

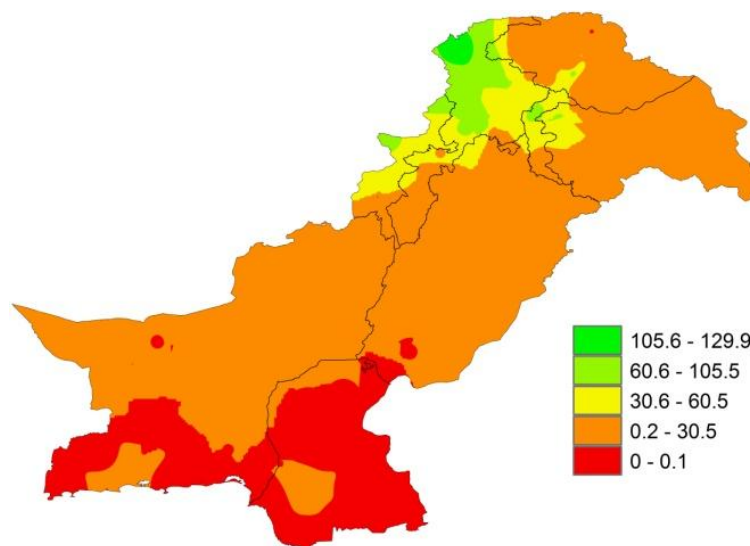
Weekly Weather and Crop Bulletin for Pakistan

**NATIONAL AGROMET CENTRE
PAKISTAN METEOROLOGICAL
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Rainfall Distribution (mm) during the
Previous Week (from 30th January to 5th February, 2017)



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Highlights of Past Weather (from 30th January to 5th February, 2017)

Slightly below normal night temperatures reported from most parts of the country.

Province wise distribution of rainfall reported as follows:

- Moderate to heavy rainfall (with snowfall over the hills) was recorded at most of the places in Khyber Pakhtunkhwa.
- Light to moderate rainfall was recorded at most of the places in Punjab, Gilgit Baltistan (GB) and Kashmir.
- Light to moderate rainfall was recorded at few places in Sindh and Balochistan.

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

Editor-in-Chief: Dr. Azmat Hayat Khan (Director)

Editor: Khalida Noureen (Meteorologist)

Past Weather of Provinces (from 30th January to 5th February, 2017)**Punjab**

Light to moderate rainfall was recorded at most of the places in Punjab during the week. Weekly maximum and minimum temperatures recorded as 20.2°C & 8.5°C respectively. For the present season on average 67.5 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 74% and wind speed in the morning/evening recorded as 1.5/2.9 Knots. During the previous week the highest amount of rainfall was recorded as 38.3 mm at Murree & the lowest minimum temperature was recorded as -2.0°C at Murree.

Sindh

Light to moderate rainfall was recorded at few places in Sindh during the week. Weekly maximum and minimum temperatures recorded as 26.2°C & 10.7°C respectively. For the present season, on average 96.6 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 60% and wind speed in the morning/evening recorded as 1.8/4.4 Knots. During the previous week the highest amount of rainfall was recorded as 1.0 mm at Jacobabad & the lowest minimum temperature was recorded as 1.0°C at Moin-jo-Daro.

Khyber Pakhtunkhwa

Moderate to heavy rainfall was recorded at most of the places in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 13.0°C & 3.5°C respectively. For the present season on average 38.8 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 74% and wind speed in the morning/evening recorded as 0.7/1.2 Knots. During the previous week the highest amount of rainfall was recorded as 130.4 mm at Chitral & the

lowest minimum temperature was recorded as -8.5°C at Parachinar.

Balochistan

Light Rainfall reported as from few places in Balochistan during the week. Weekly maximum and minimum temperatures recorded as 19.2°C & 6.5°C respectively. For the present season on average 61.2 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 1.4/4.2 Knots. During the previous week the highest amount of rainfall was recorded as 21.0 mm at Zhob & the lowest minimum temperature was recorded as -10.0°C at Kalat.

Gilgit-Baltistan and Azad Jammu & Kashmir

Light to moderate rainfall was recorded from most of the places in Gilgit-Baltistan & Kashmir during the week. Weekly maximum and minimum temperatures recorded as 11.1°C & 2.0°C respectively. For the present season on average 30.2 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 69% and wind speed in the morning/evening recorded as 0.6/0.8 Knots. During the previous week the highest amount of rainfall was recorded as 57.3 mm at Muzaffarabad & the lowest minimum temperature was recorded as -6.6°C at Skardu.

**Past Weather for Major Agricultural Plains
(from 30th January to 5th February, 2017)**

Rawalpindi (Potohar region)

Rainfall reported as 14.0 mm during the week; however, cloudiness in the morning/evening recorded as 4.8/5.2 Oktas while, average relative humidity observed as 82%. Mean night time temperature recorded as 8.5°C & for the present season 58.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/1.4 Knots.

Faisalabad (Central Punjab)

Rainfall reported as 4.1 mm during the week; however, cloudiness in the morning/evening recorded as 4.0/3.3 Oktas while, average relative humidity observed as 74%. Mean night time temperature recorded as 7.5°C & for the present season 65.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.6/0.9 Knots.

