

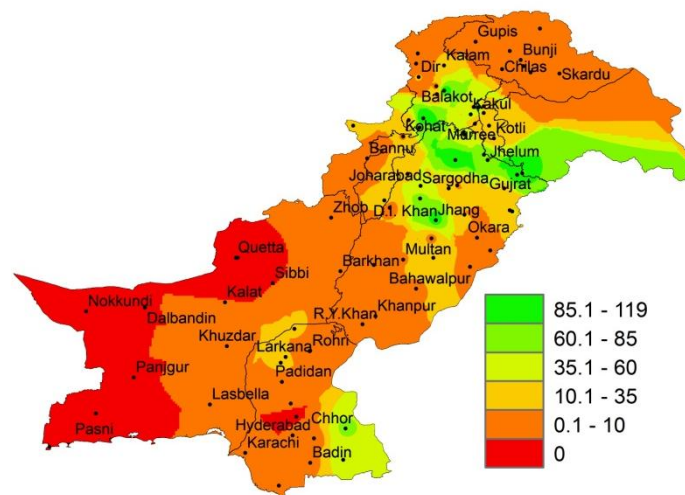
Weekly Weather and Crop Bulletin for Pakistan

**NATIONAL AGROMET CENTRE
PAKISTAN METEOROLOGICAL
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**Rainfall Distribution (mm) during the
Previous Week (24th July to 30th July, 2017)**



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Highlights of Past Weather (24th July to 30th July, 2017)

Below normal day time temperatures reported from most parts of the country.

Province wise distribution of rainfall reported as follows:

- Light to moderate rainfall reported from most part of the country except Balochistan during the week.
- Light rainfall was reported from a few places of Baluchistan.

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

Editor-in-Chief: Dr. Khalid M. Malik (Director)

Editor: Dr. Dildar H. Kazmi (Meteorologist)

Past Weather of Provinces (24th July to 30th July, 2017)

Punjab

Light to moderate rainfall reported from most part of Punjab during the week. Weekly maximum and minimum temperatures recorded as 36.1°C & 26.9°C respectively. For the recent week on average 185.3 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 70% and wind speed in the morning/evening recorded as 2.0/3.1 knots. During the previous week the highest amount of rainfall was recorded as 117.02 mm at Kamra & highest maximum temperature was recorded as 42.5°C at Rahimyaar Khan.

Balochistan

Light rainfall was reported from scattered places of Balochistan province during the week. Weekly maximum and minimum temperatures recorded as 37.5°C & 24.2°C respectively. For the recent week on average 177.1 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 4.8/6.2 knots. During the previous week the highest amount of rainfall was recorded as 54 mm at Khuzdar & highest maximum temperature was recorded as 45.0°C at Dilbadin.

Khyber Pakhtunkhwa

Light to moderate rainfall reported from most part of Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 33.3°C & 22.6°C respectively. For the recent week on average 160.6 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 67% and wind speed in the morning/evening recorded as 1.0/3.9 knots. During the previous week the highest amount of rainfall was recorded as 119.02 mm at Risalpur & highest maximum temperature was recorded as 41.0 °C at D.I. Khan.

Gilgit-Baltistan and Azad Jammu & Kashmir

Light to moderate rainfall reported from most part of Gilgit-Baltistan & Kashmir during the week. Weekly maximum and minimum temperatures recorded as 33.5°C & 20.5°C respectively. For the recent week on average 148.9 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 1.1/3.1 knots. During the previous week the highest amount of rainfall was recorded as 107.0 mm at Muzaffarabad & highest maximum temperature was recorded as 44.0°C at Chilas.

Sindh

Light to moderate rainfall reported from most part of Sindh during the week. Weekly maximum and minimum temperatures recorded as 36.8°C & 27.5°C respectively. For the recent week, on average 193.6 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 50% and wind speed in the morning/evening recorded as 1.7/5.6 knots. During the previous week the highest amount of rainfall was recorded as 64.4 mm at Chorr, highest maximum temperature was recorded as 44.0°C at Dadu.

**Past Weather for Major Agricultural Plains
(24th July to 30th July, 2017)****Rawalpindi (Potohar region)**

Rainfall reported as 50.5 mm from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 5.9/6.6 Oktas while, average relative humidity observed as 79%. Mean day time temperature recorded as 33.8°C & for the recent week 170.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/1.7 knots.

Faisalabad (Central Punjab)

Rainfall reported as 18.0 mm from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 0.4/2.9 Oktas while, average relative humidity observed as 72%. Mean day time temperature recorded as 37.1°C & for the recent week 192.4 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.0/0.3 knots.

Tandojam (Lower Sindh)

Rainfall reported as 2.0 mm from Tandojam during the week; however, cloudiness in the morning/evening recorded as 8.7/4.6 Oktas while, average relative humidity observed as 75%. Mean day time temperature recorded as 35.6°C & for the recent week 178.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.8/4.3 knots.

Usta Muhammad (Eastern Balochistan)

Dry weather reported from Usta Muhammad during the week; however, cloudiness in the morning/evening recorded 3.4/3.4 Oktas while, average relative humidity observed as 70%. Mean day time temperature recorded as 36.8°C & for the recent week 189.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.1/4.9 knots.

Quetta (Northern Baluchistan)

Dry weather reported from Quetta during the week; however, cloudiness in the morning/evening recorded as 2.7/4.1 Oktas while, average relative humidity observed as 29.0%. Mean day time temperature recorded as 35.2°C & for the recent

week 160.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.1/3.6 knots.

**Past Weather for Sub-Regional Agricultural
Plains (24th July to 30th July, 2017)****Multan**

Rainfall reported as 9.01 mm from Multan during the week; however, cloudiness in the morning/evening recorded as 0.8/3.1 Oktas while, average relative humidity observed as 58%. Mean day time temperature recorded as 39.0°C & for the recent week 207.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 3.0/6.3 knots.

