	2.9	1.7
Saidu Sharif	35.0	37.0	163.4	62	22.0	1.7	2.0	0.0	0.6
Sialkot	35.9	37.5	180.0	69	12.1	4.3	2.9	0.3	0.6
Sibbi	43.1	45.0	224.5	60	0.0	2.6	1.1	1.7	3.1
Skardu	29.5	32.2	121.2	36	0.2	4.3	6.1	0.3	4.9
Tandojam	26.8	27.0	188.8	70	0.0	3.7	2.4	4.5	6.6
Usta.M	40.9	42.0	209.6	59	0.0	0.5	0.3	2.5	2.0
Zhob	37.2	39.5	178.0	51	0.0	1.0	3.1	5.0	9.6

*** 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)