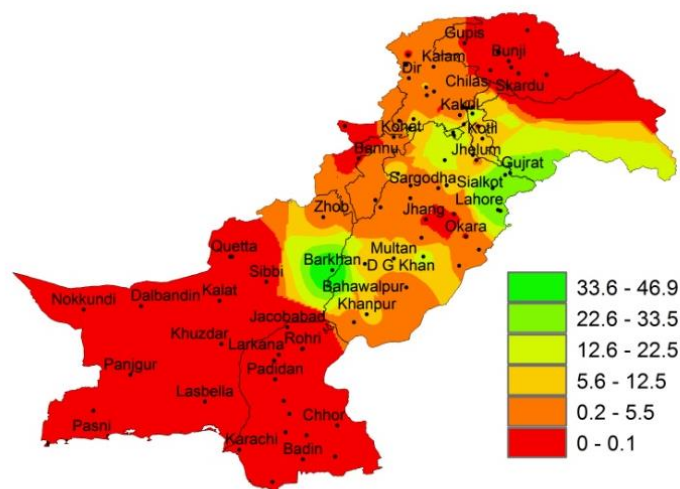


Weekly Weather and Crop Bulletin for Pakistan

**NATIONAL AGROMET CENTRE
PAKISTAN METEOROLOGICAL
DEPARTMENT SECTOR H-8/2,
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**Rainfall Distribution (mm) during the
Previous Week (from 12th June to 18th June, 2017)**

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Highlights of Past Weather (from 12th June to 18th June, 2017)

Above normal day time temperatures reported from most parts of the country.

Province wise distribution of rainfall reported as follows:

- Light to moderate rainfall reported from most places of the places in upper half of the country.
- Light rainfall was recorded at a single station (Karachi) in Sindh province.

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

Editor-in-Chief: Dr.Khalid M. Malik (Director)

Editor: Dr. Dildar Kazmi(Meteorologist)

Past Weather of Provinces(from 12th June to 18th June, 2017)

Punjab

Light to moderate rainfall reported from most places of Punjab during the week. Weekly maximum and minimum temperatures recorded as 39.6°C & 26.1°C respectively. For the recent week on average 199.4 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 51% and wind speed in the morning/evening recorded as 2.8/3.8 Knots. During the previous week the highest amount of rainfall was recorded as 33.3mm at Gujranwala & highest maximum temperature was recorded as 47.0°C at Noorpur Thal.

Balochistan

Light to moderate rainfall reported from scattered places of Baluchistan during the week. Weekly maximum and minimum temperatures recorded as 39.9°C & 25.3°C respectively. For the recent week on average 191.6 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 43% and wind speed in the morning/evening recorded as 1.1/6.1 Knots. During the previous week the highest amount of rainfall was recorded as 47.0mm at Barkhan & highest maximum temperature was recorded as 48.5°C at Nokhandi.

Khyber Pakhtunkhwa

Light rainfall reported from most of the places in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 36.5°C & 21.5°C respectively. For the recent week on average 167.9 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 44% and wind speed in the morning/evening recorded as 1.0/3.5 Knots. During the previous week the highest amount of rainfall was recorded as 9.0 mm at Cherat & highest

maximum temperature was recorded as 43.0°C at D.I.Khan.

Gilgit-Baltistan and Azad Jammu & Kashmir

Light to moderate rainfall reported from most places of places of Gilgit-Baltistan & Kashmir during the week. Weekly maximum and minimum temperatures recorded as 32.9°C & 17.3°C respectively. For the recent week on average 140.5 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 41% and wind speed in the morning/evening recorded as 0.8/2.9 Knots. During the previous week the highest amount of rainfall was recorded as 27.2mm at Garhi Dopatta & highest maximum temperature was recorded as 43.0°C at Chilas.

Sindh

Mainly dry weather reported from Sindh during the week. Weekly maximum and minimum temperatures recorded as 41.6°C & 28.6°C respectively. For the recent week, on average 210.2 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 53% and wind speed in the morning/evening recorded as 6.5/8.3 Knots. During the previous week the highest amount of rainfall was recorded as 0.2 mm at Karachi, highest maximum temperature was recorded as 49.5°C at Moin-jo-Daro.

Past Weather for Major Agricultural Plains (from 12th June to 18th June, 2017)

Rawalpindi (Potohar region)

Rainfall reported as 18.0mm from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 3.7/0.6Oktas while, average relative humidity observed as 54%. Mean day time temperature recorded as 38.7°C & for the recent week 187.4 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/1.2 Knots.

Faisalabad (Central Punjab)

Dry weather reported from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 0.0/1.1Oktas while, average relative humidity observed as 49%. Mean day time temperature recorded as 39.7°C & for the recent week 198.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.1/1.7 Knots.

Tandojam (Lower Sindh)

Dry weather reported from Tandojam during the week; however, cloudiness in the morning/evening recorded as 0.3/0.4Oktas while, average relative humidity observed as 63%. Mean day time temperature recorded as 38.8°C & for the recent week 191.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 3.7/0.9Knots.

Usta Muhammad (Eastern Balochistan)

Dry weather reported from Usta Muhammad during the week; however, cloudiness in the morning/evening recorded 0.9/2.0Oktas while, average relative humidity observed as 29%. Mean day time temperature recorded as 45.9°C & for the recent week 214.6 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.7/3.4Knots.

