

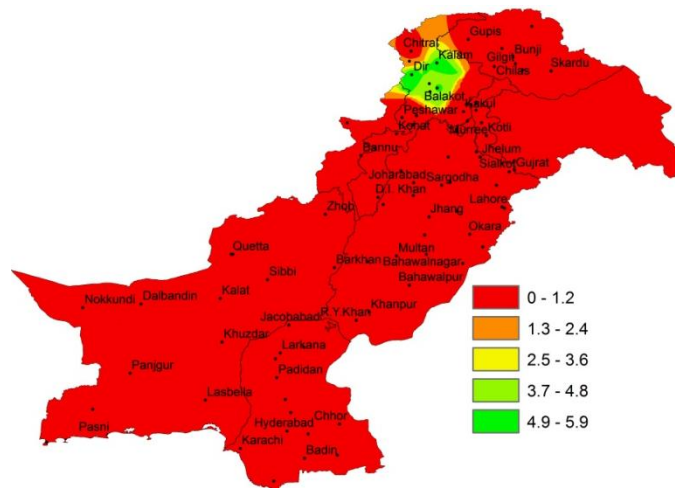
Weekly Weather and Crop Bulletin for Pakistan

**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 31st Oct to 6th Nov, 2016)**



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Highlights of Past Weather (from 31st Oct to 6th November, 2016)

Slightly above normal day time temperature was reported in most parts of the country during the week.

Province wise distribution of rainfall reported as follows:

- Light rainfall was reported at few places in Khyber Pakhtunkhwa.
- Light rainfall was reported only at single station (Islamabad = 0.1) in Punjab.
- Dry weather was reported at the remaining parts of country.

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

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

Editor: Asma Jawad Hashmi (Deputy Director)

Past Weather of Provinces (from 31st Oct to 6th November, 2016)**Punjab**

Light rainfall reported only at single station (Islamabad = 0.1) in Punjab during the week. Weekly maximum and minimum temperatures recorded as 29.6°C & 14.5°C respectively. For the present season on average 119.1 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 67% and wind speed in the morning/evening recorded as 0.4/0.5Knots. During the previous week the lowest minimum temperature was recorded as 7.3°C at Murree.

Sindh

Dry weather reported in Sindh during the week. Weekly maximum and minimum temperatures recorded as 35.6°C & 17.3°C respectively. For the present season, on average 151.0 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 54% and wind speed in the morning/evening recorded as 0.5/1.6 Knots. During the previous week the lowest minimum temperature recorded as 11.5°C at Mithi.

Khyber Pakhtunkhwa

Light rainfall reported at few places in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 24.8°C & 9.4°C respectively. For the present season on average 84.8 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 0.7/1.7 Knots. During the previous week the lowest minimum temperature recorded as 1.5°C at Kalam.

Balochistan

Dry weather reported in Balochistan during the week. Weekly maximum and minimum temperatures recorded as 30.0°C & 13.0°C respectively. For the present season on average 119.1 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 42% and wind speed in the morning/evening recorded as 1.7/4.3 Knots. During the previous week the lowest minimum temperature was recorded as 0.0°C at Kalat.

Gilgit-Baltistan and Azad Jammu & Kashmir

Dry weather reported in Gilgit-Baltistan & Kashmir regions during the week. Weekly maximum and minimum temperatures recorded as 22.0°C & 5.9°C respectively. For the present season on average 64.8 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 52% and wind speed in the morning/evening recorded as 0.7/1.1 Knots. During the previous week the lowest minimum temperature recorded as -2.8°C at Skardu.

**Past Weather for Major Agricultural Plains
(from 31st Oct to 6th Nov, 2016)****Rawalpindi (Potohar region)**

Dry weather was reported during the week; cloudiness in the morning/evening recorded as 0.7/0.6 Oktas while, average relative humidity observed as 75%. Mean night time temperature recorded as 12.0°C & for the present season 105.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.1/0.6 Knots.

Faisalabad (Central Punjab)

Dry weather was reported during the week; however cloudiness in the morning/evening recorded as 0.0/1.7 Oktas while, average relative humidity observed as 73%. Mean night time temperature recorded as 15.1°C & for the present season 121.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.2/0.0 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 61%. Mean night time temperature recorded as 14.8°C & for the present season 141.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.2/0.3 Knots.

Quetta (Northern Baluchistan)

Dry weather was reported during the week; however cloudiness in the morning/evening recorded as 0.0/0.1 Oktas while, average relative humidity observed as 34%. Mean night time temperature recorded as 8.1°C & for the present season 77.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.6/0.0 Knots.

