

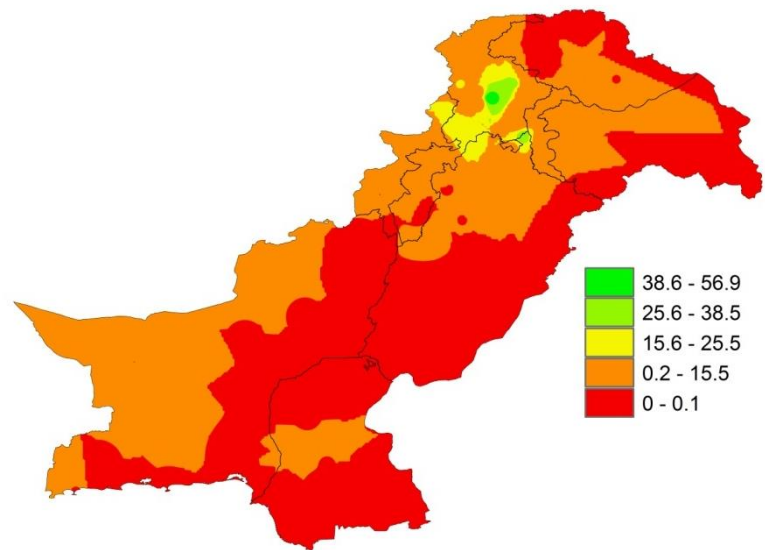
Weekly Weather and Crop Bulletin for Pakistan

**NATIONAL AGROMET CENTRE
PAKISTAN METEOROLOGICAL
DEPARTMENT SECTOR H-8/2,
ISLAMABAD.**

Phone: +92-51-9250299

Email: dirnamc@yahoo.com

Rainfall Distribution (mm) during the
Previous Week (from 16th to 22nd January, 2017)



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Highlights of Past Weather (from 16th to 22nd 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 several places in Punjab and Khyber Pakhtunkhawa.
- Light rainfall was recorded at a single station (Nawab Shah=0.7mm) in Sindh.
- Light rainfall was recorded at few places in Balochistan.
- Light rainfall was recorded at many places in Gilgit Baltistan.

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

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

Editor: Dr Dildar Hussain Kazmi (Meteorologist)

Past Weather of Provinces (from 16th to 22nd January, 2017)**Punjab**

Light to moderate rainfall was recorded at many places in Punjab during the week. Weekly maximum and minimum temperatures recorded as 17.2°C & 5.0°C respectively. For the present season on average 44.8 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 68% and wind speed in the morning/evening recorded as 1.1/2.3 Knots. During the previous week the highest amount of rainfall was recorded as 35.6 mm at Murree & the lowest minimum temperature was recorded as - 5.0°C at Muree.

Sindh

Light rainfall was recorded at single station (Nawab Shah=0.7mm) in Sindh during the week. Weekly maximum and minimum temperatures recorded as 22.0°C & 7.8°C respectively. For the present season, on average 70.8 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 64% and wind speed in the morning/evening recorded as 0.4/2.3 Knots. . During the previous week the lowest minimum temperature was recorded as 3.4°C at Mithi.

Khyber Pakhtunkhwa

Light to moderate rainfall was recorded at many places in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 12.1°C & 0.9°C respectively. For the present season on average 29.5 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 70% and wind speed in the morning/evening recorded as 1.0/2.2 Knots. . During the previous week the highest amount of rainfall was recorded as 58.0 mm at Malam Jabba

& the lowest minimum temperature was recorded as -9.5°C at Kalam.

Balochistan

Light rainfall was reported from few places in Balochistan during the week. Weekly maximum and minimum temperatures recorded as 17.9°C & 5.0°C respectively. For the present season on average 67.1 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 1.9/2.9 Knots. . During the previous week the highest amount of rainfall was recorded as 3.9 mm at Naukandi & the lowest minimum temperature was recorded as -9.0°C at Kalat.

Gilgit-Baltistan and Azad Jammu & Kashmir

Light rainfall was reported from many places in Balochistan during the week. Weekly maximum and minimum temperatures recorded as 9.0°C & -1.9°C respectively. For the present season on average 17.2 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 2.3/2.9 Knots. . During the previous week the highest amount of rainfall was recorded as 11.0 mm at Garhi Dupatta & the lowest minimum temperature was recorded as -13.4°C at Skardu.