Lahore

Rainfall reported as 47.9 mm from Lahore during the week; however, cloudiness in the morning/evening recorded as 1.7/4.7 Oktas while, average relative humidity observed as 74%. Mean day time temperature recorded as 34.9°C & for the recent week 182.2 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.7/0.3 knots.

Zhob

Rainfall reported as 4.01 mm from Zhob during the week; however, cloudiness in the morning/evening recorded as 0.0/3.7 Oktas while, average relative humidity observed as 50%. Mean day time temperature recorded as 37.3°C & for the recent week 173.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.7/8.1 knots.

Murree

Rainfall reported as 15.0 mm from Murree during the week; however, cloudiness in the morning/evening recorded as 6.7/8.0 Oktas while, average relative humidity observed as 93%. Mean day time temperature recorded as 21.8°C & for the recent week 94.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/0.3 knots.

D.I. Khan

Rainfall reported as 19.0 mm from D.I.Khan during the week; however, cloudiness in the morning/evening recorded as 4.2/1.9 Oktas while, average relative humidity observed as 74%. Mean day time temperature recorded as 38.2°C & for the recent week 192.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.3/3.4 knots.

Peshawar

Rainfall reported as 15.0 mm from Peshawar during the week; however, cloudiness in the morning/evening recorded as 6.2/3.9 Oktas while, average relative humidity observed as 71%. Mean day time temperature recorded as 35.3°C & for the recent week 180.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.0/2.6 knots.

Kalam

Rainfall reported as 48.5 mm from Kalam during the week; however, cloudiness in the morning/evening recorded as 5.0/5.7 Oktas while, average relative humidity observed as 82%. Mean day time temperature recorded as 29.4°C & for the recent week 138.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.3/0.9 knots.

Gilgit

Rainfall reported as 1.0 mm from Gilgit during the week; However, cloudiness in the morning/evening recorded as 3.7/5.9 Oktas while, average relative humidity observed as 56%. Mean day time temperature recorded as 38.1°C & for the recent week 158.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.0/1.7 knots.

Skardu

Rainfall reported as 0.02 mm from Skardu during the week; However, cloudiness in the morning/evening recorded as 3.8/6.0 Oktas while, average relative humidity observed as 42%. Mean day time temperature recorded as 33.3°C & for the recent week 136.6 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.7/4.9 knots.

**Crop Situation for Major Agricultural Plains
(Based on data from Regional Agromet Centers)****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.

Cotton: Good condition, *flowering* stage.

Lower Sindh (Tandojam)

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

Cotton (HH-906): Good condition, *Boll formation* stage.

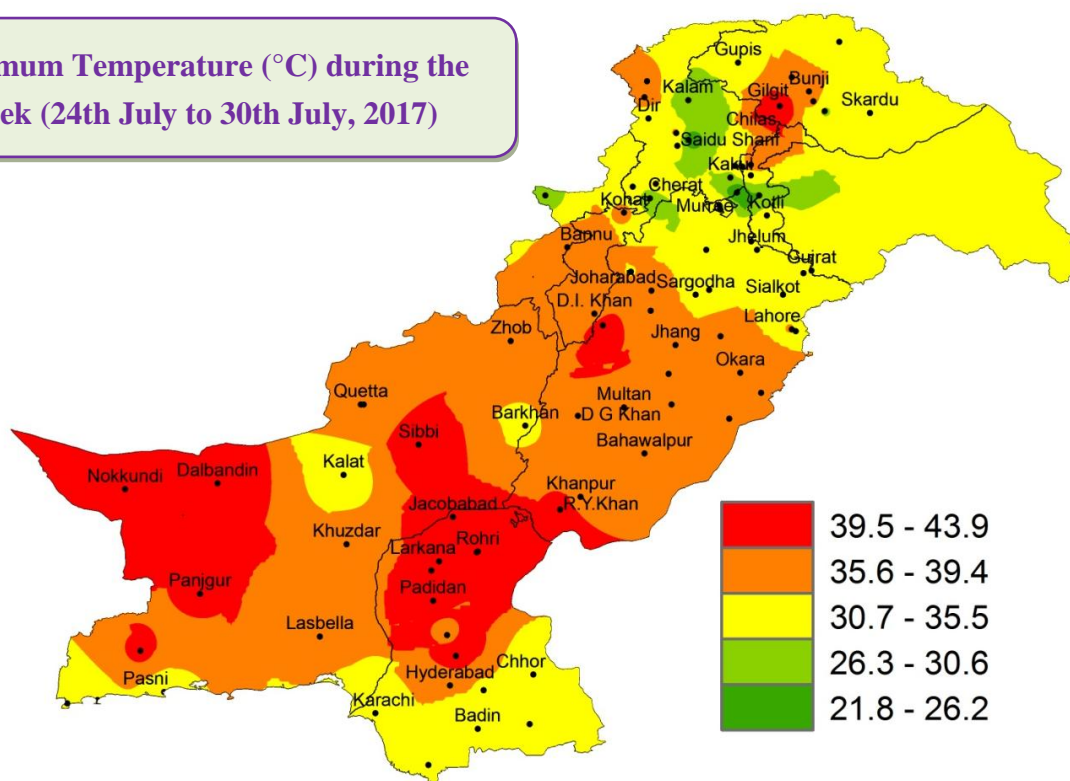
Northern Baluchistan (Quetta)