Usta Muhammad (Eastern Balochistan)

Dry weather was reported during the week; however cloudiness in the morning/evening recorded 0.0/0.0 Oktas while, average relative humidity observed as 59%. Mean night time temperature recorded as 14.8°C & for the present season 134.4 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.0 Knots.

**Past Weather for Sub-Regional Agricultural
Plains (from 31st Oct to 6th Nov, 2016)****Multan**

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 63%. Mean night time temperature recorded as 17.1°C & for the present season 134.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.0 Knots.

Lahore

Dry weather was reported during the week; cloudiness in the morning/evening recorded as 0.0/0.0 Oktas while, average relative humidity observed as 72%. Mean night time temperature recorded as 15.5°C & for the present season 118.7 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.0 Knots.

Zhob

Dry weather was reported during the week; however cloudiness in the morning/evening recorded as 0.0/0.3 Oktas while, average relative humidity observed as 36%. Mean night time temperature recorded as 11.0°C & for the present season 95.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.9/5.6 Knots.

D.I. Khan

Dry weather was reported during the week; cloudiness in the morning/evening recorded as 3.1/3.7 Oktas while, average relative humidity observed as 78%. Mean night time temperature recorded as 15.6°C & for the present season 122.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.6/0.6 Knots.

Peshawar

Dry weather was reported during the week; cloudiness in the morning/evening recorded as 1.3/0.9 Oktas while, average relative humidity observed as 68%. Mean night time temperature recorded as 13.6°C & for the present season 111.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/0.3 Knots.

Murree

Dry weather was reported during the week; cloudiness in the morning/evening recorded as 1.1/0.6 Oktas while, average relative humidity observed as 47%. Mean night time temperature recorded as 8.8°C & for the present season 62.6 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.7/0.9 Knots.

Kalam

Rainfall was reported 5.0mm during the week, cloudiness in the morning/evening recorded as 1.7/3.1 Oktas while, average relative humidity observed as 56%. Mean night time temperature recorded as 2.2°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 0.0/1.1 Knots.

Gilgit

Dry weather was reported during the week, cloudiness in the morning/evening recorded as 2.3/5.1 Oktas while, average relative humidity observed as 69%. Mean night time 2.5 growing degree days accumulated 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 2.1/4.4 Oktas while, average relative humidity observed as 58%. Mean night time temperature recorded as -1.1°C & for the present season 22.5 growing degree days accumulated 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 one crop (irrigated condition) grown in the fields of RAMC Rawalpindi.

Maize: The crop has been harvested.

Central Punjab (Faisalabad)

There is presently one crop (irrigated condition) grown in the fields of RAMC Faisalabad.

Cotton: good condition at *First picking* stage.

Lower Sindh (Tandojam)

Land is preparing for new crop.

Northern Balochistan (Quetta)

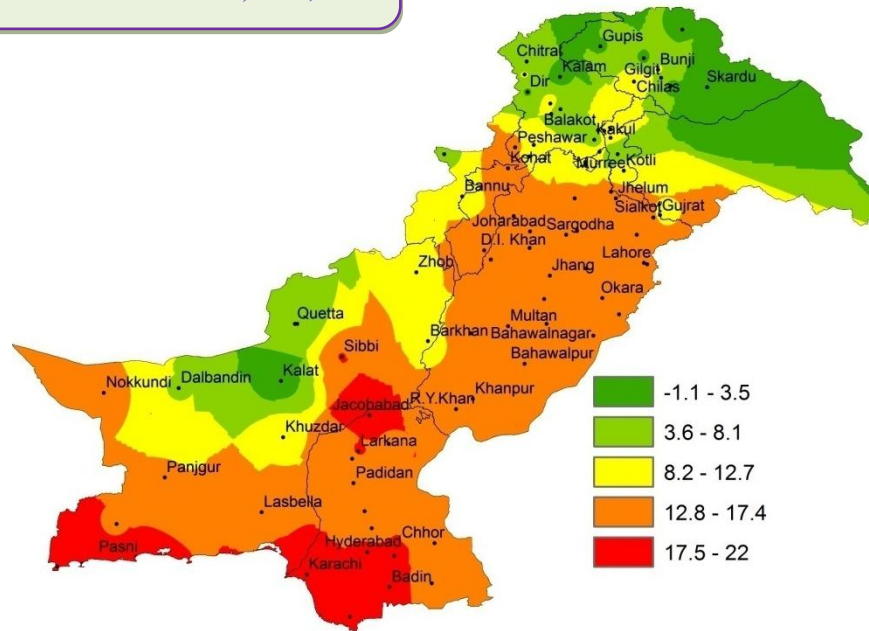
There is presently no crop grown in the fields of RAMC Quetta.