**Past Weather for Major Agricultural Plains
(from 16th to 22nd January, 2017)**

Rawalpindi (Potohar region)

Rainfall was reported 12.4 mm during the week; cloudiness in the morning/evening recorded as 5.6/4.1 Oktas while, average relative humidity observed as 83.0%. Mean night time temperature recorded as 4.3°C & for the present season 36.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.2/0.5 Knots.

Faisalabad (Central Punjab)

Rainfall was reported 0.0 mm during the week; however cloudiness in the morning/evening recorded as 2.7/3.0 Oktas while, average relative humidity observed as 72.0%. Mean night time temperature recorded as 5.0°C & for the present season 46.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/0.5 Knots.

Tandojam (Lower Sindh)

Dry weather was reported during the week; however cloudiness in the morning/evening recorded as 0.3/0.0 Oktas while, average relative humidity observed as 62.0%. Mean night time temperature recorded as 6.3°C & for the present season 62.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/1.4 Knots.

Quetta (Northern Baluchistan)

Rainfall was reported 2.2 mm during the week; however cloudiness in the morning/evening recorded as 3.9/4.0 Oktas while, average relative humidity observed as 67%. Mean night time temperature recorded as -5.9°C at the end of last week. Wind speed recorded in the morning/evening as 2.5/2.8 Knots.

Usta Muhammad (Eastern Balochistan)

Dry weather was reported during the week; however cloudiness in the morning/evening recorded 1.3/2.4 Oktas while, average relative humidity observed as 75%. Mean night time temperature recorded as 4.3°C & for the present season 42.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/1.1 Knots.

**Past Weather for Sub-Regional Agricultural
Plains (from 16th to 22nd January, 2017)**

Multan

Dry weather was reported during the week; however cloudiness in the morning/evening recorded as 2.6/1.7 Oktas while, average relative humidity observed as 65%. Mean night time temperature recorded as 6.0°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 0.0/3.4 Knots.

Lahore

Dry weather was reported during the week; however cloudiness in the morning/evening recorded as 4.7/4.1 Oktas while, average relative humidity observed as 74%. Mean night time temperature recorded as 7.0°C & for the present season 49.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.6/3.1 Knots.

Zhob

Dry weather was reported during the week; however cloudiness in the morning/evening recorded as 2.6/2.6 Oktas while, average relative humidity observed as 59%. Mean night time temperature recorded as -1.0°C by the end of last week. Wind speed recorded in the morning/evening as 1.4/5.6 Knots.

D.I. Khan

Dry weather was reported during the week; cloudiness in the morning/evening recorded as 2.1/2.1 Oktas while, average relative humidity observed as 70%. Mean night time temperature recorded as 6.6°C & for the present season 49.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/1.4 Knots.

Peshawar

Rainfall was reported 16.0 mm during the week; cloudiness in the morning/evening recorded as 4.6/6.6 Oktas while, average relative humidity observed as 74%. Mean night time temperature recorded as 6.0°C & for the present season 40.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.7/1.7 Knots.

Murree

Rainfall was reported 36.0 mm during the week; cloudiness in the morning/evening recorded as 4.6/5.7 Oktas while, average relative humidity observed as 72%. Mean night time temperature recorded as -2.0°C by the end of last week. Wind speed recorded in the morning/evening as 3.1/1.7 Knots.

Kalam

Rainfall was reported 16.0 mm during the week; cloudiness in the morning/evening recorded as 6.0/5.9 Oktas while, average relative humidity observed as 87%. Mean night time temperature recorded as -6.0°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 5.9/6.7 Oktas while, average relative humidity observed as 62%. Mean night time temperature recorded as -3.0°C by the end of last week. Wind speed recorded in the morning/evening as 0.3/0.0 Knots.

Skardu

Dry weather was reported during the week; cloudiness in the morning/evening recorded as 6.1/7.0 Oktas while, average relative humidity observed as 69%. Mean night time temperature recorded as -8.0°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 Flowering stage.