Tandojam (Lower Sindh)

Dry weather was reported during the week; however, cloudiness in the morning/evening recorded as 1.1/0.0 Oktas while, average relative humidity observed as 62%. Mean night time temperature recorded as 9.4°C & for the present season 89.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.2/1.8 Knots.

Usta Muhammad (Eastern Balochistan)

Rainfall reported as 2.0 mm during the week; however, cloudiness in the morning/evening recorded 1.7/2.3 Oktas while, average relative humidity observed as 70%. Mean night time temperature recorded as 9.3°C & for the present season 77.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.4/1.1 Knots.

Quetta (Northern Baluchistan)

Rainfall reported as 12.4 mm during the week; however, cloudiness in the morning/evening recorded as 5.6/5.6 Oktas while, average relative humidity observed as 60%. Mean night time temperature recorded as 1.6°C at the end of last week. Wind speed recorded in the morning/evening as 3.3/3.6 Knots.

Past Weather for Sub-Regional Agricultural Plains (from 30th January to 5th February, 2017)

Multan

Rainfall reported as 1.8 mm during the week; however, cloudiness in the morning/evening recorded as 4.2/3.2 Oktas while, average relative humidity observed as 70%. Mean night time temperature recorded as 9.2°C & for the present season 69.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.6/4.3 Knots.

Lahore

Rainfall reported as 6.8mm during the week; however, cloudiness in the morning/evening recorded as 5.0/4.6 Oktas while, average relative humidity observed as 75%. Mean night time temperature recorded as 10.3°C & for the present season 75.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.9/2.6 Knots.

Zhob

Rainfall reported as 21.0 mm during the week; however, cloudiness in the morning/evening recorded as 3.9/5.1 Oktas while, average relative humidity observed as 59%. Mean night time temperature recorded as 1.4°C by the end of last week. Wind speed recorded in the morning/evening as 1.7/4.4 Knots.

Murree

Rainfall reported as 38.3 mm during the week; however, cloudiness in the morning/evening recorded as 5.1/6.7 Oktas while, average relative humidity observed as 64%. Mean night time temperature recorded as 0.3°C by the end of last week. Wind speed recorded in the morning/evening as 2.9/3.0 Knots.

D.I. Khan

Rainfall reported as 8.0 mm during the week; however, cloudiness in the morning/evening recorded as 3.3/5.3 Oktas while, average relative humidity observed as 77%. Mean night time temperature recorded as 8.7°C & for the present season 63.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.4/1.7 Knots.

Peshawar

Rainfall reported as 57.0 mm during the week; however, cloudiness in the morning/evening recorded as 5.7/6.3 Oktas while, average relative humidity observed as 77%. Mean night time temperature recorded as 8.2°C & for the present season 56.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/1.1 Knots.

Kalam

Rainfall reported as 85.0 mm during the week; however, cloudiness in the morning/evening recorded as 5.7/6.1 Oktas while, average relative humidity observed as 91.0%. Mean night time temperature recorded as -3.2°C by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.0 Knots.

Gilgit

Rainfall reported as 11.1 mm during the week; However, cloudiness in the morning/evening recorded as 7.1/7.0 Oktas while, average relative humidity observed as 70%. Mean night time temperature recorded as 1.8°C by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.0 Knots.

Skardu

Rainfall reported as 2.3 mm during the week; however, cloudiness in the morning/evening recorded as 7.6/6.9 Oktas while, average relative humidity observed as 82%. Mean night time temperature recorded as -3.6°C by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.0 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 conditions) grown in the fields of RAMC Faisalabad.

Wheat: Very good condition at *Shooting stage*.

Lower Sindh (Tandojam)

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

Wheat (Imdad): Good condition at *Milk maturity stage*.

Northern Balochistan (Quetta)

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

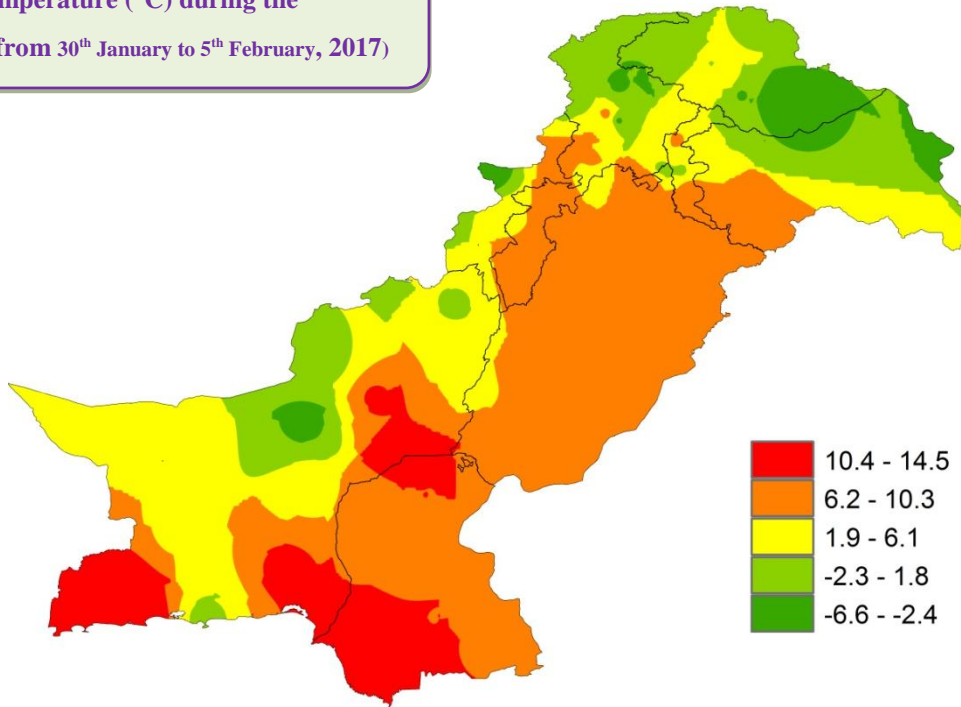
Wheat (Local white): Good condition at *Tillering stage*.

