

Weekly Weather and Crop Bulletin for Pakistan

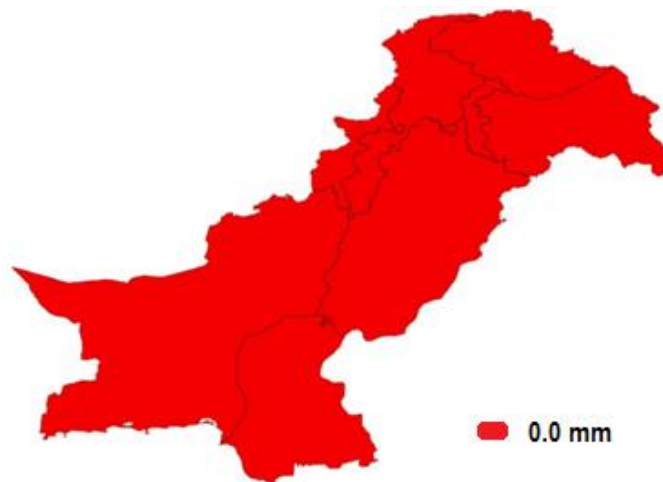
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Rainfall Distribution (mm) during the

Previous Week (from 26th December, 2016 to 1st January, 2017)



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Highlights of Past Weather (from 26th December, 2016 to 1st January, 2017)

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

Dry weather was reported from all over of the country.

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

Editor: Khalida Noureen (Meteorologist)

Past Weather of Provinces (from 26th December, 2016 to 1st January, 2017)**Punjab**

Dry weather was reported in Punjab during the week. Weekly maximum and minimum temperatures recorded as 21.7°C & 6.9°C respectively. For the present season on average 65.1 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 54% and wind speed in the morning/evening recorded as 0.7/2.3 Knots. During the previous week the lowest minimum temperature was recorded -0.5 at Kamra.

Sindh

Dry weather reported from Sindh during the week. Weekly maximum and minimum temperatures recorded as 27.4°C & 10.5°C respectively. For the present season, on average 98.7 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 68% and wind speed in the morning/evening recorded as 0.6/3.8 Knots. During the previous week the lowest minimum temperature recorded as 3.8°C at Mithi.

Khyber Pakhtunkhwa

Dry weather was reported in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 18.4°C & 2.2°C respectively. For the present season on average 37.1 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 58% and wind speed in the morning/evening recorded as 0.9/3.6 Knots. During the previous week the lowest minimum temperature recorded as -4.0°C at Kalam.

Balochistan

Dry weather was reported in Balochistan during the week. Weekly maximum and minimum temperatures recorded as 26.2°C & 7.4°C respectively. For the present season on average 79.1 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 48% and wind speed in the morning/evening recorded as 1.0/1.9 Knots. During the previous week the lowest minimum temperature was recorded as -3.1°C at Samungli.

Gilgit-Baltistan and Azad Jammu & Kashmir

Dry weather was reported in Gilgit-Baltistan & Kashmir regions during the week. Weekly maximum and minimum temperatures recorded as 14.8°C & -1.2°C respectively. For the present season on average 13.6 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 0.9/1.4 Knots. During the previous week the lowest minimum temperature recorded as -9.8°C at Skardu.

**Past Weather for Major Agricultural Plains
(from 26th December, 2016 to 1st January, 2017)**

Rawalpindi (Potohar region)

Dry weather was reported during the week; cloudiness in the morning/evening recorded as 0.2/0.4 Oktas while, average relative humidity observed as 73%. Mean night time temperature recorded as 4.3°C & for the present season 60.6 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/1.0 Knots.

Faisalabad (Central Punjab)

Dry weather was reported during the week; however cloudiness in the morning/evening recorded as 0.9/0.6 Oktas while, average relative humidity observed as 75%. Mean night time temperature recorded as 7.9°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 0.2/0.2 Knots.

Tandojam (Lower Sindh)

Dry weather was reported during the week; however cloudiness in the morning/evening recorded as 0.0/0.0 Oktas while, average relative humidity observed as 69%. Mean night time temperature recorded as 9.3°C & for the present season 94.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.5/0.4 Knots.

Quetta (Northern Baluchistan)

Dry weather was reported during the week; however cloudiness in the morning/evening recorded as 0.6/2.7 Oktas while, average relative humidity observed as 29%. Mean night time temperature recorded as 3.3°C & for the present season 44.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/2.8 Knots.

Usta Muhammad (Eastern Balochistan)

Dry weather was reported during the week; however cloudiness in the morning/evening recorded 0.0/0.3 Oktas while, average relative humidity observed as 75%. Mean night time temperature recorded as 8.4°C & for the present season 80.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.2 Knots.