Northern Balochistan (Quetta)

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

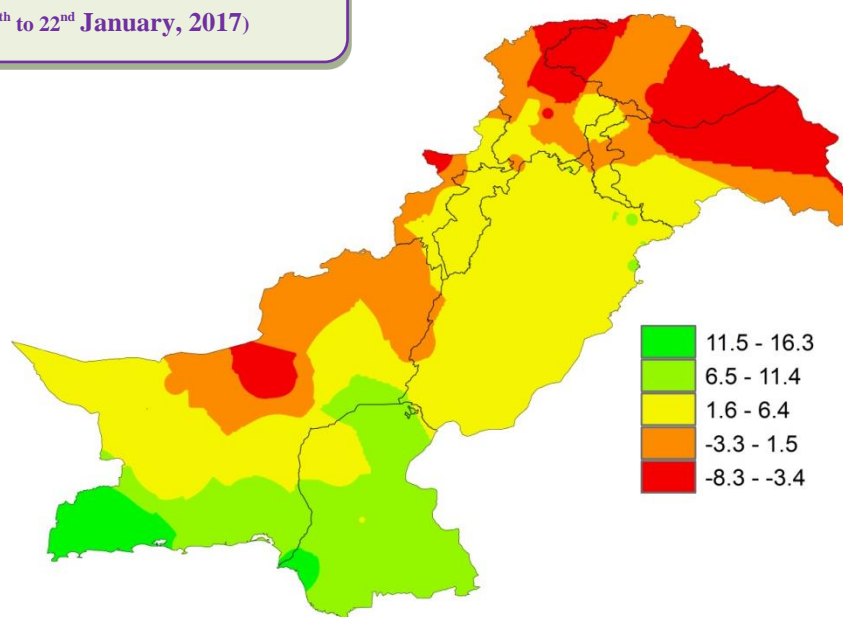
Wheat (Local White): Good condition at Tillering stage.

Eastern Balochistan (Usta Muhammad)

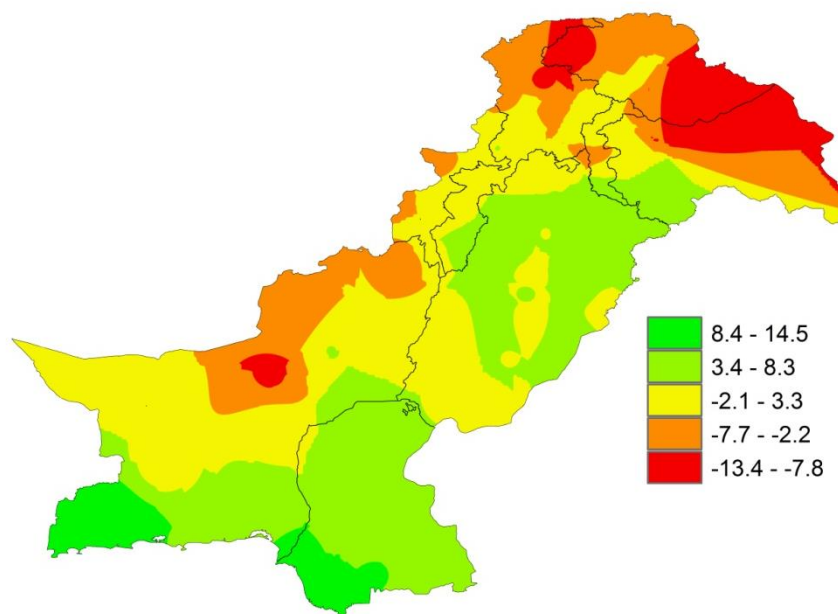
There is presently one crop (irrigated conditions) grown in the fields of RAMC Usta Muhammad.

Wheat): Good condition at Tillering stage.

