

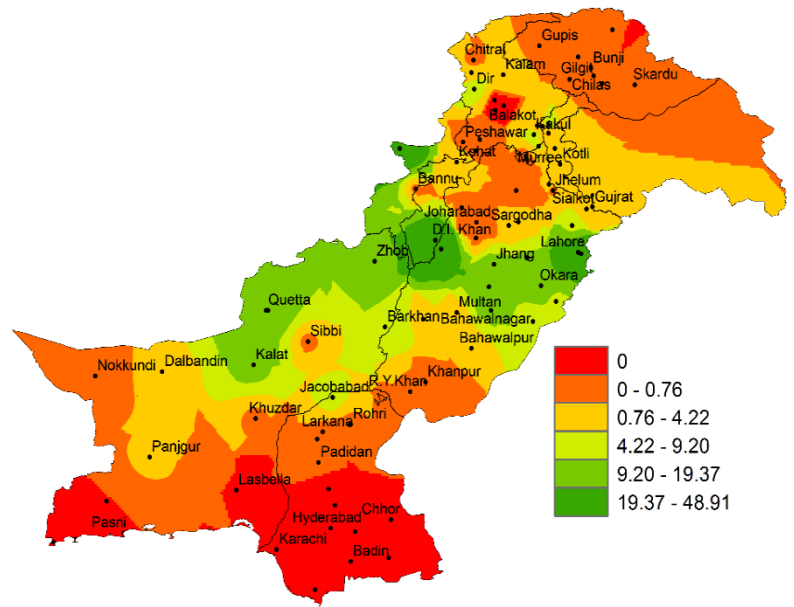
Weekly Weather and Crop Bulletin for Pakistan

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PAKISTAN METEOROLOGICAL
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Rainfall Distribution (mm) during the previous
Week (19th March to 25th March, 2018)



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
Weather Outlook	10
National data for selected stations	11-13
AgMIP findings	14
Press Release (MoU with EFERT)	15

Highlights of Past Weather (19th March to 25th March, 2018)

Above normal night temperatures were observed all over the country.

Province wise rainfall distribution reported as follows:

- Light to moderate rainfall observed in Punjab, KP and Balochistan during the previous week.
- Light rainfall observed at most places in GB during the previous week.
- Light rainfall observed at isolated places in Sindh during the previous week.

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

Editor-in-Chief: Asma Jawad Hashmi (Director)

Editor: Khalida Noureen (Meteorologist)

Past Weather of Provinces (19th March to 25th March, 2018)

Punjab

Light to moderate rainfall observed at most places in Punjab during the previous week. Weekly maximum and minimum temperatures recorded as 29.3°C & 14.8°C respectively. For the recent week on average 119.3 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 57% and wind speed in the morning/evening recorded as 1.5/3.6 knots. During the previous week highest amount of rainfall was reported as 37.0 mm at Murree & lowest minimum temperature was recorded as 3.0°C at Murree.

Balochistan

Light to moderate rainfall observed at most places in Balochistan during the previous week. Weekly maximum and minimum temperatures recorded as 27.8°C & 13.3°C respectively. For the recent week on average 108.6 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 47% and wind speed in the morning/evening recorded as 1.2/5.4 knots. During the previous week highest amount of rainfall was reported as 19.0 mm at Quetta & lowest minimum temperature was recorded as 1.0°C at Kalat.

Khyber Pakhtunkhwa

Light to moderate rainfall observed at most places in Khyber Pakhtunkhwa during the previous week. Weekly maximum and minimum temperatures recorded as 23.7°C & 9.5°C respectively. For the recent week on average 87.8 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 56% and wind speed in the morning/evening recorded as 1.2/2.8 knots. During the previous week highest amount of rainfall was reported as 49 mm at Parachinar &

lowest minimum temperature was recorded as -0.5°C at Kalam.

Gilgit-Baltistan and Azad Jammu & Kashmir

Light rainfall observed at most places in Gilgit-Baltistan and Azad Jammu & Kashmir during the previous week. Weekly maximum and minimum temperatures recorded as 22.0°C & 7.2°C respectively. For the recent week on average 79.1 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 46% and wind speed in the morning/evening recorded as 0.7/2.3 knots. During the previous week highest amount of rainfall was reported as 6.21 mm at Bagrote & lowest minimum temperature was recorded as -2.0°C at Astore.

Sindh

Light rainfall observed at isolated places in Sindh during the previous week. Weekly maximum and minimum temperatures recorded as 34.9°C & 18.0°C respectively. For the recent week, on average 149.9 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 47% and wind speed in the morning/evening recorded as 1.3/4.0 knots. During the previous week highest amount of rainfall was reported as 7.0 mm at Jacobabad & lowest minimum temperature was recorded as 14°C at Padidan.

Past Weather for Major Agricultural Plains (19th March to 25th March, 2018)

Rawalpindi (Potohar region)

Rainfall reported as Trace (not measureable) from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 2.1/3.4 Oktas while average relative humidity observed as 63.4%. Mean night time temperature recorded as 12.7°C & for the recent week 106.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/1.1 knots.

Faisalabad (Central Punjab)

Rainfall reported as 10.0 mm from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 2.1/2.6 Oktas while average relative humidity observed as 56%. Mean night time temperature recorded as 15.8°C & for the recent week 123.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.2/1.9 knots.

Tandojam (Lower Sindh)

Dry weather reported from Tandojam during the week; however, cloudiness in the morning/evening recorded as 0.4/0.6 Oktas while average relative humidity observed as 49%. Mean night time temperature recorded as 15.4°C & for the recent week 143.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.5/1.7 knots.

Usta Muhammad (Eastern Balochistan)

Rainfall reported as 5.0 mm from Usta Muhammad during the week; however, cloudiness in the morning/evening recorded 0.4/0.0 Oktas while average relative humidity observed as 76%. Mean night time temperature recorded as 17.5°C & for the recent week 149.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.8/1.4 knots.

Quetta (Northern Baluchistan)

Rainfall reported as 7.6 mm from Quetta during the week; however, cloudiness in the morning/evening recorded as 3.0/3.9 Oktas while average relative humidity observed as 39%. Mean night time temperature recorded as 8.1°C & for the recent

week 61.6 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.4/3.6 knots.

Past Weather for Sub-Regional Agricultural Plains (19th March to 25th March, 2018)

Multan

Rainfall reported as 1.22 mm from Multan during the week; however, cloudiness in the morning/evening recorded as 3.4/2.4 Oktas while average relative humidity observed as 57%. Mean night time temperature recorded as 16.5°C & for the recent week 125.7 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.3/5.4 knots.