Eastern Balochistan (Usta Muhammad)

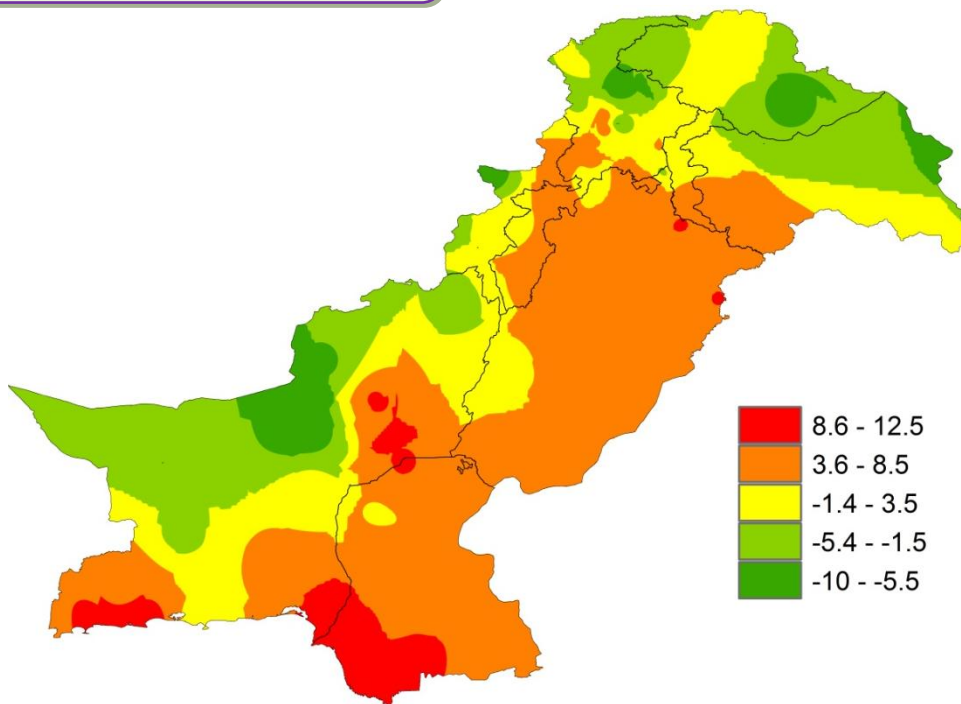
There is presently one crop (irrigated conditions) grown in the fields of RAMC Usta Muhammad.

Wheat: Good condition at *Stem extension stage*.

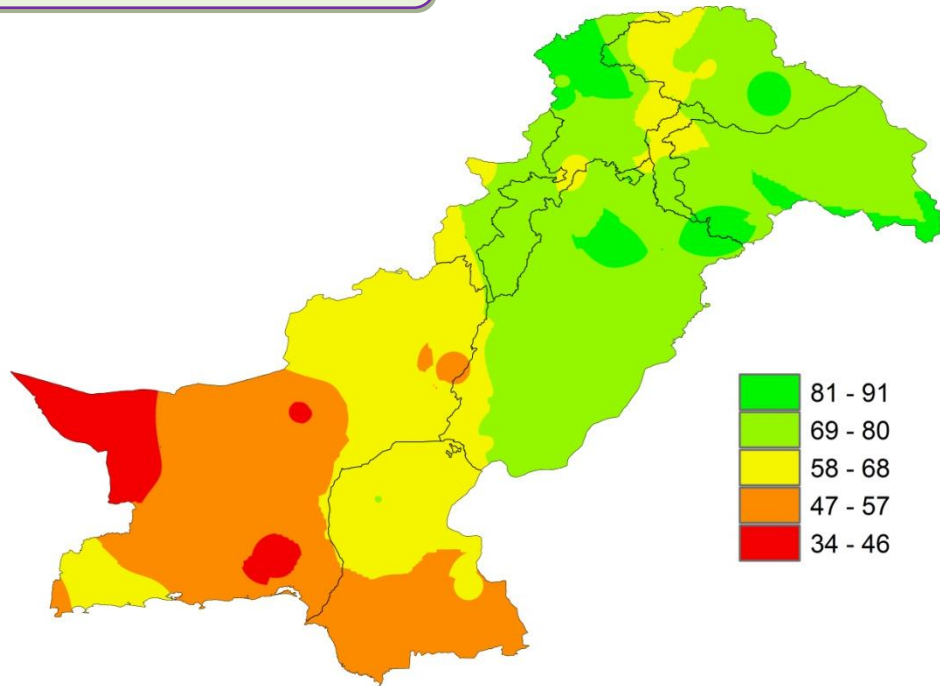
Mean lowest Temperature (°C) during the Previous week (from 30th January to 5th February, 2017)