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

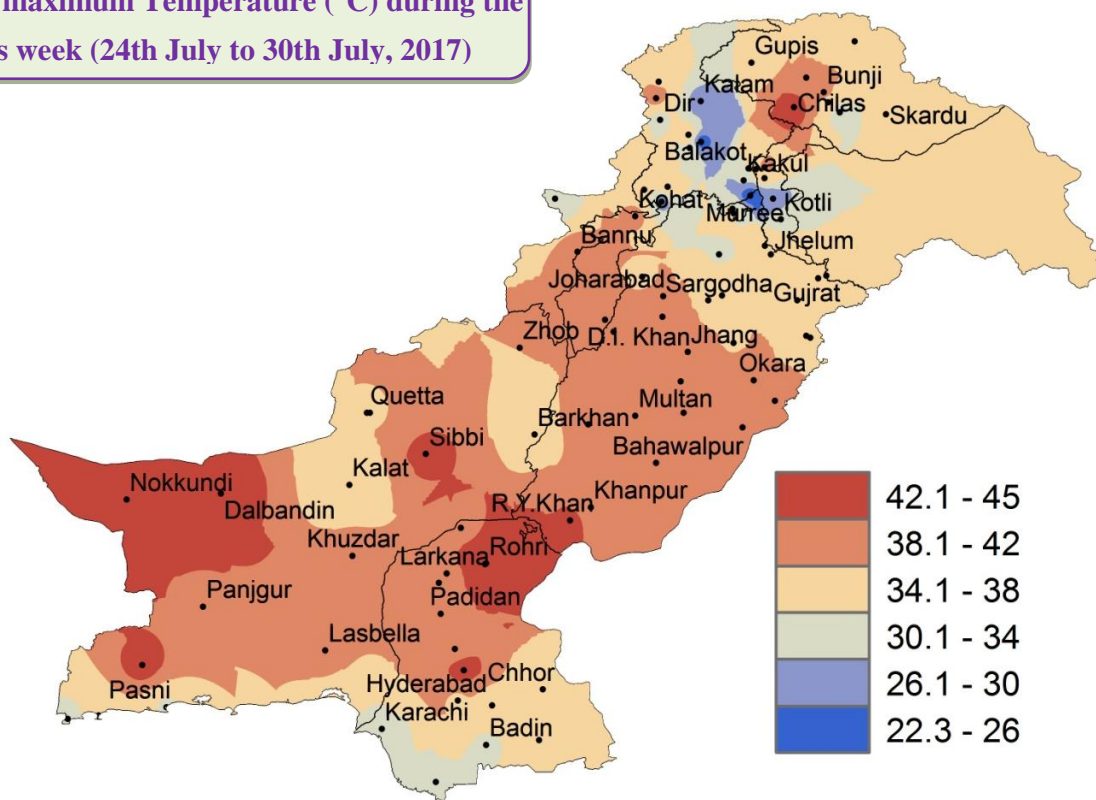
Eastern Baluchistan (Usta Muhammad)

Rice PANERI has been transferred in the fields of RAMC Usta Muhammad.

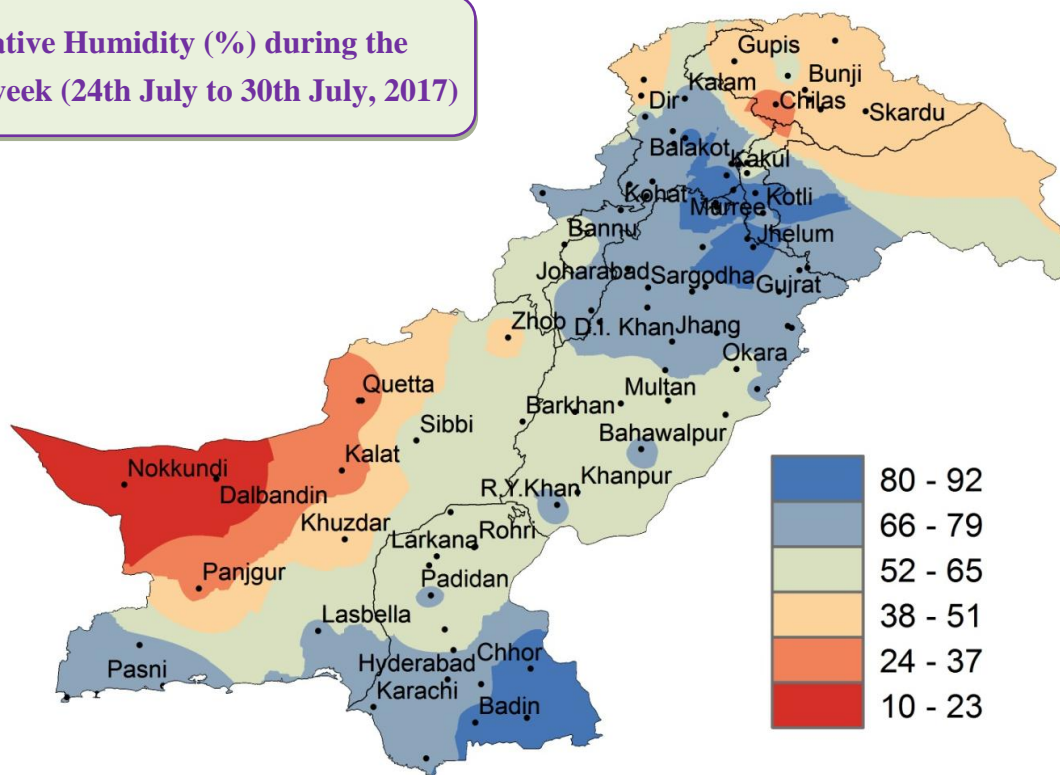
Mean Maximum Temperature (°C) during the Previous week (24th July to 30th July, 2017)