Eastern Balochistan (Usta Muhammad)

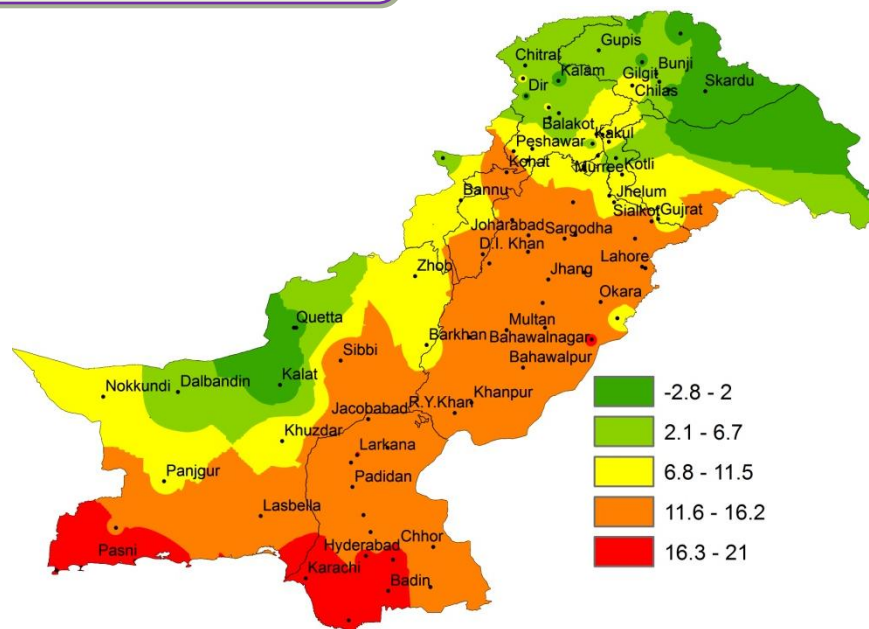
There is presently one crop (irrigated condition) grown in the fields of RAMC Usta Muhammad.

Rice: Good condition at *Harvesting* stage.

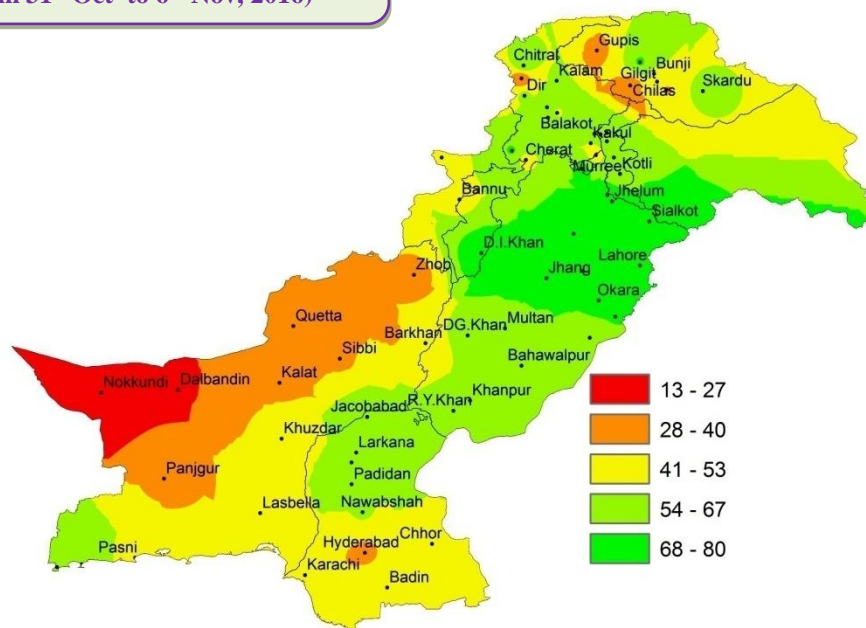
Mean lowest Temperature (°C) during the
Previous week (from 31st Oct to 6th Nov, 2016)