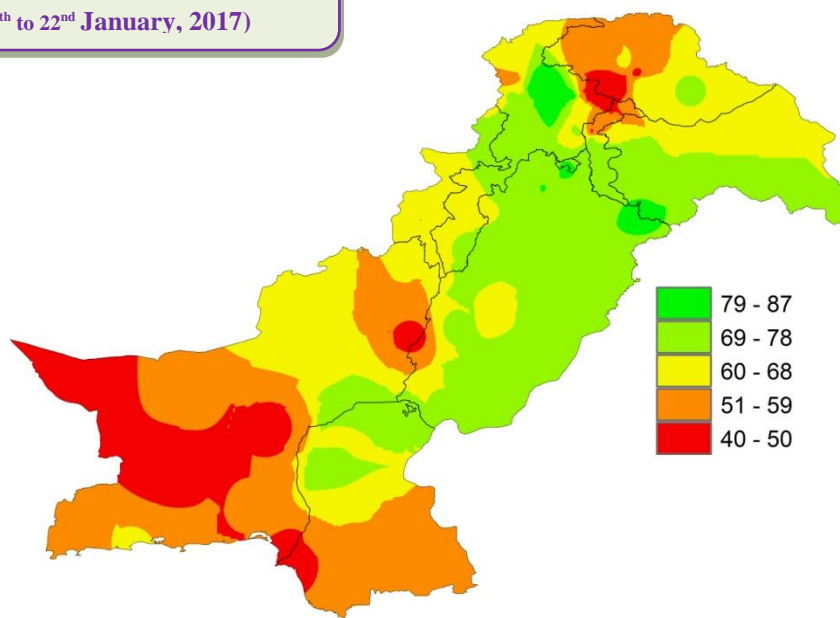
Mean lowest Temperature (°C) during the
Previous week (from 16th to 22nd January, 2017)



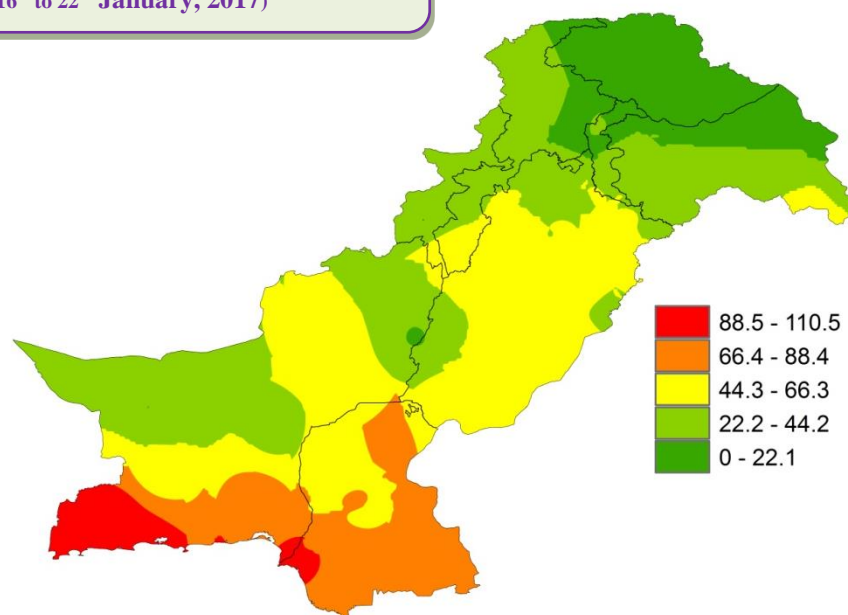
Lowest Minimum Temperature (°C) during the
Previous week (from 16th to 22nd January, 2017)



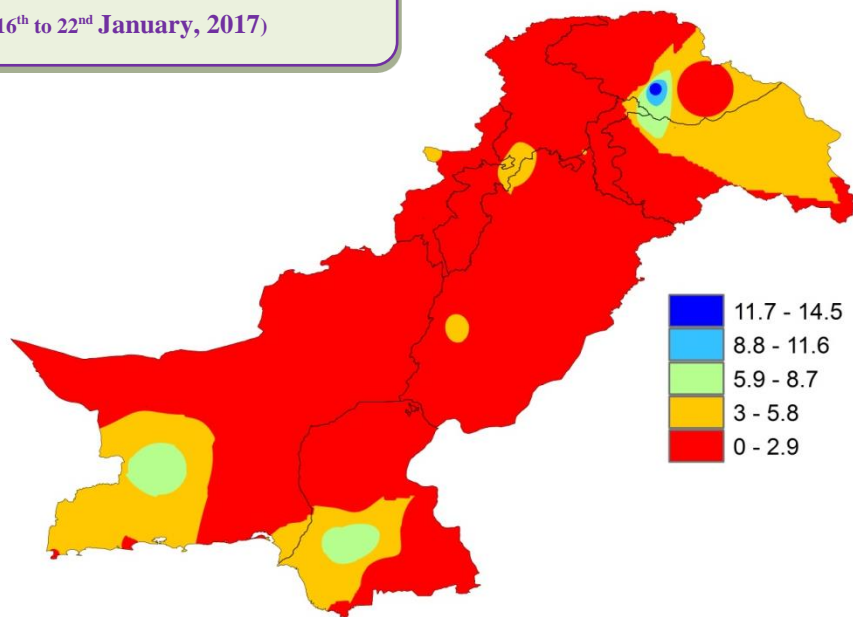
Mean Relative Humidity (%) during the
Previous week (from 16th to 22nd January, 2017)



