

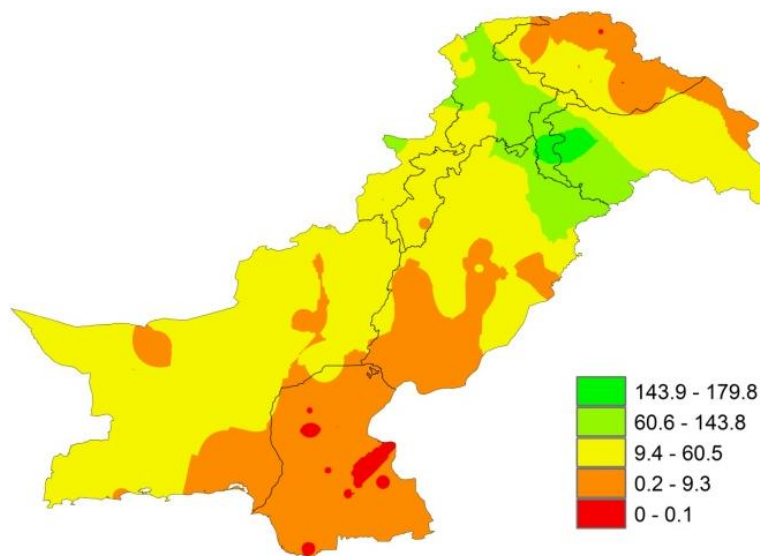
# Weekly Weather and Crop Bulletin for Pakistan

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Rainfall Distribution (mm) during the  
Previous Week (from 23<sup>rd</sup> to 29<sup>th</sup> January, 2017)



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## Highlights of Past Weather (from 23<sup>rd</sup> to 29<sup>th</sup> January, 2017)

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

Province wise distribution of rainfall reported as follows:

- Light to moderate rainfall was recorded at most of the places in Punjab, Khyber Pakhtunkhawa (KP), Gilgit Baltistan (GB) and Balochistan.
- Light to moderate rainfall was recorded at few places in Sindh.

**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 23<sup>rd</sup> to 29<sup>th</sup> January, 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 17.9°C & 8.0°C respectively. For the present season on average 57.9 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 76% and wind speed in the morning/evening recorded as 1.4/1.8 Knots. During the previous week the highest amount of rainfall was recorded as 103.4 mm at Murree & the lowest minimum temperature was recorded as - 5.5°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 23.8°C & 9.4°C respectively. For the present season, on average 81.5 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 71% and wind speed in the morning/evening recorded as 0.7/1.5 Knots. During the previous week the highest amount of rainfall was recorded as 14.0 mm at Jacobabad & the lowest minimum temperature was recorded as 4.5°C at Mithi.

**Khyber Pakhtunkhwa**

Light to moderate rainfall was recorded at most of the places in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 11.3°C & 3.0°C respectively. For the present season on average 32.8 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 78% and wind speed in the morning/evening recorded as 1.7/1.7 Knots. During the previous week the highest amount of rainfall was recorded as 101.0 mm at Balakot & the

lowest minimum temperature was recorded as - 7.5°C at Parachinar.

**Balochistan**

Light rainfall was reported from most of the places in Balochistan during the week. Weekly maximum and minimum temperatures recorded as 17.8°C & 6.0°C respectively. For the present season on average 52.2 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 65% and wind speed in the morning/evening recorded as 2.7/3.1 Knots. During the previous week the highest amount of rainfall was recorded as 63.1 mm at Quetta & the lowest minimum temperature was recorded as - 6.0°C at Kalat.

**Gilgit-Baltistan and Azad Jammu & Kashmir**

Light rainfall was reported at most of the places in Balochistan during the week. Weekly maximum and minimum temperatures recorded as 8.4°C & 1.1°C respectively. For the present season on average 16.6 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 2.5/2.7 Knots. During the previous week the highest amount of rainfall was recorded as 180.4 mm at Rawalakot & the lowest minimum temperature was recorded as -12.2°C at Skardu.

**Past Weather for Major Agricultural Plains  
(from 23<sup>rd</sup> to 29<sup>th</sup> January, 2017)**

**Rawalpindi (Potohar region)**

Rainfall was reported 64.4 mm during the week; however, cloudiness in the morning/evening recorded as 5.4/6.1 Oktas while, average relative humidity observed as 85%. Mean night time temperature recorded as 7.8°C & for the present season 51.3 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 was reported 11.7 mm during the week; however, cloudiness in the morning/evening recorded as 5.4/6.9 Oktas while, average relative humidity observed as 80%. Mean night time temperature recorded as 8.1°C & for the present season 56.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.7/1.2 Knots.

**Tandojam (Lower Sindh)**

Rainfall was reported 1.0 mm during the week; however, cloudiness in the morning/evening recorded as 0.6/0.6 Oktas while, average relative humidity observed as 65%. Mean night time temperature recorded as 6.7°C & for the present season 70.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.2/0.9 Knots.

**Usta Muhammad (Eastern Balochistan)**

Rainfall was reported 9.0 mm during the week; however, cloudiness in the morning/evening recorded 2.8/2.3 Oktas while, average relative humidity observed as 79%. Mean night time temperature recorded as 8.4°C & for the present season 65.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.2 Knots.

**Quetta (Northern Baluchistan)**

Rainfall was reported 44.0 mm during the week; however, cloudiness in the morning/evening recorded as 5.2/6.4 Oktas while, average relative humidity observed as 70%. Mean night time temperature recorded as -0.9°C at the end of last week. Wind speed recorded in the morning/evening as 1.7/2.6 Knots.