Lahore

Rainfall reported as 15.8 mm from Lahore during the week; however, cloudiness in the morning/evening recorded as 2.6/3.0 Oktas while average relative humidity observed as 58%. Mean night time temperature recorded as 17.3°C & for the recent week 125.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.4/4.9 knots.

Zhob

Rainfall reported as 14.0 mm from Zhob during the week; however, cloudiness in the morning/evening recorded as 2.4/2.9 Oktas while average relative humidity observed as 55%. Mean night time temperature recorded as 10.9°C & for the recent week 79.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.9/6.7 knots.

Murree

Rainfall reported as 4.62 mm from Murree during the week; however, cloudiness in the morning/evening recorded as 2.9/2.7 Oktas while average relative humidity observed as 58%. Mean night time temperature recorded as 6.3°C & for the recent week 43.7 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.3/2.0 knots.

D.I. Khan

Rainfall reported as 27.0 mm from D.I. Khan during the week; however, cloudiness in the morning/evening recorded as 4.6/3.9 Oktas while

average relative humidity observed as 67. Mean night time temperature recorded as 16.2°C & for the recent week 125.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/1.7 knots.

Peshawar

Rainfall reported as 0.03 mm from Peshawar during the week; however, cloudiness in the morning/evening recorded as 3.9/5.7 Oktas while average relative humidity observed as 59%. Mean night time temperature recorded as 14.9°C & for the recent week 112.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/2.0 knots.

Kalam

Rainfall reported as 3.0 mm from Kalam during the week; however, cloudiness in the morning/evening recorded as 3.4/5.4 Oktas while average relative humidity observed as 57%. Mean night time temperature recorded as 0.8°C. Wind speed recorded in the morning/evening as 0.0/1.4 knots.

Gilgit

Rainfall reported as Trace (Not measureable) from Gilgit during the week; However, cloudiness in the morning/evening recorded as 4.9/4.4 Oktas while average relative humidity observed as 44%. Mean night time temperature recorded as 5.9°C & for the recent week 69.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/4.0 knots.

Skardu

Dry weather reported from Skardu during the week; However, cloudiness in the morning/evening recorded as 5.4/5.9 Oktas while average relative humidity observed as 39%. Mean night time temperature recorded as 3.3°C. Wind speed recorded in the morning/evening as 0.0/2.9 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)

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

Wheat (*Galaxy*); *Very Good, Milk Maturity* stage started, irrigated Conditions.

Lower Sindh (Tandojam)

There is presently no crop in the fields of RAMC Tandojam.

Northern Baluchistan (Quetta)

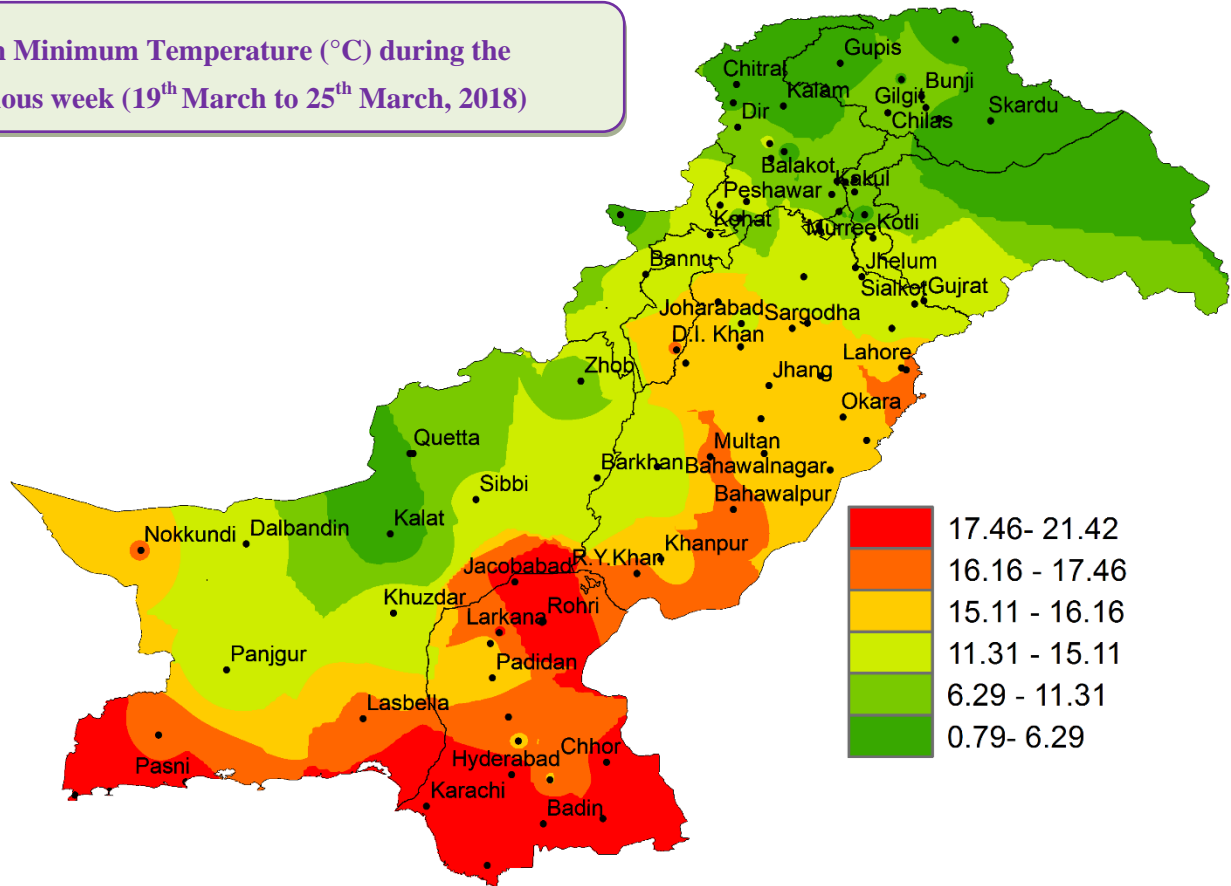
There is presently no crop grown in the fields of RAMC Quetta.