**Past Weather for Sub-Regional Agricultural
Plains (from 26th December, 2016 to 1st January,
2017)**

Multan

Dry weather was reported during the week; however cloudiness in the morning/evening recorded as 2.0/2.1 Oktas while, average relative humidity observed as 73%. Mean night time temperature recorded as 9.0°C & for the present season 74.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/2.6 Knots.

Lahore

Dry weather was reported during the week; however cloudiness in the morning/evening recorded as 1.2/2.0 Oktas while, average relative humidity observed as 73%. Mean night time temperature recorded as 8.9°C & for the present season 72.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.6 Knots.

Zhob

Dry weather was reported during the week; however cloudiness in the morning/evening recorded as 0.9/1.7 Oktas while, average relative humidity observed as 37%. Mean night time temperature recorded as 2.7°C & for the present season 46.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 5.0/5.0 Knots.

D.I. Khan

Dry weather was reported during the week; cloudiness in the morning/evening recorded as 2.4/0.7 Oktas while, average relative humidity observed as 75%. Mean night time temperature recorded as 6.2°C & for the present season 64.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.9 Knots.

Peshawar

Dry weather was reported during the week; cloudiness in the morning/evening recorded as 0.9/1.3 Oktas while, average relative humidity observed as 70%. Mean night time temperature recorded as 3.7°C & for the present season 53.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/0.0 Knots.

Murree

Dry weather was reported during the week; cloudiness in the morning/evening recorded as 0.3/1.6 Oktas while, average relative humidity observed as 38%. Mean night time temperature recorded as 3.7°C & for the present season 36.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.4/1.1 Knots.

Kalam

Dry weather was reported during the week; cloudiness in the morning/evening recorded as 0.7/2.6 Oktas while, average relative humidity observed as 64%. 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.

Gilgit

Dry weather was reported during the week; cloudiness in the morning/evening recorded as 3.4/3.4 Oktas while, average relative humidity observed as 66%. Mean night time temperature recorded as -4.1°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; cloudiness in the morning/evening recorded as 3.9/4.4 Oktas while, average relative humidity observed as 65%. Mean night time temperature recorded as -8.6°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 *Tillering* stage.

Lower Sindh (Tandojam)

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

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

Northern Balochistan (Quetta)

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

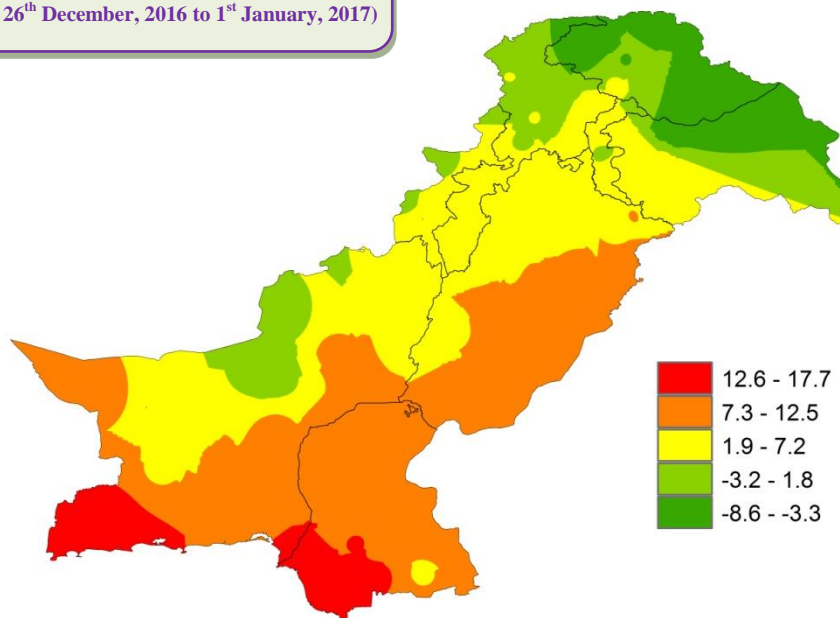
Wheat (Local white): Good condition at *Tillering* stage.