Quetta (Northern Baluchistan)

Dry weather reported from Quetta during the week; however, cloudiness in the morning/evening recorded as 0.0/0.1Oktas while, average relative humidity observed as 20%. Mean day time temperature recorded as 36.2°C & for the recent

week 165.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.8/4.1 Knots.

Past Weather for Sub-Regional Agricultural Plains (from 12th June to 18th June, 2017)

Multan

Rainfall reported as 7.3 mm from Multan during the week; however, cloudiness in the morning/evening recorded as 0.6/3.1Oktas while, average relative humidity observed as 51%. Mean day time temperature recorded as 40.2°C & for the recent week 211.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 6.3/4.9Knots.

Lahore

Rainfall reported as 25.0 mm from Lahore during the week; however, cloudiness in the morning/evening recorded as 1.7/1.9Oktas while, average relative humidity observed as 46%. Mean day time temperature recorded as 38.1°C & for the recent week 197.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 5.4/3.1Knots.

Zhob

Rainfall reported as 2.0 mm Zhob during the week; however, cloudiness in the morning/evening recorded as 0.4/2.7Oktas while, average relative humidity observed as 52%. Mean day time temperature recorded as 37.4°C & for the recent week 170.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.4/9.1 Knots.

Murree

Rainfall reported as 11.0 mm from Murree during the week; however, cloudiness in the morning/evening recorded as 3.3/3.9 Oktas while, average relative humidity observed as 62%. Mean day time temperature recorded as 25.3°C & for the recent week 113.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.6/2.0 Knots.

D.I. Khan

Rainfall reported as trace (not measureable) from D.I.Khan during the week; however, cloudiness in the morning/evening recorded as 0.6/3.4 Oktas while, average relative humidity observed as 51%. Mean day time temperature recorded as 41.8°C & for the recent week 203.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.7/2.9 Knots.

Peshawar

Rainfall reported as trace (not measureable) from Peshawar during the week; however, cloudiness in the morning/evening recorded as 1.1/1.6 Oktas while, average relative humidity observed as 47%. Mean day time temperature recorded as 39.1°C & for the recent week 194.7 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.7/2.9 Knots.

Kalam

Rainfall reported as 3.0 mm from Kalam during the week; however, cloudiness in the morning/evening recorded as 0.0/5.9 Oktas while, average relative humidity observed as 51%. Mean day time temperature recorded as 28.3°C & for the recent week 106.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/2.6 Knots.

Gilgit

Dry weather reported from Gilgit during the week; However, cloudiness in the morning/evening recorded as 2.1/5.3 Oktas while, average relative humidity observed as 39%. Mean day time temperature recorded as 36.1°C & for the recent week 144.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/6.6 Knots.

Skardu

Dry weather reported from Skardu during the week; However, cloudiness in the morning/evening recorded as 2.7/4.7 Oktas while, average relative humidity observed as 37%. Mean day time temperature recorded as 29.3°C & for the recent week 102.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/2.9 Knots.

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

Potohar Region (Rawalpindi)

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

Central Punjab (Faisalabad)

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

Cotton: Good condition, *Budding 30 %*.

Lower Sindh (Tandojam)

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

Cotton (HH-906): Good condition, *Budding Stage*.

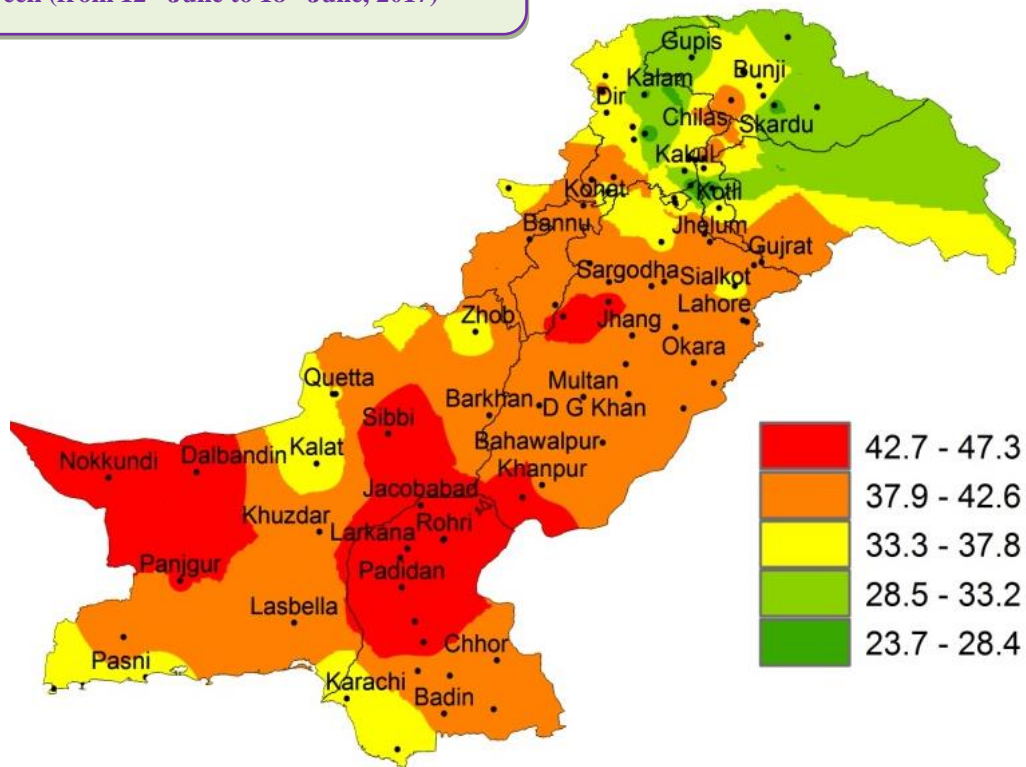
Northern Baluchistan (Quetta)

