

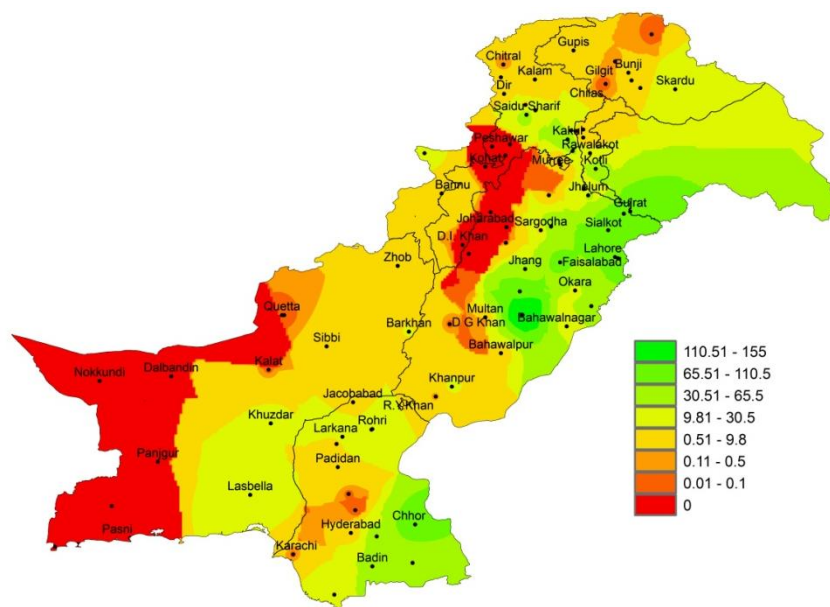
Weekly Weather and Crop Bulletin for Pakistan

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PAKISTAN METEOROLOGICAL
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**Rainfall Distribution (mm) during the Previous
Week (25th June to 1st June, 2018)**



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Highlights of Past Weather (25th June to 1st July, 2018)

Below normal day temperature was observed all over the country.

Province wise distribution of rainfall reported as follows:

- Light to moderate rainfall observed in Khyber Pakhtunkhwa, Baluchistan, Sindh, Gilgit-Baltistan and Azad Jammu & Kashmir 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 (25th June to 1st July, 2018)**Punjab**

Moderate to heavy rainfall observed in Punjab during the week. Weekly maximum and minimum temperatures recorded as 36.1°C & 25.9°C respectively. For the recent week on average 181.7 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 50% and wind speed in the morning/evening recorded as 0.6/2.6 Knots. During the previous week the highest amount of rainfall was recorded as 153.5 mm at Toba Tak Singh & highest maximum temperature was recorded as 45.0°C at Bhakkar.

Sindh

Light to moderate rainfall observed in Sindh during the week. Weekly maximum and minimum temperatures recorded as 37.2°C & 27.1°C respectively. For the recent week, on average 189.9 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 59% and wind speed in the morning/evening recorded as 2.9/3.8 Knots. During the previous week the highest amount of rainfall was recorded as 88.0 mm at Chhor & highest maximum temperature was recorded as 45.0°C at Dadu.

Khyber Pakhtunkhwa

Light to moderate rainfall observed in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 33.5°C & 20.5°C respectively. For the recent week on average 154.1 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 0.8/3.7 Knots. During the previous week the highest amount of rainfall was recorded as 59.01 mm at Kakul & highest maximum temperature was recorded as 44.0°C at D.I.Khan.

Baluchistan

Light to moderate rainfall observed from a single station in Baluchistan during the week. Weekly maximum and minimum temperatures recorded as 36.6°C & 25.0°C respectively. For the recent week on average 179.3 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 45% and wind speed in the morning/evening recorded as 2.3/6.6 Knots. During the previous week the highest amount of rainfall was recorded as 28 mm at Lasbella & highest maximum temperature was recorded as 49.5°C at Turbat.

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 27.9°C & 17.2°C respectively. For the recent week on average 117.3 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 59% and wind speed in the morning/evening recorded as 2.5/4.1 Knots. During the previous week the highest amount of rainfall was recorded as 42.3 mm at Kotli & highest maximum temperature was recorded as 40.8°C at Kotli.

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

Rawalpindi (Potohar region)

Dry weather reported from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 4.1/5.1 Oktas while, average relative humidity observed as 52%. Mean day time temperature recorded as 37.3°C & for the recent week 177.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.6/0.8 Knots.

Faisalabad (Central Punjab)

Dry weather reported from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 5.4/4.1 Oktas while, average relative humidity observed as 65%. Mean day time temperature recorded as 34.7°C & for the recent week 176.7 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.9/1.1 Knots.

Tandojam (Lower Sindh)

Rainfall reported as 7.2 mm from Tandojam during the week; however, cloudiness recorded in the morning/evening as 2.9/3.7 Oktas while, average relative humidity observed as 68%. Mean day time temperature recorded as 37.1°C & for the recent week 182.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.7/2.8 Knots.

Usta Muhammad (Eastern Baluchistan)

Rainfall reported as 0.01 mm (trace) from Usta Muhammad during the week; however, cloudiness in the morning/evening recorded as 2.4/1.6 Oktas while, average relative humidity observed as 51%. Mean day time temperature recorded as 43.1°C & for the recent week 216.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/3.4 Knots.

Quetta (Northern Baluchistan)

Dry weather reported from Quetta during the week; however, cloudiness in the morning/evening recorded as 0.9/2.9 Oktas while, average relative humidity observed as 29%. Mean day time temperature recorded as 34.2°C & for the recent

week 156.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.5/3.6 Knots.

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

Multan

Rainfall reported as 0.22 mm from Multan during the week; however, cloudiness in the morning/evening recorded as 5.3/2.7 Oktas while, average relative humidity observed as 56%. Mean day time temperature recorded as 36.8°C & for the recent week 192.6 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 5.1/8.0 Knots.