**Past Weather for Sub-Regional Agricultural  
Plains (from 23<sup>rd</sup> to 29<sup>th</sup> January, 2017)**

**Multan**

Rainfall was reported 13.4 mm during the week; however, cloudiness in the morning/evening recorded as 6.3/6.1 Oktas while, average relative humidity observed as 79%. Mean night time temperature recorded as 8.5°C & for the present season 61.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.4/1.4 Knots.

**Lahore**

Rainfall was reported 48.6 mm during the week; however, cloudiness in the morning/evening recorded as 5.9/7.1 Oktas while, average relative humidity observed as 82%. Mean night time temperature recorded as 9.9°C & for the present season 62.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.4/3.1 Knots.

**Zhob**

Rainfall was reported 15.0 mm during the week; however, cloudiness in the morning/evening recorded as 3.6/4.4 Oktas while, average relative humidity observed as 61%. Mean night time temperature recorded as 2.6°C by the end of last week. Wind speed recorded in the morning/evening as 2.1/4.3 Knots.

**Murree**

Rainfall was reported 103.4 mm during the week; however, cloudiness in the morning/evening recorded as 5.9/7.6 Oktas while, average relative humidity observed as 77%. Mean night time temperature recorded as -0.9°C by the end of last week. Wind speed recorded in the morning/evening as 2.9/3.4 Knots.

**D.I. Khan**

Rainfall was reported 8.0 mm during the week; however, cloudiness in the morning/evening recorded as 5.4/5.1 Oktas while, average relative humidity observed as 74%. Mean night time temperature recorded as 7.6°C & for the present season 57.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/1.1 Knots.

**Peshawar**

Rainfall was reported 35.1 mm during the week; however, cloudiness in the morning/evening recorded as 7.5/7.3 Oktas while, average relative humidity observed as 80%. Mean night time temperature recorded as 8.8°C & for the present season 54.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.4/1.7 Knots.

**Kalam**

Rainfall was reported 97.0 mm during the week; however, cloudiness in the morning/evening recorded as 7.3/7.1 Oktas while, average relative humidity observed as 95%. Mean night time temperature recorded as -2.1°C by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.0 Knots.

**Gilgit**

Rainfall was reported 11.0 mm during the week; However, cloudiness in the morning/evening recorded as 7.6/7.6 Oktas while, average relative humidity observed as 78%. Mean night time temperature recorded as 2.4°C by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.0 Knots.

**Skardu**

Dry weather was reported during the week; however, cloudiness in the morning/evening recorded as 7.1/7.6 Oktas while, average relative humidity observed as 85%. Mean night time temperature recorded as -7.6°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 *Tillering stage* completed.

**Lower Sindh (Tandojam)**

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

**Wheat (Imdad):** Good condition at *Flowering stage*.

**Northern Balochistan (Quetta)**

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

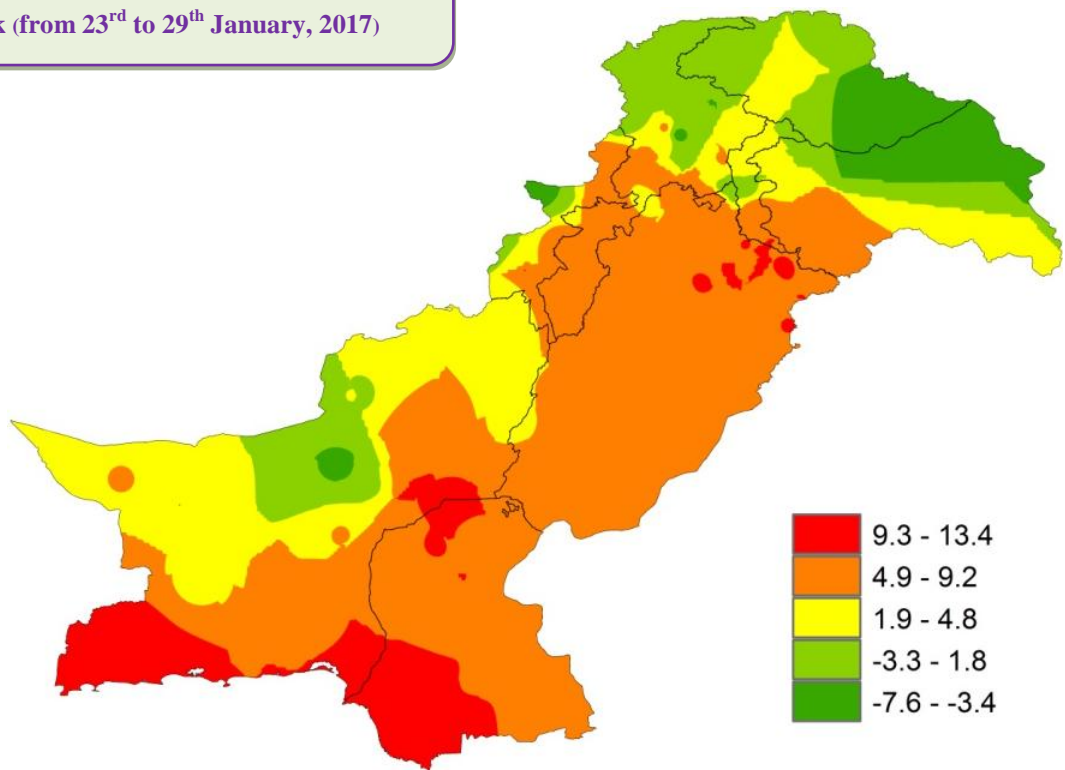
**Wheat (Local white):** Good condition at *Tillering stage*.