Eastern Balochistan (Usta Muhammad)

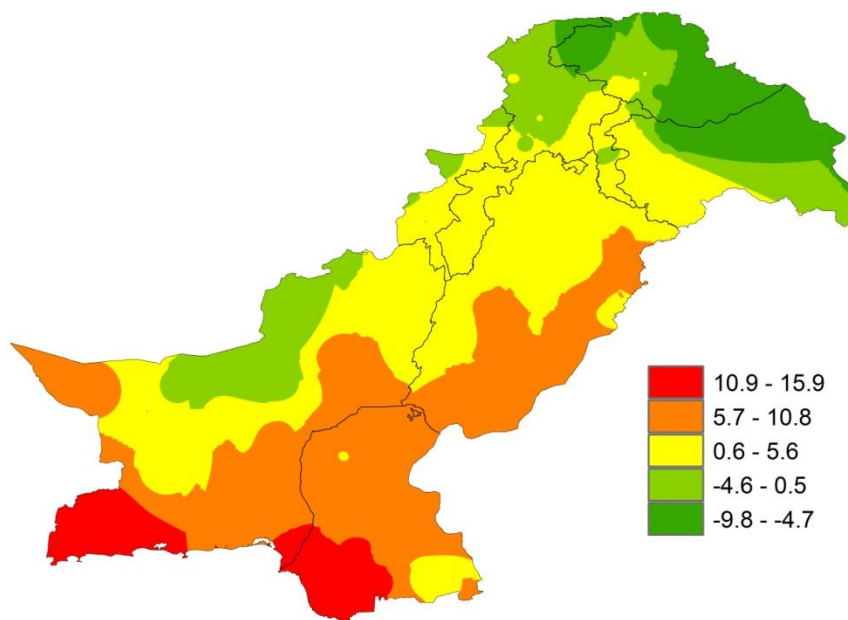
There is presently one crop (irrigated conditions) grown in the fields of RAMC Usta Muhammad.

Wheat: Good condition at *Tillering* stage.

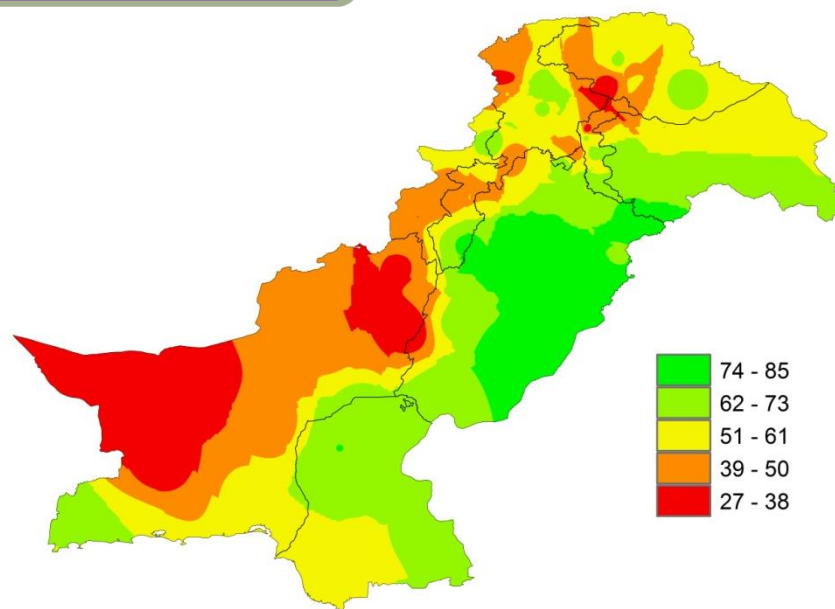
Mean lowest Temperature (°C) during the
Previous week (from 26th December, 2016 to 1st January, 2017)



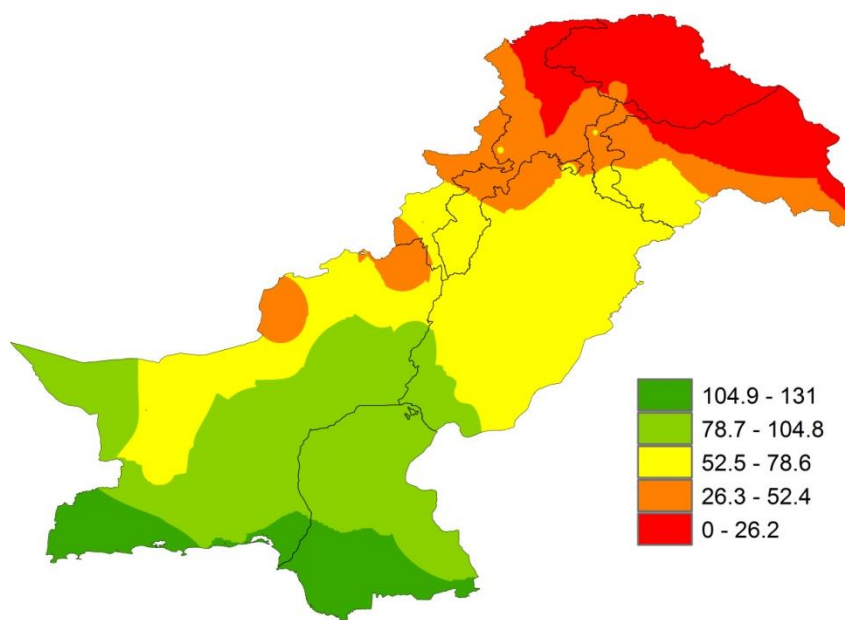
Lowest Minimum Temperature (°C) during the
Previous week (from 26th December, 2016 to 1st January, 2017)