Lahore

Rainfall reported as 83.21 mm from Lahore during the week; however, cloudiness in the morning/evening recorded as 5.9/5.6 Oktas while, average relative humidity observed as 70%. Mean day time temperature recorded as 34.4°C & for the recent week 175.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.7/3.7 Knots.

Zhob

Rainfall reported as 8.00 mm from during the week; however, cloudiness in the morning/evening recorded as 0.0/3.6 Oktas while, average relative humidity observed as 40%. Mean day time temperature recorded as 33.1°C & for the recent week 162.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 4.3/10.1 Knots.

Murree

Rainfall reported as 32.02 mm from Murree during the week; however, cloudiness in the morning/evening recorded as 4.0/5.0 Oktas while, average relative humidity observed as 60%. Mean day time temperature recorded as 23.8°C & for the recent week 106.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.4/0.6 Knots.

D.I. Khan

Dry weather reported from D.I. Khan during the week; however, cloudiness in the morning/evening recorded as 2.6/2.3 Oktas while, average relative

humidity observed as 53%. Mean day time temperature recorded as 38.1°C & for the recent week 193.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.9/2.3 Knots.

Peshawar

Dry weather reported from Peshawar during the week; however, cloudiness in the morning/evening recorded as 1.9/2.1 Oktas while, average relative humidity observed as 52%. Mean day time temperature recorded as 38.0°C & for the recent week 184.7 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 4.00 mm from Kalam during the week; however, cloudiness in the morning/evening recorded as 1.0/4.0 Oktas while, average relative humidity observed as 55%. Mean day time temperature recorded as 25.2°C & for the recent week 94.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/2.6 Knots.

Gilgit

Rainfall reported as 0.31 mm from Gilgit during the week; However, cloudiness in the morning/evening recorded as 4.6/6.0 Oktas while, average relative humidity observed as 49%. Mean day time temperature recorded as 29.4°C & for the recent week 124.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/2.6 Knots.

Skardu

Rainfall reported as 29.22 mm from Skardu during the week; however, cloudiness in the morning/evening recorded as 6.6/7.1 Oktas while, average relative humidity observed as 63%. Mean day time temperature recorded as 21.8°C & for the recent week 85.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/1 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 .

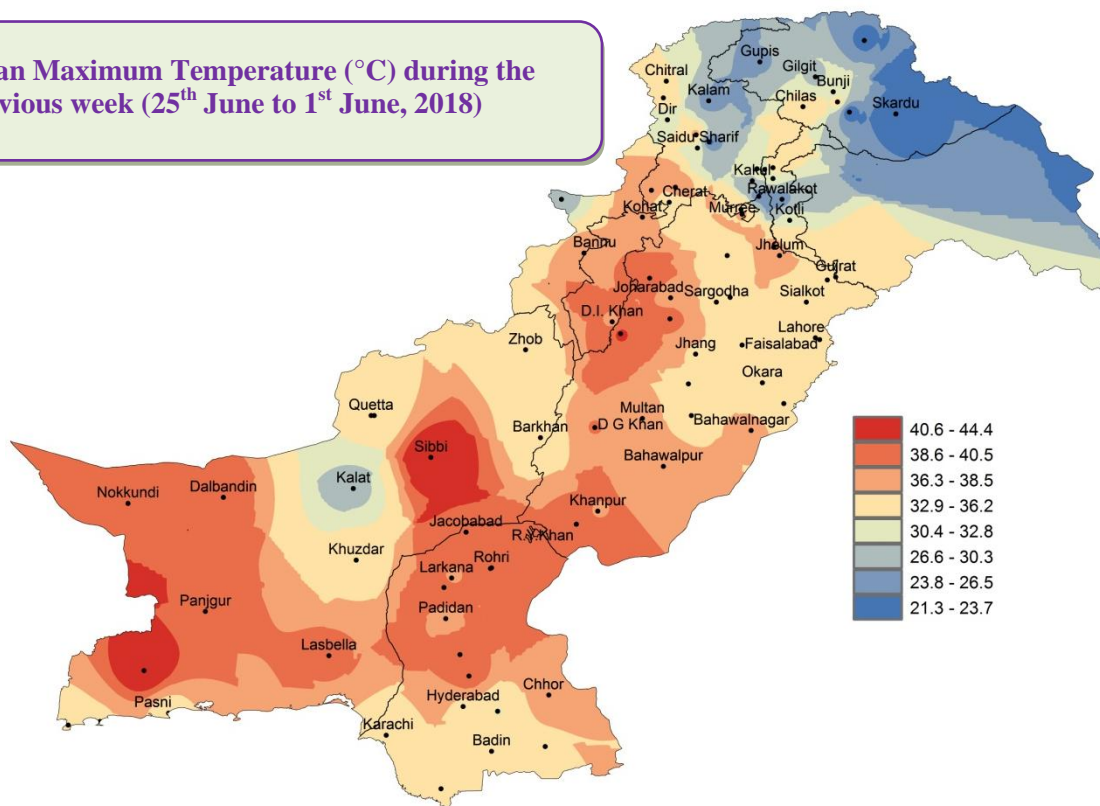
Northern Baluchistan (Quetta)

