



Pakistan's Monthly Climate Summary AUGUST, 2021

Overview

- The month saw one of its sever deficient rainfall (-55.5%) and ranked as third driest month on record.
- Severe dry conditions prevailed over all regions in the month.
- AJK (-60.5%) and Punjab (-57.7%) were the worst hit regions as both recorded their second driest month on record.
- The regions, KP (-34.3%) & Sindh (-89.2%) also experienced large rain-deficit and ranked among ten driest month on record.
- The situation was no different over Balochistan (-48.6%) and GB (-12.8%).
- The national mean monthly temperature was 0.21 °C warmer than average.
- The mean maximum temperature at country-level was 0.53 °C warmer than average.
- The mean minimum temperature was 24.22 °C, being 0.10 °C lower than average.
- The country hottest day was 24th & 27th August when Dadu & Sibbi observed 44.5 °C temperature.
- The Indian Ocean Dipole (IOD) was below the negative IOD threshold.
- El Nino-Southern Oscillation (ENSO) continued to be neutral in August 2021.

National weather extremes during AUGUST 2021

Hottest day	44.5 °C	at Dadu (Sindh) on the 24 th at Sibbi (Balochistan) on the 27 th
Coldest day	17.0 °C	at Babusar (KP) on the 31 st
Coldest night	6.0 °C	at Babusar (KP) on the 16 th
Warmest night	31.0 °C	at Bahawalnagar (Punjab) on the 9 th at Multan Airport (Punjab) on the 6 th & 7 th
Wettest day	102.0 mm	at Bhakkar (Punjab) on the 4 th
Wettest month	231.0 mm	at Malamjabba (KP)

Synoptic Summary

The seasonal low (or heat-low) invariably remained prevalent over north-northwest Balochistan with a trough extending southeastwards during almost entire month of August. Monsoon axis predominantly remained oriented along southeast-northwest direction (Bay of Bengal to northern parts of India to the northeastern parts of Pakistan) which caused strong moist monsoon currents flow in northeastern parts of the country during first week of the month and 27-31 August. This favorable situation produced

some considerably good rainy spells over north/northeast of the country, whereas, Pakistan southern areas did not observe any significant monsoon currents incursion. Another monsoon-low developed over the Bay of Bengal on 26th August, moved first over central India then over Rajasthan on 31st August with its trough elongating to southeast Sindh and adjoining Northeast Arabian Sea which ultimately set the path for monsoon currents inflow over southern Sindh.

On the other hand, a trough-low see-saw pattern persisted between Khyber Pakhtunkhwa (KP) and Gilgit-Baltistan (GB) through most of the days.

August, 2021 area-weighted rainfall

	Rank (of 61)	Normal (mm)	Average (mm)	Departure (percent)	Comment
Pakistan	3	56.2	25.0	-55.5	3 rd driest (record 16.4 mm in 1993)
Azad Jammu & Kashmir	2	114.1	45.0	-60.5	2 nd driest (record 41.0mm in 1993)
Balochistan	20	22.5	11.5	-48.6	---
Gilgit Baltistan	33	17.1	14.9	-12.8	---
Khyber Pakhtunkhwa	8	117.6	77.1	-34.4	8 th driest (record 46.1 mm in 1993)
Punjab	2	93.3	39.5	-57.7	2 nd driest (record 28.6mm in 1993)
Sindh	10	53.6	5.8	-89.2	10 th driest (record 53.6 mm in 1966)