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

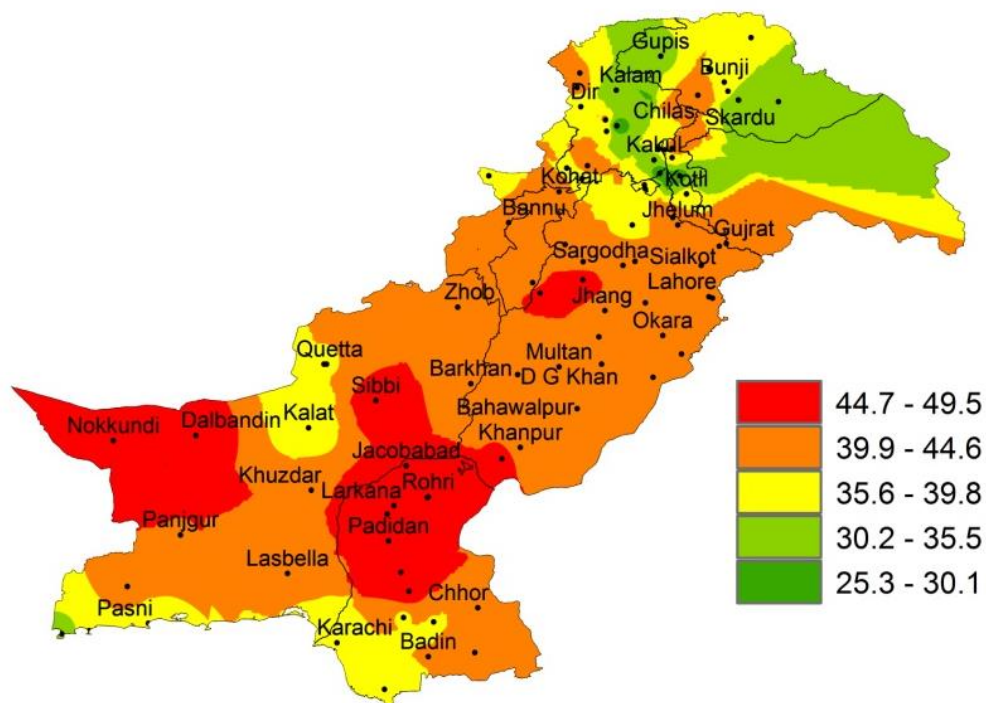
Eastern Baluchistan (Usta Muhammad)

Land has been prepared for Rice seedling.

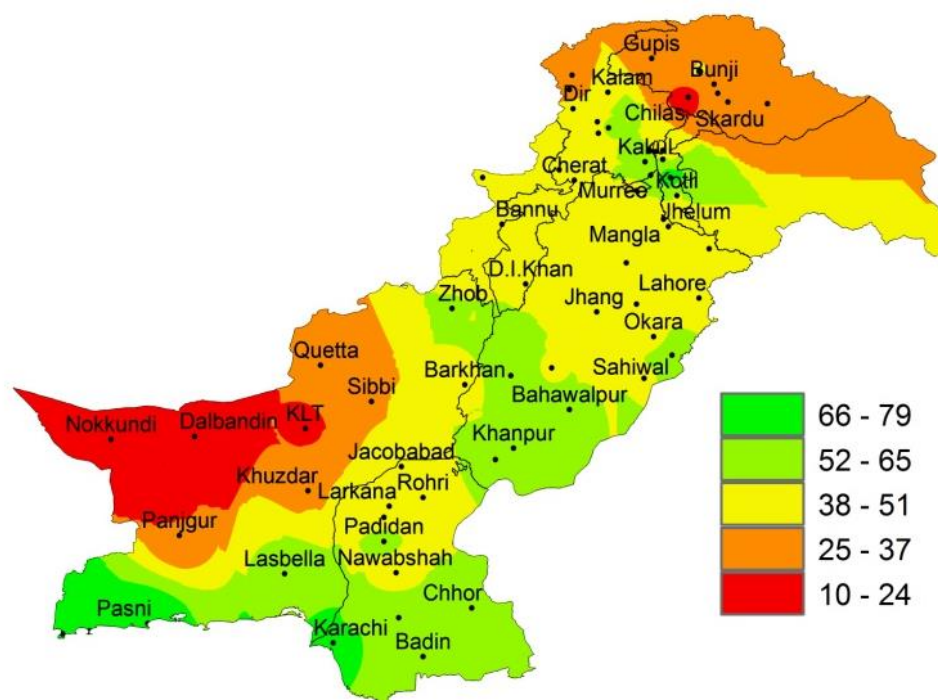
Mean Maximum Temperature (°C) during the
Previous week (from 12th June to 18th June, 2017)