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

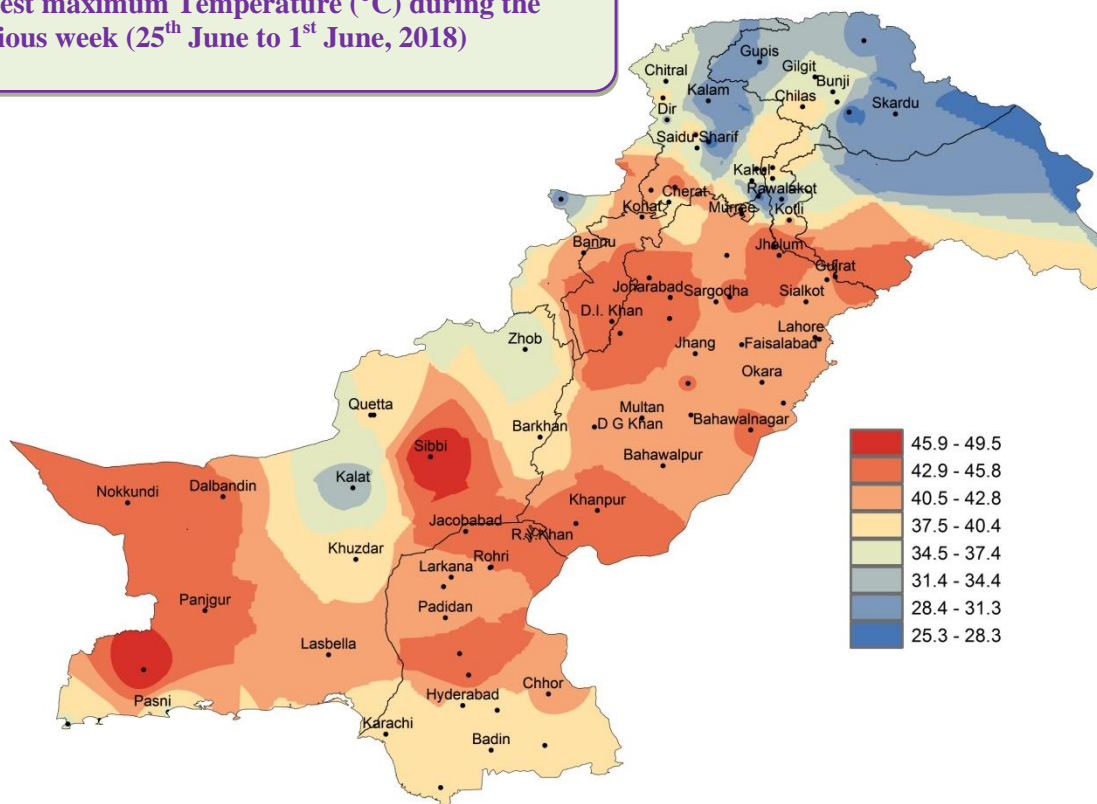
Eastern Baluchistan (Usta Muhammad)

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

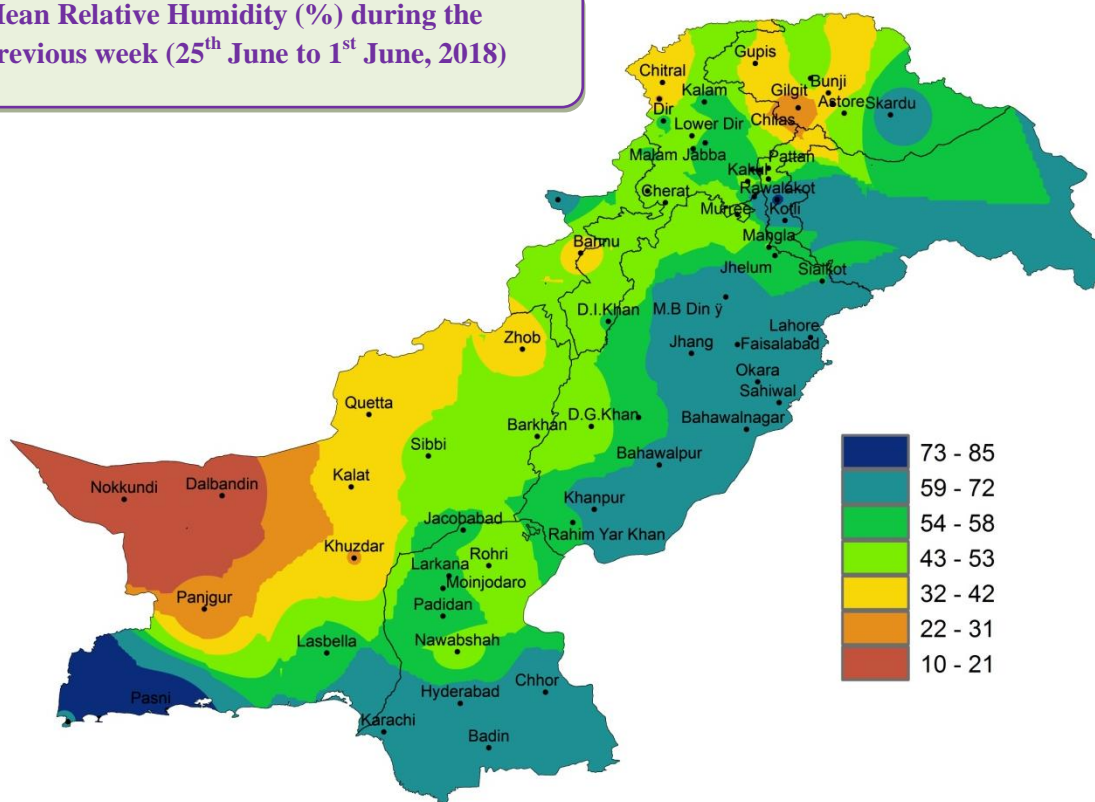
Mean Maximum Temperature (°C) during the Previous week (25th June to 1st June, 2018)