Eastern Baluchistan (Usta Muhammad)

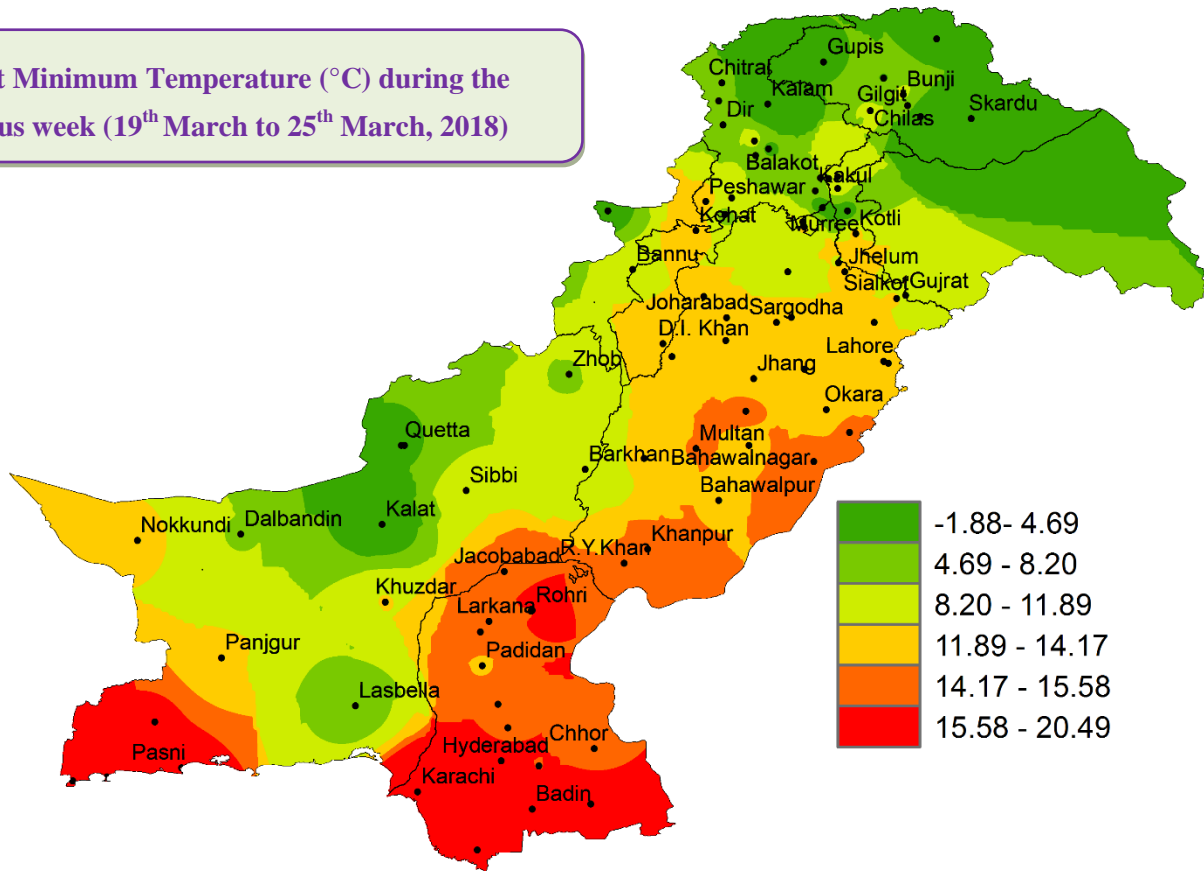
There is presently one crop grown in the fields of RAMC Usta Muhammad.

Wheat (*Galaxy*); *Good, at Wax Maturity* stage.

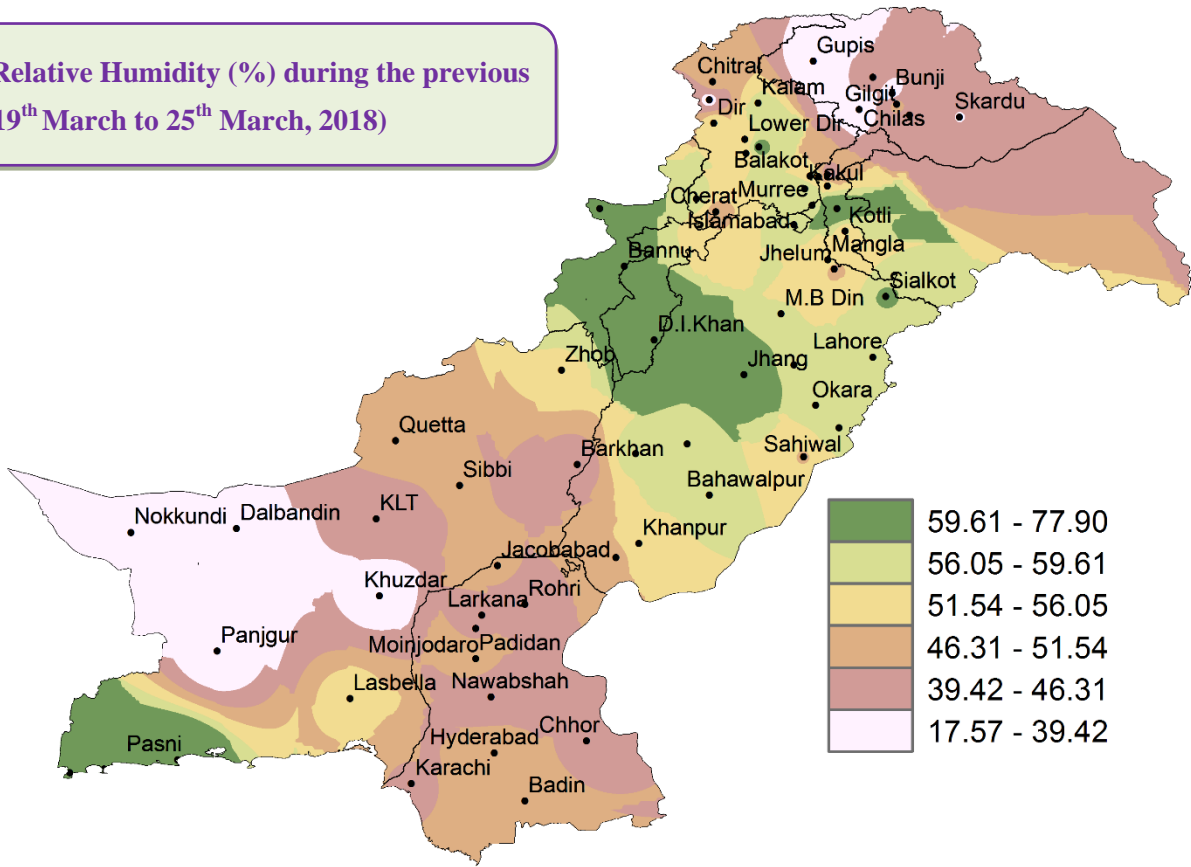
Mean Minimum Temperature (°C) during the Previous week (19th March to 25th March, 2018)