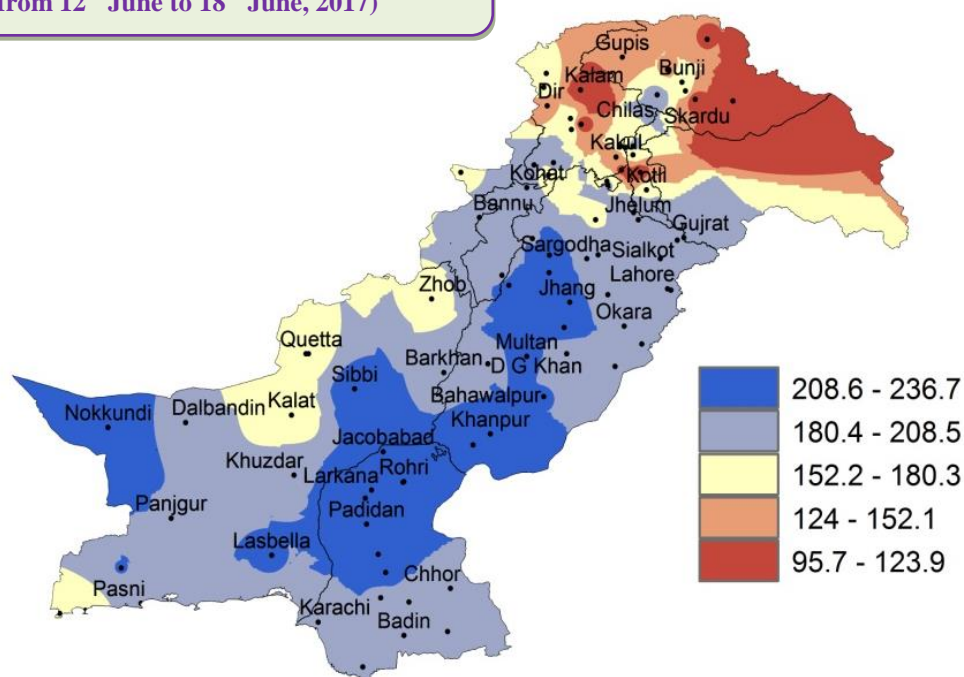
Highest maximum Temperature (°C) during the
Previous week (from 12th June to 18th June, 2017)



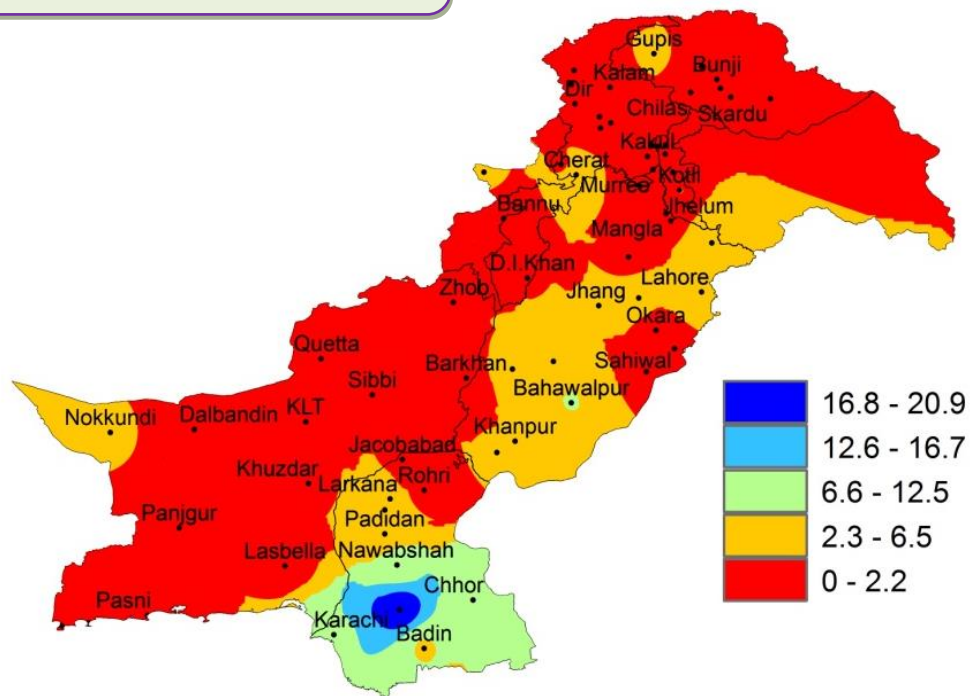
Mean Relative Humidity (%) during the
Previous week (from 12th June to 18th June, 2017)



