



Government of Pakistan
Pakistan Meteorological Department
Pakistan Monthly Climate Summary
April 2024

In brief

- National area-weighted rainfall, 59.30 mm of April 2024 was **excessively above average (164%)** and stands as record wettest April since 1961 (previous record being 55.8 mm in 1983). Record-breaking rainfall have occurred in some regions too.
- The heaviest one-day rainfall of 91.0 mm occurred at Dir (KP) on 14th and Malam-Jabba on 20th of the month. Whereas Malam-Jabba (KP) was the wettest place with 520.0 mm monthly total rainfall.
- The national mean monthly temperature of 23.67 °C for Pakistan (with **-0.87 °C** anomaly) was lower than country average of 24.54 °C.
- The daytime (maximum) temperature at the country-level was 30.59 °C (with **-1.14°C** anomaly) was also lower than the country average of 31.74 °C.
- The nighttime (minimum) temperature at country level was 16.70 °C (with **-0.10°C** anomaly) was near to the countrywide average of 16.80 °C.
- The **hottest** day of the month was observed at Shaheed Benazirabad (Sindh) when it recorded a maximum temperature of 43.5 °C on 8th April. The same place found to be the **warmest** place with a mean monthly maximum temperature of 39.4 °C.
- The **coldest** night temperature (-4.0°C) of the month was recorded at Kalam (Khyber Pakhtunkhwa, KP) on 4 April 2024, which too happened to be the **coolest** place with mean monthly minimum temperature of 0.4 °C.
- The El Niño–Southern Oscillation (ENSO) is turning into neutral phase (neither La Niña nor El Niño) with sea surface temperatures (SSTs) around +0.8°C over the central equatorial Pacific. International models forecast further cooling of the central and eastern equatorial Pacific in the months ahead.
- the Indian Ocean Dipole (IOD) is gradually turning into positive phase.

Table-1: National Weather Extremes during April 2024

Hottest day	43.5 °C	at Sh. Benazirabad (Sindh) on the 8 th
Coldest day	3.2 °C	at Chitral (KP) on the 15 th
Coldest night	-4.0 °C	at Kalam (KP) on the 4 th
Warmest night	26.5 °C	at Hyderabad on the 29 th and Karachi AP (Sindh) on the 18 th & 30 th
Wettest day	91.0 mm	at Dir (KP) on 14 th and Malam-Jabba on 20 th
Wettest month	520.0 mm	at Malam Jabba (KP)

Synoptic Summary

The unusual western disturbances (WDs) were the most dominant features of the month which entered through western & northern parts and spread over upper & central parts of the Country. Three back-to-back westerly waves entered the country from 2-7, 10-15 & 18-30 which gripped KP, Gilgit-Baltistan (GB), Kashmir, Punjab, Balochistan and parts of Sindh. Resultantly, widespread dust-thunderstorm/rain of moderate to heavy with few very heavy falls accompanied with hailstorm and snowfall over hills occurred in KP, GB, Kashmir, Punjab, Balochistan and few places in Sindh. These systems triggered flash floods in Balochistan & upper KP associated with riverine flood in Kabul River. Rest of the days remained under continental air over most parts of the country.

Table-2: New Weather Records Set in April 2024

S No	Stations	Weather Parameters	New Record		Old Record		No of years examined.
			Value	Date	Value	Date	
1	GWADAR	Heaviest one day Rainfall (mm)	79.5	18/Apr/2024	62.0	08/Apr/2013	23
2	ORMARA	Heaviest one day Rainfall (mm)	77.0	18/Apr/2024	57.1	09/Apr/1961	96
3	QUETTA (SH MANDA)	Heaviest one day Rainfall (mm)	46.0	15/Apr/2024	32.2	16/Apr/2018	30
4	CHITRAL	Wettest month rainfall(mm)	283.5	Apr-2024	208.3	Apr-1965	64
5	DALBANDIN	Wettest month rainfall(mm)	78.0	Apr-2024	75.2	Apr-1924	116
6	DIR	Wettest month rainfall(mm)	461.9	Apr-2024	353.0	Apr-1995	60
7	DROSH	Wettest month rainfall(mm)	300.4	Apr-2024	278.4	Apr-1908	126
8	GAWADAR	Wettest month rainfall(mm)	100.3	Apr-2024	62.0	Apr-2013	23
9	KAKUL	Wettest month rainfall(mm)	289.0	Apr-2024	254.3	Apr-1961	74
10	KALAT	Wettest month rainfall(mm)	71.0	Apr-2024	52.0	Apr-2012	131
11	ORMARA	Wettest month rainfall(mm)	84.0	Apr-2024	76.7	Apr-1933	96
12	PANJGUR	Wettest month rainfall(mm)	81.0	Apr-2024	66.8	Apr-1997	116
13	PASNI	Wettest month rainfall(mm)	156.0	Apr-2024	136.4	Apr-1933	115
14	QUETTA (SH MANDA)	Wettest month rainfall(mm)	110.1	Apr-2024	85.0	Apr-2012	30
15	CHITRAL	Coldest day Temperature (°C)	3.2	15/Apr/2024	3.3	01/Apr/2007	64
16	DROSH	Coldest day Temperature (°C)	3.4	15/Apr/2024	4.1	26/Apr/1986	66
17	HYDERABAD	Coldest day Temperature (°C)	26.0	14/Apr/2024	27.2	29/Apr/1967	66