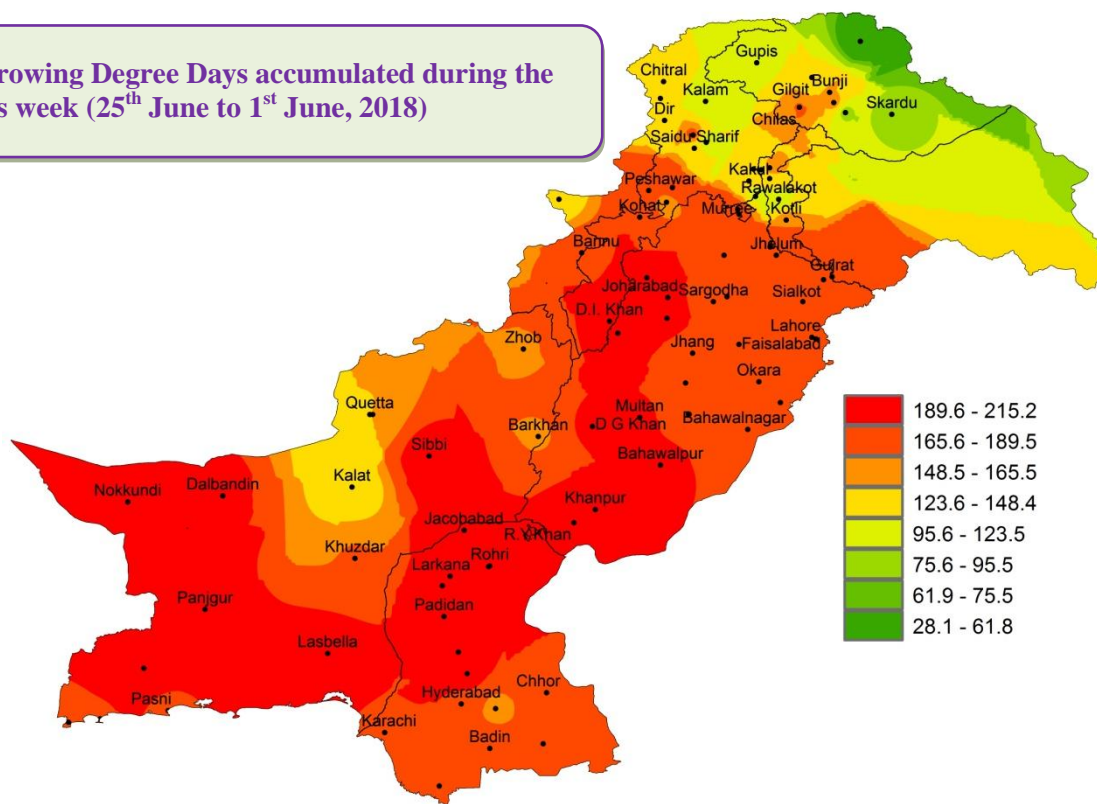
Highest maximum Temperature (°C) during the Previous week (25th June to 1st June, 2018)



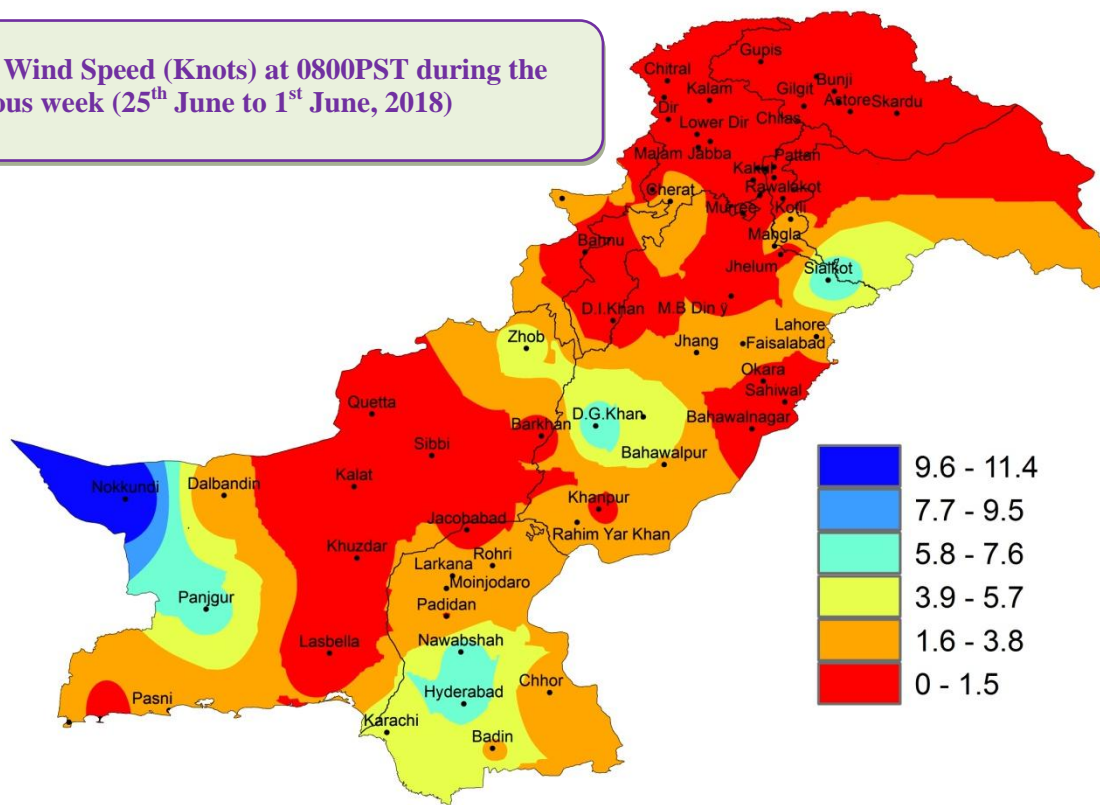
Mean Relative Humidity (%) during the
Previous week (25th June to 1st June, 2018)