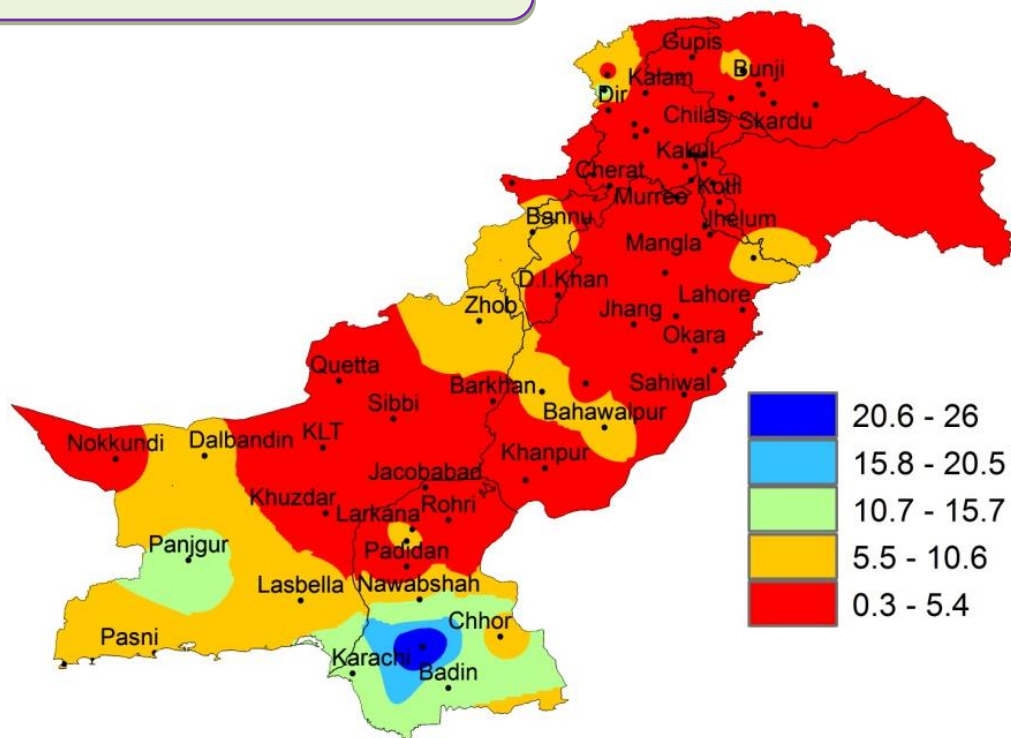
Total Growing Degree Days accumulated during the
Previous week (from 12th June to 18th June, 2017)



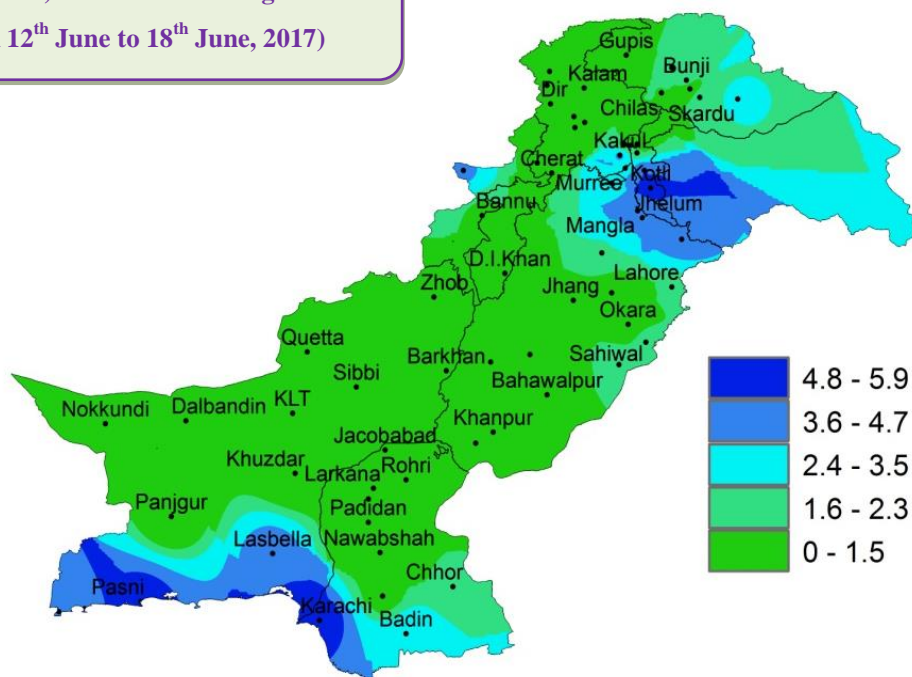
Mean Wind Speed (Knots) at 0800PST during the
Previous week (from 12th June to 18th June, 2017)