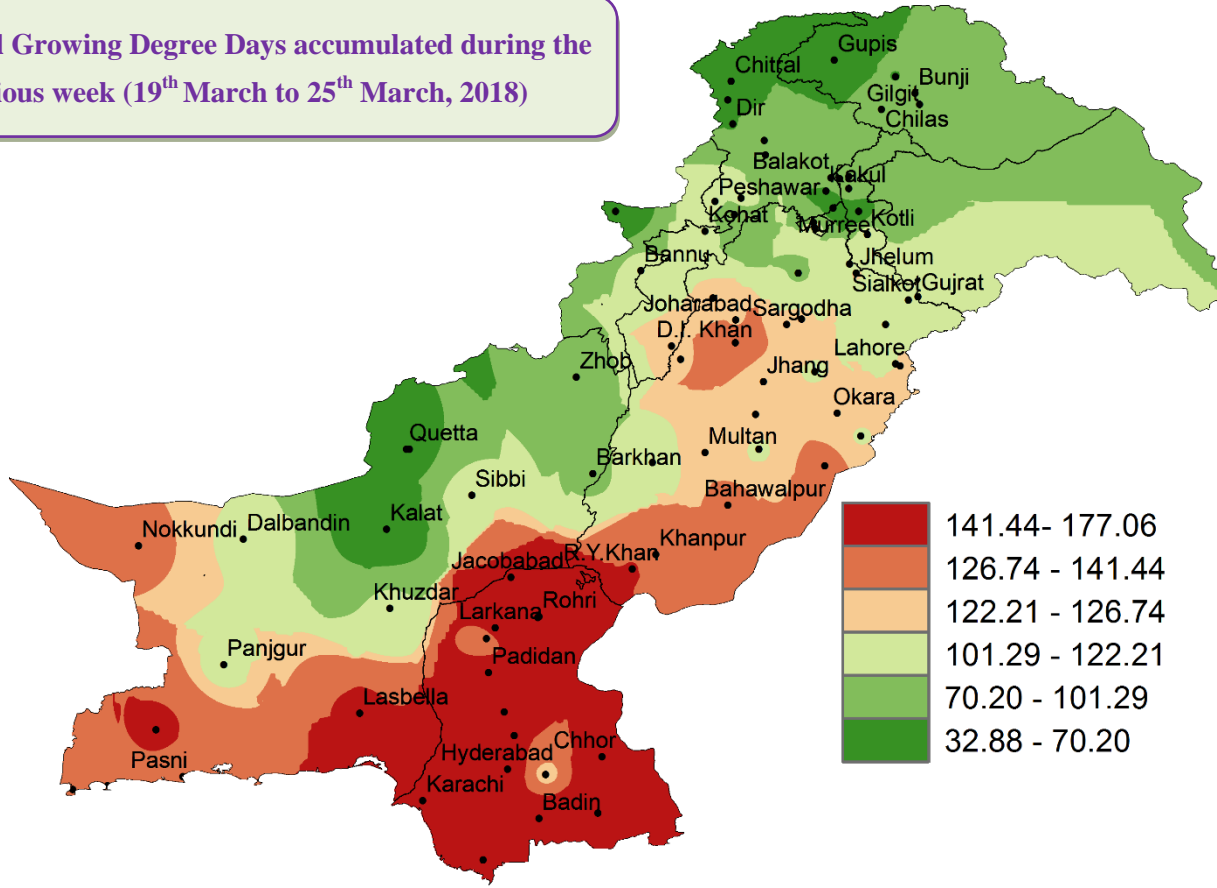
Lowest Minimum Temperature (°C) during the Previous week (19th March to 25th March, 2018)



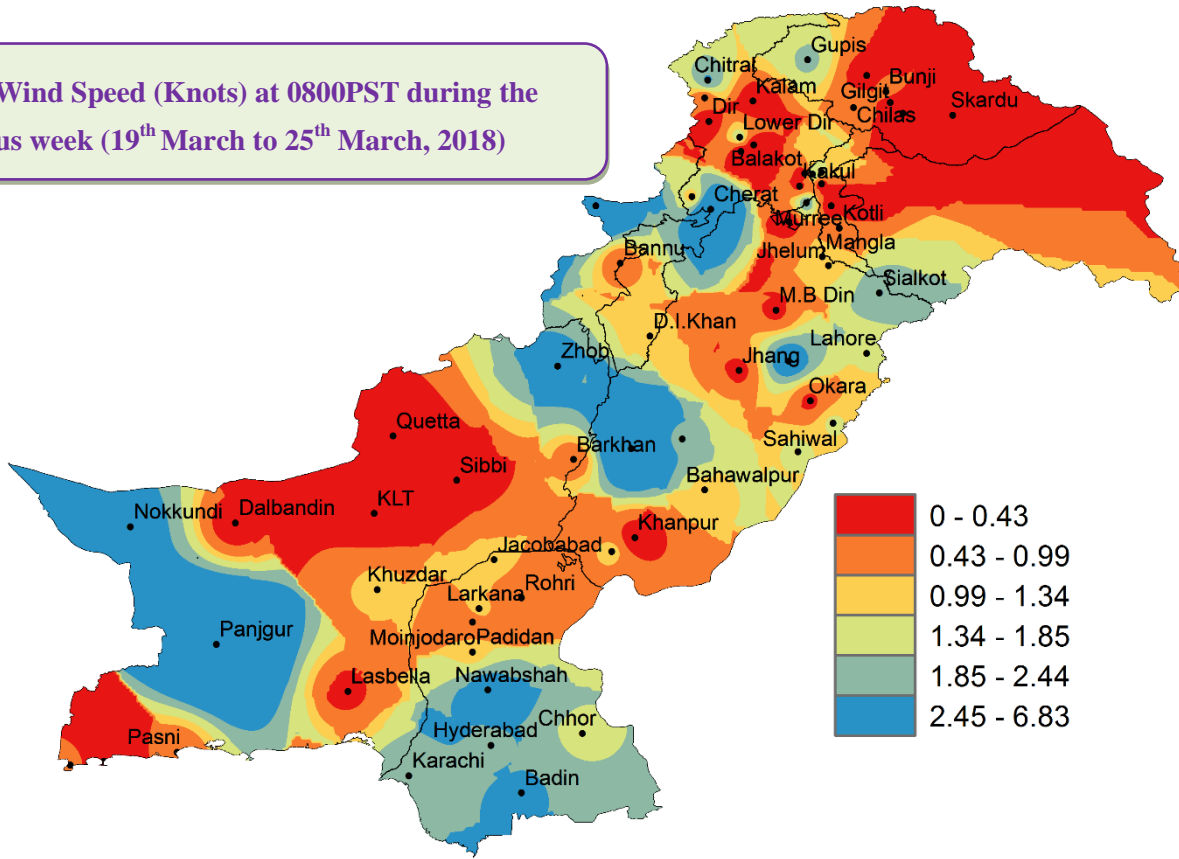
Mean Relative Humidity (%) during the previous week (19th March to 25th March, 2018)