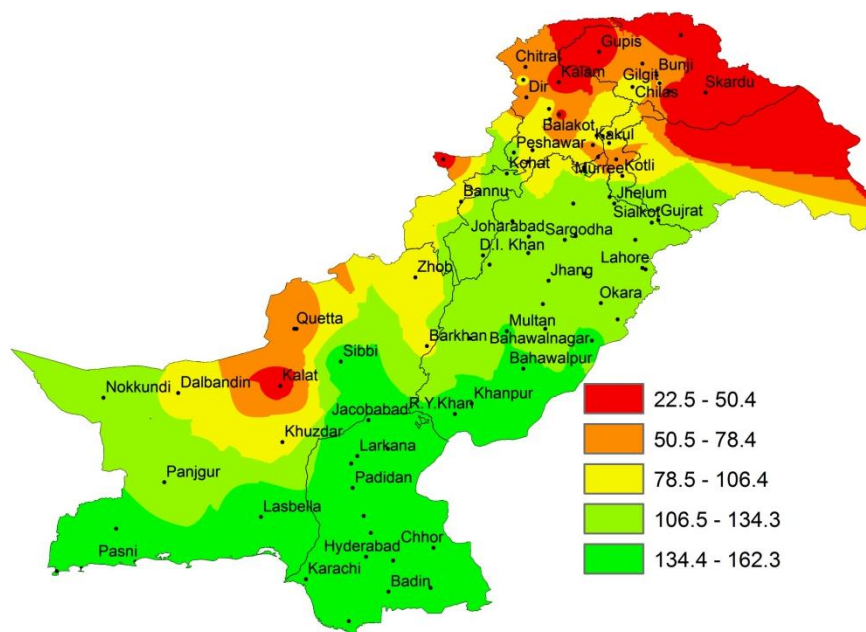
Lowest Minimum Temperature (°C) during the
Previous week (from 31st Oct to 6th Nov, 2016)



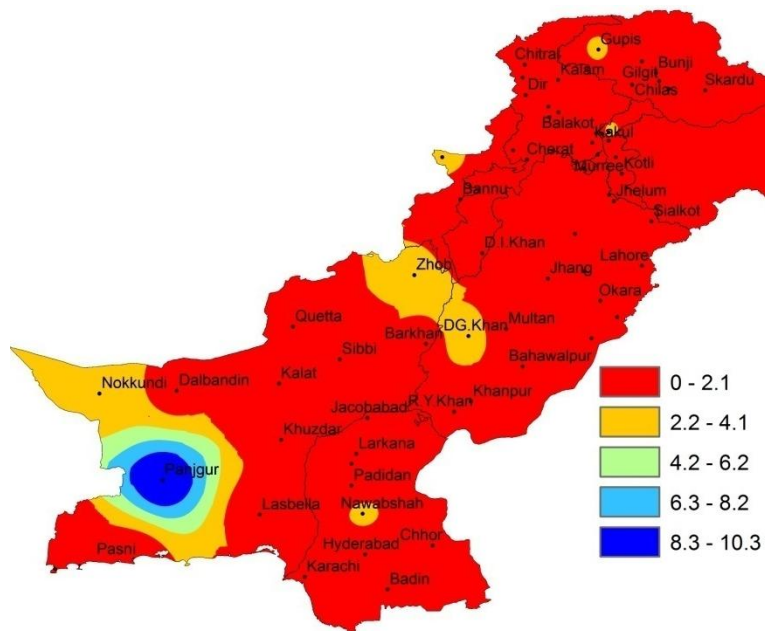
Mean Relative Humidity (%) during the
Previous week (from 31st Oct to 6th Nov, 2016)



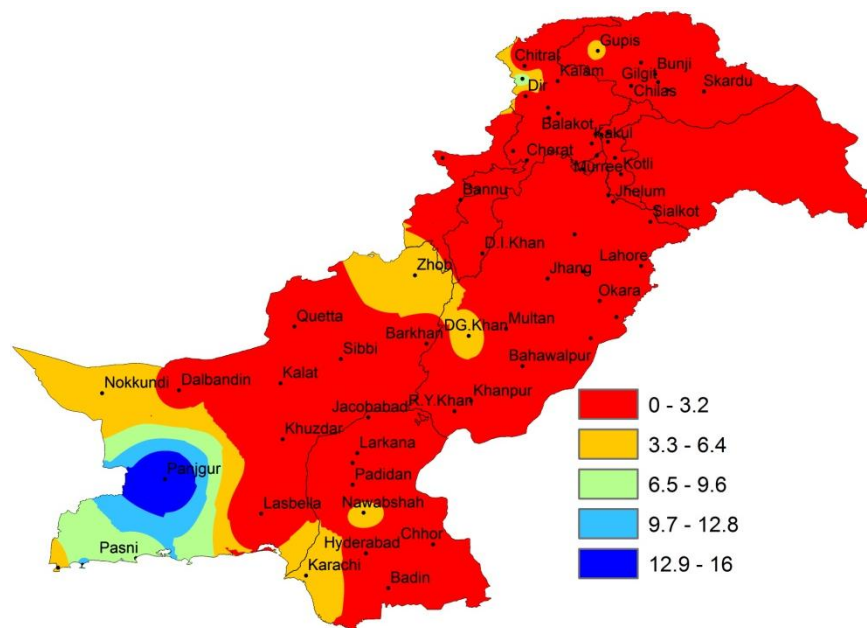
Total Growing Degree Days accumulated during the
Previous week (from 31st Oct to 6th Nov, 2016)