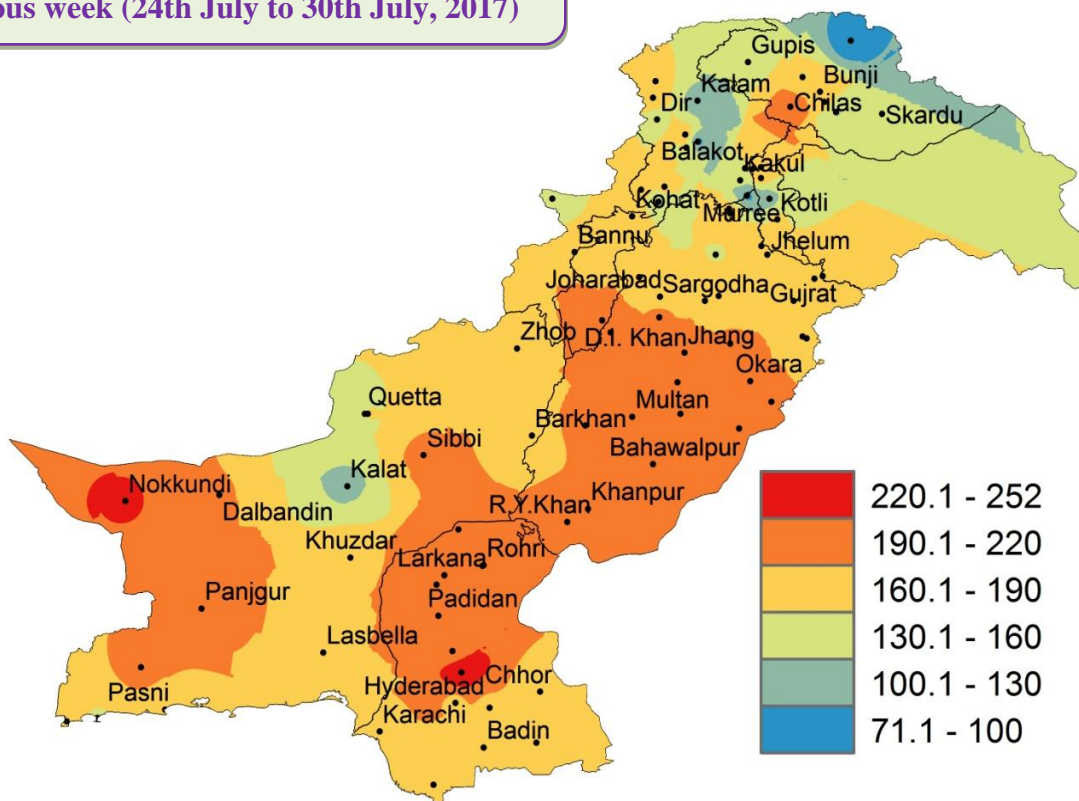
Highest maximum Temperature (°C) during the Previous week (24th July to 30th July, 2017)



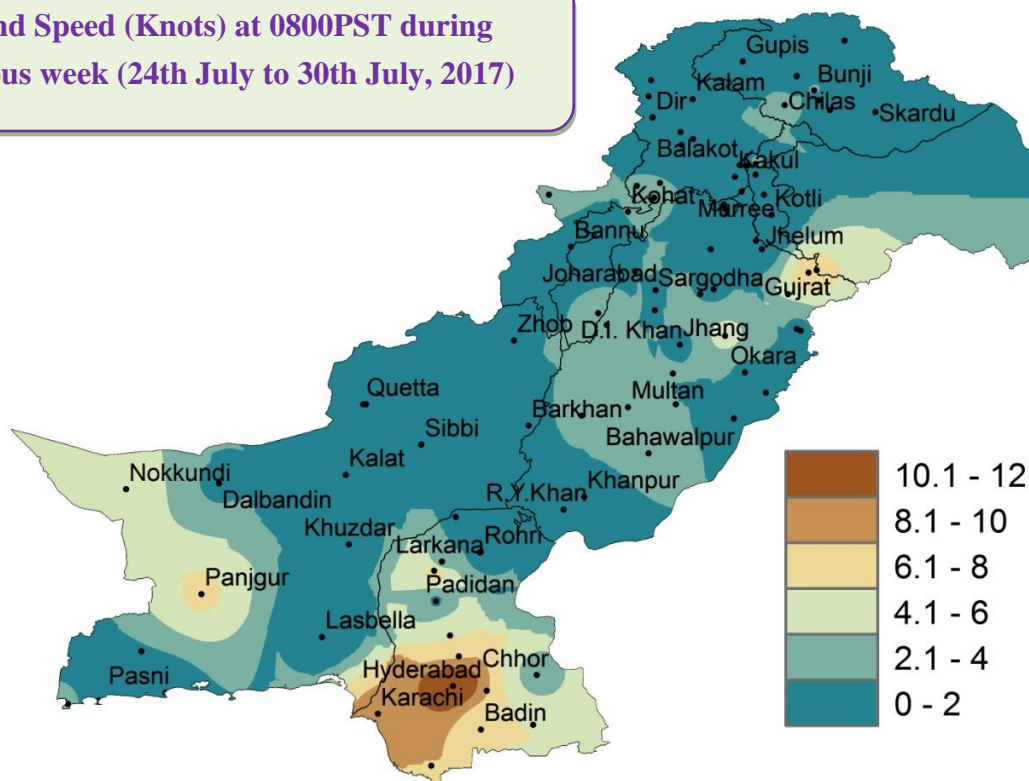
Mean Relative Humidity (%) during the previous week (24th July to 30th July, 2017)