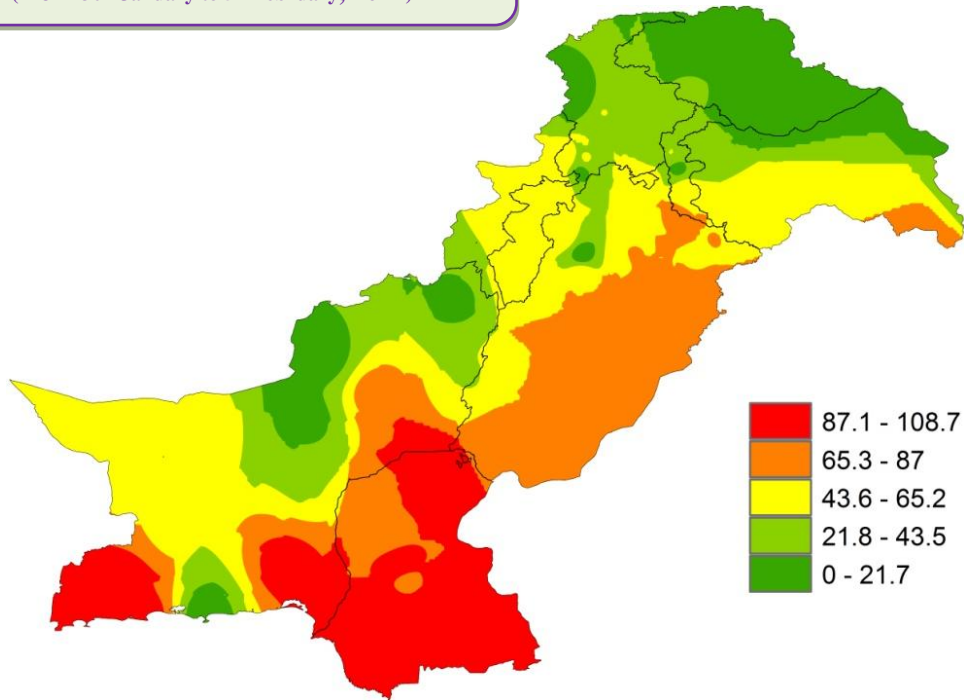
Lowest Minimum Temperature (°C) during the Previous week (from 30th January to 5th February, 2017)



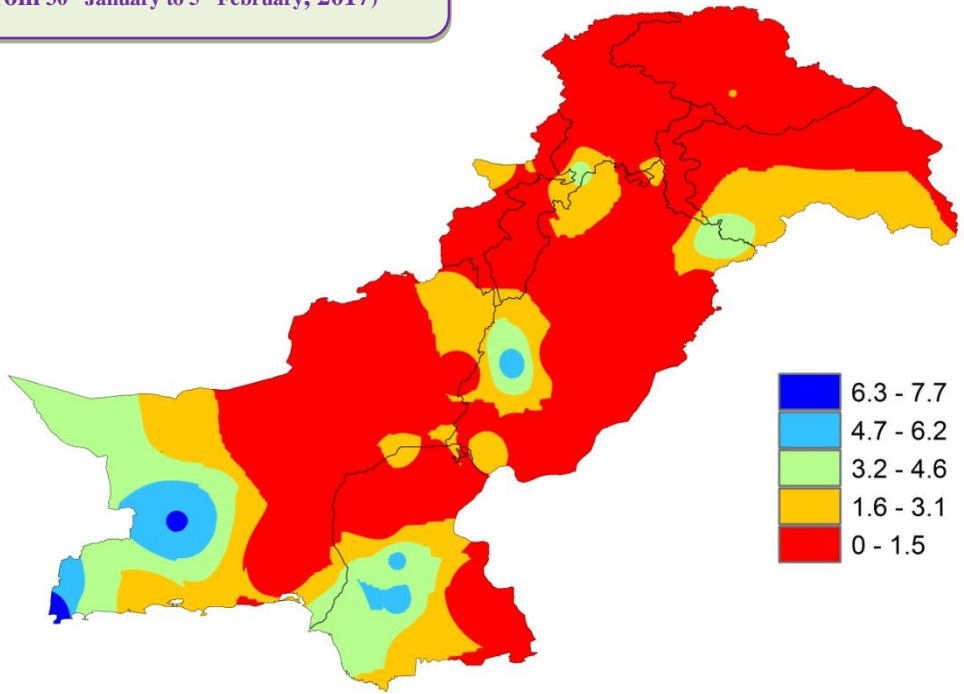
Mean Relative Humidity (%) during the Previous week (from 30th January to 5th February, 2017)