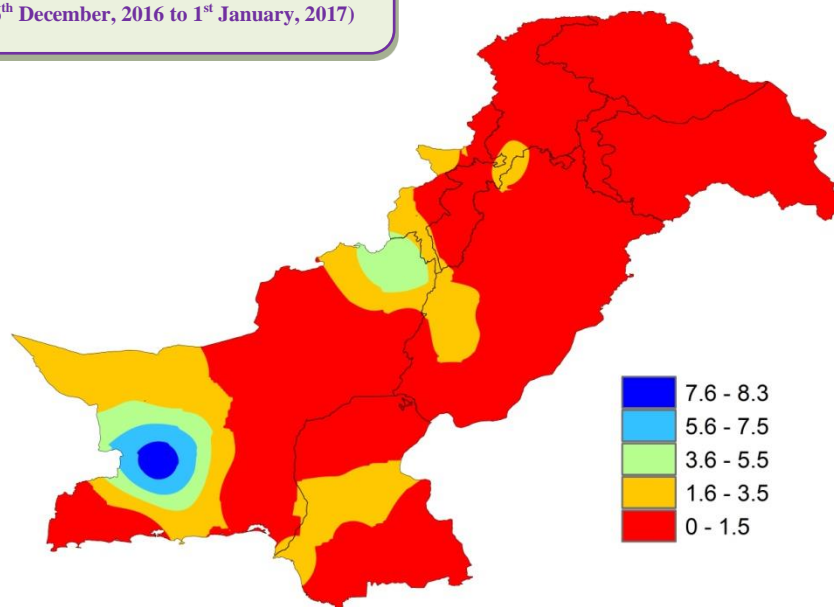
Mean Relative Humidity (%) during the
Previous week (from 26th December, 2016 to 1st January, 2017)



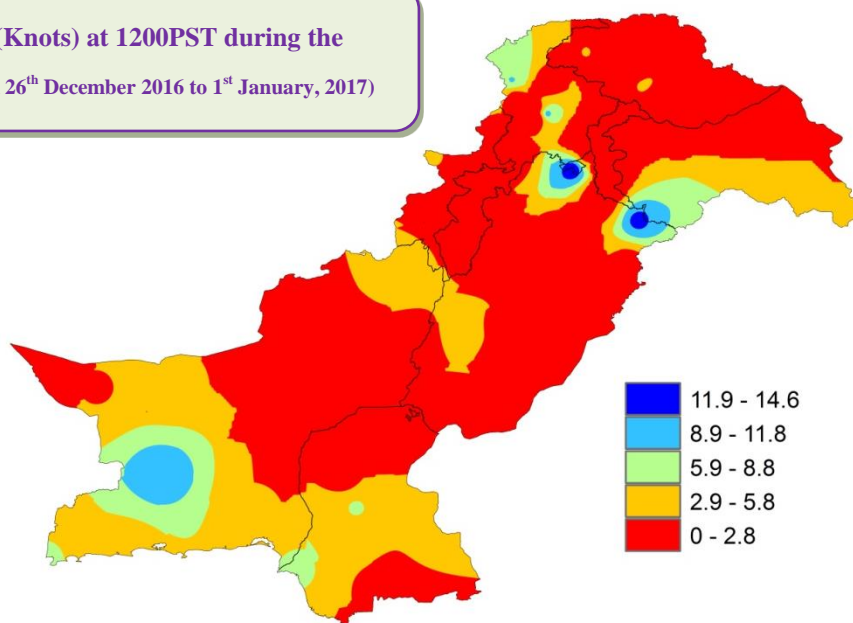
Total Growing Degree Days accumulated during the
Previous week (from 26th December, 2016 to 1st January, 2017)