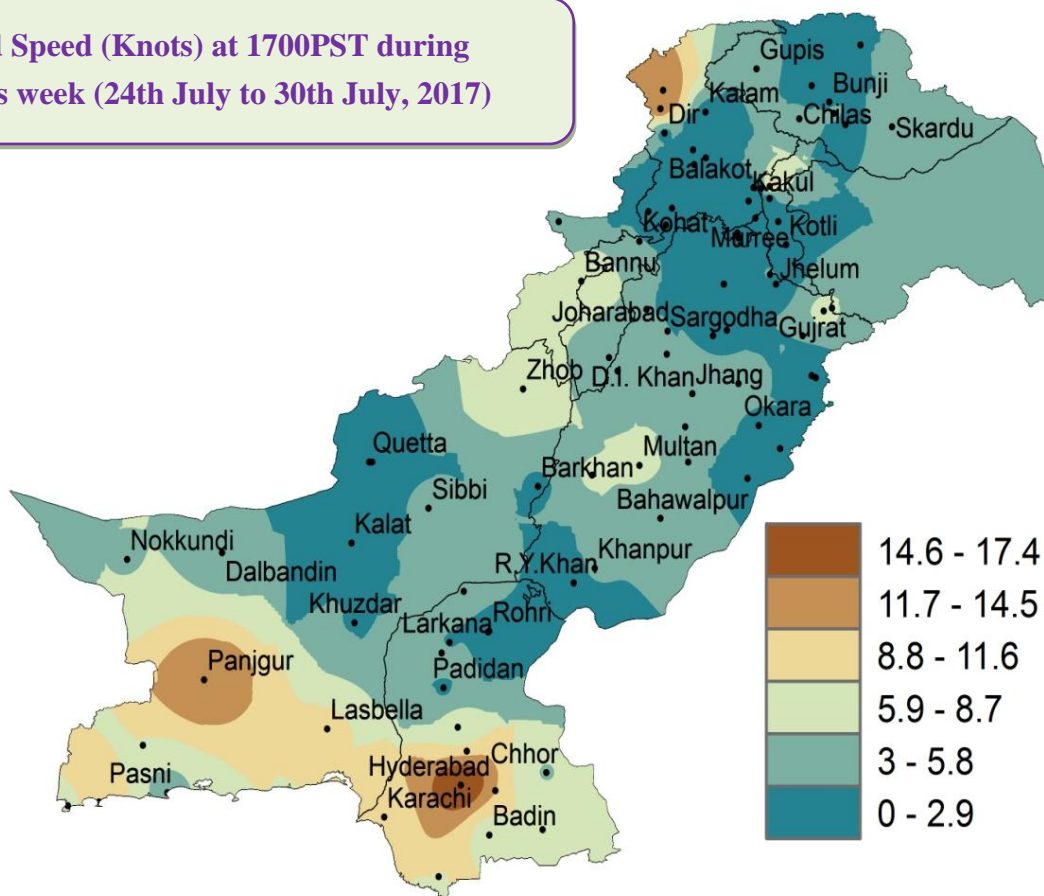
Total Growing Degree Days accumulated during the previous week (24th July to 30th July, 2017)



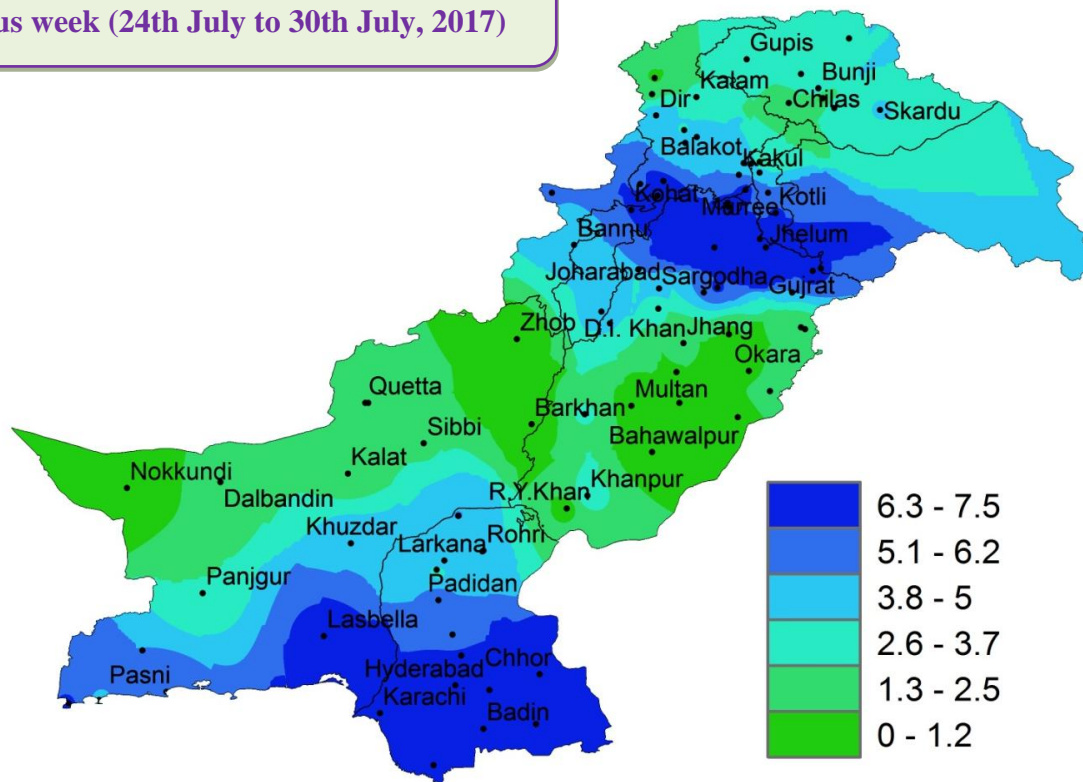
Mean Wind Speed (Knots) at 0800PST during
the previous week (24th July to 30th July, 2017)