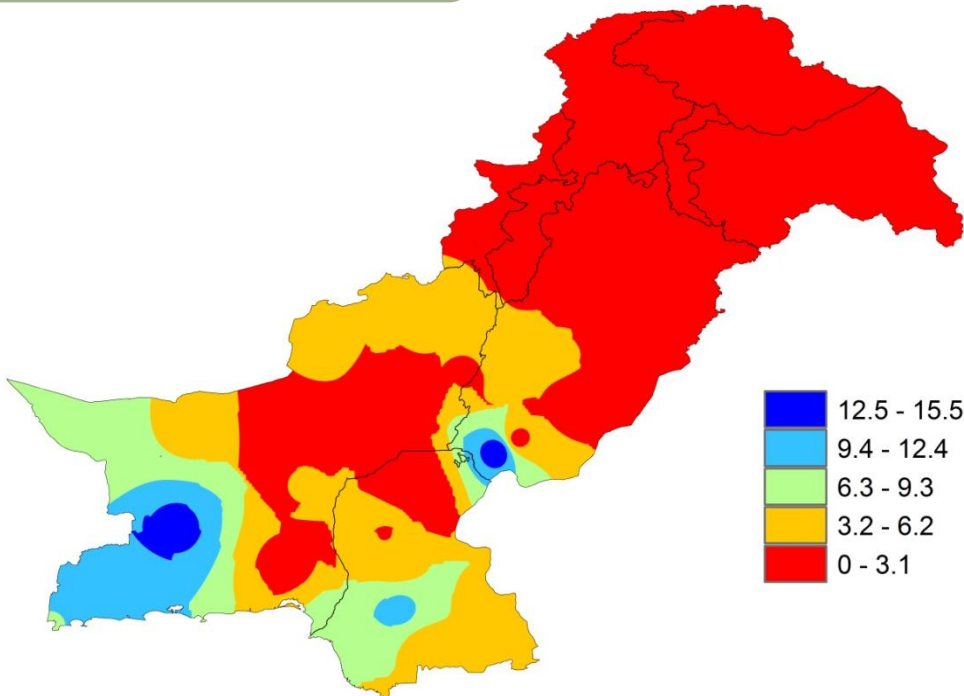
Total Growing Degree Days accumulated during the Previous week (from 30th January to 5th February, 2017)



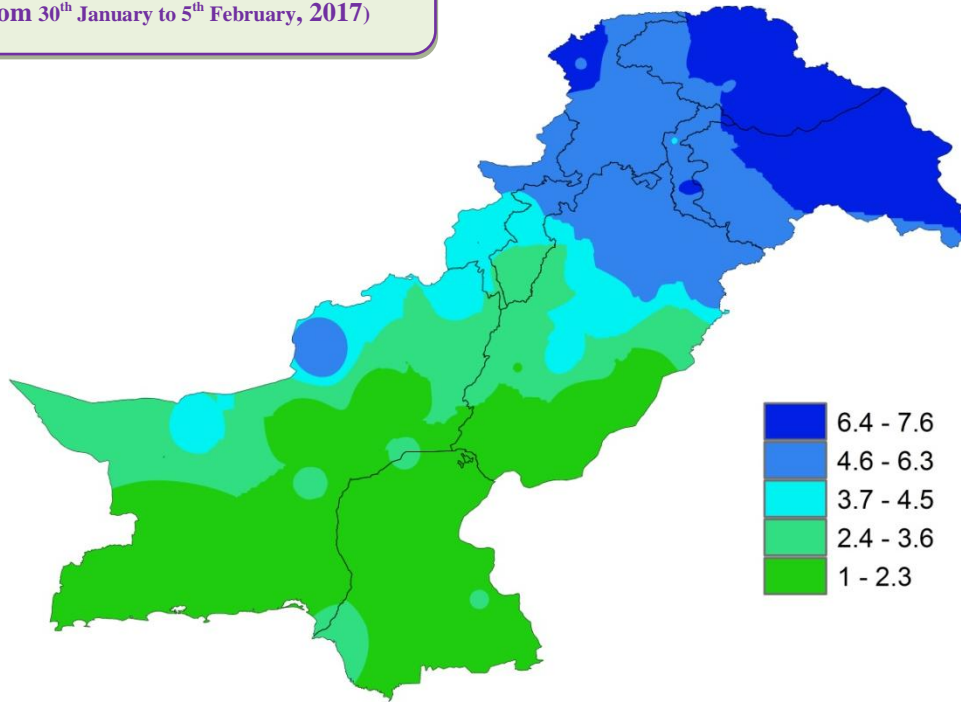
Mean Wind Speed (Knots) at 0800PST during the Previous week (from 30th January to 5th February, 2017)