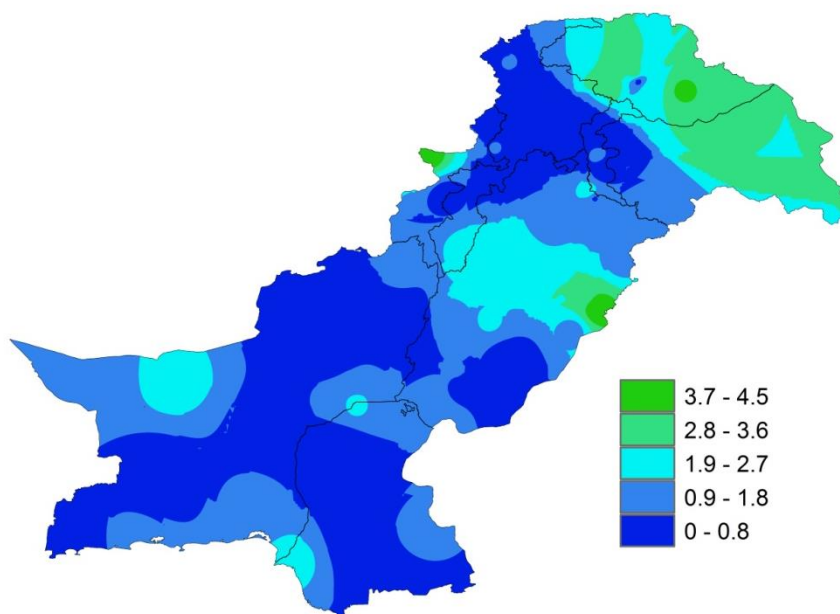
Mean Wind Speed (Knots) at 0800PST during the
Previous week (from 26th December, 2016 to 1st January, 2017)



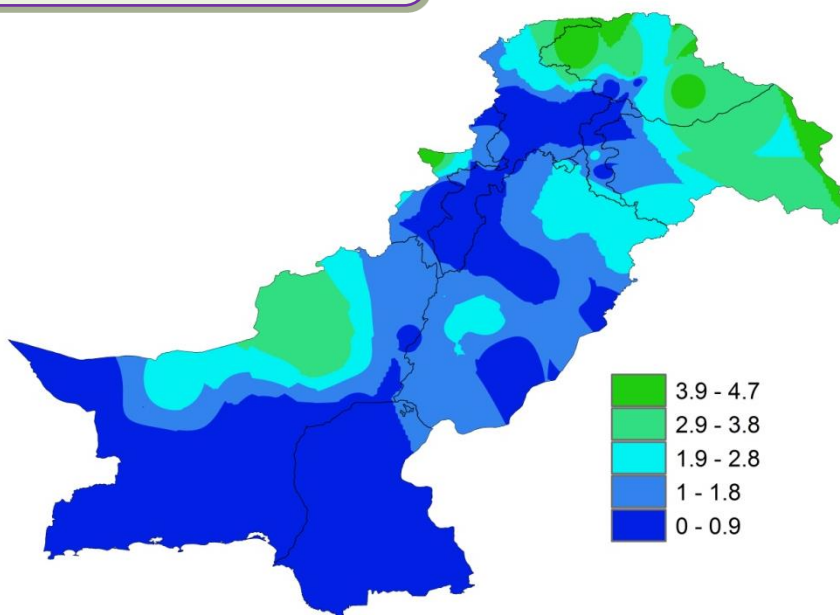
Mean Wind Speed (Knots) at 1200PST during the
Previous week (from 26th December 2016 to 1st January, 2017)



Mean Cloudiness (Oktas) at 0800PST during the
Previous week (from 26th December 2016 to 1st January, 2017)



Mean Cloudiness (Oktas) at 1200 PST during the
Previous week (from 26th December, 2016 to 1st January, 2017)



Weekly Weather Advisory for Farmers**(From 2nd to 8th January, 2017)**

Continental air is prevailing over most parts of the country. A fresh westerly wave is likely to approach upper parts of the country on Tuesday and likely to persist during next few days.

MONDAY (02-01-2017)

Mainly cold and dry weather is expected in most parts of the country. However, light rain (with light snowfall over the hills) is expected at a few places in Malakand division and Gilgit-Baltistan. Dense foggy conditions are likely to continue over plain areas of Punjab and upper Sindh during night and morning hours.

TUESDAY (03-01-2017)

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 Malakand, Hazara divisions, upper FATA, Kashmir and Gilgit-Baltistan. Dense foggy conditions are likely to continue over plain areas of Punjab and upper Sindh during night and morning hours.

WEDNESDAY (04-01-2017)

Rain-thunderstorm with snowfall over the hills is expected at scattered places in KP, FATA, Islamabad, upper Punjab, Kashmir and Gilgit-Baltistan, while at isolated places in Quetta and Zhob divisions. While foggy conditions are likely to continue over plain areas of Punjab and upper Sindh during night and morning hours. Cold and dry weather may prevail elsewhere in the country.