**Eastern Balochistan (Usta Muhammad)**

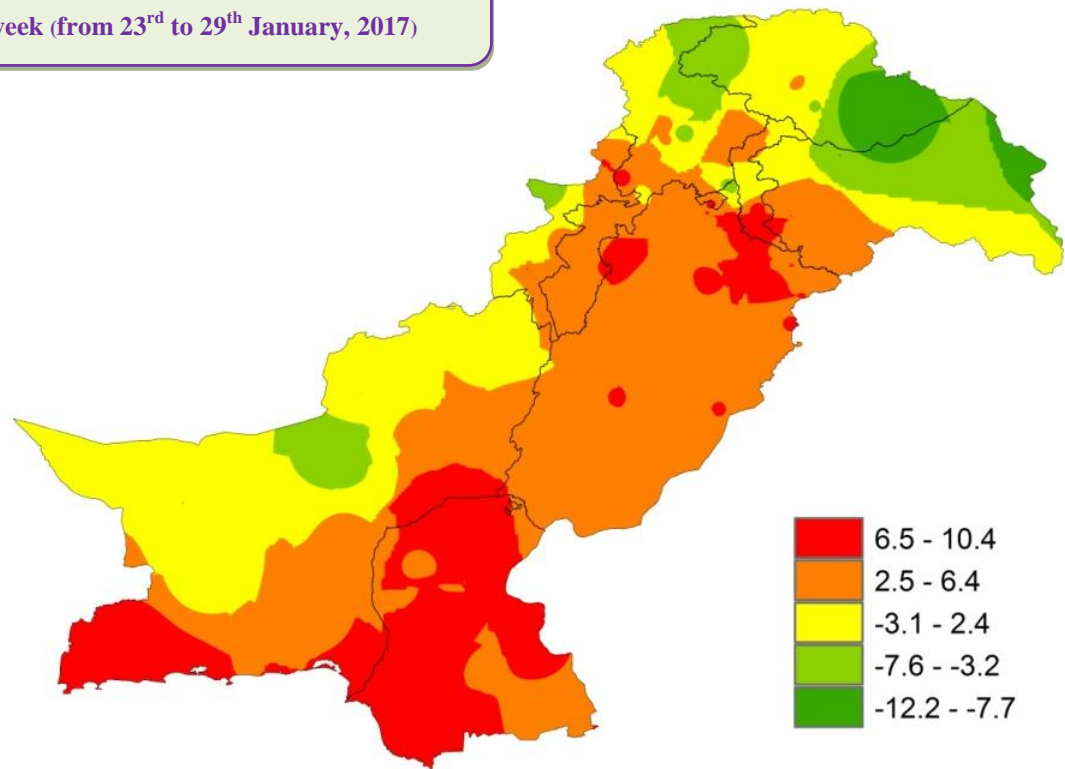
There is presently one crop (irrigated conditions) grown in the fields of RAMC Usta Muhammad.

**Wheat:** Good condition at *Tillering stage*.

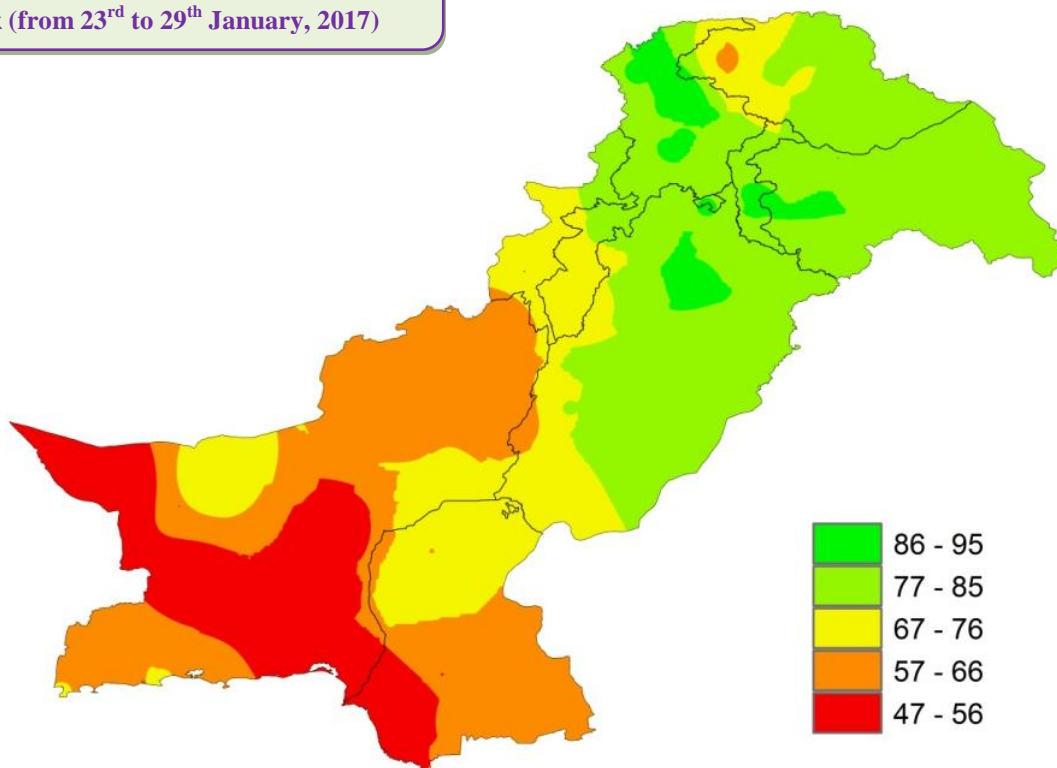
Mean lowest Temperature (°C) during the Previous week (from 23<sup>rd</sup> to 29<sup>th</sup> January, 2017)