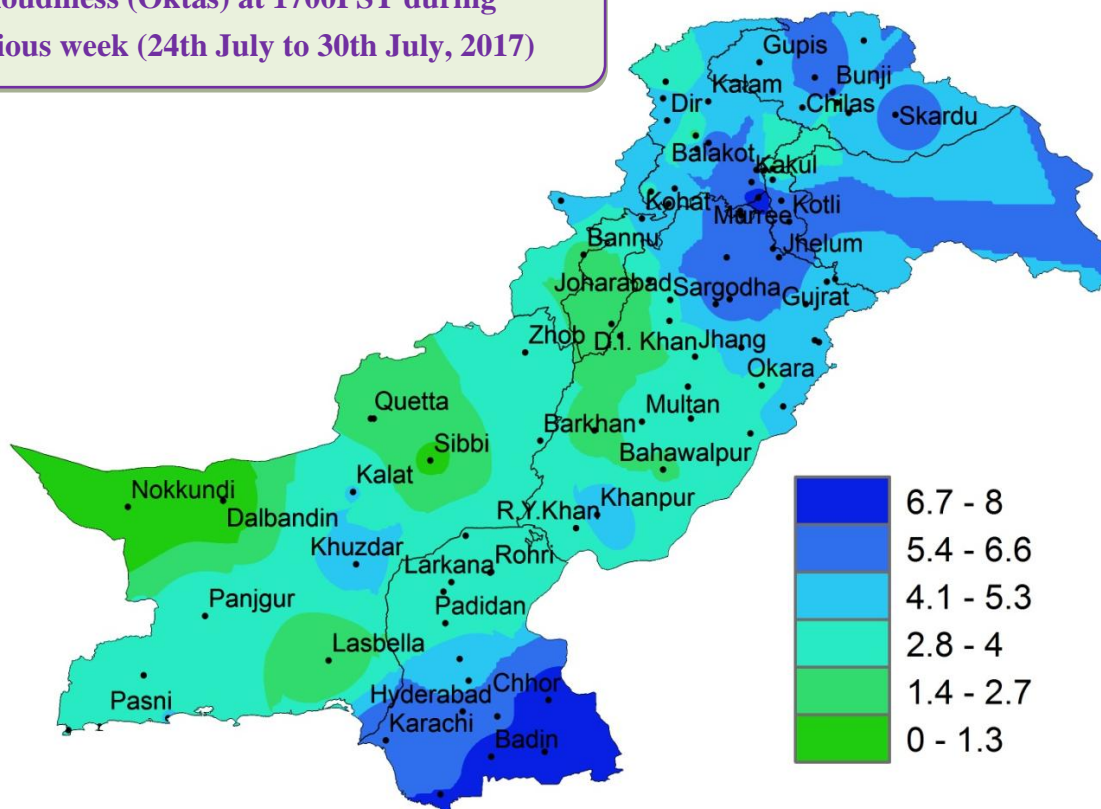
Mean Wind Speed (Knots) at 1700PST during
the previous week (24th July to 30th July, 2017)



Mean Cloudiness (Oktas) at 0800PST during the previous week (24th July to 30th July, 2017)



Mean Cloudiness (Oktas) at 1700PST during the previous week (24th July to 30th July, 2017)



Weekly Weather Advisory for Farmers **(31st July to 6th August, 2017)**

Seasonal low lies over northwest Balochistan. Monsoon currents are reaching eastern and upper parts of country and likely to continue in upper parts during next few days.

MONDAY (31-07-2017)

Rain-thunderstorm (with few heavyfalls) is expected at number of places in Kashmir, upper Punjab (Rawalpindi, Gujranwala, Lahore, Faisalabad, Sargodha divisions), Islamabad & at scattered places in KP, FATA, south Punjab & Gilgit-Baltistan. Hot and humid weather is expected elsewhere in the country.

TUESDAY (01-08-2017)

Rain-thunderstorm (with few heavyfalls) is expected at number of places in Kashmir, upper Punjab (Rawalpindi, Gujranwala, Lahore, Faisalabad, Sargodha divisions), Islamabad & at scattered places in KP, FATA, south Punjab & Gilgit-Baltistan. Hot and humid weather is expected elsewhere in the country.

WEDNESDAY (02-08-2017)

Rain-thunderstorm (with few heavyfalls) is expected at scattered places in Kashmir, upper Punjab (Rawalpindi, Gujranwala, Lahore, Faisalabad divisions), Islamabad, upper KP (Malakand, Hazara, Peshawar, Mardan, Kohat divisions), while at isolated places D.I khan, Bannu, Sargodha, Sahiwal divisions & FATA. Light rain/drizzle is also expected in coastal areas of Sindh including Karachi. Hot and humid weather is expected elsewhere in the country.

THURSDAY (03-08-2017)

Mainly hot and humid weather is expected in the most parts of the country. However, rain-thunderstorm is expected at isolated places in upper Punjab (Rawalpindi, Gujranwala, Lahore, Sargodha, Faisalabad divisions), D.G division, upper KP, Islamabad, FATA, Kashmir and Gilgit-Baltistan.

FRIDAY (04-08-2017)

Mainly hot and humid weather is expected in the most parts of the country. However, rain-thunderstorm is expected at isolated places in Rawalpindi, Gujranwala, Hazara, Peshawar divisions, FATA, Kashmir and Gilgit-Baltistan.

SATURDAY (05-08-2017)

Mainly hot and humid weather is expected in the most parts of the country. However, rain-thunderstorm is expected at isolated places in upper Punjab (Rawalpindi, Gujranwala, Lahore, Sargodha, Faisalabad divisions), upper KP, Islamabad, FATA, Kashmir and Gilgit-Baltistan.

SUNDAY (06-08-2017)

Mainly hot and humid weather is expected in the most parts of the country. However, rain-thunderstorm is expected at isolated places in upper Punjab (Rawalpindi, Gujranwala, Lahore, Sargodha, Faisalabad divisions), Hazara, Peshawar, Mardan divisions, Islamabad, FATA, Kashmir and Gilgit-Baltistan.