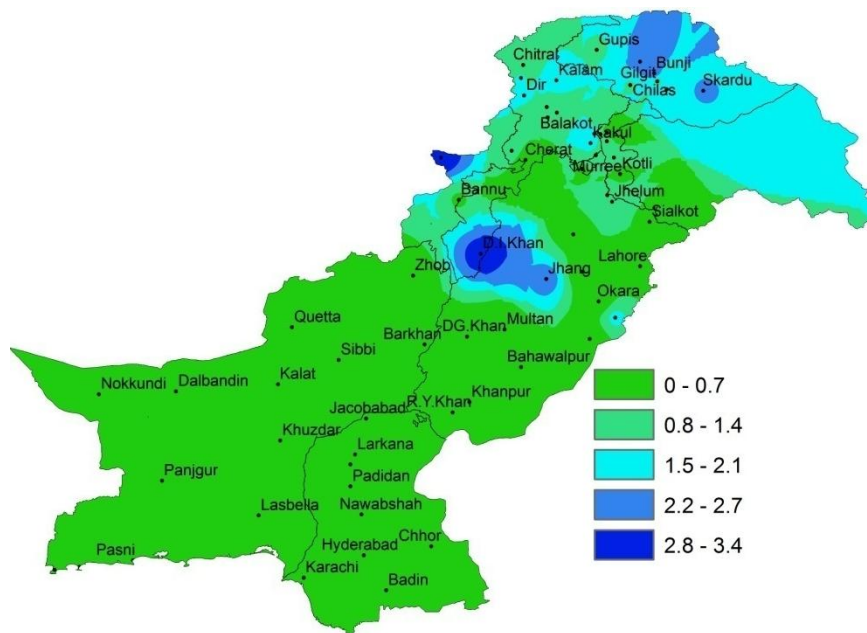
Mean Wind Speed (Knots) at 0800PST during the
Previous week (from 31st Oct to 6th Nov, 2016)



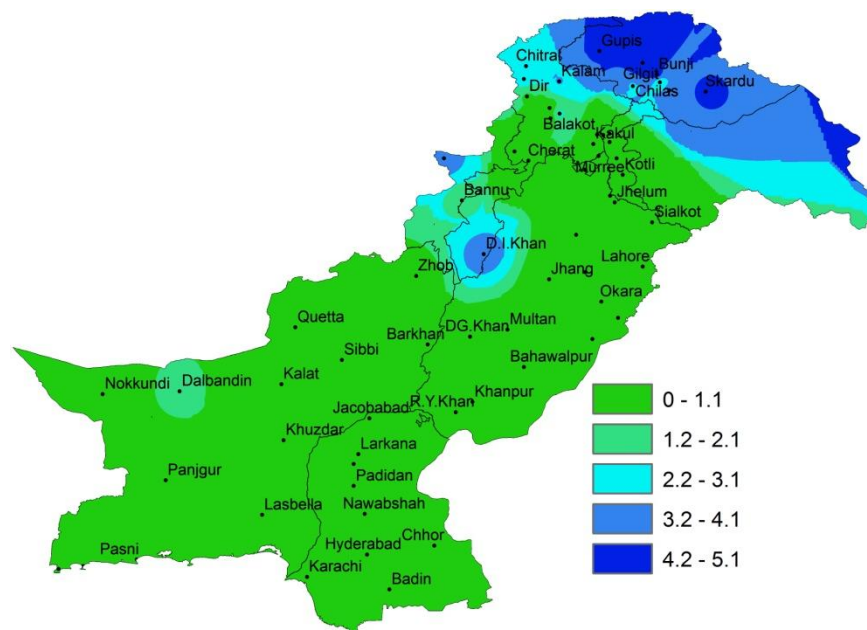
Mean Wind Speed (Knots) at 1200PST during the
Previous week (from 31st Oct to 6th Nov, 2016)



Mean Cloudiness (Oktas) at 0800PST during the
Previous week (from 31st Oct to 6th Nov, 2016)



Mean Cloudiness (Oktas) at 1200 PST during the
Previous week (from 31st Oct to 6th Nov, 2016)



Weekly Weather Advisory for Farmers**(From 7th to 13th November, 2016)**

Continental air would prevail over most parts of the country. A westerly wave is likely to enter upper parts of the country on Thursday (night)/Friday.