THURSDAY (05-01-2017)

Rain-thunderstorm with snowfall over the hills is expected at scattered places in KP, FATA, Islamabad, upper Punjab, Kashmir and Gilgit-Baltistan, while at isolated places in Quetta and Zhob divisions. While foggy conditions are likely to continue over plain areas of Punjab and upper Sindh during night and morning hours. Cold and dry weather may prevail elsewhere in the country.

FRIDAY (06-01-2017)

Rain-thunderstorm with snowfall over the hills is expected at scattered places in Kashmir, while at isolated places in upper KP, FATA, Islamabad, upper Punjab, Kashmir and Gilgit-Baltistan. While dense foggy conditions are likely to continue over plain areas of Punjab and upper Sindh during night and morning hours. Cold and dry weather may prevail elsewhere in the country.

SATURDAY (07-01-2017)

Rain-thunderstorm with snowfall over the hills is expected at scattered places in Kashmir and Gilgit-Baltistan, while at isolated places in Malakand, Hazara, Rawalpindi divisions. While dense foggy conditions are likely to continue over plain areas of Punjab and upper Sindh during night and morning hours. Cold and dry weather may prevail elsewhere in the country.

SUNDAY (08-01-2017)

Mainly cold and dry weather is expected in most parts of the country. However, rain-thunderstorm is expected at isolated places in Kashmir and its adjoining hilly areas. Dense foggy conditions are likely to continue over plain areas of Punjab and upper Sindh during night and morning hours.

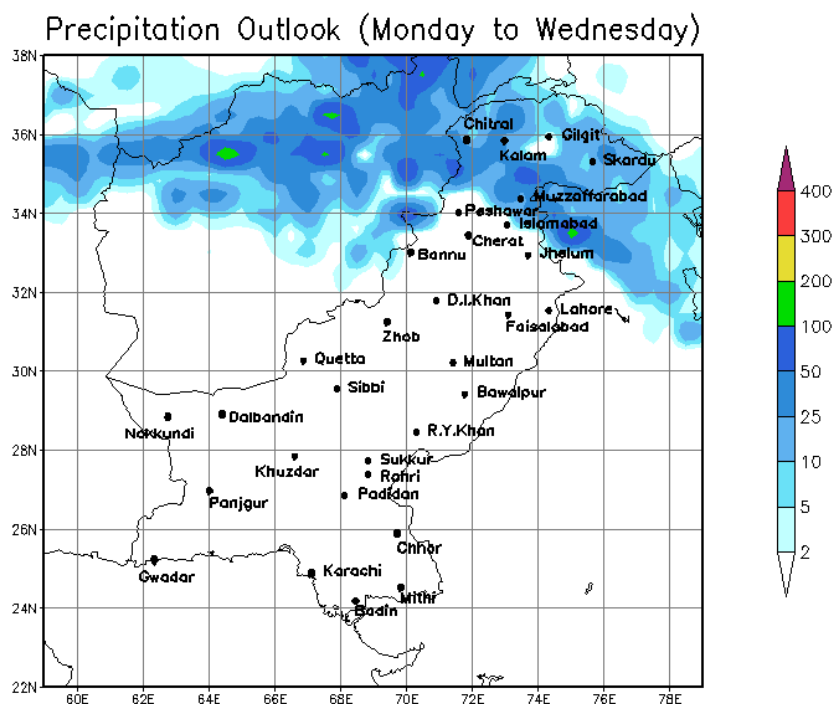
ADVISES FOR CROPS

During the last three months mainly dry weather has been reported for most of the agricultural plains of the country. However, light to moderate rain (with snowfall over the mountains) is expected in upper Punjab, upper KP, north western Balochistan, G.B & Kashmir from 3rd January. Accordingly, soil moisture conditions may get better in particular areas. Keeping in view the expected weather conditions following advises are suggested for farming community especially for rainfed areas of KP and Punjab.