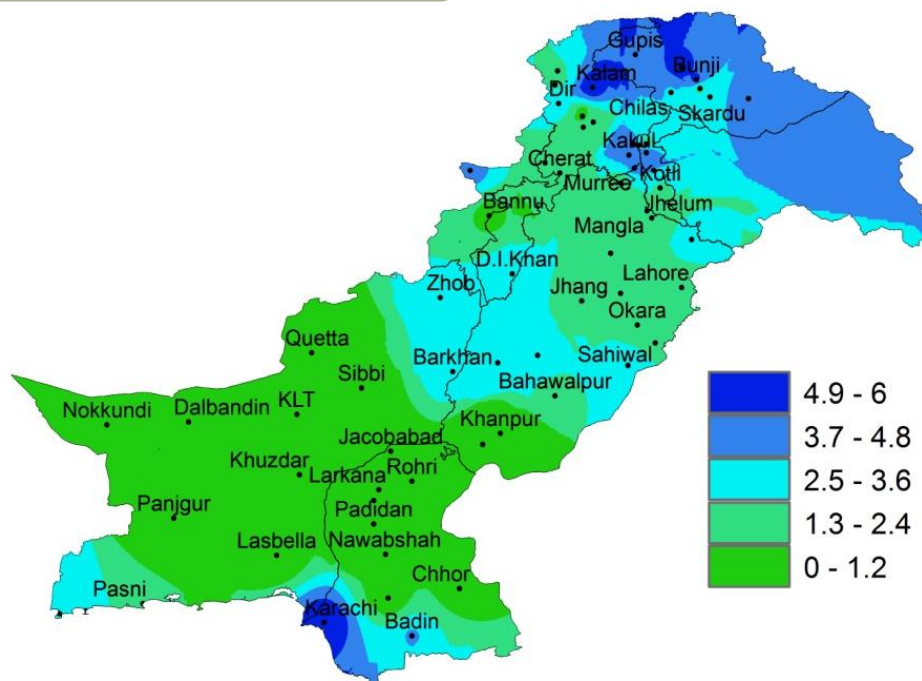
Mean Wind Speed (Knots) at 1700PST during the
Previous week (from 12th June to 18th June, 2017)



Mean Cloudiness (Oktas) at 0800PST during the
Previous week (from 12th June to 18th June, 2017)



Mean Cloudiness (Oktas) at 1700PST during the
Previous week (from 12th June to 18th June, 2017)



Weekly Weather Advisory for Farmers**(from 19th June to 24th June, 2017)**

A shallow westerly wave is still affecting upper and central parts of the country. Another fresh westerly wave is likely to enter upper parts of the country on Tuesday.

MONDAY**19-06-2017**

Mainly hot and dry weather is expected in most parts of the country. However, rain/dust-thunderstorm with gusty winds is expected at isolated places in Rawalpindi, Lahore, Gujranwala, Sargodha, Faisalabad, D.G. Khan, Multan, Bahawalpur, Sahiwal, Hazara, D.I.Khan divisions, Islamabad and Kashmir. Light rain-thunderstorm/drizzle expected at few places along Sindh coast.

TUESDAY**20-06-2017**

Rain-thunderstorm with gusty winds is expected at scattered places in Rawalpindi, Lahore, Gujranwala divisions, Kashmir while at isolated places in Sargodha, D.G.Khan, Multan, Bahawalpur, Sahiwal, Faisalabad, Hazara divisions & Islamabad. Hot and dry weather is likely elsewhere in the country.

WEDNESDAY**21-06-2017**

Rain-thunderstorm with gusty winds (with isolated heavy falls) is expected at scattered places in KP, FATA, upper Punjab, Islamabad and Kashmir, while at isolated places in Zhob, Sibbi, Multan, Bahawalpur, Sahiwal, D.G.Khan divisions. Hot and dry weather is likely elsewhere in the country.

THURSDAY**22-06-2017**

Rain-thunderstorm with gusty winds (with isolated heavy falls) is expected at scattered places in KP, FATA, upper Punjab, Islamabad and Kashmir, while at isolated places in Zhob, Sibbi, Multan, Bahawalpur, Sahiwal, D.G.Khan divisions. Hot and dry weather is likely elsewhere in the country.

FRIDAY**23-06-2017**

Rain-thunderstorm with gusty winds is expected at isolated places in upper FATA, Rawalpindi, Gujranwala, Sargodha, D.G.Khan, Malakand divisions, Islamabad and Kashmir. Hot and dry weather is likely elsewhere in the country.

SATURDAY**24-06-2017**

Mainly hot and dry weather is expected in most parts of the country. However, rain/dust-thunderstorm with gusty winds is expected at isolated places in Rawalpindi, Gujranwala, Lahore, Hazara divisions & Kashmir.

SUNDAY**25-06-2017**

Mainly hot and dry weather is expected in most parts of the country. However, rain/dust-thunderstorm with gusty winds is expected at a few places in Kashmir and its adjoining hilly areas.