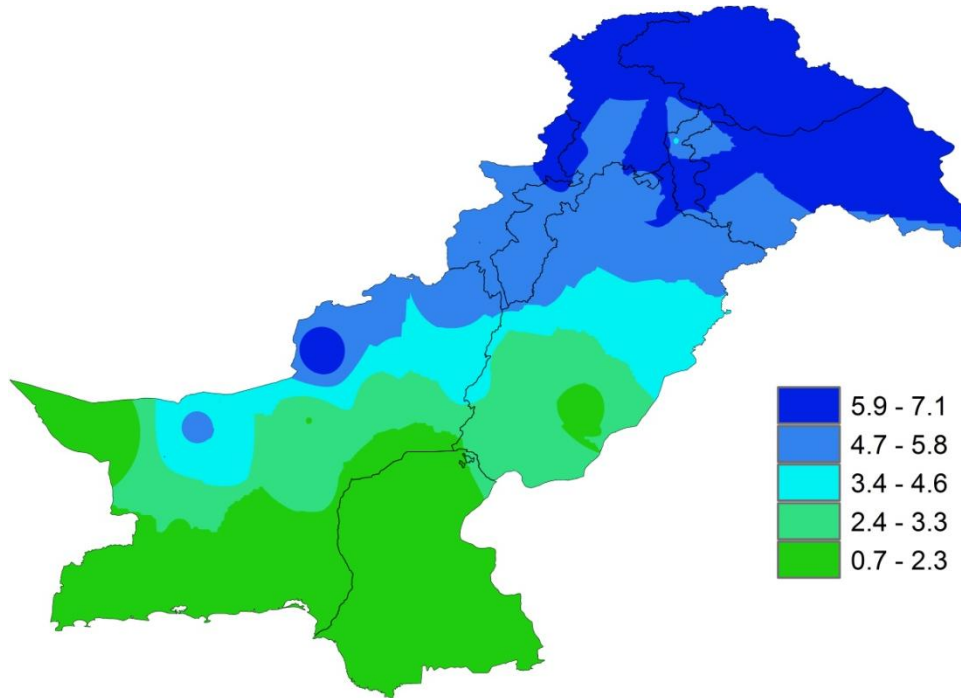
Mean Wind Speed (Knots) at 1700PST during the Previous week (from 30th January to 5th February, 2017)



Mean Cloudiness (Oktas) at 0800PST during the Previous week (from 30th January to 5th February, 2017)



Mean Cloudiness (Oktas) at 1700PST during the Previous week (from 30th January to 5th February, 2017)



Weekly Weather Advisory for Farmers
(From 6th to 12th February, 2017)

A shallow westerly wave is still affecting northern areas of the country and is likely to move eastward tonight. Another weak westerly wave is likely to enter upper parts of the country on Tuesday (evening) and may persist till Wednesday (morning).

MONDAY

06-02-2017

Mainly cold and dry weather is expected in most parts of the country. However, light rain (with snowfall over the hills) is expected at isolated places of Gilgit-Baltistan. Foggy conditions are likely over plain areas of Punjab and upper Sindh in morning hours.

TUESDAY

07-02-2017

Mainly cold and dry weather is expected in most parts of the country. However, light rain (with snowfall over the hills) is expected at isolated places of Malakand, Hazara, Peshawar, Mardan, Rawalpindi divisions and Gilgit-Baltistan. Foggy conditions are likely over plain areas of Punjab and upper Sindh in morning hours.

WEDNESDAY

08-02-2017

Mainly cold and dry weather is expected in most parts of the country. Foggy conditions are expected in plains of Punjab and upper Sindh during night and morning hours.

THURSDAY

09-02-2017

Mainly cold and dry weather is expected in most parts of the country. Foggy conditions are expected in plains of Punjab and upper Sindh during night and morning hours.

FRIDAY

10-02-2017

Mainly cold and dry weather is expected in most parts of the country. Foggy conditions are expected in plains of Punjab and upper Sindh during night and morning hours.

SATURDAY

11-02-2017

Mainly cold and dry weather is expected in most parts of the country. Foggy conditions are expected in plains of Punjab and upper Sindh during night and morning hours.

SUNDAY

12-02-2017

Mainly cold and dry weather is expected in most parts of the country. Foggy conditions are expected in plains of Punjab and upper Sindh during night and morning hours.

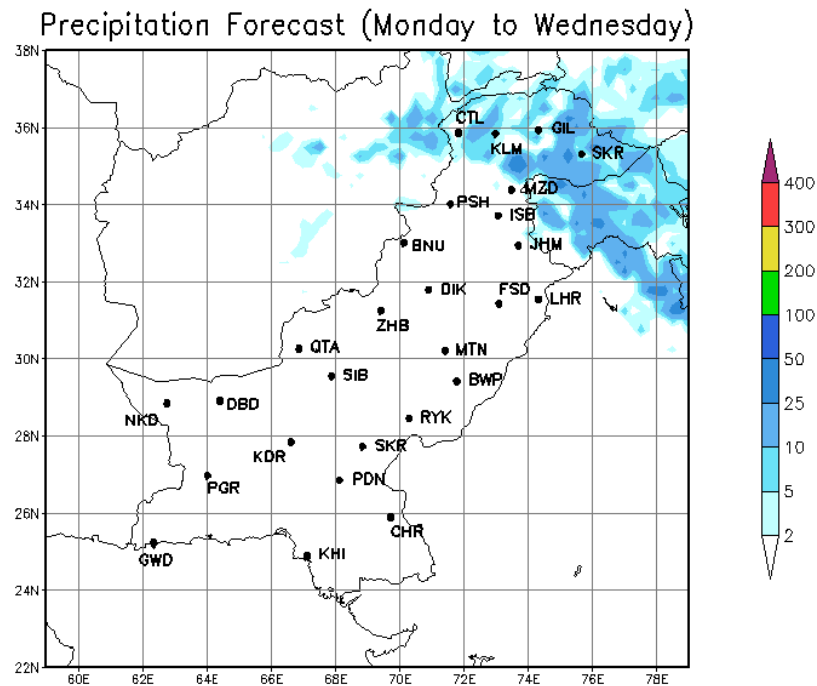
ADVISES FOR FARMERS

During the last week, light to moderate rains (with snowfall over the mountains) recorded at most of the agricultural plains in the upper half of the country. Accordingly, soil moisture conditions got better in the particular areas. Cold and dry weather is expected in most parts of the country with foggy conditions in the plains of Punjab and upper Sindh. Keeping in view the expected weather conditions following advises are suggested for farming community.