MONDAY**07-11-2016**

Mainly dry weather is expected in most parts of the country. Smoggy/foggy conditions are expected over plain areas of Lahore, Gujranwala, Sargodha, Faisalabad, Sahiwal, Multan, Bahawalpur and Sukkur divisions.

TUESDAY**08-11-2016**

Mainly dry weather is expected in most parts of the country. Smoggy/foggy conditions are expected to prevail over plain areas of Punjab.

WEDNESDAY**09-11-2016**

Mainly dry weather is expected in most parts of the country. Smoggy/foggy conditions are expected to prevail over plain areas of Punjab.

THURSDAY**10-11-2016**

Mainly dry weather is expected in most parts of the country. Smoggy/foggy conditions are expected to prevail over plain areas of Punjab.

FRIDAY**11-11-2016**

Mainly dry weather is expected in most parts of the country. However, light rain with snow over the hills is expected at isolated places in Malakand division and Gilgit-Baltistan. Smoggy/foggy conditions are expected to prevail over plain areas of Punjab.

SATURDAY**12-11-2016**

Mainly dry weather is expected in most parts of the country. However, partly cloudy to cloudy weather conditions are expected in upper parts of the country with chances of light rain with snow over the hills is expected at isolated places in Malakand, Hazara divisions and Gilgit-Baltistan. Smoggy/foggy conditions are expected to prevail over plain areas of Punjab.

SUNDAY**13-11-2016**

Mainly dry weather is expected in most parts of the country. Smoggy/foggy conditions are expected to prevail over plain areas of Punjab.

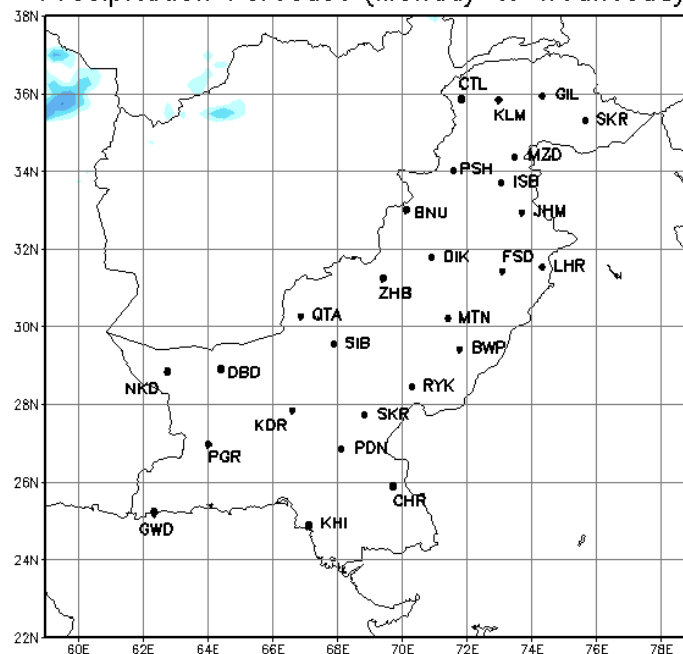
ADVISES FOR CROPS

- Farmers of rainfed areas obtaining water through tube wells and irrigated areas in upper parts are advised to schedule the irrigation according to the expected weather mentioned during the decade.
- Rainfall/ gusty winds after irrigation cause water logging of standing crops like maize, sugarcane and cotton. Farmers should be very careful in this regard.
- Farmers are advised to cultivate winter vegetables in time so that present soil moisture may fully be utilized.
- Farmers are advised to take in time precautionary measures to protect their crops, livestock and other property from any expected rain.
- Farmers of cotton crop areas are advised to prepare their field for incoming rabi crops and complete sowing in time.
- Farmers of rainfed areas are advised to sow their rabi crops during the period 15th October to 15th November. After this time yield of wheat crop decreases gradually.
- Farmers of irrigated areas of Punjab, Sindh and KPK are advised to complete sowing of wheat crop in the month of November. Late varieties may be cultivated in December.
- Farmers of rainfed areas of K.P & Punjab are advised to complete cultivation of Rabi crops as soon as possible. The status of soil moisture is very suitable after recent rains in these areas.