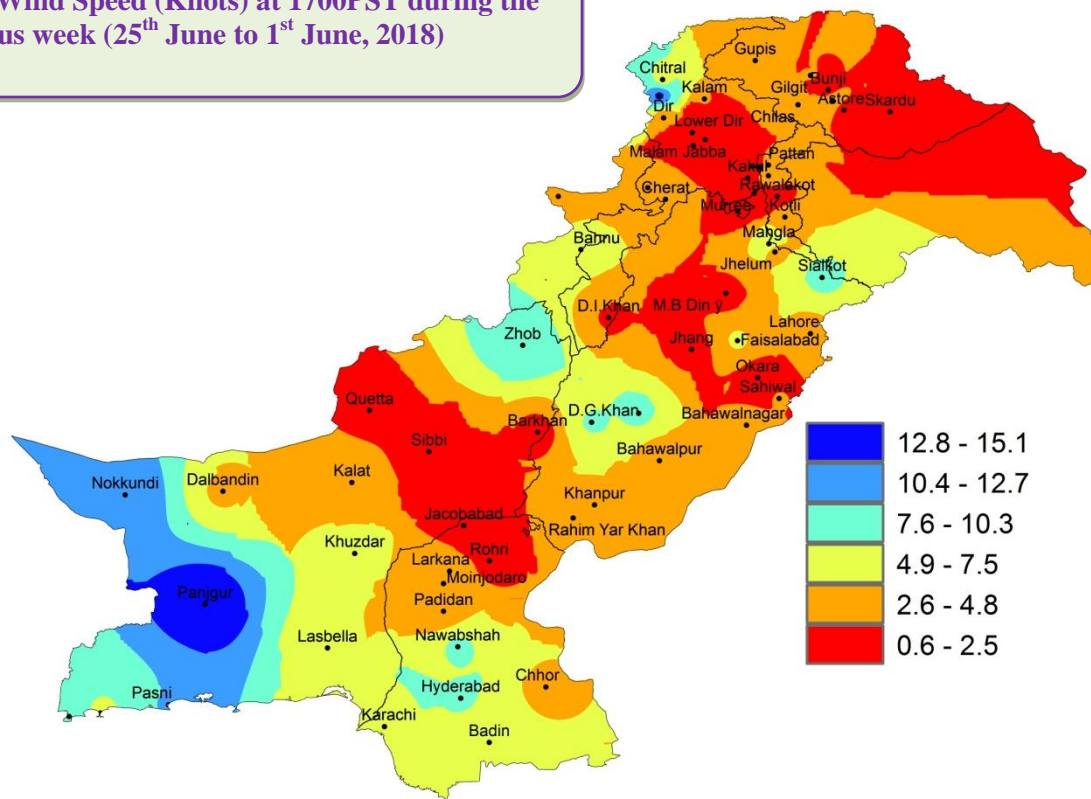
Total Growing Degree Days accumulated during the
Previous week (25th June to 1st June, 2018)



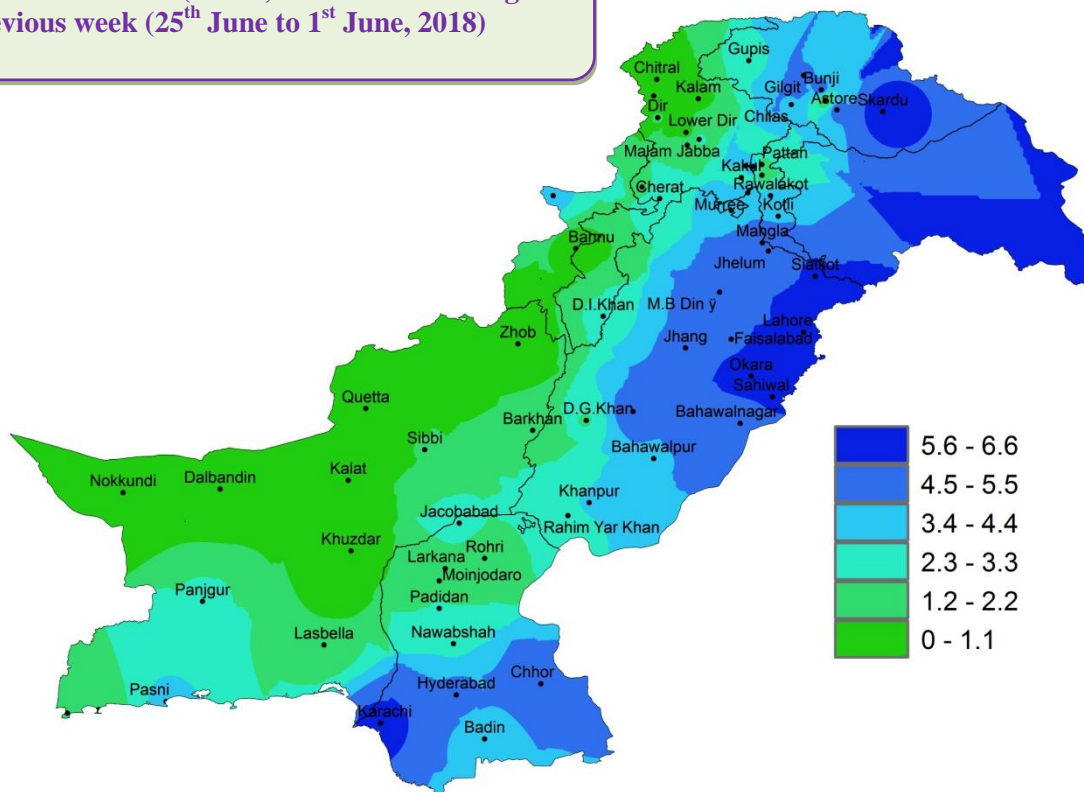
Mean Wind Speed (Knots) at 0800PST during the Previous week (25th June to 1st June, 2018)