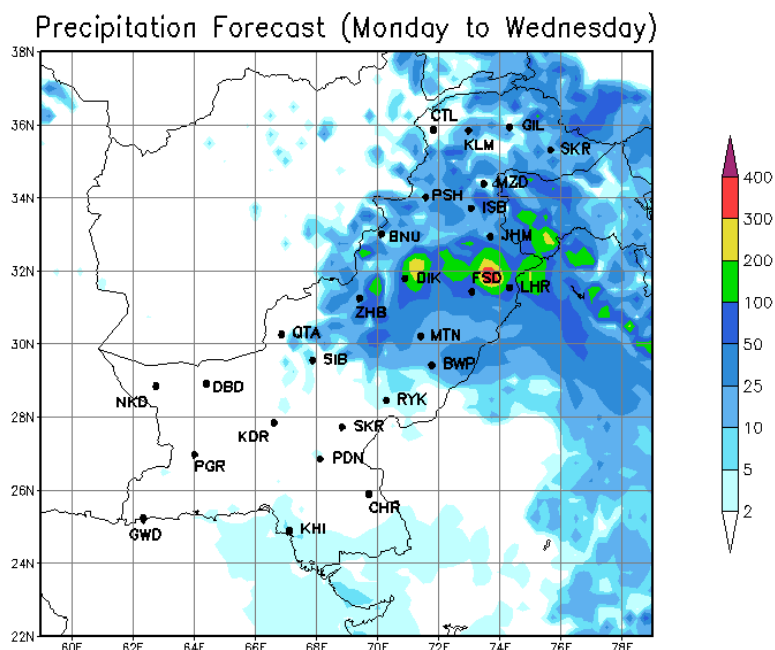
ADVISES FOR FARMERS

During the last week, light to moderate rainfall occurred mainly in upper half of the country except Sindh where dry and hot weather recorded. This may continue with almost the same pattern over northern parts of the country in coming days as well. Keeping in view the expected weather conditions following advises are suggested for farming community.

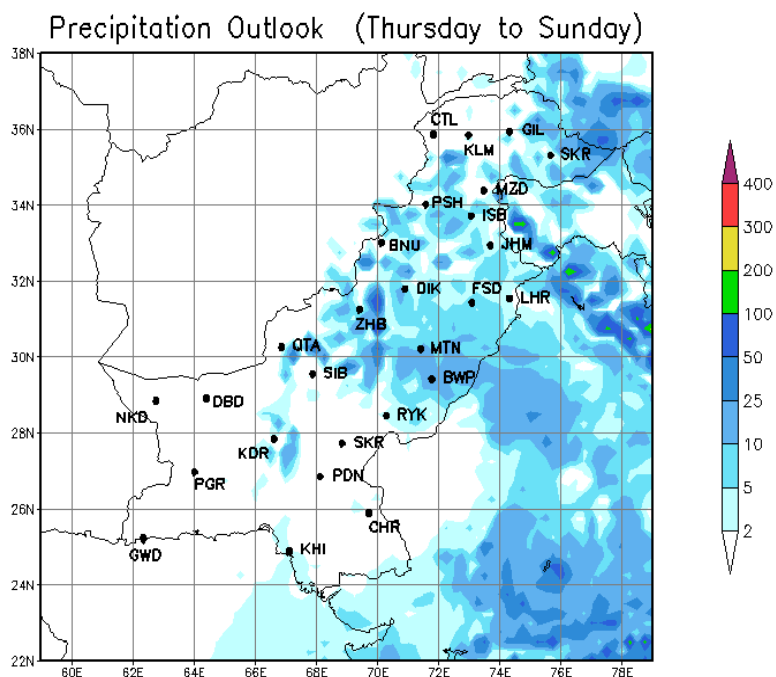
- Farmers of irrigated areas may irrigate the standing crops as per requirement in accordance with the expected weather conditions.
- Farmers of Rice growing areas may complete sowing of their crops.

Weather Outlook from 19th June to 25th June, 2017

The forecast from 19th to 21st June, 2017 shows that light to moderate rainfall is expected at many places of GB, Kashmir, Punjab, KP and northern Baluchistan with heavy rainfall in central Punjab and south eastern KP.



The outlook from 22th June to 25th June, 2017 shows that light to moderate rainfall is expected at particular places in Punjab, GB, KP, Kashmir and northern Baluchistan.



National Weather Data of Selected Cities
(from 12th June to 18th June, 2017)

Stations	Maximum/Nighttime 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	26.4	29.5	98.1	36	0.00	2.4	3.6	1.1	2.6
Badin	38.1	40.0	197.5	61	0.00	3.4	3.7	5.7	10.6
Bahawalnagar	41.2	44.0	197.3	50	5.00	2.1	3.4	0.6	2.9
Bahawalpur	41.0	42.3	209.0	52	0.00	0.0	1.9	6.6	6.3
Balakot	35.0	36.5	154.4	51	5.50	0.9	4.7	0.3	1.6
Bannu	41.1	42.0	192.4	41	0.00	1.1	0.7	0.0	9.1
Barkhan	38.9	41.0	187.0	49	47.00	0.0	3.6	0.0	3.7
Bunji	35.6	39.4	161.6	28	0.00	2.4	5.3	0.3	2.3
Cherat	34.4	37.0	149.9	43	9.00	1.4	1.4	4.6	2.0
Chhor	39.5	41.5	204.3	59	0.00	2.0	0.6	8.9	9.4
Chilas	39.2	43.0	190.0	19	0.00	1.4	3.4	1.7	4.1
Chitral	37.8	40.3	160.4	34	0.00	0.0	2.1	1.1	4.0
D.G.Khan	40.9	42.5	206.1	56	7.02	1.0	3.4	4.0	6.9
D.I.Khan	41.8	43.0	203.8	51	0.01	0.6	3.4	1.7	2.9
Dalbandin	46.6	48.0	195.0	12	0.00	0.0	0.0	0.9	6.3
Dir	34.0	36.0	130.3	50	4.00	0.0	3.6	0.0	2.0
Drosh	38.2	41.0	169.4	23	0.00	0.0	2.3	0.0	14.0
Faisalabad	39.7	43.0	198.8	49	0.00	0.0	1.1	2.1	1.7
Garidopatta	36.6	39.0	166.6	56	27.22	2.0	5.1	0.0	2.3
Gawader	35.4	36.0	161.3	73	0.00	4.4	2.9	2.0	10.0
Gilgit	36.1	39.5	144.8	39	0.00	2.1	5.3	0.0	6.6