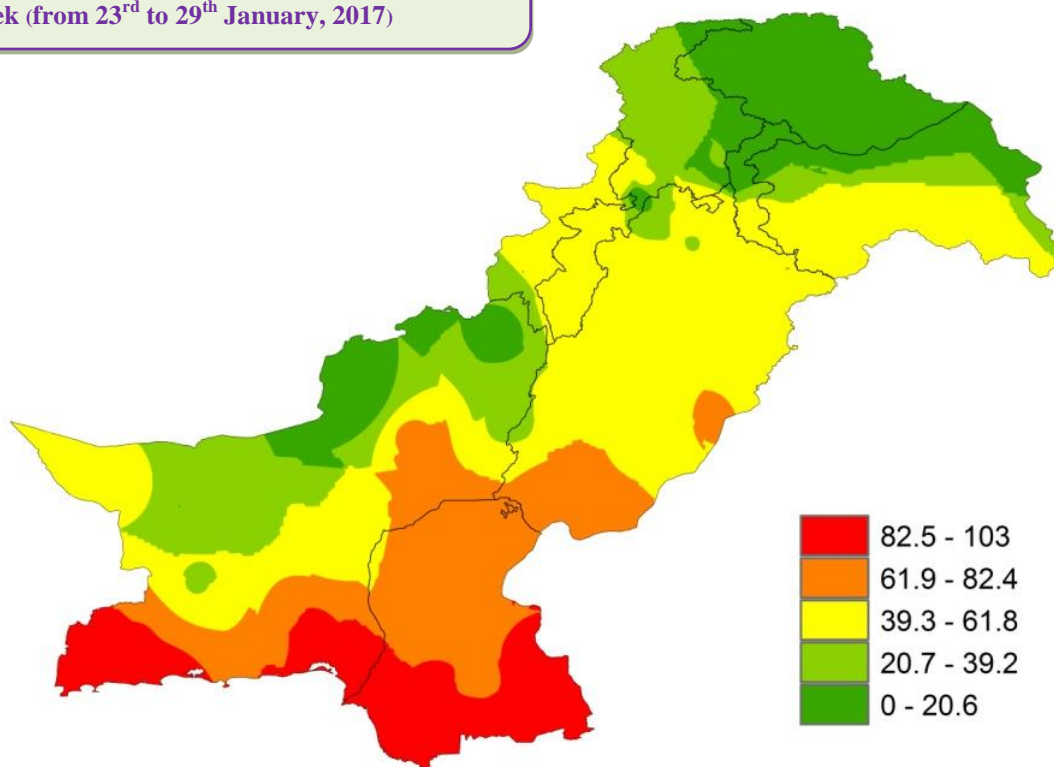
Lowest Minimum Temperature (°C) during the Previous week (from 23<sup>rd</sup> to 29<sup>th</sup> January, 2017)



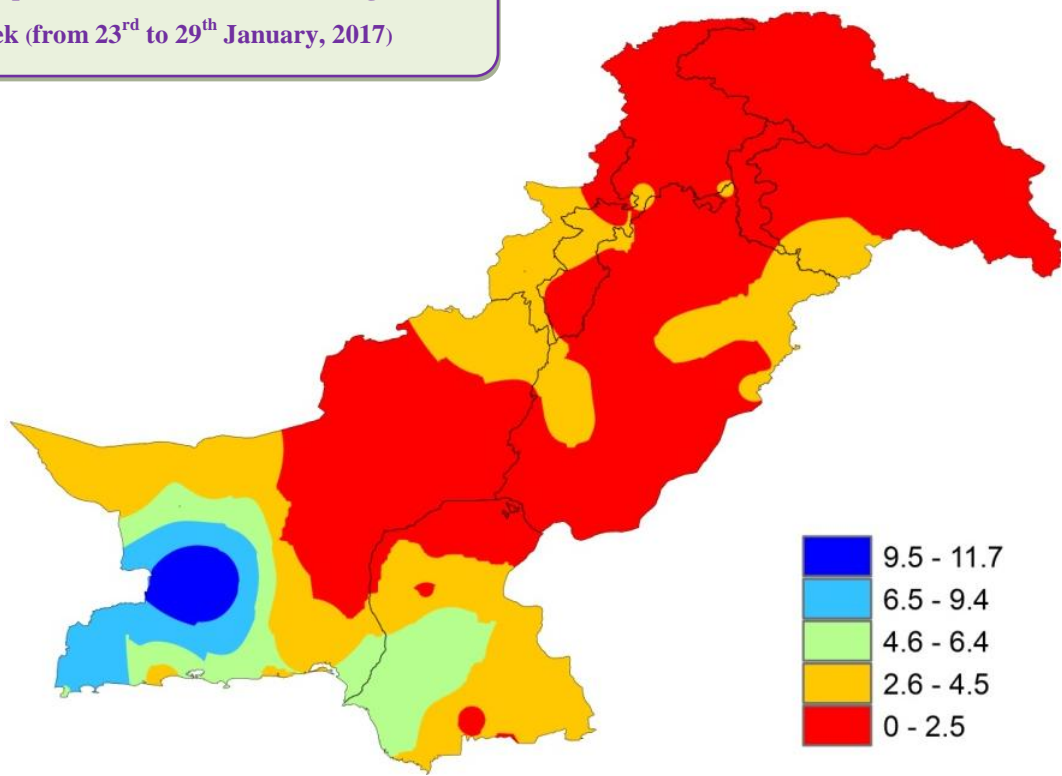
Mean Relative Humidity (%) during the Previous week (from 23<sup>rd</sup> to 29<sup>th</sup> January, 2017)