Table-3: Significant Winds

Date	Station	Max Wind Knots
12/2024	Islamabad Ap	34
23/2024	Islamabad Ap	34
12/2024	Islamabad ZP	30
10/2024	Sialkot AP	32
29/2024	Sialkot AP	35
26/2024	Lahore City	30
15/2024	Lahore AP	50
19/2024	Lahore AP	35
22/2024	Lahore AP	33
26/2024	Lahore AP	55
29/2024	Lahore AP	55
30/2024	Lahore AP	35
18/2024	Layyah	32
21/2024	Multan AP	32
22/2024	Multan AP	32
25/2024	Multan AP	30
26/2024	Multan AP	30
26/2024	Khanpur	40
21/2024	Hyderabad	30

Rainfall: Excessively Above average in the country.

Climatologically, the April and April-June (AMJ) rainfall contribution to the national annual total is 7.6% & 40.2% respectively. During the month, Pakistan experienced 3 to 4 heavy/very heavy rain spells. The area-averaged daily rainfall is shown in Fig-1. April 2024 rainfall was excessively above average with 59.3mm (+164%) for Pakistan as a whole. Situation was similar on regional scale too, i.e. Balochistan with 58.1mm (+437%) and KP with 174.9mm (+137%) recorded excessively above-average rainfall and ranked ever wettest April (previous record being 36.4mm and 158.6mm in 1965 respectively). The AJK with 168.9mm (+102%) too recorded excessively above average rainfall and ranked 2nd wettest April (the record being 171.0mm in 1965) and Punjab with 35.5 mm (+73%) also recorded excessively above average rainfall. GB with 36.8mm (+13%) was the only region to have experienced a slightly above average rainfall (Table -4).

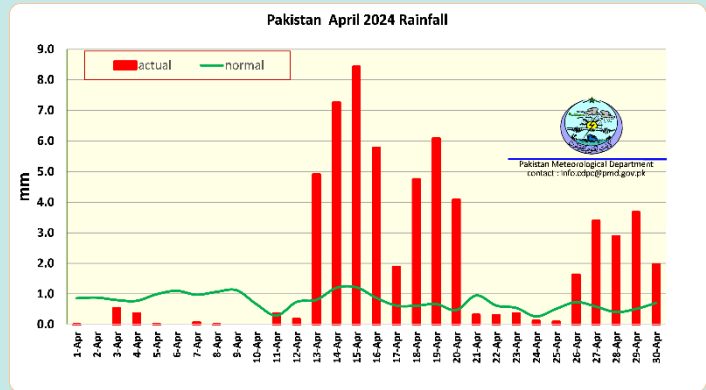


Fig1: Daily Area Weighted Rainfall

The wettest day of the month in the country was 14th April for Dir (KP) & 20th for Malam Jabba (KP) when both stations recorded 91.0 mm of rainfall. Whereas Malam Jabba (KP) was the wettest place with a monthly total rainfall of 520.0mm (Table-1).