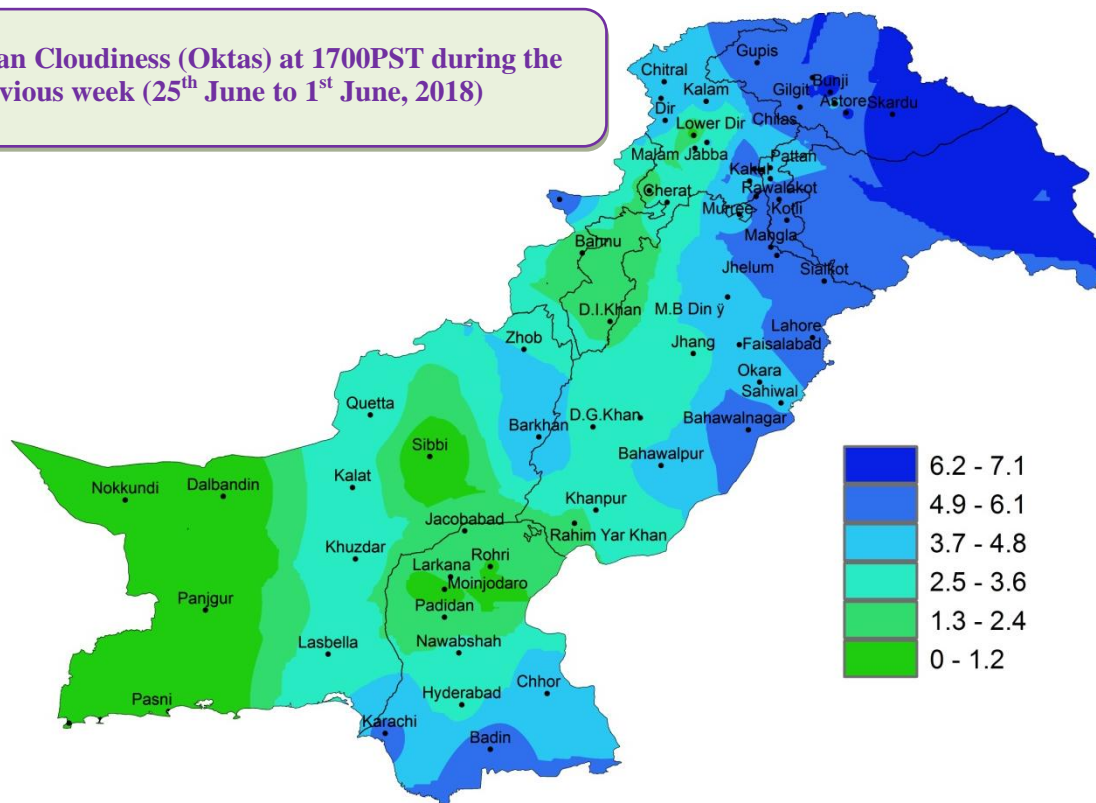
Mean Wind Speed (Knots) at 1700PST during the Previous week (25th June to 1st June, 2018)



Mean Cloudiness (Oktas) at 0800PST during the Previous week (25th June to 1st June, 2018)



Mean Cloudiness (Oktas) at 1700PST during the Previous week (25th June to 1st June, 2018)



Weekly Weather Advisory for Farmers**(2nd July to 8th July, 2018)**

Seasonal Low lies over North Balochistan with its trough extending eastwards. Monsoon currents from Arabian Sea are continuously penetrating upper parts of the country and likely to strengthen during next 24 hours.. A westerly wave is also present over upper parts of the country and likely to persist during next 2-3 days.

MONDAY**02-07-2018**

Rain-thundershower with gusty winds is expected at scattered places in Hazara, Rawalpindi, Gujranwala, Lahore, Sargodha, Faisalabad divisions, Islamabad and Kashmir, while at isolated places in Malakand, Peshawar, Kohat divisions and Gilgit-Baltistan during evening/night. Hot and dry weather is expected elsewhere in the country.

TUESDAY**03-07-2018**

Rain-thundershower with gusty winds is expected at a number of places in Malakand, Hazara, Rawalpindi, Gujranwala, Lahore, Sargodha, Faisalabad divisions, Islamabad, Gilgit-Baltistan and Kashmir, while at isolated places in Peshawar, Kohat, Bannu, D.I.Khan and Sahiwal divisions. Heavy falls are also expected at isolated places in Lahore, Gujranwala, Rawalpindi divisions and Kashmir. Hot and dry weather is expected elsewhere in the country.

WEDNESDAY**04-07-2018**

Rain-thundershower with gusty winds is expected at scattered places in KP, northeast Baluchistan (Quetta, Zhob, Sibbi, Naseerabad divisions), Punjab Islamabad, Gilgit-Baltistan and Kashmir. Hot and dry weather is expected elsewhere in the country.

THURSDAY**05-07-2018**

Rain-thundershower with gusty winds is expected at scattered places in northeast Baluchistan (Quetta,

Zhob, Sibbi, Naseerabad, Kalat divisions), Multan, D.G.Khan, Bahawalpur, Sukkur, Malakand, Hazara divisions, Gilgit-Baltistan and Kashmir. Hot and dry weather is expected elsewhere in the country.

FRIDAY**06-07-2018.**

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 Malakand division, Kashmir and Gilgit-Baltistan.

SATURDAY**07-07-2018**

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

SUNDAY**08-07-2018**

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 Kashmir and its adjoining hilly areas.