Weather Outlook from 31st Oct to 6th Nov, 2016

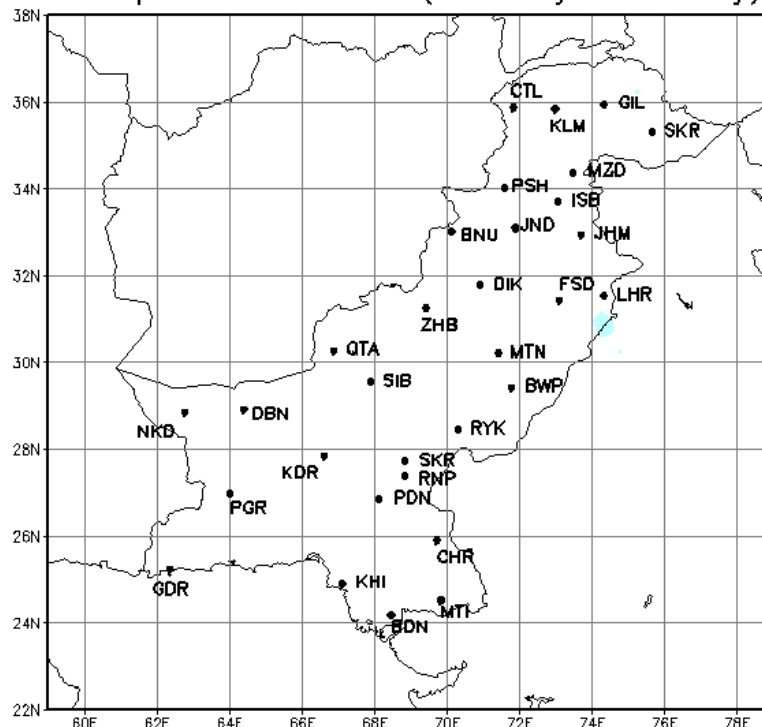
The outlook from 31st October to 2nd November, 2016 shows that dry weather is expected in most parts of the country.

Precipitation Forecast (Monday to Wednesday)



The outlook from 3rd November to 6th November, 2016 shows that dry weather is expected in most parts of the country.

Precipitation Outlook (Thursday to Sunday)



National Weather Data of Selected Cities
(Weekly Data from 31st October to 6th November, 2016)

Stations	Maximum/Night time Temperature (°C)		Growing Degree Days	Relative Humidity (%)	Rainfall (mm)	Cloudiness (Oktas) 0800PST	Cloudiness (Oktas) 1700PST	Wind Speed (Knots) 0800PST	Wind Speed (Knots) 1700PST
	Mean	Lowest							
Astore	1.8	0.0	26.5	38	0.0	1.7	3.4	0.3	2.9
Badin	21.3	20.5	162.3	53	0.0	0.0	0.0	0.9	0.9
Bahawalnagar	16.8	16.5	139.3	57	0.0	0.0	0.0	0.0	0.0
Bahawalpur	15.7	14.9	137.0	61	0.0	0.0	0.0	0.0	0.0
Balakot	7.6	6.7	84.9	62	0.0	1.9	0.4	0.0	0.3
Bannu	11.1	9.0	104.4	51	0.0	0.6	1.6	0.3	0.3
Barkhan	11.5	10.5	104.0	40	0.0	0.0	0.0	1.1	1.1
Bunji	8.6	6.7	72.9	51	0.0	2.6	4.9	0.6	0.9
Cherat	11.6	11.0	82.8	50	0.0	0.0	0.0	2.0	2.3
Chhor	14.9	13.0	146.7	52	0.0	0.0	0.0	0.6	1.4
Chilas	11.4	9.0	91.0	31	0.0	1.3	3.0	0.3	0.9
Chitral	4.1	2.8	61.6	66	0.0	0.9	2.7	0.0	0.9
D.I.Khan	15.6	12.5	122.5	78	0.0	3.1	3.7	0.6	0.6
Dalbandin	7.8	3.5	103.3	25	0.0	0.0	1.3	0.8	2.3
DG.Khan	14.6	13.8	127.0	61	0.0	0.0	0.6	3.7	4.9
Dir	3.1	1.5	64.8	56	6.0	1.4	1.0	0.0	2.0
Drosh	8.6	7.5	83.2	26	1.2	1.4	2.6	0.0	8.9
Faisalabad	15.1	14.0	121.9	73	0.0	0.0	1.7	0.2	0.0
Garidopatta	9.0	8.6	89.1	61	0.0	0.9	0.7	0.0	0.3
Gawader	20.4	19.5	153.0	60	0.0	0.0	0.3	0.0	10.0
Gilgit	2.5	1.0	53.2	69	0.0	2.3	5.1	0.0	0.0