Table-4: April 2024 Area-Weighted Rainfall

Region	Rank (of 63y)	Normal (mm)	Average (mm)	Departure (percent)	Comment
Pakistan	64	22.5	59.3	164	01 st highest (record was 55.8 mm in 1983)
Azad Jammu & Kashmir	63	83.6	168.9	102	02 nd highest (record is 171 mm in 1965)
Balochistan	64	10.8	58.1	437	01 st highest (record was 36.4 mm in 1965)
Gilgit Baltistan	44	32.5	36.8	13	----
Khyber Pakhtunkhwa	64	73.8	174.9	137	01 st highest (record was 158.6 mm in 1965)
Punjab	52	20.6	35.5	73	----
Sindh	50	3.1	5.1	65	----

[RANK RANGES FROM 1 (LOWEST) TO 64 (HIGHEST) IN TERMS OF YEARS FROM 1961]

The other significant rainfalls recorded were Dir 461.9mm, Saidu Sharif 382.0mm, Kalam 379.6mm, Rawalakot 363.8mm, Lower Dir 346.9mm, Drosh 300.4mm, Kakul 289.0mm, Chitral 283.5mm, Garhi Dupatta 280.3mm, Mirkhani 270.0mm, Pattan 261.0mm, Peshawar Airbase 235.5mm, Peshawar-Bacha Khan Airport 220.7mm, Muzaffarabad Airport 216.5mm, Muzaffarabad City 213.5mm, Peshawar City 208.8mm, and Murree 205.5mm. The station: Dadu recorded only traces of rainfall during the month.

April 2024 Rainfall maps

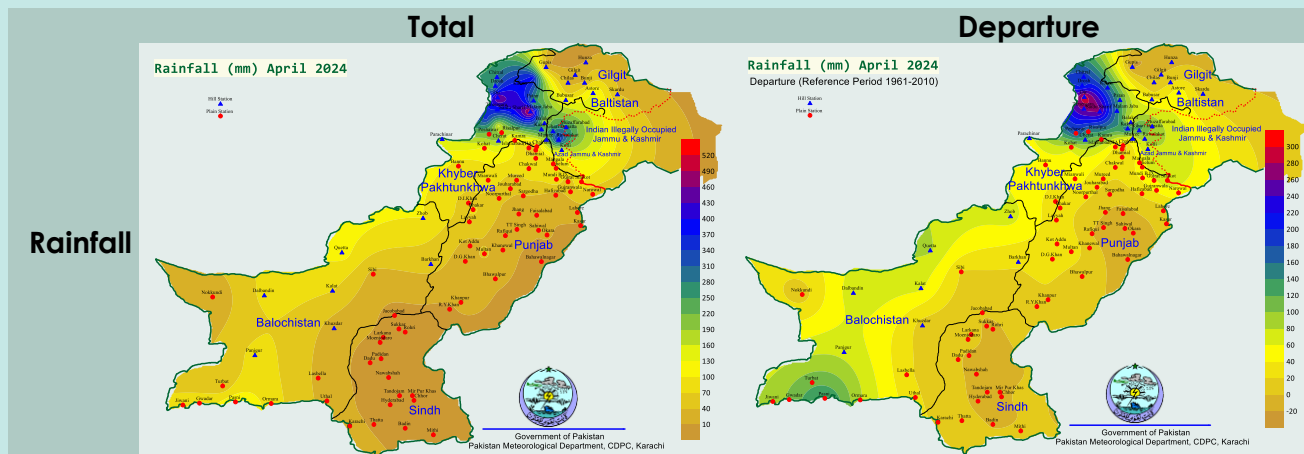


Fig. 2. March-2024 spatial rainfall distribution and departure from normal

Table 5: Below average Temperatures observed in most parts of the country.

Area Averaged Temperatures (°C) in April 2024 and anomalies from normal 1961-1990						
Regions	Maximum Temperature		Minimum Temperature		Mean Temperature	
	Actual	Anomaly	Actual	Anomaly	Actual	Anomaly
Pakistan	30.59	-1.14	16.70	-0.10	23.67	-0.87
Azad Jammu & Kashmir	22.53	-0.53	10.10	-0.34	16.34	-0.43
Balochistan	30.03	-1.66	15.90	-1.06	23.00	-1.71
Gilgit-Baltistan	21.21	0.34	8.65	-0.07	14.95	0.12
Khyber Pakhtunkhwa	24.96	-1.75	12.74	-0.76	18.86	-1.20
Punjab	33.29	-0.94	19.02	0.62	26.16	-0.52
Sindh	37.41	-0.70	22.63	1.48	30.03	+0.40

The April 2024 national mean temperature of 23.67 °C for Pakistan was -0.87 °C cooler than the country-average of 24.54 °C. The situation was more or less similar in the regions too: Balochistan with 23.00°C (-1.7°C), KP with 18.86°C (-1.20°C), Punjab with 25.16°C (-0.52°C) and AJK with 16.34°C (-0.43 °C) all exhibited cooler than average temperatures. Sindh with 30.03°C (+0.40°C) and GB with 14.95°C (+0.12°C) were the regions to have observed slightly warmer than average temperature (Table-5, Fig. 3 lower panel). The mean temperature anomalies of April 2024 were in range -3.8 to 2°C in the country.