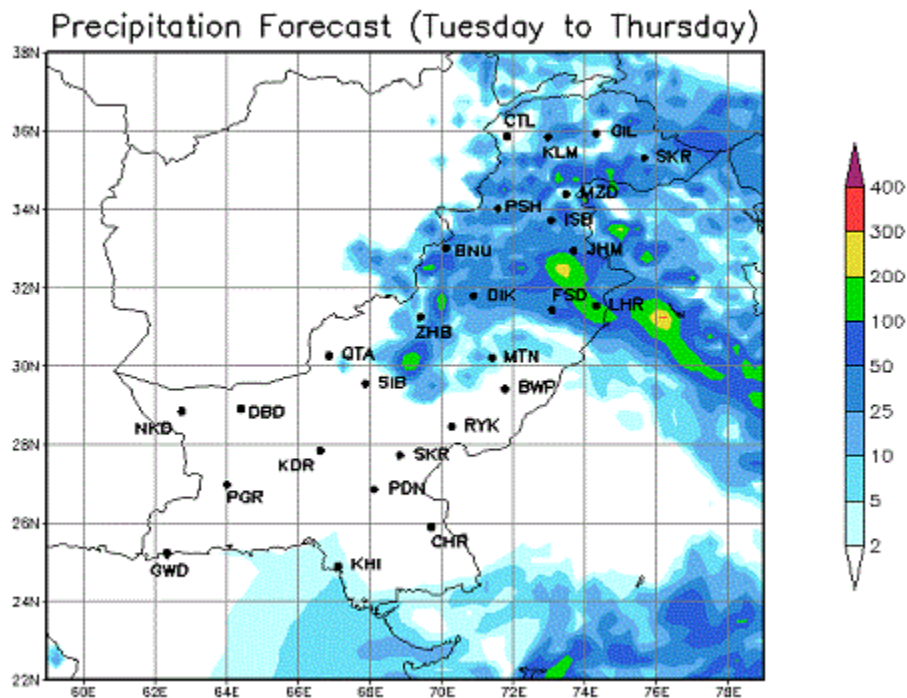
ADVISES FOR FARMERS

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.

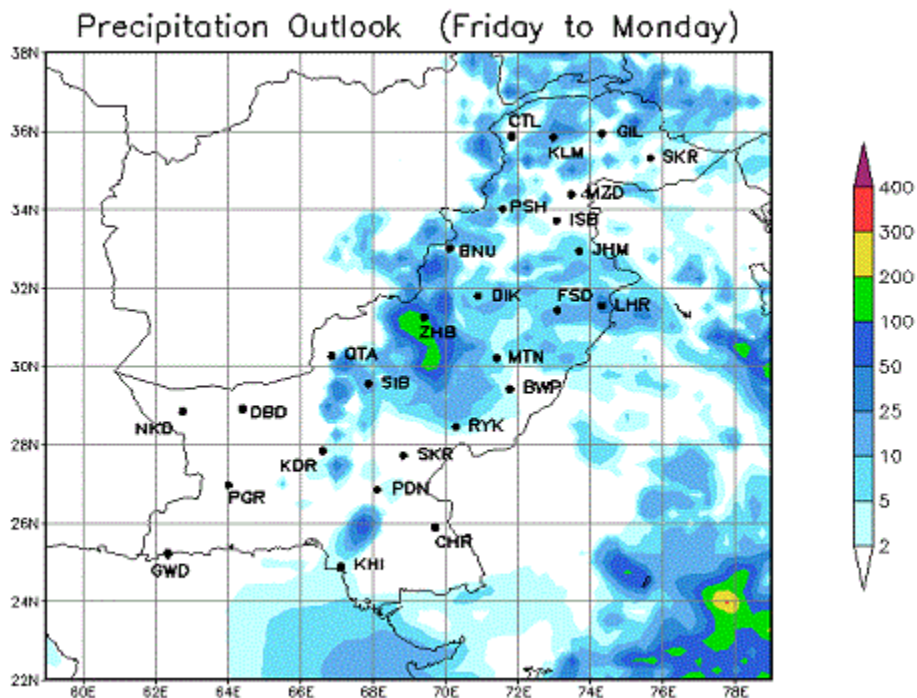
- Farmers of southern Punjab and Sindh are advised to complete the sowing of cotton and other Kharif crops to utilize the maximum soil moisture.
- Farmers of upper regions are advised to complete the cultivation of millet and sorghum in the upper regions because of the moisture availability in field.

Weather Outlook from (2nd July to 8th July, 2018)

The forecast from 2nd July to 4th July, 2018 shows that light to moderate rainfall is expected in GB, Kashmir, KP and North eastern Baluchistan . Heavy rainfall is expected at few places in Central Punjab.



The outlook from 5th July to 8th July, 2018 shows that light to moderate rainfall is expected at scattered places in the GB , Kashmir, Punjab, sindh and KP. Whereas heavy rainfall is expected at isolated places in North eastern Baluchistan.



National Weather Data of Selected Cities (Weekly Data from 25th June to 1st 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	21.1	25.5	53	8.80	80.8	5.3	6.3	1.1	1.4
Badin	34.8	38.0	69	36.01	181.9	3.7	5.6	3.7	5.4
Bahawalnagar	36.9	43.0	67	23.00	182.3	4.4	5.9	0.6	3.1
Bahawalpur	37.4	42.5	61	0.03	195.2	4.3	4.1	3.7	2.6
Balakot	31.3	37.0	59	29.00	142.3	3.3	5.7	0.3	0.9
Bannu	38.2	42.6	39	3.00	185.3	0.3	1.3	0.0	6.3
Barkhan	33.6	37.5	47	10.00	162.5	1.6	4.7	0.6	1.4
Bunji	31.3	36.7	35	1.00	149.1	5.4	7.0	1.4	0.9
Cherat	32.3	36.5	47	0.00	150.0	3.1	2.9	3.4	4.3
Chhor	38.1	41.0	61	88.00	186.0	5.1	4.0	2.9	4.3
Chilas	34.4	39.0	23	0.00	166.8	4.3	5.7	0.9	3.4
Chitral	33.2	37.0	39	0.01	143.9	0.3	4.6	1.1	6.3
D.G.Khan	38.6	42.5	49	0.00	195.1	2.1	2.9	6.6	7.7
D.I.Khan	38.1	44.0	53	0.00	193.0	2.6	2.3	0.9	2.3
Dalbandin	39.7	43.0	15	0.00	196.5	0.3	0.1	1.7	4.3
Dir	31.0	34.0	55	5.00	122.7	1.1	4.3	0.3	2.6
Drosh	34.1	38.0	30	1.30	148.5	0.7	4.0	0.9	13.6
Faisalabad	34.7	42.5	65	0.00	176.7	5.4	4.1	1.9	1.1
Garidopatta	30.8	37.0	53	1.20	145.6	1.9	4.9	0.0	4.0
Gawader	35.8	39.5	85	0.00	187.3	1.4	0.9	0.6	6.9
Gilgit	29.4	34.5	49	0.31	124.5	4.6	6.0	0.0	2.6
Gupis	25.9	31.0	41	6.00	106.3	2.9	5.4	0.9	3.9