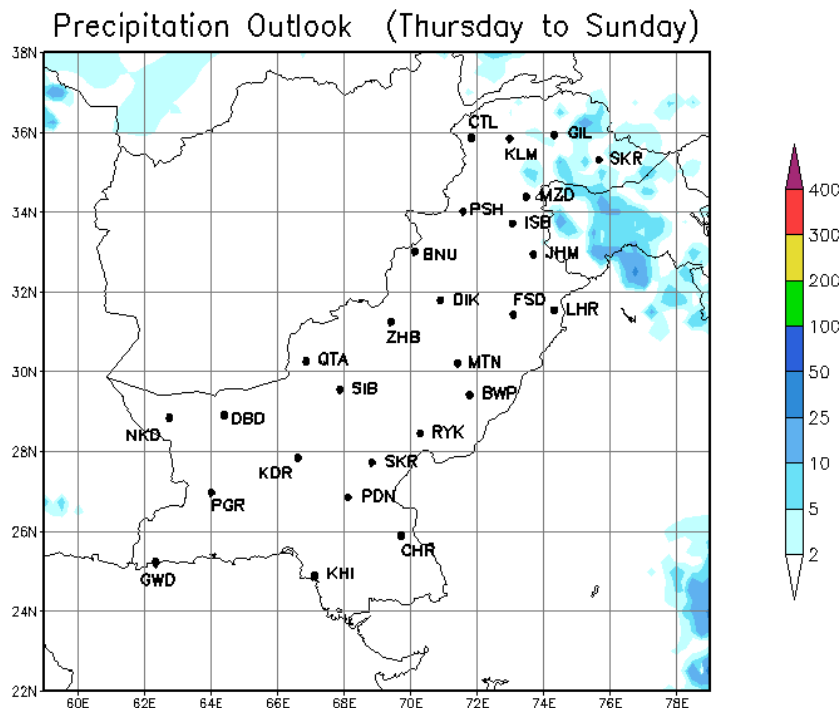
- Farmers of irrigated areas should irrigate the crop as per requirement keeping expected weather in mind.
- Measures should be taken to preserve the crops and livestock from the expected frost during clear nights in high elevated agricultural plains.
- Removing weeds from the standing crops is very important as weeds utilize moisture and food which may be utilized by the crop. As a result considerable loss in yield occurs every year. However operations against weeds should be started using weedicides or manually when the crop completely covers the fields.

Weather Outlook from 6th to 12th February, 2017

The forecast from 6th to 8th February, 2017 shows that light to moderate rainfall is expected at few places in upper KP, GB & Kashmir. However, dry weather may prevail in rest of the country.



The outlook from 9th to 12th February, 2017 shows that dry weather may prevail in most parts of the country. However, light rainfall is expected at isolated places in GB & Kashmir.



National Weather Data of Selected Cities
(Weekly Data from 30th January to 5th February, 2017)

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	Lowest							
Astore	-3.2	-5.5	**	71	0.0	7.0	6.6	1.7	1.4
Badin	13.1	10.5	108.6	54	0.0	1.7	1.4	1.7	4.0
Bahawalnagar	9.9	6.5	80.5	71	3.0	1.8	3.3	0.9	2.0
Bahawalpur	8.8	7.5	73.7	76	5.0	1.6	2.0	1.1	0.6
Balakot	5.6	4.2	39.9	70	50.0	6.3	7.0	0.0	0.0
Bannu	5.4	2.0	46.5	69	35.0	3.9	5.3	0.0	0.6
Barkhan	4.2	2.5	41.3	54	6.0	2.6	3.6	0.9	2.6
Bunji	3.9	2.2	20.0	63	12.5	7.1	7.1	0.0	0.9
Cherat	3.6	1.0	10.0	63	42.0	5.1	5.6	4.0	2.3
Chhor	9.1	7.0	99.3	57	0.0	2.3	0.7	0.3	5.7
Chilas	4.1	-0.5	25.9	67	27.0	5.9	6.3	0.6	1.1
Chitral	0.5	-0.7	**	85	130.4	6.2	6.7	0.0	0.9
D.G.Khan	7.1	2.5	64.3	75	1.1	2.3	2.6	5.4	5.4
D.I.Khan	8.7	5.0	63.9	77	8.0	3.3	5.3	1.4	1.7
Dalbandin	3.4	-3.0	64.0	51	0.0	4.0	4.7	1.7	4.6
Dir	-0.3	-2.0	3.4	81	88.0	5.5	6.6	0.0	0.9
Drosh	0.2	-2.5	***	78	73.6	7.1	6.7	0.0	2.6
Faisalabad	7.5	6.5	65.1	74	4.1	4.0	3.3	0.6	0.9
Garidopatta	5.0	1.8	44.1	67	51.3	5.7	5.9	0.6	1.1
Gawader	14.2	9.5	103.9	61	0.0	1.3	1.6	3.7	11.4
Gilgit	1.8	-0.5	12.5	70	11.1	7.1	7.0	0.0	0.0
Gupis	-2.4	-3.0	***	64	15.0	5.4	6.9	1.1	1.7