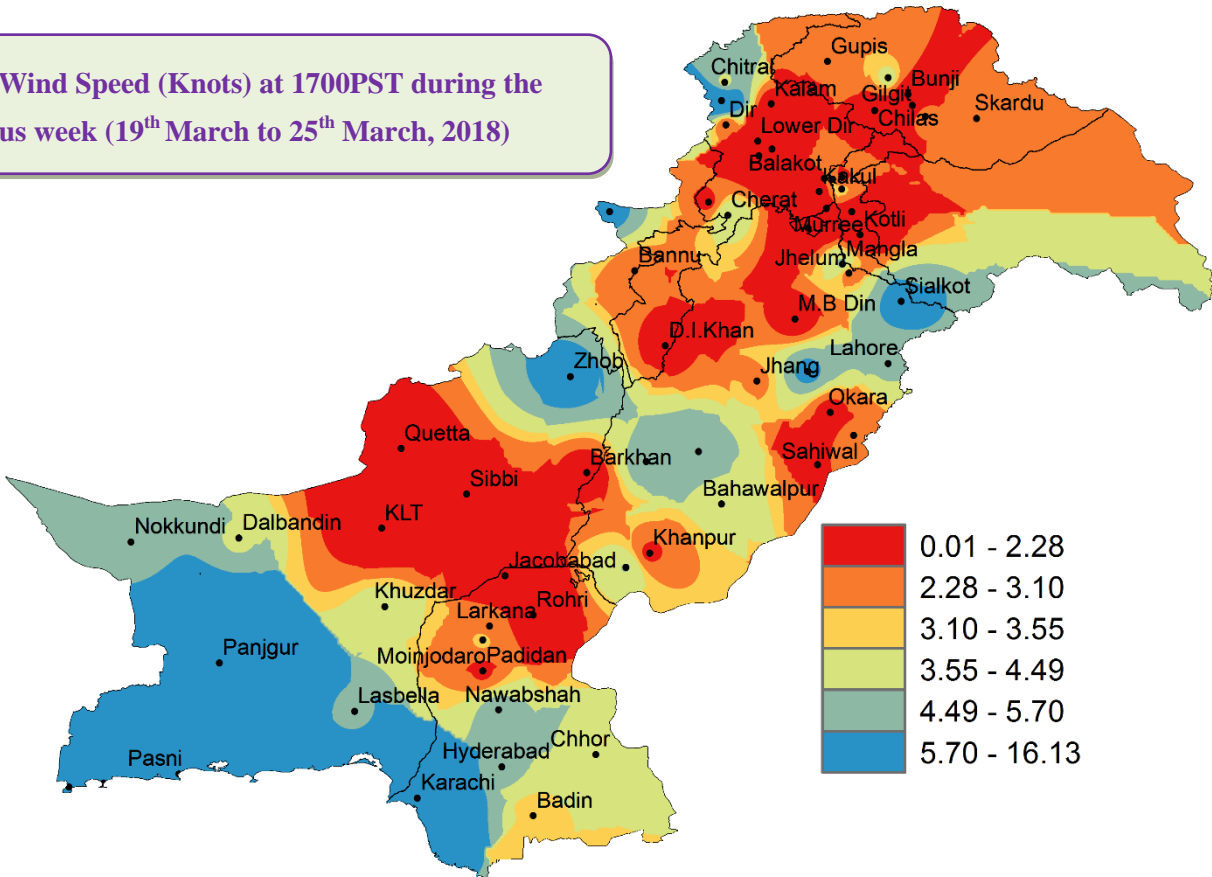
Total Growing Degree Days accumulated during the previous week (19th March to 25th March, 2018)



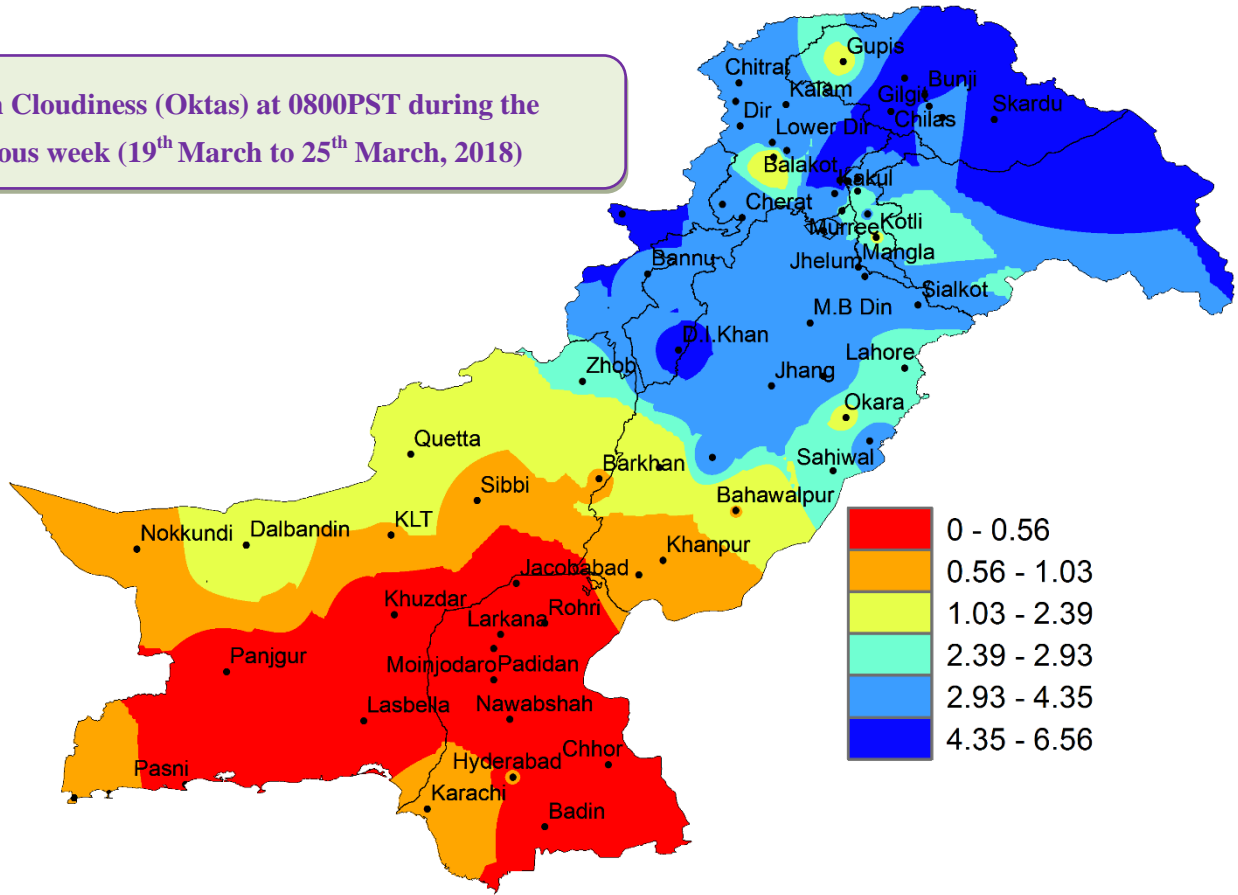
Mean Wind Speed (Knots) at 0800PST during the previous week (19th March to 25th March, 2018)