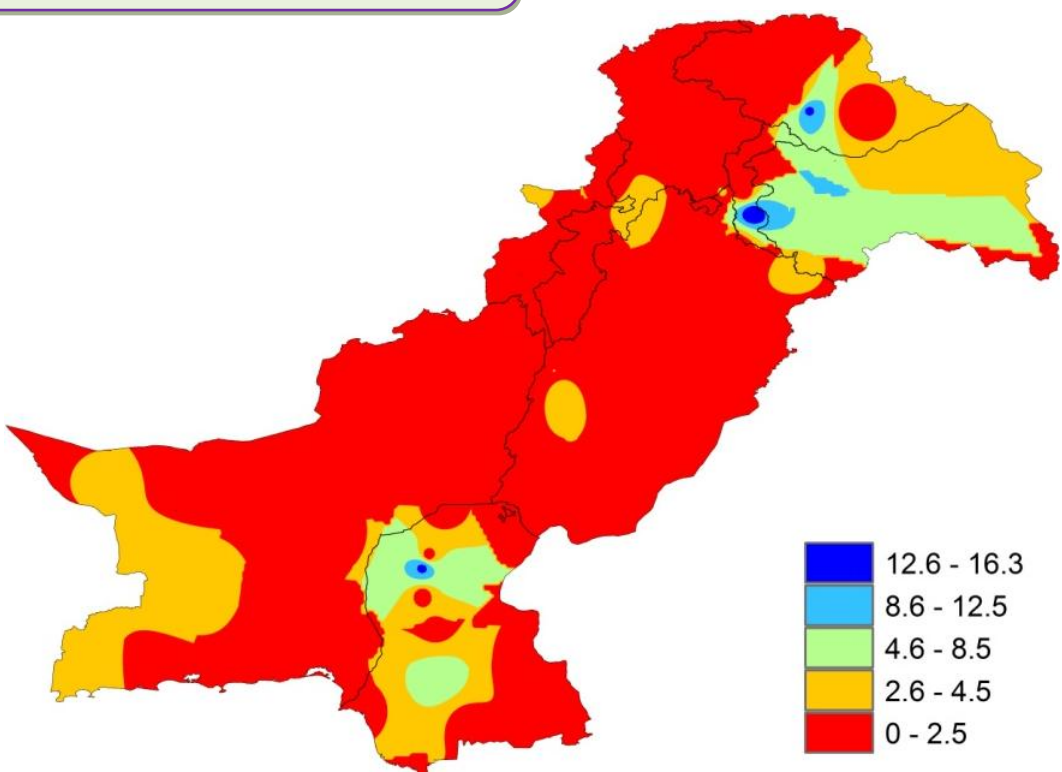
Total Growing Degree Days accumulated during the Previous week (from 23<sup>rd</sup> to 29<sup>th</sup> January, 2017)



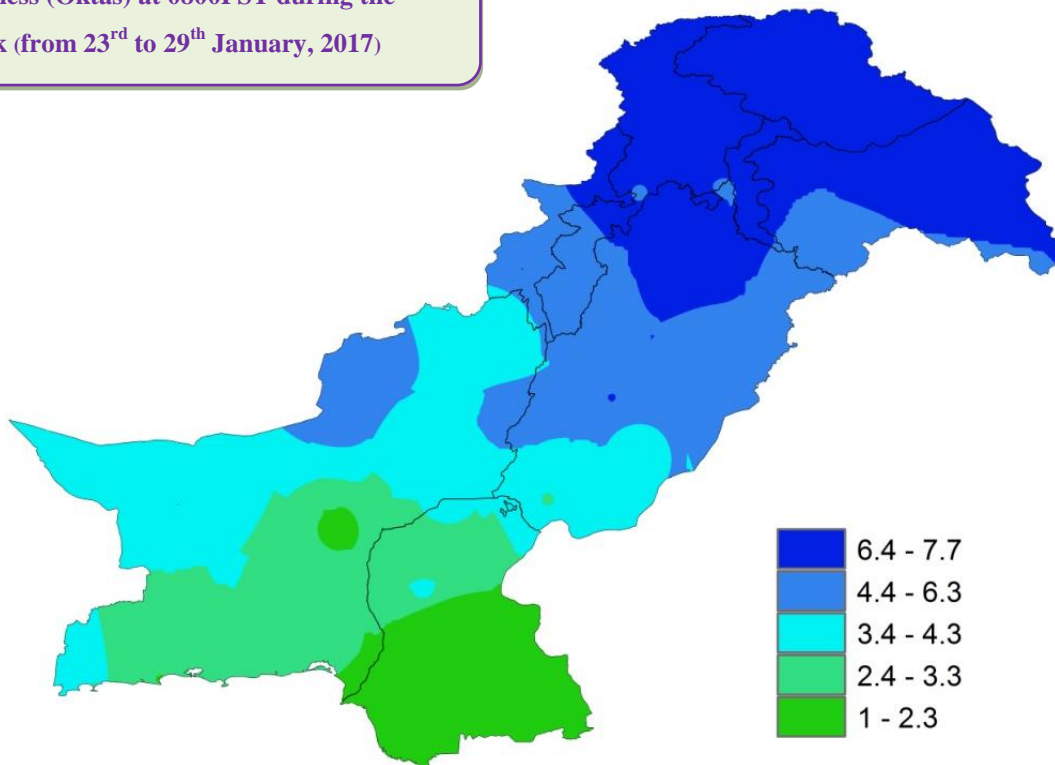
Mean Wind Speed (Knots) at 0800PST during the Previous week (from 23<sup>rd</sup> to 29<sup>th</sup> January, 2017)