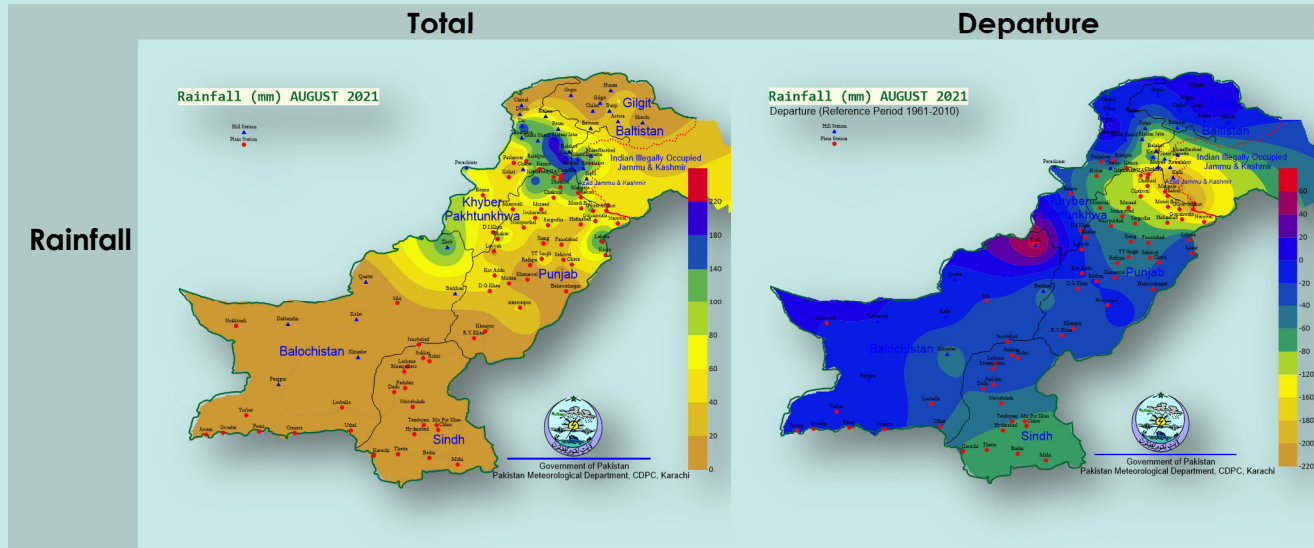
Rank ranges from 1 (lowest) to 61 (highest)

Rainfall – Record largely deficient rainfall over country

During August 2021, no major rainfall occurred over the country. In fact, the month saw one of its severe deficient rainfall month (-55.5 %) and ranked as third driest month on record during past sixty-one years after 1993 being the first driest one. In Pakistan, the month of August normally happens to be one of the rainiest month but August 2021 saw just opposite with recording 25.0 mm rain against its normal 56.2 mm. On average, The month of August has rainfall contribution of the order of 40% and 19% to the monsoon (JAS) and annual rainfall respectively.

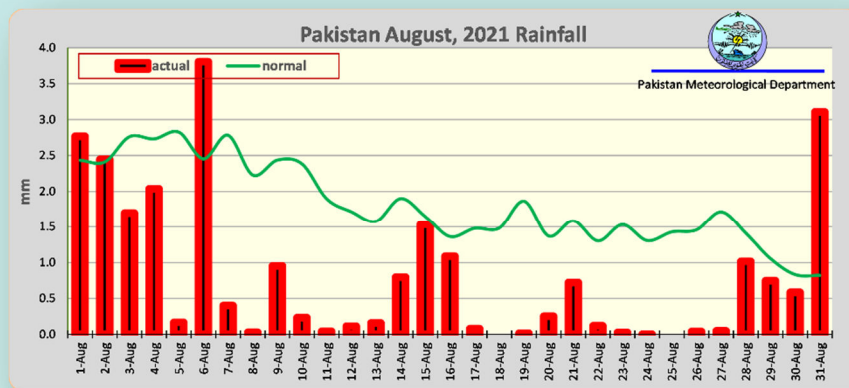
On regional scale, severe dry conditions prevailed over all regions during the month. AJK (-60.5%) and Punjab (-57.7%) were the worst hit regions with both having experienced their second driest month on record. So were the regions of KP (-34.3%) & Sindh (-89.2%) with large rain deficit and ranked among ten driest months on record. The situation over Balochistan (-48.6%) and GB (-12.8%) was not different as well. The wettest day of the month in the country was 4th August, when Bhakkar (Punjab) recorded 102 mm of rain and Malamjabba (KP) being the wettest place with 231.0 mm monthly total. The other chief amounts of month rainfall were: Malamjabba (231.0 mm), Kakul (217.0 mm), Dir (171.0 mm), Attack (170.2 mm) & Chaklala (164.9 mm).