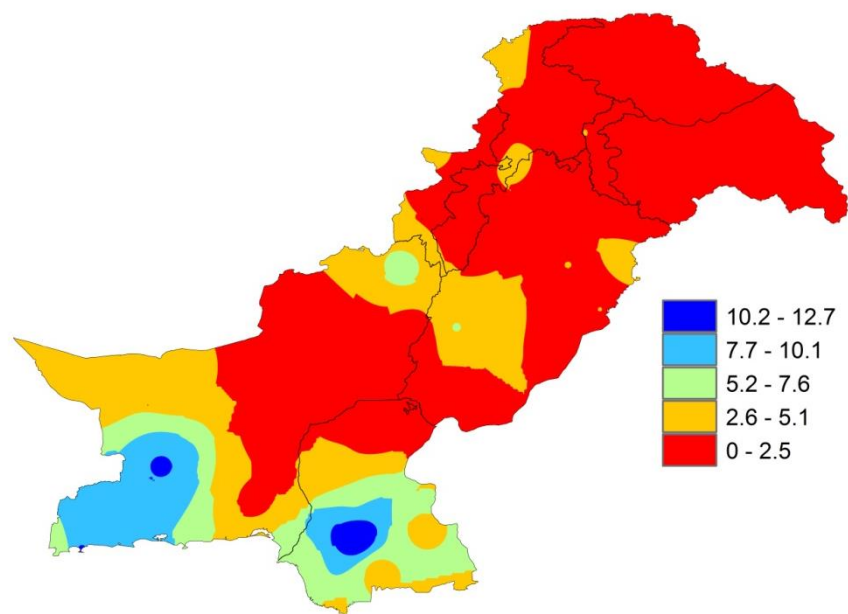
Total Growing Degree Days accumulated during the
Previous week (from 16th to 22nd January, 2017)



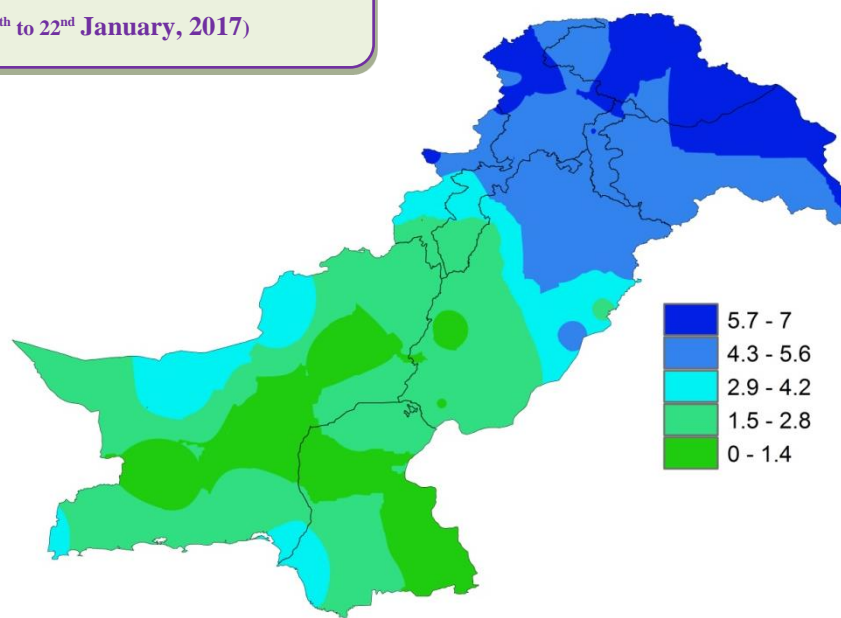
Mean Wind Speed (Knots) at 0800PST during the
Previous week (from 16th to 22nd January, 2017)