April 2024 mean-maximum (daytime) temperature of 30.59°C recorded at country-level with a negative anomaly of -1.14 °C than the country average of 31.74°C. Below average mean maximum (daytime) temperatures were also observed in most of the regions (Table-5, Fig. 3 upper panel). The

Mean maximum temperature anomalies were -4.2 to $+1.3$ °C in the country with those being considerably higher over eastern Punjab and Gilgit Baltistan (GB).

The night (minimum) temperature of 16.70 °C (with -0.10 °C anomaly) was near to the country-average of 16.80 °C during the month. A similar cooler-than-average minimum temperatures were observed in the regions too except Sindh and Punjab, where positive minimum temperatures anomalies were observed (Table-5, Fig-3, middle panel). The hottest day of the month was at Shaheed Benazirabad (Sindh) when it recorded 43.5 °C temperature on 8th April and same happened to be the warmest place with 39.4 °C average maximum temperature during the month. Kalam (KP) recorded the month's **coldest** night temperature of -4.0 °C on 4th April and incidentally been the **coolest** place with 0.4 °C average minimum temperature.

April 2024 Temperature maps

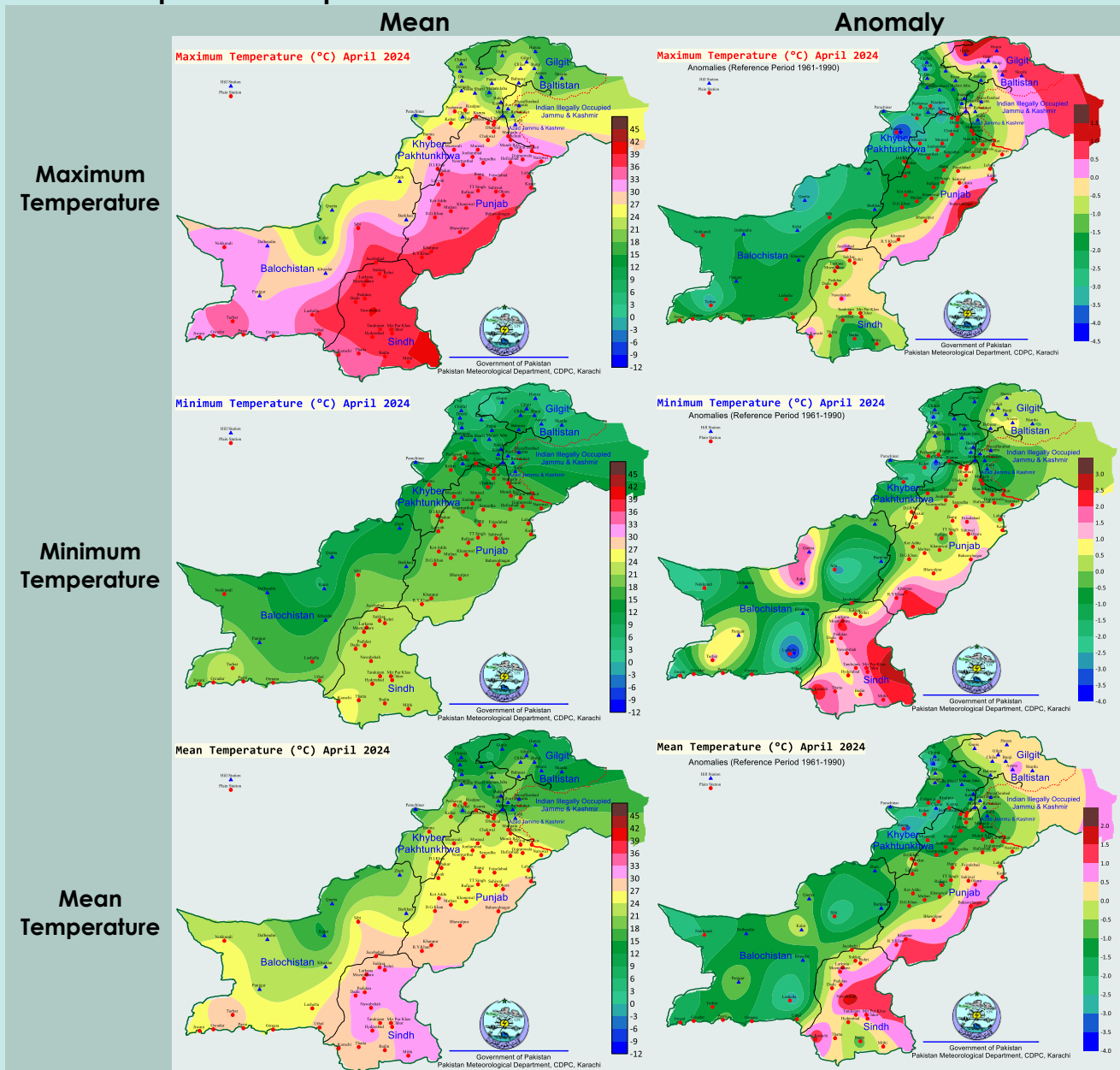


Fig. 3. April-2024 Temperatures (Maximum, Minimum & Mean) and their anomalies.

Table 6: April 2024 Monthly Averages & Normals

Station	Pressure (mb)		Temperature (°C)			Vapour (mb)	Precipitation	
	Station Level	Sea Level	Mean	Maximum	Minimum	Pressure	Total (mm)	Days
Drosh	854.0	1502.8	12.7	18.6	6.8	8.1	300.4	16
	853.6	1496.3	17.2	23.6	10.7	7.9	99.2	12
Peshawar	973.5	1010.9	22.2	28.5	15.9	16.1	208.8	12
	967.4	1007.7	23.6	30.6	16.5	15.2	50.4	9.3
Parachinar	826.7	1491.1	14.0	19.4	8.5	8.9	155.0	11
	826.5	1487.3	14.9	21.3	8.5	8.5	96.5	13.5
Rawalpindi	953.0	1010.1	22.4	28.1	16.6	13.2	70.0	13
	950.6	1007.3	22.5	30.2	15.4	13.4	63.1	9.2