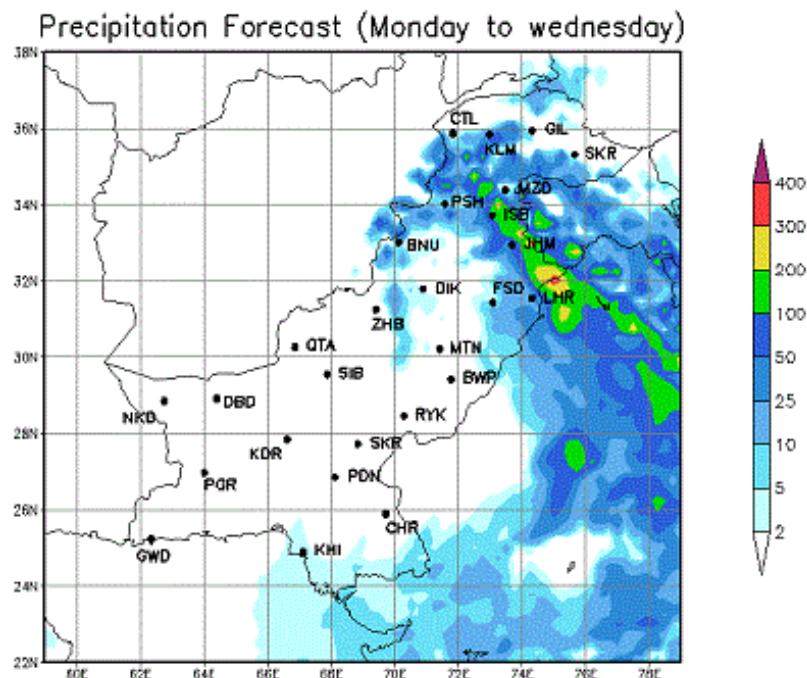
ADVISES FOR FARMERS

During the last week, light to moderate rainfall occurred in most of the agricultural plains in most parts of the country except most part of Baluchistan. This may continue with almost the same pattern over northern half of the country in coming days as well. Keeping in view the expected weather conditions following advises are suggested for farming community.

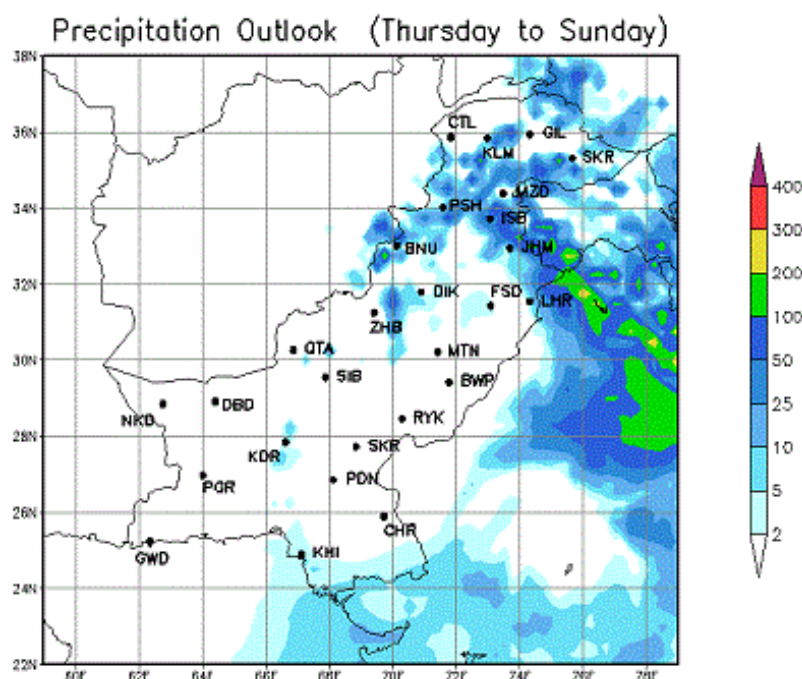
- Pest/viral attacks and more weeds growth are expected after consistent rains in standing crops. Farmers are therefore advised to take in time precautionary measures in this regard.
- Farmers of irrigated areas may irrigate the standing crops as per requirement in accordance with the expected weather conditions.
- Measures may be taken to preserve the crops and livestock from the harsh weather events like hailing, flooding and strong winds etc.

Weather Outlook from 31st July to 6th August, 2017

The outlook from 31st July to 2nd August, 2017 shows that light to moderate rainfall is expected at isolated places of KP, GB, Kashmir, with heavy rainfall in northern and northeastern Punjab. Light rainfall is expected at the coastal belt of Sindh.



The outlook from 3rd to 6th August, 2017 shows that light to moderate rainfall is expected at scattered places of KP, GB, Kashmir, northern and northeastern parts of Punjab with light rainfall at the coastal belt of Sindh.



National Weather Data of Selected Cities (from 17th July to 23rd July, 2017)

Stations	Maximum/Nighttime 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	highest							
Astore	29.9	31.5	126.0	48	3.00	3.5	5.3	1.0	1.1
Badin	32.0	33.5	171.3	80	2.01	7.3	7.0	6.0	7.4
Bahawalnagar	39.3	42.0	204.3	58	0.00	0.7	3.9	0.7	2.9
Bahawalpur	39.4	40.6	203.5	66	7.00	0.3	2.6	3.3	3.4
Balakot	32.4	33.5	155.8	77	17.40	4.0	6.0	1.2	1.1
Bannu	38.2	39.6	184.2	60	0.00	4.5	2.4	0.8	8.0
Barkhan	34.6	35.5	168.0	62	2.00	0.0	3.4	0.0	2.6
Bunji	37.2	39.4	183.8	43	0.01	4.0	7.1	2.3	2.3
Cherat	26.7	28.0	125.5	78	66.00	6.8	5.0	2.3	2.6
Chhor	32.7	35.0	170.2	83	64.40	7.5	7.0	3.3	5.7
Chilas	41.7	44.0	212.0	28	0.02	1.3	4.1	2.7	3.4
Chitral	36.3	37.9	169.8	46	0.00	1.0	3.4	0.0	14.3
D.G.Khan	39.3	40.0	202.2	58	0.01	2.7	2.0	3.7	6.0
D.I.Khan	38.2	41.0	192.0	74	19.00	4.2	1.9	2.3	3.4
Dalbandin	43.6	45.0	190.8	13	0.00	1.5	0.7	1.7	4.0
Dir	32.4	32.5	147.1	68	11.00	5.0	4.7	0.0	2.1
Drosh	37.4	39.1	176.0	39	0.00	2.2	4.4	0.0	13.3
Faisalabad	37.1	38.0	192.4	72	18.00	0.4	2.9	1.0	0.3
Garidopatta	33.7	35.6	164.8	63	22.00	4.3	4.6	0.0	0.9
Gawader	34.5	35.0	157.8	69	0.00	4.8	3.3	0.0	11.1
Gilgit	36.1	38.0	158.8	56	1.00	3.7	5.9	0.0	1.7
Gupis	32.2	34.5	137.3	47	0.00	3.5	5.1	1.7	3.4