Hyderabad	35.9	39.0	62	1.00	184.1	4.9	3.3	6.3	7.7
Islamabad	36.0	41.0	48	0.00	175.6	3.9	4.6	0.0	1.7
Jacobabad	39.9	44.0	54	4.00	202.5	2.6	1.7	0.6	0.6
Jhang	36.0	41.6	63	35.00	181.5	4.7	3.0	1.7	1.4
Jhelum	36.6	44.8	58	33.71	186.6	5.0	5.1	1.1	4.0
Jiwani	34.3	37.0	71	0.00	183.3	1.9	0.9	2.9	10.0
Kakul	29.9	35.0	49	59.01	133.0	2.9	4.1	0.0	1.7
Kalam	25.2	28.5	55	4.00	94.8	1.0	4.0	0.0	2.6
Kalat	29.0	33.0	33	0.00	125.0	0.6	2.9	0.0	4.0
Karachi	34.8	37.8	69	0.01	187.6	5.9	4.9	4.3	7.1
Khanpur	38.4	43.2	62	11.41	195.2	3.4	2.4	1.1	4.3
Khuzdar	34.3	39.0	31	13.40	167.0	0.3	3.0	0.3	5.4
Kotli	32.4	40.8	58	42.30	163.1	4.3	5.1	2.0	4.0
Lahore	34.4	42.2	70	83.21	175.1	5.9	5.6	1.7	3.7
Larkana	38.4	42.0	54	26.60	193.3	2.0	2.1	3.1	4.0
Lasbella	39.1	42.0	57	28.00	200.1	1.1	2.6	0.0	5.1
Lower Dir	37.5	41.5	42	6.00	177.5	0.4	0.7	0.6	2.0
M.B Din	36.1	44.0	63	64.01	182.3	4.9	4.3	0.6	1.7
Malam Jabba	22.4	25.0	59	12.00	97.5	2.4	3.9	0.0	0.6
Mangla	36.5	44.5	52	9.71	185.7	5.3	5.3	1.7	6.3
Mir Khani	34.9	38.0	36	1.00	164.7	0.4	4.0	0.6	5.0
Moinjodaro	39.0	42.5	53	2.00	199.0	1.6	0.0	3.1	4.0
Multan(PBO)	36.8	41.8	56	0.22	192.6	5.3	2.7	5.1	8.0
Murree	23.8	27.5	60	32.02	106.2	4.0	5.0	1.4	0.6
Muzaffarabad	31.1	38.2	54	4.00	138.5	4.3	4.4	0.3	1.7
Nawabshah	38.6	43.5	50	0.01	194.5	3.1	2.9	6.6	8.0

Nokkundi	40.4	43.5	10	0.00	205.5	0.0	0.0	11.4	12.6
Okara	34.9	42.5	71	28.00	176.8	6.3	4.3	0.9	1.1
Padidan	38.4	42.5	56	3.70	195.8	2.3	2.0	1.4	2.9
Panjgur	39.7	43.0	23	0.00	195.0	2.4	0.0	6.3	15.1
Parachinar	28.6	31.0	62	15.00	126.9	3.9	5.6	3.0	3.3
Pasni	34.5	37.0	82	0.00	182.5	3.6	0.9	2.4	10.4
Pattan	35.5	39.5	43	6.00	155.3	1.7	3.7	0.0	3.9
Peshawar	38.0	42.6	52	0.00	184.7	1.9	2.1	0.9	2.6
Quetta	34.2	36.0	29	0.00	156.2	0.9	2.9	1.5	3.6
R. Y. Khan	39.9	5.0	57	0.00	203.7	2.9	2.3	2.3	3.7
Rawalakot	25.1	30.0	74	11.70	102.1	3.4	5.7	0.3	1.1
Rawalpindi	37.3	41.5	52	0.00	177.2	4.1	5.1	0.6	0.8
Rohri	39.2	43.5	47	20.00	203.3	1.6	1.1	2.0	1.7
Sahiwal	34.1	42.6	62	40.01	174.0	5.6	4.7	1.1	2.6
Saidu Sharif	32.1	36.5	53	45.00	136.1	1.9	2.7	0.0	1.1
Sialkot	34.7	42.2	58	66.80	166.9	5.6	5.0	7.3	8.3
Sibbi	44.4	49.0	46	2.00	214.3	1.1	0.0	0.0	1.4
Skardu	21.8	28.6	63	29.22	85.8	6.6	7.1	0.3	1.4
Tandojam	37.1	39.0	68	7.20	182.3	2.9	3.7	1.7	2.8
Usta muhamad	43.1	45.0	51	0.01	216.8	2.4	1.6	0.0	3.4
Zhob	33.1	35.0	40	8.00	162.8	0.0	3.6	4.3	10.1

*** 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 2012-2014)