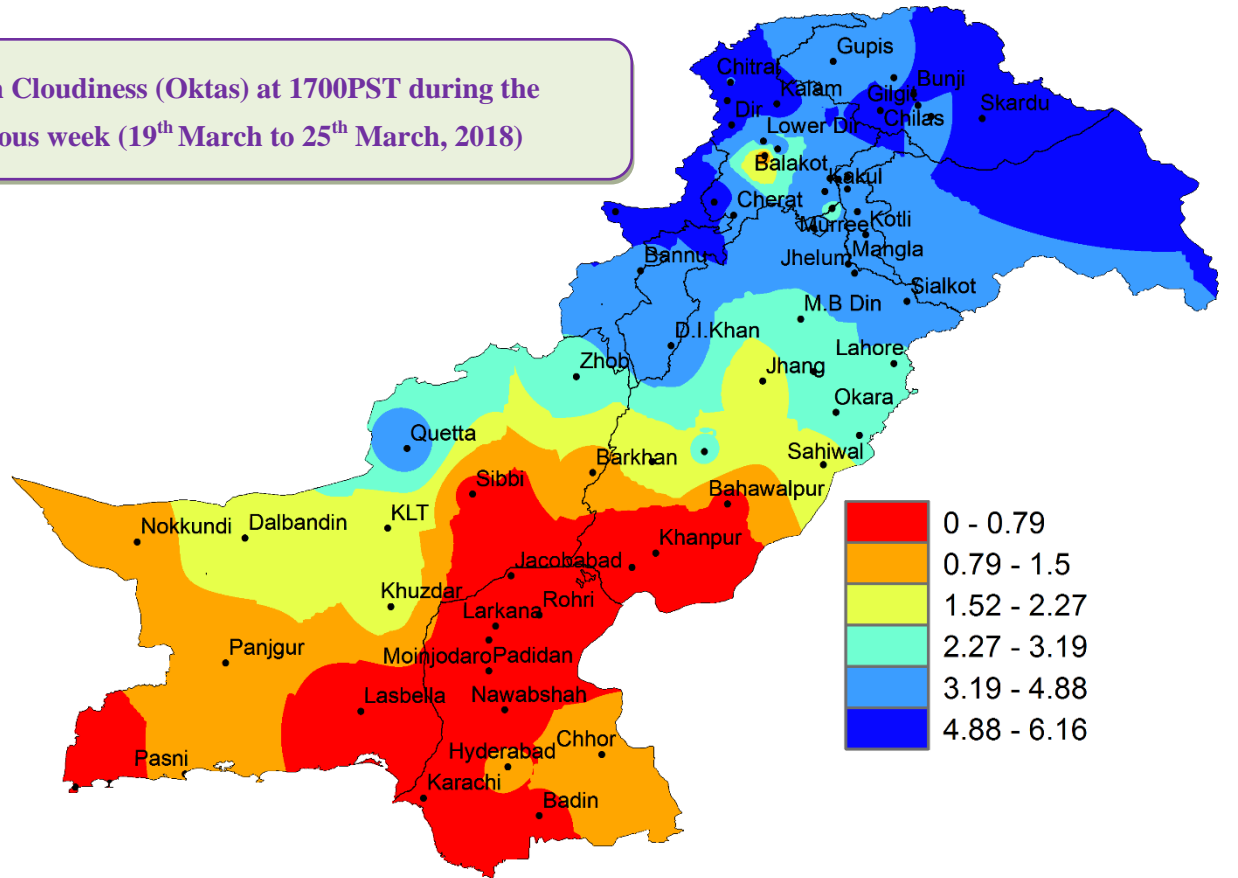
Mean Wind Speed (Knots) at 1700PST during the previous week (19th March to 25th March, 2018)



Mean Cloudiness (Oktas) at 0800PST during the previous week (19th March to 25th March, 2018)



Mean Cloudiness (Oktas) at 1700PST during the previous week (19th March to 25th March, 2018)



Weekly Weather Advisory for Farmers
(26th March to 1st April, 2018)

Continental air is prevailing over most parts of the country.