Hyderabad	35.5	37.5	182.5	72	0.00	6.7	5.6	12.0	17.4
Islamabad	33.1	34.2	166.7	77	46.04	6.4	5.4	0.0	0.9
Jacobabad	39.5	41.5	207.5	55	12.01	5.0	3.4	1.7	5.4
Jhang	38.2	39.4	198.0	66	97.00	1.3	2.7	1.7	4.6
Jhelum	34.1	36.2	175.7	81	79.01	6.3	5.4	1.0	1.4
Jiwani	32.4	33.0	170.0	74	0.00	6.3	3.3	2.7	8.0
Kakul	29.4	30.5	138.3	82	48.50	5.0	5.7	0.3	0.9
Kalam	27.1	28.0	115.8	69	14.00	2.7	4.1	0.0	2.0
Kalat	33.6	34.0	123.5	33	0.00	1.7	4.0	2.0	1.7
Karachi	32.1	33.2	173.5	74	0.01	7.0	6.6	8.7	10.0
Khanpur	39.1	41.0	202.3	61	0.02	3.2	5.0	0.0	3.1
Khuzdar	36.4	39.5	182.0	48	5.40	4.8	4.4	0.0	2.9
Kotli	32.5	33.1	165.2	77	12.00	6.3	5.6	0.7	2.6
Lahore	34.9	36.2	182.2	74	47.90	1.7	4.7	1.7	0.3
Larkana	40.1	41.5	205.9	59	10.30	4.2	3.4	2.3	2.6
Lasbella	37.1	38.5	182.9	65	0.00	6.8	1.3	0.0	9.0
Lower Dir	36.5	38.0	181.5	66	0.00	3.5	2.0	1.0	2.0
M.B Din	34.5	37.5	179.1	79	6.51	6.3	6.0	1.7	1.1
Malam Jabba	21.8	22.5	90.3	85	119.00	4.5	6.9	0.0	0.0
Mangla	33.3	34.5	170.1	79	74.82	6.7	6.1	0.7	3.1
Mir Khani	36.3	37.0	172.6	41	0.00	0.5	1.9	1.0	3.9
Moinjodaro	39.9	41.5	199.0	61	13.51	3.5	2.7	7.7	4.9
Multan	39.0	40.3	207.9	58	9.01	0.8	3.1	3.0	6.3
Murree	21.8	22.2	94.5	93	15.00	6.7	8.0	0.3	0.3
Muzaffarabad	34.5	36.3	162.7	72	107.00	5.2	4.1	0.7	1.4
Nawabshah	38.7	40.0	196.8	60	0.00	6.2	4.7	6.0	7.4

Nokkundi	43.9	45.0	222.3	10	0.00	0.3	0.0	5.2	5.7
Okara	38.2	39.5	197.0	63	0.00	1.0	3.4	1.7	2.3
Padidan	39.8	42.0	203.8	66	1.00	5.8	3.7	1.7	2.6
Panjgur	39.9	41.0	199.5	37	0.00	2.5	3.9	6.3	14.0
Parachinar	29.0	30.5	131.6	70	18.00	5.0	5.1	3.0	3.0
Pasni	33.0	33.5	171.3	79	0.00	6.0	4.0	1.0	5.0
Pattan	38.2	39.5	185.8	52	3.00	1.8	2.0	2.8	11.9
Peshawar	35.3	37.4	180.3	71	15.00	6.2	3.9	2.0	2.6
Quetta	35.2	36.0	160.3	29	0.00	2.7	4.1	2.1	3.6
Rahim Yar Khan	40.0	42.5	203.3	66	1.20	0.8	3.0	0.7	2.0
Rawalakot	26.0	26.5	119.6	89	14.01	5.0	5.7	0.0	0.0
Rawalpindi	33.8	34.6	170.2	79	50.50	5.9	6.6	1.1	1.7
Rohri	40.9	42.0	215.3	55	12.00	3.8	3.1	0.7	1.4
Sahiwal	38.2	40.5	191.1	66	2.00	2.0	4.6	1.3	2.6
Saidu Sharif	32.9	34.0	162.4	72	3.00	4.8	4.9	0.8	0.0
Sialkot	34.0	35.4	172.8	73	114.11	6.6	5.0	7.6	6.4
Sibbi	42.2	43.0	198.8	56	0.00	2.3	1.1	0.7	3.4
Skardu	33.3	35.6	136.6	42	0.02	3.8	6.0	0.7	4.9
Tandojam	35.6	37.5	178.8	75	2.00	8.7	4.6	0.8	4.3
Usta.M	36.8	37.5	189.5	70	0.00	3.4	3.4	1.1	4.9
Zhob	37.3	38.0	173.0	50	4.01	0.0	3.7	1.7	8.1

*** 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 باب (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)