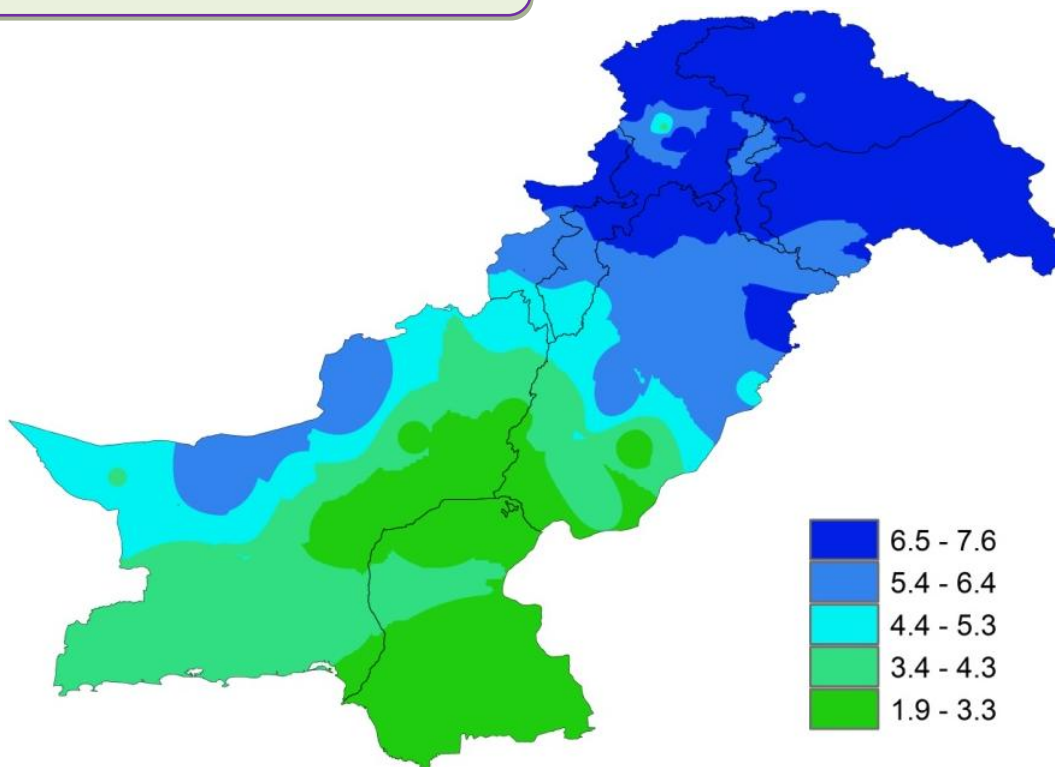
Mean Wind Speed (Knots) at 1700PST during the Previous week (from 23<sup>rd</sup> to 29<sup>th</sup> January, 2017)



Mean Cloudiness (Oktas) at 0800PST during the Previous week (from 23<sup>rd</sup> to 29<sup>th</sup> January, 2017)



Mean Cloudiness (Oktas) at 1700PST during the Previous week (from 23<sup>rd</sup> to 29<sup>th</sup> January, 2017)





**Weekly Weather Advisory for Farmers**  
**(From 30<sup>th</sup> January to 5<sup>th</sup> February, 2017)**

A shallow westerly wave is affecting upper parts of the country and likely to persist during next 24 hours. Another westerly wave is likely to enter western parts of the country on Friday and likely to persist till Monday morning.

**MONDAY**  
**30-01-2017**

Rain (with snowfall over the hills) is expected at scattered places in Malakand, Hazara, Mardan divisions, FATA, Kashmir and Gilgit-Baltistan, while at isolated places in Quetta, Zhob, Peshawar, Kohat, Bannu, D.I. Khan, Rawalpindi, Gujranwala, Sargodha, Lahore, Faisalabad divisions and Islamabad. Foggy conditions are likely to prevail over plain area of Punjab and upper Sindh during night and morning hours. Cold and dry weather elsewhere in the country.

**TUESDAY**  
**31-01-2017**

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

**WEDNESDAY**  
**01-02-2017**

Mainly cold and dry weather is expected in most parts of the country. Foggy conditions are likely to prevail over plain area of Punjab, KP and upper Sindh during night and morning hours.

**THURSDAY**  
**02-02-2017**

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 Quetta, Zhob, Malakand, Hazara divisions, Gilgit-Baltistan, Kashmir and its adjoining hilly areas.

**FRIDAY**  
**03-02-2017**

Mainly cold and dry weather is expected in most parts of the country. However rain with snowfall over the hills is expected at scattered places of Quetta, Zhob, Kalat, Makran divisions, while at isolated places in KP, Sargodha, Rawalpindi, Gujranwala divisions, Islamabad, FATA, Gilgit-Baltistan and Kashmir.

**SATURDAY**  
**04-02-2017**

Rain and thunderstorm with snowfall over the hills is expected at a number of places in Balochistan, KP, FATA, Kashmir, upper Punjab, while at scattered places of South Punjab, Gilgit-Baltistan, and at isolated places in Sindh.

**SUNDAY**  
**05-02-2017**

Rain and thunderstorm with snowfall over the hills is expected at a number of places in KP, FATA, Kashmir, upper Punjab, while at scattered places of South Punjab and Gilgit-Baltistan.