Gupis	30.9	33.5	128.0	27	0.00	0.0	4.7	2.9	4.6
Hyderabad	38.2	39.0	196.0	61	0.00	1.0	0.4	20.9	26.0
Islamabad	37.4	39.6	178.7	46	13.00	3.3	1.4	0.0	4.0
Jacobabad	43.9	45.0	224.8	48	0.00	0.0	0.0	1.4	1.4
Jhang	41.1	43.2	212.7	46	0.01	1.3	1.6	2.6	4.0
Jhelum	40.1	42.4	200.8	48	4.03	3.4	1.1	1.4	2.9
Jiwani	34.2	34.5	180.4	72	0.00	4.3	2.9	2.0	9.4
Kakul	32.4	33.0	147.3	53	0.02	3.9	4.0	0.0	1.7
Kalam	28.3	30.5	106.3	51	3.00	0.0	5.9	0.0	2.6
Kalat	34.9	36.0	154.0	21	0.00	0.0	0.0	0.0	0.6
Karachi	35.3	36.0	192.4	68	0.02	5.9	6.0	11.4	13.1
Khanpur	42.0	43.4	219.0	51	8.01	0.0	0.0	2.3	2.6
Khuzdar	41.9	43.5	203.3	35	0.00	0.0	0.7	1.1	3.4
Kotli	36.2	37.2	174.7	50	12.01	5.3	2.1	2.3	2.3
Lahore	38.1	42.2	197.5	46	25.00	1.7	1.9	5.4	3.1
Larkana	45.6	48.0	226.7	46	0.00	0.0	0.0	2.9	5.4
Lasbella	40.4	41.2	209.8	60	0.00	4.6	0.0	0.0	8.3
Lower Dir	38.6	41.0	180.8	44	7.00	0.3	0.9	2.0	2.0
M.B Din	40.3	42.0	199.3	50	10.00	2.1	2.0	1.4	1.1
MalamJabba	23.4	25.0	94.0	58	0.00	0.0	2.0	0.0	0.3
Mangla	38.9	40.5	193.8	46	8.91	4.1	2.6	0.9	2.9
Mir Khani	36.9	37.5	170.5	35	0.00	0.0	1.7	0.6	2.9
Moinjodaro	44.9	49.5	223.8	49	0.00	0.0	0.0	4.3	6.3
Multan(PBO)	40.2	41.2	211.8	51	7.31	0.6	3.1	6.3	4.9
Murree	25.3	26.0	113.5	62	11.02	3.3	3.9	0.6	2.0
Muzaffarabad	35.5	37.4	155.2	53	3.00	2.0	3.6	0.0	2.4

Nawabshah	45.2	46.0	233.8	46	0.00	0.0	0.0	9.7	10.6
Nokkundi	47.1	48.5	236.8	10	0.00	0.0	0.0	2.6	4.6
Okara	40.4	43.0	208.1	48	0.00	0.4	1.6	1.1	2.6
Padidan	43.4	45.5	218.3	54	0.00	0.0	0.0	2.9	2.6
Panjgur	42.7	44.5	207.0	24	0.00	0.0	0.0	1.4	12.0
Parachinar	34.3	37.0	168.8	38	0.00	3.9	4.3	3.0	3.6
Pasni	35.1	35.5	189.3	79	0.00	5.7	1.3	0.0	9.6
Pattan	39.9	42.0	194.0	34	0.00	0.0	1.4	0.0	0.6
Peshawar	39.1	39.5	194.7	47	0.01	1.1	1.6	1.7	2.9
Quetta	36.2	38.0	165.2	20	0.00	0.0	0.1	2.8	4.1
Rahim Yar Khan	44.2	45.5	229.7	55	0.00	0.0	0.0	2.6	2.9
Rawalakot	26.4	28.0	104.8	73	3.80	4.7	3.6	0.3	1.7
Rawalpindi	38.7	40.4	187.4	54	18.00	3.7	0.6	0.3	1.2
Rohri	44.4	46.0	227.5	47	0.00	0.0	0.0	1.1	1.7
Sahiwal	38.7	41.2	197.7	58	3.00	2.0	2.0	0.9	2.9
Saidu Sharif	37.6	38.5	174.3	42	0.00	0.0	1.6	0.0	1.1
Sialkot	38.4	44.5	190.4	48	25.80	4.4	3.0	5.4	7.4
Sibbi	47.3	48.0	235.5	37	0.00	0.0	0.0	0.0	3.7
Skardu	29.3	34.0	102.1	37	0.00	2.7	4.7	0.0	2.9
Tandojam	38.8	39.5	191.5	63	0.00	0.3	0.4	3.7	0.9
Usta.M	45.9	46.5	214.6	29	0.00	0.9	2.0	1.7	3.4
Zhob	37.4	41.0	170.8	52	2.00	0.4	2.7	1.4	9.1

*** 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 2014-2012)