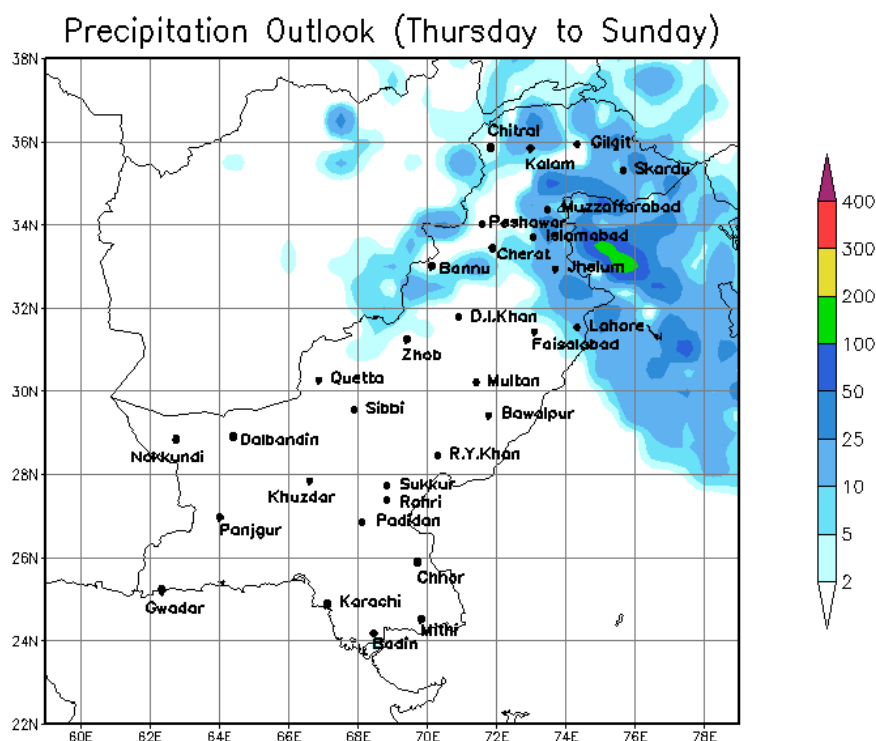
- Farmers of rainfed areas obtaining water through tube wells are advised to schedule the irrigation in accordance with the prevailing weather conditions and crop requirement.
- In areas like Potohar region and adjoining areas of KP where rain water storages are available, farmers are advised to irrigate crops by using available irrigation methods like sprinkler irrigation etc.

Weather Outlook From 2nd to 8th January, 2017

The outlook from 2nd to 4th January, 2017 shows that light to moderate rainfall is expected at scattered places in KP, FATA, Islamabad, upper Punjab, Kashmir and Gilgit-Baltistan.



The outlook from 5th to 8th January, 2017 shows that moderate to heavy rainfall is expected at scattered places in KP, GB & Kashmir, northern Balochistan and upper Punjab.



National Weather Data of Selected Cities
(Weekly Data 26th December, 2016 to 1st 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	-3.2	-6.5	***	46	0.0	2.7	2.4	1.1	0.6
Badin	14.1	12.0	115.0	61	0.0	0.0	0.9	1.0	1.1
Bahawalnagar	10.4	9.0	72.8	82	0.0	1.2	1.8	0.3	0.3
Bahawalpur	8.1	6.7	66.5	79	0.0	0.0	0.0	0.6	0.0
Balakot	2.9	0.9	50.3	61	0.0	0.0	0.3	0.0	0.0
Bannu	2.8	2.0	52.9	39	0.0	0.0	0.0	0.9	0.0
Barkhan	3.9	2.0	84.8	28	0.0	0.0	0.8	0.0	0.3
Bunji	1.5	0.6	18.1	42	0.0	3.4	4.0	0.3	0.6
Cherat	5.9	5.5	37.8	39	0.0	0.4	0.7	2.6	1.7
Chhor	8.7	6.2	98.2	64	0.0	1.2	0.3	0.9	3.1
Chilas	2.6	2.0	29.0	32	0.0	3.3	0.6	0.9	0.6
Chitral	0.1	-1.2	26.5	48	0.0	1.0	2.0	1.3	7.1
D.G.Khan	6.6	4.5	69.4	65	0.0	1.5	1.9	3.4	4.6
D.I.Khan	6.2	5.0	64.0	75	0.0	2.4	0.7	0.0	0.9
Dalbandin	3.3	0.0	71.5	32	0.0	2.6	2.3	2.0	3.3
Dir	-2.1	-3.5	29.8	50	0.0	0.0	0.3	0.0	1.1
Drosh	2.5	1.2	31.6	29	0.0	0.0	1.4	0.0	9.1
Faisalabad	7.9	6.0	75.0	75	0.0	0.9	0.6	0.2	0.2
Garidopatta	2.8	1.5	45.0	65	0.0	0.3	0.6	0.0	0.6
Gawader	13.1	11.0	116.5	67	0.0	0.0	0.3	0.0	4.9
Gilgit	-4.1	-4.5	0.3	66	0.0	3.4	3.4	0.0	0.0
Gupis	-5.9	-7.0	***	48	0.0	1.9	4.7	1.4	2.9