Hyderabad	12.3	8.0	100.4	54	0.4	1.9	0.9	4.9	10.6
Islamabad	7.9	6.5	55.2	80	19.0	5.0	5.3	1.1	1.4
Jacobabad	11.7	9.0	87.8	66	1.0	2.6	2.1	1.7	0.9
Jhang	8.4	7.0	74.8	77	12.0	3.7	3.7	0.6	0.6
Jhelum	9.6	8.6	68.0	78	8.7	4.7	5.4	0.6	2.0
Jiwani	13.9	7.5	100.1	54	0.0	2.0	2.0	7.7	8.9
Kakul	3.2	1.0	27.2	70	31.1	4.9	6.6	0.3	1.1
Kalam	-3.2	-8.0	***	91	85.0	5.7	6.1	0.0	0.0
Karachi	14.1	12.5	108.8	48	0.0	2.7	1.6	4.0	8.6
Khanpur	8.4	4.1	74.3	72	0.0	1.3	2.7	0.6	1.4
Khuzdar	4.2	0.0	38.9	52	12.0	2.4	2.7	1.1	3.4
KLT	-3.8	-10.0	10.3	45	2.0	1.6	2.3	0.0	0.0
Kotli	8.6	8.0	56.4	74	15.0	6.5	6.0	0.6	0.9
Lahore	10.3	9.5	75.0	75	6.8	5.0	4.6	0.9	2.6
Larkana	10.2	6.5	86.1	58	0.0	1.6	1.1	1.4	1.1
Lasbella	11.6	7.5	101.0	45	0.0	1.0	1.1	0.3	2.0
Lower Dir	7.2	5.0	44.8	74	66.0	5.4	5.7	1.4	1.1
M.B Din	10.1	8.5	67.3	83	11.0	5.5	5.7	0.3	0.9
Malam Jabba	-3.5	-6.0	***	71	38.0	5.6	5.6	0.0	1.4
Mangla	9.4	8.3	66.2	74	14.0	5.6	6.3	0.6	2.6
Mir Khani	2.0	1.0	13.1	77	74.2	5.7	6.0	0.0	1.0
Moinjodaro	8.1	1.0	85.7	69	0.0	1.3	1.4	0.3	5.1
Multan(PBO)	9.2	5.2	69.2	70	1.8	4.2	3.2	0.6	4.3
Murree	0.3	-2.0	**	64	38.3	5.1	6.7	2.9	3.0
Muzaffarabad	4.8	2.6	39.2	69	50.0	5.7	6.4	0.9	1.3
Nawabshah	10.0	8.0	94.1	58	0.0	1.6	1.0	4.9	4.9

Nokkundi	5.9	-1.5	51.1	34	9.0	2.4	1.6	3.4	6.9
Okara	9.6	8.5	76.1	74	1.0	2.8	3.6	1.1	1.1
Padidan	8.6	5.5	80.6	66	0.0	1.9	1.0	0.9	2.9
Panjgur	4.2	-2.5	45.0	47	0.0	1.1	2.3	6.3	13.4
Parachinar	-6.6	-8.5	***	67	70.0	5.3	5.4	3.0	3.0
Pasni	14.5	10.5	102.5	57	0.6	1.0	1.1	1.6	9.3
Pattan	6.9	3.0	39.8	64	72.0	4.1	4.1	0.0	0.3
Peshawar	8.2	6.0	56.5	77	57.0	5.7	6.3	0.0	1.1
Quetta	1.6	-5.5	6.1	60	12.4	5.4	5.6	3.3	3.6
Rahim Yar Khan	9.6	4.5	81.8	68	0.1	1.6	2.6	2.0	15.6
Rawalakot	1.2	-1.0	13.0	70	57.3	5.7	6.3	0.9	0.6
Rawalpindi	8.5	6.5	58.8	82	14.0	4.8	5.2	0.3	1.4
Rohri	10.2	6.0	99.1	57	0.0	1.2	1.7	1.0	1.7
Sahiwal	8.5	6.5	70.6	76	3.2	2.7	3.3	0.6	2.0
Saidu Sharif	5.6	5.0	37.0	73	81.5	5.1	5.4	0.0	0.0
Sialkot	10.2	7.0	67.3	82	24.6	5.7	5.1	4.4	2.3
Sibbi	11.1	9.0	83.8	59	3.0	1.7	2.9	0.9	2.6
Skardu	-3.6	-6.6	**	82	2.3	7.6	6.9	0.0	0.0
Tandojam	9.4	5.5	89.0	62	0.0	1.1	0.0	0.2	1.8
Usta M	9.3	5.2	77.3	70	2.0	1.7	2.3	0.4	1.1
Zhob	1.4	-3.5	14.5	59	21.0	3.9	5.1	1.7	4.4

*** 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 (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)