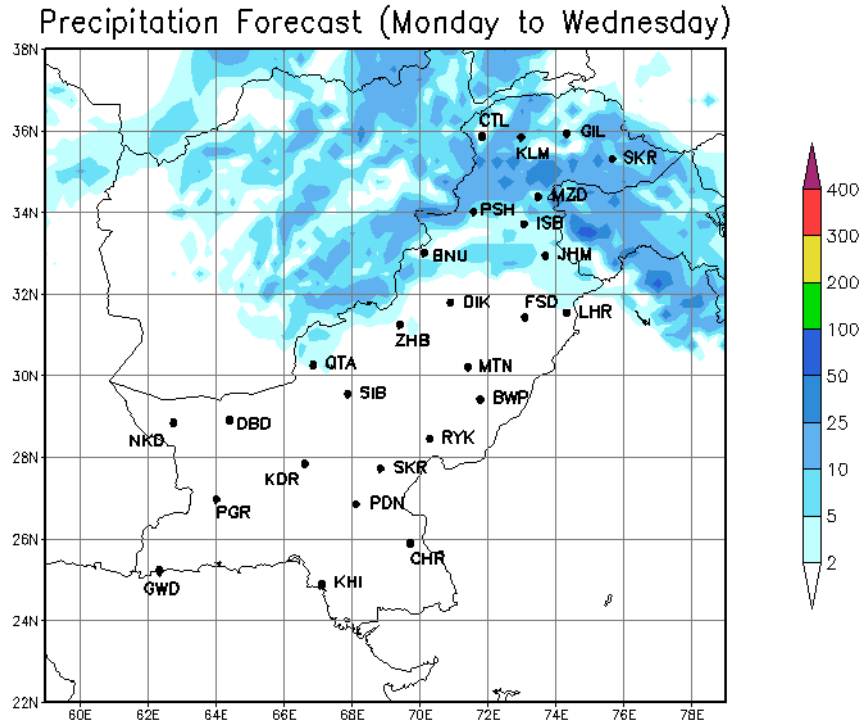
**ADVISES FOR FARMERS**

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

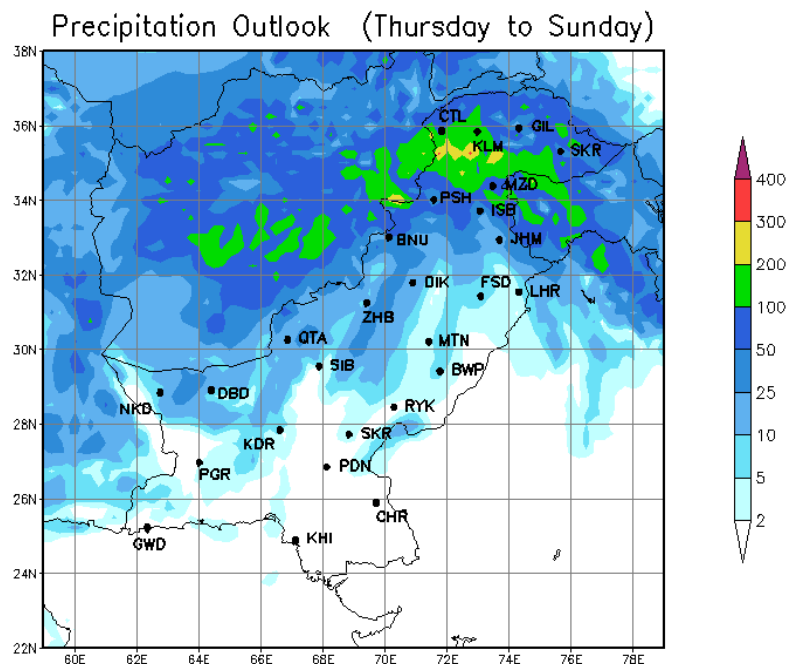
- Farmers of rainfed areas obtaining water through tube wells are advised to schedule the irrigation in accordance with the prevailing weather conditions and crop requirement.
- More drop in the night temperatures in Kashmir, GB, KP and upper Punjab may result into frost. Accordingly, measures should be taken to preserve the crops and livestock in the particular areas.

**Weather Outlook from 30<sup>th</sup> January to 5<sup>th</sup> February, 2017**

The forecast from 30<sup>th</sup> January to 1<sup>st</sup> February, 2017 shows that light to moderate rainfall is expected at few places in upper Punjab, KP, GB & Kashmir and north western Balochistan. However, dry weather may prevail in rest of the country.



The outlook from 2<sup>nd</sup> to 5<sup>th</sup> February, 2017 shows that moderate to heavy rainfall is expected in most parts of Punjab, KP, GB & Kashmir and Balochistan.



**National Weather Data of Selected Cities**  
**(Weekly Data from 23<sup>rd</sup> to 29<sup>th</sup> January, 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	-1.7	-4.0	***	79	8.5	6.7	7.4	13.9	0.9
Badin	11.9	10.0	92.3	59	2.0	1.9	2.4	1.7	2.3
Bahawalnagar	8.9	6.5	64.5	79	21.5	4.6	5.6	0.6	1.7
Bahawalpur	7.4	5.8	60.4	80	8.8	3.7	2.9	0.6	0.9
Balakot	5.4	3.9	25.1	80	101.0	6.9	7.3	0.0	0.3
Bannu	6.2	2.9	46.0	74	15.0	5.6	6.0	0.0	3.1
Barkhan	3.9	3.0	31.5	60	14.0	4.6	3.1	0.3	0.6
Bunji	4.1	3.3	12.5	72	7.1	7.6	7.4	0.9	1.1
Cherat	1.9	1.0	1.0	77	47.0	6.1	7.0	4.3	2.9
Chhor	9.1	7.5	90.1	60	0.0	1.3	2.7	1.4	3.1
Chilas	3.4	2.0	11.5	72	22.4	7.4	6.4	0.9	1.4
Chitral	0.3	-1.8	***	87	62.2	6.9	7.6	0.0	0.0
D.I.Khan	7.6	5.5	57.3	74	8.0	5.4	5.1	0.3	1.1
Dalbandin	2.8	-1.5	31.3	74	8.0	4.0	6.0	1.7	4.0
D.G.Khan	6.8	3.0	59.5	76	2.1	4.6	3.9	3.4	4.3
Dir	-0.5	-2.0	***	82	98.0	7.0	6.6	0.0	0.6
Drosh	-0.4	-2.6	***	79	38.0	7.7	7.1	0.0	0.6
Faisalabad	8.1	4.8	56.3	80	11.7	5.4	6.9	0.7	1.2
Garidopatta	1.9	0.8	7.0	79	81.0	7.0	6.3	0.6	1.7
Gwadar	13.4	10.0	95.5	61	26.0	3.3	3.6	3.7	9.1
Gilgit	2.4	1.0	6.8	78	11.0	7.6	7.6	0.0	0.0
Gupis	-2.9	-5.5	***	65	4.0	6.6	7.6	0.3	1.4