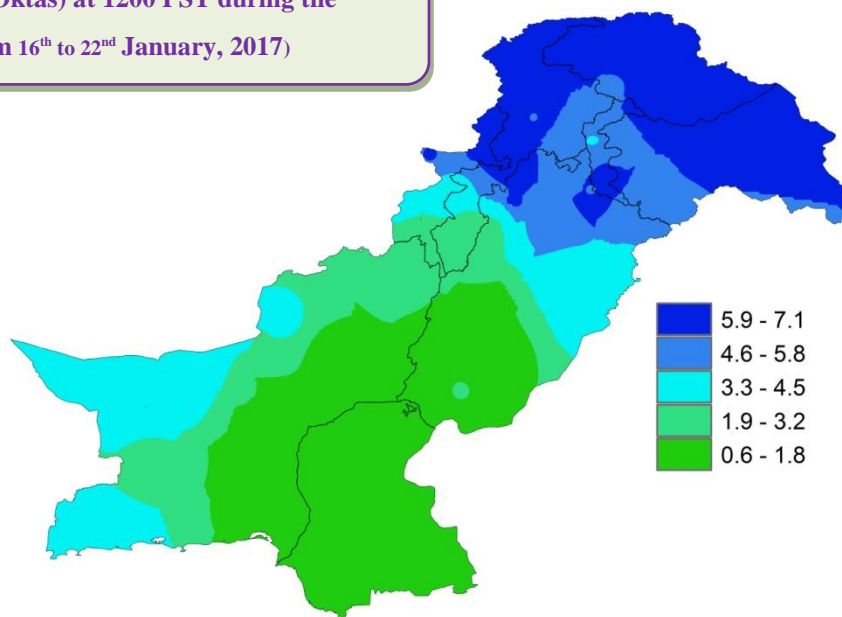
Mean Wind Speed (Knots) at 1200PST during the
Previous week (from 16th to 22nd January, 2017)



Mean Cloudiness (Oktas) at 0800PST during the
Previous week (from 16th to 22nd January, 2017)



Mean Cloudiness (Oktas) at 1200 PST during the
Previous week (from 16th to 22nd January, 2017)



Weekly Weather Advisory for Farmers**(From 23rd to 29th January, 2017)**

A strong westerly wave has entered western parts of the country. This weather system (westerly wave) is expected to produce more rains/snowfall in the country till Thursday. The detailed forecast is;

Monday**23-01-2017**

Rain-thunderstorm (with snowfall over the hills) is expected at number of places in Balochistan, while at scattered places in KP, FATA, Islamabad, Rawalpindi, Gujranwala, Sargodha, D.G Khan, Sukkur, Larkana divisions, Gilgit-Baltistan and Kashmir.

TUESDAY**24-01-2017**

Rain with snowfall over the hills is expected at a number of places in Punjab, Balochistan, KP, FATA, Islamabad, Gilgit-Baltistan and Kashmir. while at scattered places in Sindh. Heavy snowfall is expected over the hills of Quetta, Zhob, Kalat divisions. Isolated heavy fall is expected in Kalat and Makran divisions. Intermittent heavy snowfall may occur over the hills of Murree and Galliyat.

WEDNESDAY**25-01-2017**

Rain with snowfall over the hills is expected at a number of places in Punjab, Balochistan, KP, FATA, Islamabad, Gilgit-Baltistan & Kashmir and at scattered places in Sindh. Heavy snowfall is expected over the hills of Quetta, Zhob and Kalat divisions. Isolated heavy fall is expected in Kalat, Makran, Malakand, Rawalpindi, Gujranwala divisions and Kashmir. Intermittent heavy snowfall may occur over the hills of Murree, Galliyat, FATA, Malakand and Hazara divisions.

THURSDAY**26-01-2017**

Rain with snowfall over the hills is expected at a number of places in upper Punjab, KP, FATA, Islamabad, Gilgit-Baltistan and Kashmir. Intermittent heavy snowfall may occur over the hills of Murree, Galliyat, FATA, Malakand and Hazara divisions.

FRIDAY**27-01-2017**

Cold and dry weather is expected in most parts of the country. However rain with snowfall over the hills is expected at isolated places of Malakand, Hazara, Rawalpindi divisions, Islamabad, Kashmir and Gilgit-Baltistan.

SATURDAY**28-01-2017**

Cold and dry weather is expected in most parts of the country. However rain with snowfall over the hills is expected at isolated places of Malakand, Hazara divisions, Kashmir and Gilgit-Baltistan.