Sargodha	987.2	1008.0	26.0	32.9	19.1	16.3	46.7	6
	986.0	1006.9	26.3	34.2	18.4	15.8	29.6	6.9
Jhelum	981.7	1008.3	24.0	31.1	16.9	17.2	92.3	10
	980.3	1006.8	25.4	33.0	17.8	15.1	36.0	8
Sialkot	979.2	1008.1	24.6	31.9	17.2	17.9	104.3	8
	978.0	1006.5	24.8	32.4	17.2	15.0	33.0	6.1
Zhob	855.4	1458.8	18.9	24.6	13.1	8.7	100.0	7
	856.3	1468.5	20.2	27.2	13.2	8.2	31.2	3.1
D.I.Khan	988.6	1008.1	25.7	32.1	19.3	17.9	52.1	7
	987.0	1006.5	25.9	33.5	18.5	15.8	24.1	5.6
Lahore	983.9	1008.1	26.7	33.4	19.9	15.4	26.6	4
	982.3	1006.3	27.0	34.0	20.0	14.8	22.3	6.3
Quetta	841.8	1507.3	15.8	21.5	10.1	6.8	108.0	10
	839.9	1487.3	17.0	25.3	8.6	8.8	22.2	3.9
Multan	993.6	1007.5	26.9	33.7	20.1	15.2	47.3	6
	992.4	1006.3	28.1	35.6	19.5	15.6	14.6	4
Barkhan	889.6	1490.0	21.7	28.0	15.4	7.9	52.0	7
	887.3	1480.0	23.5	29.6	17.0	9.3	37.3	3.3
Nokkundi	931.6	1006.2	24.2	31.8	16.5	6.8	13.0	5
	931.8	1008.3	25.8	34.2	18.6	10.5	2.3	0.5
Dalbandin	916.0	1493.3	22.7	30.5	14.9	9.1	78.0	6
	914.9	1488.8	24.4	31.9	14.3	8.0	5.7	1
Jacobabad	1000.8	1007.1	29.7	38.3	21.2	15.2	3.2	2
	999.4	1005.6	30.2	38.2	22.3	15.2	2.1	0.7
Khanpur	997.0	1007.0	28.8	36.9	20.7	17.9	23.2	3
	995.7	1005.8	27.7	37.1	18.4	15.3	3.1	1.1
Panjgur	901.8	1491.1	23.2	29.4	17.0	11.8	81.0	7
	901.8	1493.4	24.0	31.5	16.4	6.4	8.6	0.9
Khuzdar	876.0	1491.4	21.4	28.1	14.6	6.2	26.1	4
	873.9	1470.7	22.8	29.9	16.1	4.1	17.1	1.7
Sh. Benazirabad	1003.9	1007.2	30.3	39.4	21.1	17.9	1.5	1
	1002.7	1007.3	29.5	39.6	19.5	19.7	2.6	0.2
Jiwani	1003.0	1009.5	25.1	30.8	19.3	23.9	92.0	3
	1002.2	1008.5	26.7	31.9	21.9	22.7	4.6	0.2
Pasni	1008.6	1009.2	26.3	32.6	20.0	24.5	156.0	3
	1007.4	1008.1	26.2	33.0	20.8	21.8	1.2	0.1
Hyderabad	1002.4	1007.2	30.7	37.5	23.8	17.8	4.0	1
	1002.6	1006.6	31.0	38.8	23.0	17.7	5.1	0.4
Chhor	1006.5	1007.2	30.6	38.5	22.8	22.1	4.0	1
	1005.5	1006.1	29.9	39.6	20.2	17.3	1.6	0.3
Karachi	1005.9	1008.5	29.7	34.6	24.8	24.0	15.1	1
	1005.3	1008.0	28.5	34.5	22.5	22.2	3.2	0.2