Hyderabad	12.1	9.5	90.4	56	2.0	1.0	1.9	6.6	5.4
Islamabad	7.9	5.0	48.4	87	72.5	7.0	6.7	0.0	0.0
Jacobabad	9.5	8.0	69.7	72	14.0	3.6	3.3	1.1	0.6
Jhelum	9.3	6.4	57.7	83	75.6	6.9	6.3	0.6	0.9
Jiwani	13.0	8.5	91.3	66	31.0	4.2	3.9	3.7	6.3
Kakul	3.3	1.3	13.8	82	76.2	6.9	6.6	0.0	1.1
Kalam	-2.1	-4.5	***	95	97.0	7.3	7.1	0.0	0.0
Karachi	12.8	10.5	103.0	47	3.2	2.1	2.4	2.0	6.3
Khanpur	7.8	5.0	66.8	75	6.0	3.4	4.1	0.9	0.9
Khuzdar	4.9	3.5	41.8	50	22.0	2.3	3.0	0.3	0.3
Kotli	8.1	7.2	43.6	86	180.0	6.6	7.1	16.4	1.4
Lahore	9.9	7.0	62.3	82	48.6	5.9	7.1	1.4	3.1
Larkana	10.2	9.0	77.4	65	1.0	2.7	3.0	0.9	2.0
Lasbella	8.6	5.5	83.9	52	4.0	3.1	4.3	0.3	2.9
Lower Dir	5.8	4.5	31.8	84	65.0	6.9	3.9	0.9	2.0
M.B Din	9.8	7.5	61.7	87	52.0	7.6	6.0	0.3	1.1
Malam Jabba	-6.4	-7.0	***	86	69.0	6.4	7.1	0.0	0.0
Mangla	9.1	6.7	58.2	81	62.6	7.4	6.4	1.7	1.1
Mir Khani	1.2	0.6	9.3	78	45.0	7.0	6.0	1.1	2.6
Moinjodaro	7.0	5.0	64.4	75	0.0	2.7	3.3	14.3	3.7
Multan(PBO)	8.5	6.6	61.8	79	13.4	6.3	6.1	1.4	1.4
Murree	-0.9	-5.5	***	77	103.4	5.9	7.6	2.9	3.4
Muzaffarabad	4.1	2.4	18.0	80	121.0	7.3	6.3	1.7	1.9
Nawabshah	8.6	7.0	77.8	66	1.0	1.0	2.9	2.0	5.7
Nokkundi	4.9	2.0	41.3	49	10.0	4.1	4.3	2.6	3.4
Okara	8.1	6.0	60.1	80	6.1	5.9	6.1	0.9	1.1

Padidan	8.9	6.5	74.0	68	0.0	3.6	3.9	1.4	2.3
Panjgur	3.4	-0.5	37.5	51	20.0	3.3	3.7	3.7	11.7
Parachinar	-7.1	-7.5	***	73	75.0	6.1	6.6	3.0	3.0
Pasni	13.4	10.5	93.8	66	7.8	2.3	4.0	1.0	4.0
Pattan	4.4	3.5	16.3	82	78.0	6.4	6.4	0.0	0.0
Peshawar	8.8	7.3	54.0	80	35.1	7.5	7.3	1.4	1.7
Quetta	-0.9	-2.6	***	70	44.0	5.2	6.4	1.7	2.6
Rawalpindi	7.8	4.0	51.3	85	64.4	5.4	6.1	0.0	1.1
Rahim Yar Khan	8.6	5.3	73.0	72	4.8	3.3	2.4	1.1	2.0
Rawalakot	0.3	-1.2	***	87	180.4	6.4	7.0	0.6	0.6
Sahiwal	7.7	3.5	56.2	82	4.0	5.0	5.0	0.9	2.9
Saidu Sharif	4.5	3.4	22.8	86	55.6	6.7	6.7	0.0	0.0
Sialkot	10.4	6.5	62.7	84	77.0	5.3	6.0	3.1	4.3
Sibbi	8.6	4.0	69.8	65	7.0	3.7	3.1	0.0	0.6
Skardu	-7.6	-12.2	***	85	0.0	7.1	7.6	0.0	0.0
Tandojam	6.7	5.0	70.5	65	1.0	0.6	0.6	0.2	0.9
Usta.M	8.4	6.0	65.3	79	9.0	2.8	2.3	0.0	0.2
Zhob	2.6	0.5	13.3	61	15.0	3.6	4.4	2.1	4.3

\*\*\* 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 2014-2012)