SUNDAY**29-01-2017**

Cold and dry weather is expected in most parts of the country. However, rain with snowfall over the hills is expected at isolated places of Malakand, Hazara divisions, Kashmir and Gilgit-Baltistan.

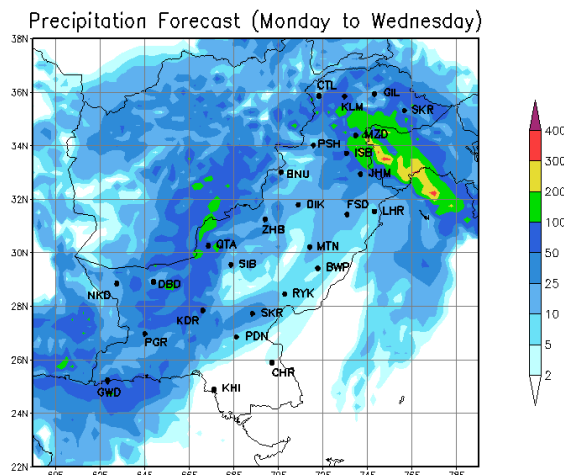
ADVISES FOR FARMERS

Light to moderate rain (with snowfall over the mountains) occurred in most parts of the country, particularly over the northern half. More rains are expected in most parts over the country from 23rd January. Accordingly, soil moisture conditions may be more improved 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.

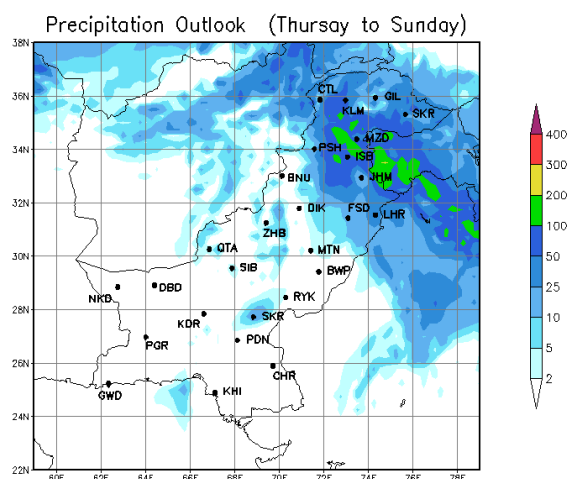
- Due to further drop of temperature farmers of particular areas in the northern half of the country are advised to take precautionary measures for protection of their crops and livestock from the expected frost.
- Farmers of rainfed areas obtaining water through tube wells are advised to schedule the irrigation in accordance with the prevailing weather conditions and crop requirement.

Weather Outlook from 23rd to 29th January, 2017

The forecast from 23rd to 25th January, 2017 shows that heavy rainfall is expected in Punjab, KP, GB and Kashmir. Whereas, light to moderate rainfall is expected in Balochistan and isolated places of Sindh.



The outlook from 26th to 29th January, 2017 shows that light to moderate rainfall is expected in upper parts of the country while, dry weather may prevail in rest of the country.



National Weather Data of Selected Cities
(Weekly Data from 16th to 22nd 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	-7	-8	**	63	0	5.0	6.6	14.7	1.7
Badin	10	10	81	56	0	1.6	1.4	1.4	4.0
Bahawalnagar	6	5	47	77	0	4.6	3.3	0.0	0.6
Bahawalpur	4	3	46	75	0	2.0	1.3	0.3	2.6
Balakot	1	0	13	72	2	5.3	5.1	0.4	0.3
Bannu	2	0	33	59	1	2.9	3.3	1.4	1.1
Barkhan	1	-1	21	46	0	1.4	1.7	1.4	0.6
Bunji	2	0	8	45	0	7.0	7.1	0.0	0.3
Cherat	0	-1	**	76	21	5.6	6.0	4.3	3.4
Chhor	7	5	79	53	0	0.3	1.3	1.7	4.6
Chilas	1	0	14	40	0	5.9	5.3	0.3	2.0
Chitral	-1	-3	**	62	5	5.7	6.9	1.1	2.6
D.G.Khan	3	2	43	73	0	1.1	1.3	3.4	5.1
D.I.Khan	6	5	49	70	0	2.1	2.1	1.1	1.4
Dalbandin	1	-1	34	58	2	4.0	4.3	1.7	3.0
Dir	-3	-5	**	69	17	6.0	6.1	0.0	1.3
Drosh	-1	-2	**	52	3	5.3	6.7	0.0	5.1
Faisalabad	5	4	46	72	0	2.7	3.0	0.3	0.5
Garidopatta	1	0	10	73	11	5.0	4.0	1.4	1.1
Gilgit	-3	-6	**	62	0	5.9	6.7	0.3	0.0
Gupis	-7	-10	**	50	0	4.7	6.4	1.1	1.1
Gwadar	15	13	109	54	0	2.6	3.4	3.7	10.3