MONDAY
(26-03-2018)

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

TUESDAY
(27-03-2018)

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

WEDNESDAY
(28-03-2018)

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

THURSDAY
(29-03-2018)

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

FRIDAY
(30-03-2018)

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

SATURDAY
(31-03-2018)

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

SUNDAY
(01-04-2018)

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

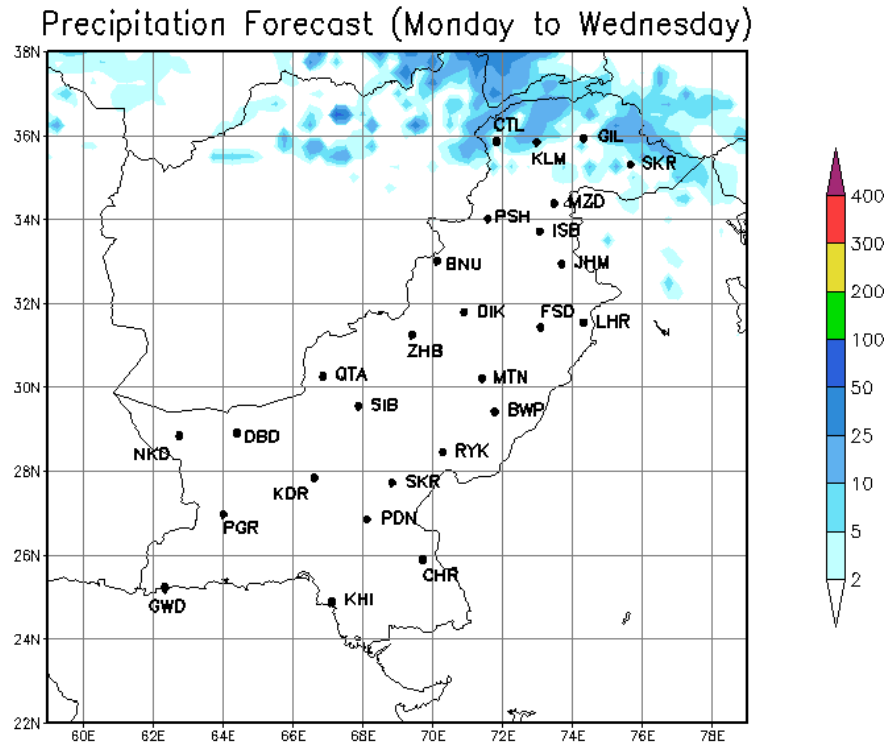
ADVISES FOR FARMERS

During the last week, light to moderate rainfall was observed in most of the agricultural plains of the country. In the next week dry weather is expect in the agricultural plains of the country. Accordingly, following advises are suggested for the farming community.

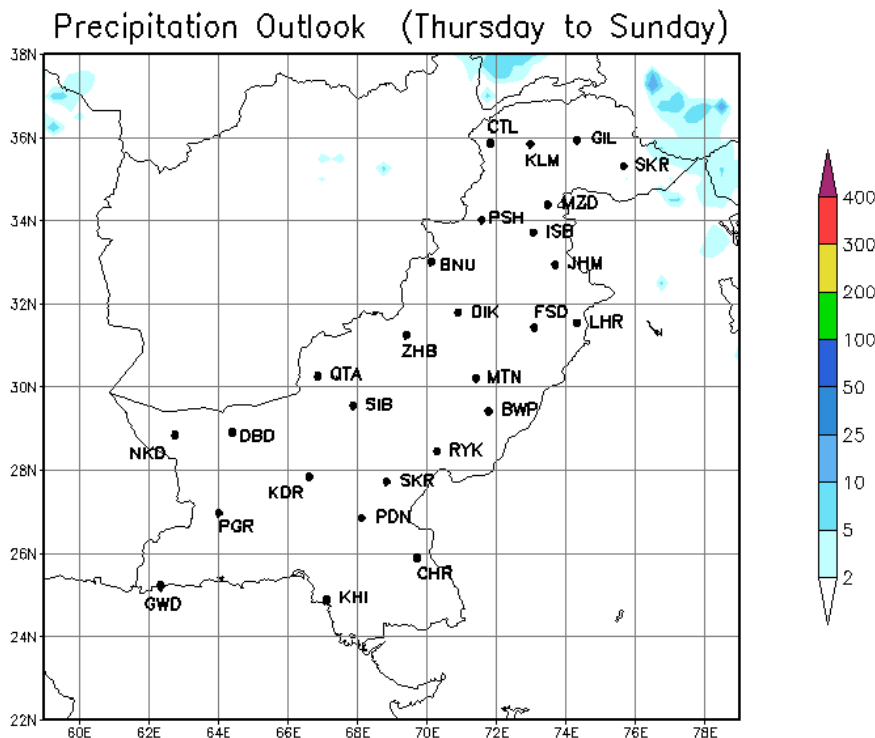
- Crops/Nurseries may be irrigated according to the rainfall prediction.
- Removal of weeds from the fields must be ensured.
- Necessary precautionary measures may be taken to protect crops/nurseries from effects of weather extremes.

Weather Outlook from 26th March to 1st April, 2018

The outlook for the period 26th to 28th March, 2018 shows that the dry weather is expected in most parts of the country, however light to moderate rainfall is expected at isolated places in of upper KP and GB.



The outlook for the period 29th March to 1st April, 2018 shows that dry weather is expected to prevail in the country.



National Weather Data of Selected Cities (19th March to 25th March, 2018)

Stations	Minimum 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	Lowest							
Astore	1.4	-2.0	***	46	0.41	4.0	4.4	0.3	2.9
Badin	20.9	20.0	161.1	48	0.00	0.4	0.7	2.6	3.1
Bahawalnagar	16.1	15.5	129.6	51	4.51	2.9	1.9	1.4	2.3
Bahawalpur	16.4	14.1	128.7	59	1.00	1.0	0.6	1.1	3.7
Balakot	9.5	8.3	86.6	55	2.00	5.9	4.6	0.0	2.0
Bannu	13.8	11.0	110.0	61	0.00	3.7	4.3	0.6	2.3
Barkhan	11.8	9.0	96.5	42	9.00	1.0	1.3	0.6	1.4
Bunji	11.5	9.4	86.6	34	0.00	5.4	5.7	0.9	0.9
Cherat	8.8	7.0	67.3	49	0.00	4.0	4.6	4.6	4.6
Chhor	17.6	15.0	153.9	45	0.00	0.1	1.1	1.7	4.0
Chilas	9.9	8.5	87.0	36	0.00	5.6	5.6	0.9	1.4
Chitral	6.1	5.2	64.2	50	0.00	4.0	4.9	2.6	4.0
D.G.Khan	12.9	12.3	117.2	59	3.20	1.4	1.7	5.1	5.1
D.I.Khan	16.2	13.5	125.3	67	27.00	4.6	3.9	1.1	1.7
Dalbandin	12.4	8.0	121.3	35	1.20	1.5	1.9	0.0	4.3
Dir	7.6	6.5	69.5	56	8.00	3.7	5.1	0.0	2.1
Drosh	6.0	5.0	62.6	36	1.20	3.6	5.3	0.6	10.0
Faisalabad	15.8	14.5	123.5	56	10.00	2.1	2.6	1.2	1.9
Garidopatta	10.4	9.5	93.7	57	0.00	2.3	3.9	0.0	3.4
Gawader	20.6	19.5	131.0	66	0.00	0.7	0.5	0.0	10.7
Gilgit	5.9	4.5	69.3	44	0.01	4.9	4.4	0.0	4.0
Gupis	4.8	4.0	47.8	32	0.00	2.1	3.9	2.0	2.6
Hyderabad	19.3	18.0	156.0	50	0.00	0.6	0.9	2.3	4.9