Note: The first row against each station contains the actual values while second row for normal values

Table 7: April 2024 extreme values

STATION	Mean Temperature (°C)				Temperature (°C)				Highest (mm & knots)			
	Highest	Date	Lowest	Date	Highest	Date	Lowest	Date	Rain	Date	Wind Speed	Date
Drosh	18.6	25	2.2	15	26.7	25	-0.1	16	50.8	14	12	7*
Peshawar	26.0	26	17.0	15	34.5	7*	12.5	30	61.0	20	10	20
Parachinar	18.0	9	9.4	19	25.0	9*	5.0	15	42.0	13	12	16
Rawalpindi	26.3	25*	18.0	19	32.6	25	11.0	30	20.0	20	22	16*
Sargodha	30.3	25	20.4	14	38.4	25	15.9	1	25.8	16	16	26
Jhelum	27.8	25	19.5	14	36.5	25	11.8	30	38.0	30	12	30
Sialkot	28.0	26	21.5	29*	36.0	25*	13.5	30	56.0	16	12	30*
Zhob	23.5	9	14.8	13	31.0	9	10.5	14	40.0	13	11	9
D.I.Khan	30.5	10	20.5	19	38.0	10*	17.0	1	23.0	19	12	26
Lahore	31.0	26	23.2	14	38.0	26	15.0	30	18.4	30	10	13*
Quetta	20.8	10	12.5	17*	27.5	10	6.0	4*	25.0	19	26	12*
Multan	31.5	25	20.0	13	39.2	25	17.0	1	11.0	19	20	26
Barkhan	26.0	9	18.5	15	33.0	9*	13.0	1	16.0	19	8	13
Nokkundi	29.8	12	19.5	17	37.5	12	12.0	1	5.0	18	16	2
Dalbandin	29.5	12	18.0	15	38.0	12	9.5	1	28.0	14	16	12
Jacobabad	33.3	25	24.0	14	43.0	10*	19.0	1*	2.0	27	6	11*
Khanpur	32.2	10	25.8	14	42.0	10	16.5	2	16.0	27	12	13
Panjgur	27.5	9	17.3	17	34.5	8*	11.5	2	23.0	16	20	12
Khuzdar	24.3	11	18.8	30	31.5	10*	12.0	30	9.1	17	12	29
Sh.Benazirabad	32.6	9	23.3	14	43.5	8	17.0	2	1.0	14	22	18
Jiwani	28.8	29	21.5	17	36.5	29	17.0	8*	44.0	17	16	17
Pasni	30.5	29	22.8	18	38.5	29	15.5	18	70.0	14	16	14
Hyderabad	33.1	9	24.9	14	41.3	8	21.7	15	4.0	15	30	21
Chhor	33.0	10	26.3	14	42.0	9	19.0	1	4.0	7	10	6*
Karachi	33.0	30	26.0	15	39.5	29*	21.0	15	15.1	15	14	18*

* means value occurred multiple times

Note

Monthly Climate Summary is produced by Pakistan Meteorological Department, Climate Data Processing Centre, Karachi to provide the main features of weather events occurred in the country during the month. The summary contains detailed data information of 25 climate stations of Pakistan. The extremes & analysis is based on 110 numbers of stations. The information in the summary is based on real time data and/or electronic reports, therefore, the above results can be considered only preliminary. Climate Summaries are usually published in the first week of each month. Long term average for rainfall is for 1961-2010 (50 years) while normal period for temperature is 1961-1990 (30 years).

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