AUGUST 2021 rainfall maps



Temperatures – Warmer than average temperature over Country

The national mean monthly temperature of August 2021 for Pakistan as a whole was 30.34 °C, being 0.21 °C warmer than monthly-average. The mean maximum (day) temperature at country-level was 36.46 °C, being 0.46 °C warmer than average of 35.93 °C. The night (minimum) temperature was 24.22 °C, being 0.10 °C lower than country-average of 24.32 °C. On regional basis, GB (-1.28 °C), AJK (-0.31 °C) and KP (-0.19 °C) provinces recorded lower than normal monthly mean temperatures. Balochistan (+0.01 °C), Sindh (+0.58 °C) and Punjab (+0.73 °C) recorded warmer than normal monthly temperature. The mean temperature anomalies of August were 0-1 °C over most parts of the country except major parts of KP and GB where it was around 2 °C.

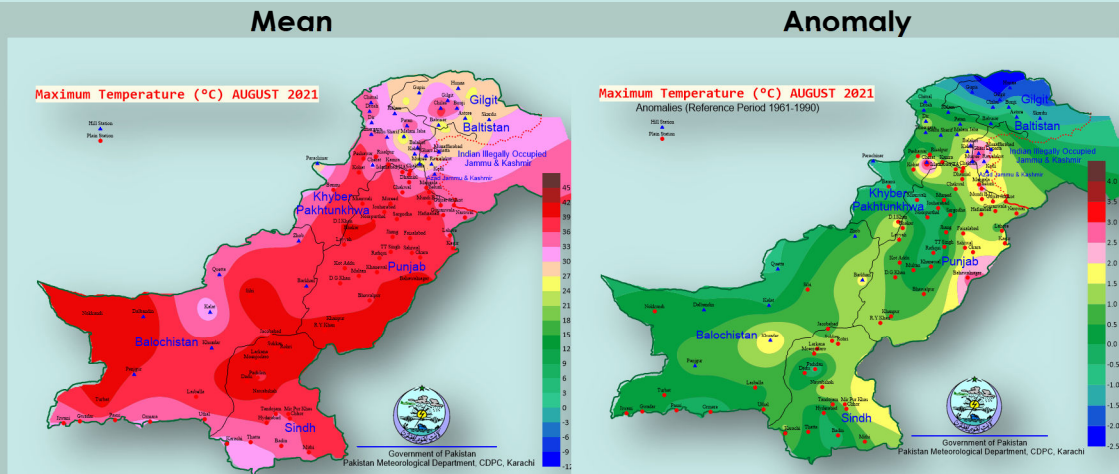


Mean Maximum temperatures' anomalies were ± 1.5 °C over most parts of the country except AJK & adjoining area around 2-3 °C. The mean minimum temperature anomalies for the month were 0-2 °C over most parts of country with

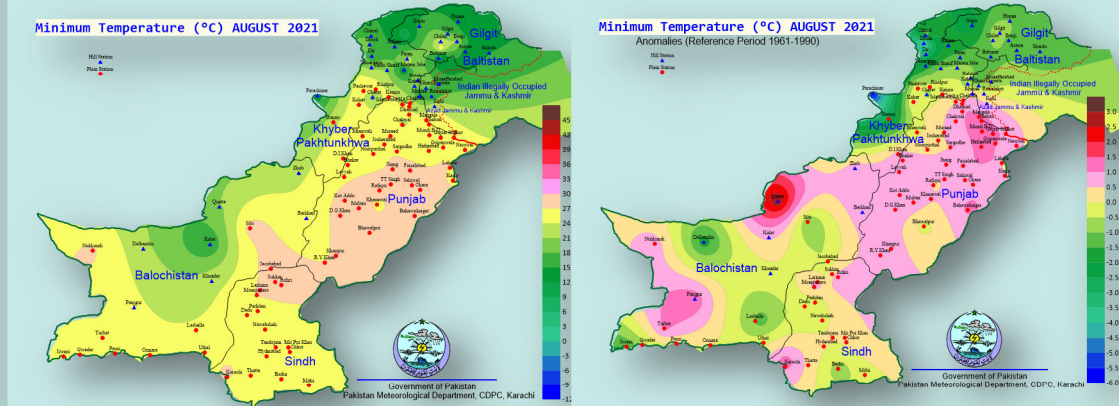
anomalies over Balochistan regions being around ± 1 °C. The hottest days of the month were at Dadu (Sindh) and Sibbi (Balochistan) when they recorded 44.5 °C temperature on 24th & 27th August respectively. The coldest temperature of 6.0 °C of the month was recorded at Babusar (KP) on 16th August 2021.