Gupis	3.3	3.0	40.8	37	0.0	1.3	4.3	2.3	3.4
Hyderabad	18.6	16.5	154.4	37	0.0	0.0	0.0	0.0	2.0
Islamabad	10.3	7.8	99.9	71	0.0	0.6	0.4	0.0	0.0
Jacobabad	18.4	16.0	148.3	63	0.0	0.0	0.0	0.0	0.0
Jhang	15.2	14.1	127.2	72	0.0	2.6	0.0	0.0	0.3
Jhelum	13.7	11.4	114.8	75	0.0	1.3	0.0	0.0	0.0
Jiwani	22.0	21.0	153.0	59	0.0	0.0	0.0	1.7	4.0
Kakul	7.3	6.5	75.3	53	0.0	1.6	0.9	0.0	0.0
Kalam	2.2	1.5	40.0	56	5.0	1.7	3.1	0.0	1.1
Kalat	0.9	-1.0	43.0	39	0.0	0.0	0.3	0.0	0.6
Karachi	19.1	18.0	158.0	42	0.0	0.0	0.0	1.4	6.3
Khanpur	15.2	14.5	135.3	59	0.0	0.0	0.0	0.3	0.0
Khuzdar	11.2	10.5	103.0	44	0.0	0.0	0.0	0.9	1.1
Kotli	11.9	10.0	107.2	59	0.0	0.6	0.3	0.3	0.0
Lahore	15.5	14.5	118.7	72	0.0	0.0	0.0	0.0	0.0
Larkana	17.9	16.5	150.8	53	0.0	0.0	0.0	0.6	0.6
Lasbella	16.4	14.5	152.2	41	0.0	0.0	0.3	0.3	0.6
Lower Dir	9.6	7.0	95.3	59	4.0	1.1	0.4	1.1	1.4
M.B Din	15.3	13.3	116.8	80	0.0	0.3	0.0	0.3	0.0
Malam Jabba	5.3	4.0	37.5	52	5.0	0.9	2.3	1.4	0.6
Mangla	12.7	10.6	111.1	70	0.0	0.7	0.0	0.0	0.6
Mir Khani	7.7	6.5	82.6	52	0.0	1.1	2.1	0.6	2.9
Moinjodaro	15.0	13.0	150.3	58	0.0	0.0	0.0	0.7	0.6
Multan	17.1	15.5	134.9	63	0.0	0.0	0.0	0.0	0.0
Murree	8.8	7.3	62.6	47	0.0	1.1	0.6	1.7	0.9
Muzaffarabad	9.2	8.0	91.3	54	0.0	1.0	0.3	0.3	0.0

Nawabshah	16.4	15.5	151.6	54	0.0	0.0	0.0	2.6	3.9
Nokkundi	14.3	10.0	125.8	13	0.0	0.0	0.5	2.7	3.7
Okara	16.5	14.5	127.0	73	0.0	0.0	0.0	0.0	0.3
Padidan	15.0	13.0	145.3	57	0.0	0.0	0.0	0.6	1.4
Panjgur	12.9	11.0	112.3	37	0.0	0.0	0.4	10.3	16.0
Parachinar	6.7	5.0	42.5	47	0.0	3.4	3.9	3.0	3.0
Pasni	19.9	19.0	156.3	50	0.0	0.3	0.0	0.3	8.3
Pattan	10.8	8.0	97.8	52	0.0	0.1	1.3	3.6	0.9
Peshawar	13.6	11.5	111.8	68	0.0	1.3	0.9	0.0	0.3
Quetta	8.1	5.2	77.9	34	0.0	0.0	0.1	1.6	0.0
R.Y.Khan	15.2	13.6	141.7	60	0.0	0.0	0.0	0.0	0.0
Rawalpindi	12.0	10.0	105.1	75	0.0	0.7	0.6	0.1	0.6
Rawalakot	3.3	1.8	53.7	64	0.0	0.9	0.6	0.0	3.0
Sahiwal	12.8	10.0	115.7	67	0.0	1.6	0.0	0.0	0.0
Saidu Sharif	8.1	6.5	83.3	62	4.0	1.0	0.7	1.1	0.6
Sialkot	13.9	12.0	112.6	78	0.0	0.4	0.0	0.0	0.0
Sibbi	17.5	15.5	149.5	39	0.0	0.0	0.0	0.9	2.0
Skardu	-1.1	-2.8	22.5	58	0.0	2.1	4.4	0.0	0.0
Tandojam	14.8	13.0	141.3	61	0.0	0.0	0.0	0.2	0.3
Usta.M	14.8	14.5	134.4	59	0.0	0.0	0.0	0.0	0.0
Zhob	11.0	9.5	95.0	36	0.0	0.0	0.3	2.9	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 (بذر یعنی 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)