Islamabad	11.7	9.5	98.7	59	0.01	3.1	3.9	0.0	0.3
Jacobabad	17.7	15.0	143.3	48	7.00	0.6	0.3	1.1	0.6
Jhang	15.2	13.6	123.2	65	11.40	3.7	1.6	0.3	2.9
Jhelum	14.9	12.8	123.5	51	0.70	3.6	3.6	1.3	2.6
Jiwani	20.5	19.0	141.4	63	0.00	0.9	0.6	0.6	8.3
Kakul	6.7	5.0	66.4	58	6.01	3.7	4.1	0.3	1.4
Kalam	0.8	-0.5	***	57	3.00	3.4	5.4	0.0	1.4
Kalat	3.3	1.0	37.5	43	12.00	1.0	1.7	0.0	0.6
Karachi	21.4	20.5	154.9	46	0.00	0.9	0.6	2.3	14.0
Khanpur	16.0	14.5	137.4	54	0.00	0.7	0.0	0.0	2.0
Khuzdar	13.8	12.0	106.3	35	0.00	0.0	1.7	1.1	4.0
Kotli	14.0	12.5	112.3	54	2.80	2.3	3.9	0.6	0.9
Lahore	17.3	14.0	125.8	58	15.80	2.6	3.0	1.4	4.9
Larkana	17.7	14.5	147.3	46	0.01	0.0	0.3	1.1	2.6
Lasbella	16.3	5.4	144.8	55	0.00	0.0	0.3	0.3	5.4
Lower Dir	12.6	9.5	101.4	52	0.00	3.6	3.7	1.7	2.0
M.B Din	15.2	13.5	123.9	56	1.01	4.0	2.7	0.3	1.4
Malam Jabba	4.1	3.5	***	62	0.00	3.4	3.6	0.0	0.0
Mangla	13.5	11.7	114.6	53	0.81	4.1	4.4	1.1	4.9
Mir Khani	8.1	6.0	76.7	49	0.40	3.6	4.7	0.0	1.7
Moinjodaro	15.6	15.0	137.0	46	0.01	0.0	0.0	0.7	3.3
Multan(PBO)	16.5	14.3	125.7	57	1.22	3.4	2.4	2.3	5.4
Murree	6.3	3.0	43.7	58	4.62	2.9	2.7	2.3	2.0
Muzaffarabad	9.0	8.0	87.4	55	2.50	3.7	4.9	2.0	3.4
Nawabshah	17.4	15.5	156.7	42	0.00	0.4	0.6	3.1	5.1
Nokkundi	16.2	12.5	129.1	18	0.01	0.9	1.4	2.9	4.6

Okara	16.0	12.0	124.7	57	15.70	2.1	2.4	0.3	1.7
Padidan	15.5	14.0	144.0	49	0.00	0.0	0.0	1.1	2.0
Panjgur	14.1	12.0	119.8	30	1.00	0.3	1.1	6.9	16.1
Parachinar	3.7	2.0	32.8	78	49.00	6.6	6.2	5.6	6.3
Pasni	17.9	16.5	133.3	70	0.00	0.3	1.1	0.6	9.0
Pattan	11.5	9.0	99.5	39	7.00	4.0	4.0	1.4	1.7
Peshawar	14.9	13.5	112.5	59	0.03	3.9	5.7	1.1	2.0
Quetta	8.1	6.8	61.6	39	7.60	3.0	3.9	2.4	3.6
Rahim Yar Khan	16.4	14.5	142.0	50	0.00	0.9	0.1	1.1	4.6
Rawalakot	4.7	3.0	49.2	69	2.21	3.0	4.3	0.0	1.4
Rawalpindi	12.7	11.5	106.5	63	0.01	2.1	3.1	0.0	1.1
Rohri	18.6	17.0	152.1	43	0.01	0.0	0.0	0.6	1.1
Sahiwal	16.0	15.0	121.8	59	8.02	3.3	2.6	1.4	2.6
Saidu Sharif	8.4	7.0	80.9	54	0.00	1.0	0.7	0.0	0.0
Sialkot	14.1	12.4	113.7	60	3.40	3.0	4.0	2.3	6.6
Sibbi	12.9	11.0	120.5	47	0.00	0.6	0.6	0.0	1.7
Skardu	3.3	1.0	***	39	0.00	5.4	5.9	0.0	2.9
Tandojam	15.4	13.5	143.8	49	0.00	0.4	0.6	0.5	1.7
Usta.M	17.5	16.0	149.8	76	5.00	0.4	0.0	0.8	1.4
Zhob	10.9	8.0	79.5	55	14.00	2.4	2.9	2.9	6.7

*** Shows that data was not available.

*Trace shows not-measurable data

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)



MoU signed with Engro Fertilizers Ltd, Karachi for Provision of Climate Services to the Farmers of Punjab and Sindh

A signing ceremony of “Memorandum of Understanding (MoU) between Pakistan Meteorological Department (PMD) and Engro Fertilizers Limited (EFERT), Karachi” was held at PMD headquarters office Islamabad today on 26th March, 2018. The team of experts of PMD (including Chief Meteorologist, Research & Development and Director of National Agromet Centre) was led by Dr Ghulam Rasul, Director General, PMD while the EFERT team was led by Dr Muhammad Umair Aslam, Desktop Agronomist, Agri Business Solutions Division, Engro Fertilizer Limited, Karachi.



PMD and EFERT will establish a Farmers Advisory Service for Wheat-Rice belt of Punjab and Sindh provinces. Mainly EFERT would acquire weather forecast from PMD and will prepare advisory for the farmers in consultation with agriculture experts accordingly. Besides, field staff of EFERT will update PMD about the actual ongoing agronomic conditions on regular basis. EFERT will support PMD for maintenance / operation of the agromet network and explore resources for expansion of network.

At the end of the ceremony, representatives of the institutions thanked each other for taking such initiative to strengthen the cooperation between two organizations for providing comprehensive advisory services to the farmers of major agricultural plains of the country.