Hyderabad	13.3	12.5	108.3	59	0.0	0.0	0.0	1.1	4.3
Islamabad	3.0	1.0	55.4	68	0.0	0.7	2.0	0.0	14.6
Jacobabad	10.3	9.0	88.0	65	0.0	2.0	0.7	0.6	0.3
Jhang	7.4	4.7	68.4	78	0.0	2.5	0.3	0.3	1.1
Jhelum	4.8	3.1	60.7	72	0.0	0.6	2.1	0.0	0.0
Jiwani	17.7	16.0	131.0	61	0.0	0.6	0.6	0.3	6.3
Kakul	2.0	0.5	41.9	45	0.0	0.4	0.7	0.0	0.3
Kalam	-2.4	-4.0	11.0	64	0.0	0.7	2.6	0.0	0.0
Karachi	14.8	13.6	122.3	58	0.0	2.3	0.6	1.7	6.3
Khanpur	8.1	6.2	77.9	71	0.0	0.6	1.6	0.9	2.6
Khuzdar	8.8	6.5	98.5	40	0.0	0.0	0.0	0.3	1.7
Kotli	4.8	3.8	62.5	61	0.0	0.0	0.4	0.6	0.6
Lahore	8.9	6.7	72.5	73	0.0	1.2	2.0	0.0	0.6
Larkana	10.0	7.5	90.5	67	0.0	0.3	0.7	0.0	0.3
Lasbella	9.1	8.0	101.3	56	0.0	1.1	0.0	0.3	3.1
Lower Dir	0.4	-2.5	35.8	61	0.0	0.0	0.0	0.0	0.9
M.B Din	7.0	5.0	62.0	74	0.0	1.3	2.0	0.6	0.0
Malam Jabba	0.0	-2.0	3.3	62	0.0	0.4	0.9	0.0	10.0
Mangla	5.0	3.9	60.9	61	0.0	2.7	2.7	0.0	0.6
Mir Khani	0.6	0.1	25.3	57	0.0	0.3	0.0	0.7	4.7
Moinjodaro	7.1	5.0	78.7	74	0.0	0.0	0.0	0.0	2.3
Multan	9.0	7.5	74.1	73	0.0	2.0	2.1	1.1	2.6
Murree	3.7	2.0	36.2	38	0.0	0.3	1.6	1.4	1.1
Muzaffarabad	2.7	2.2	42.9	61	0.0	0.0	0.3	0.9	0.6
Nawabshah	10.5	9.5	95.8	65	0.0	0.3	0.9	3.3	6.1
Nokkundi	8.7	6.5	88.0	27	0.0	0.9	0.6	2.9	2.6

Okara	9.2	7.0	72.6	81	0.0	3.0	1.2	0.3	0.3
Padidan	10.6	9.0	90.3	72	0.0	0.7	0.6	1.3	1.7
Panjgur	6.3	3.5	76.5	30	0.0	0.0	0.0	8.3	10.9
Parachinar	-1.3	-2.7	***	55	0.0	4.4	4.7	3.0	3.0
Pasni	15.1	14.5	126.8	61	0.0	1.3	0.3	0.0	4.0
Pattan	5.4	4.0	54.8	27	0.0	0.0	0.0	0.9	0.6
Peshawar	3.7	1.8	53.1	70	0.0	0.9	1.3	0.3	0.0
Quetta	3.3	-3.0	44.8	29	0.0	0.6	2.7	0.3	2.8
Rahim Yar Khan	9.1	7.0	83.9	72	0.0	1.3	1.1	1.1	1.7
Rawalakot	0.3	-1.5	31.0	65	0.0	1.1	2.0	0.0	0.0
Rawalpindi	4.3	1.5	60.6	73	0.0	0.2	0.4	0.0	1.0
Sahiwal	7.9	4.5	63.0	85	0.0	4.5	0.0	0.6	0.3
Saidu Sharif	2.6	1.0	40.0	59	0.0	0.0	0.0	0.0	0.0
Sialkot	7.3	5.0	64.9	75	0.0	1.6	2.4	0.7	12.9
Sibbi	8.9	8.5	92.3	40	0.0	0.3	3.4	0.0	0.3
Skardu	-8.6	-9.8	***	65	0.0	3.9	4.4	0.0	0.0
Tandojam	9.3	8.0	94.0	69	0.0	0.0	0.0	0.5	0.4
Usta Muhammad	8.4	7.0	80.3	75	0.0	0.0	0.3	0.0	0.2
Zhob	2.7	1.5	46.3	37	0.0	0.9	1.7	5.0	5.0

*** 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)