Hyderabad	10	8	83	55	0	2.0	0.7	8.3	12.7
Islamabad	4	1	32	80	16	4.3	5.4	0.0	0.3
Jacobabad	7	4	61	77	0	2.3	0.9	0.0	0.0
Jhelum	6	6	45	74	2	4.7	6.1	0.3	2.3
Jiwani	16	14	111	56	2	3.1	3.3	2.9	5.4
Kakul	0	-2	3	64	0	4.3	5.3	0.0	1.1
Kalam	-6	-10	**	87	16	6.0	5.9	0.0	0.0
Karachi	12	10	91	47	0	3.9	1.7	5.1	6.3
Khanpur	4	3	47	69	0	2.3	2.0	0.0	2.0
Khuzdar	3	2	34	46	0	0.0	0.9	0.0	1.1
Kotli	5	3	37	72	3	4.6	6.0	0.6	1.1
Lahore	7	5	49	74	0	4.7	4.1	0.6	3.1
Larkana	6	4	57	63	0	2.1	1.7	0.9	0.9
Lasbella	8	6	82	51	0	2.3	0.9	0.0	2.3
Lower Dir	4	2	27	78	6	5.3	6.3	1.4	1.4
M.B Din	6	5	48	77	7	4.9	5.4	0.3	1.1
Malam Jabba	-6	-7	**	82	58	5.0	6.0	0.3	0.3
Mangla	6	4	45	73	4	5.0	5.7	0.6	1.7
Mir Khani	1	0	13	66	8	5.4	6.1	0.0	0.9
Moinjodaro	6	4	59	71	0	0.4	1.1	0.0	3.7
Multan(PBO)	6	5	54	65	0	2.6	1.7	0.0	3.4
Murree	-2	-5	***	72	36	4.6	5.7	3.1	1.7
Muzaffarabad	2	0	16	63	9	5.0	5.1	2.6	3.6
Nawabshah	8	7	71	62	1	1.4	0.6	2.3	7.4
Nokkundi	5	3	42	40	3	2.1	3.3	1.7	3.4
Okara	6	5	49	75	0	2.8	3.9	0.3	0.6

Padidan	6	4	56	71	0	1.3	1.1	0.3	3.4
Panjgur	3	1	45	43	1	0.6	2.9	6.9	10.3
Parachinar	-7	-7	**	63	7	5.7	5.9	3.0	3.0
Pasni	16	15	109	61	0	2.3	3.6	2.9	7.7
Pattan	5	4	31	47	7	5.7	5.3	0.0	0.6
Peshawar	6	4	40	74	16	4.6	6.6	1.7	1.7
Quetta	-6	-10	**	67	2	3.9	4.0	2.5	2.8
Rahim Yar Khan	5	3	52	70	0	1.3	0.6	0.3	1.4
Rawalakot	-3	-6	**	78	11	5.0	5.4	0.0	0.0
Rawalpindi	4	2	37	83	12	5.6	4.1	0.2	0.5
Sahiwal	4	2	40	73	0	2.6	3.6	0.9	2.6
Saidu Sharif	3	2	24	73	3	4.9	5.7	0.0	0.9
Sialkot	7	4	47	80	0	4.6	5.0	0.0	1.7
Sibbi	5	4	55	63	0	0.3	1.1	0.0	0.0
Skardu	-8	-13	**	69	0	6.1	7.0	0.0	0.0
Tandojam	6	6	63	62	0	0.3	0.0	0.3	1.4
Usta muhammad	4	2	43	75	0	1.3	2.4	0.0	1.1
Zhob	-1	-4	**	59	0	2.6	2.6	1.4	5.6

*** 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)