AUGUST 2021 Temperature maps

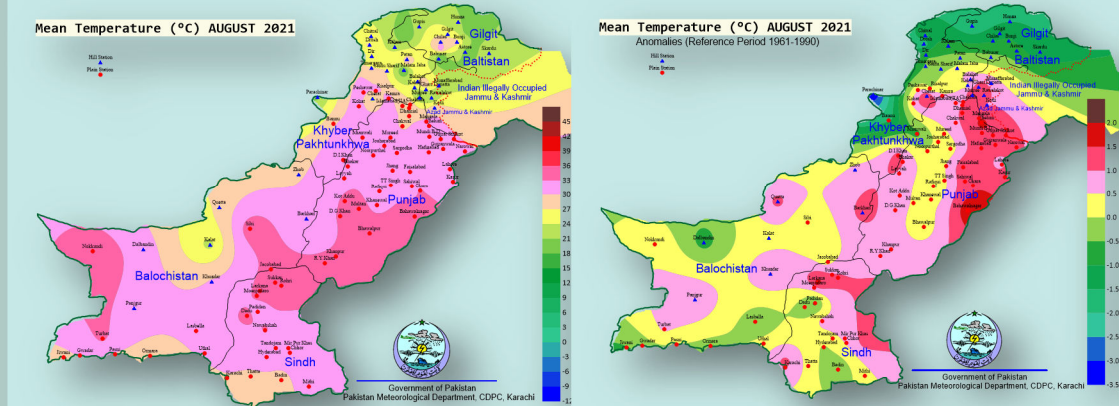
Maximum Temperature



Minimum Temperature



Mean Temperature



August 2021 Monthly Averages & Normals

Station	Pressure (mb)		Temperature (°C)			Vapour (mb)	Precipitation	
	Station Level	Sea Level	Mean	Maximum	Minimum	Pressure	Total (mm)	Days
Drosh	846.0	1422.0	27.8	36.5	17.9	15.1	11.4	3
	845.9	1420.8	28.7	35.9	22.3	15.8	20.0	4.7
Peshawar	964.4	1000.0	31.3	37.3	25.7	29.4	40.8	6
	958.9	997.9	30.6	36.0	25.7	29.2	72.6	7.7
Parachinar	821.4	1431.9	18.4	27.4	12.9	15.2	81.0	10
	822.4	1437.8	23.2	28.8	17.2	18.4	97.4	12.5
Rawalpindi	946.0	1001.2	29.2	34.7	24.3	25.8	164.9	10
	944.0	999.2	28.2	33.4	23.6	28.5	348.1	16.7
Sargodha	977.1	997.1	32.6	37.9	27.5	33.4	37.8	5
	978.6	999.3	31.4	36.5	26.6	31.4	131.7	8.9
Jhelum	974.1	999.8	31.1	36.6	26.5	32.0	63.5	7
	973.8	999.0	29.7	34.4	25.3	31.1	251.6	14.8
Sialkot	972.4	1000.5	30.3	35.1	25.7	31.5	65.6	5
	971.6	999.6	29.0	33.2	24.8	31.8	323.5	14.2
Zhob	851.1	1416.3	29.0	35.9	23.3	15.3	118.0	5
	850.5	1410.3	28.7	35.4	22.4	17.7	49.7	3.7
D.I.Khan	980.0	998.9	33.2	39.2	27.1	33.4	42.0	3
	979.4	997.4	31.3	37.3	26.0	31.3	61.7	5.6
Lahore	976.8	1000.4	31.5	35.7	27.3	31.5	144.9	10
	975.5	999.1	30.5	34.9	26.5	31.5	194.5	12.7
Quetta	837.0	1453.0	28.0	34.3	20.9	7.5	0.0	0
	834.3	1423.2	27.1	35.0	18.3	12.5	13.2	1.5
Multan	985.9	999.4	33.5	38.0	28.8	30.6	18.2	2
	984.6	998.3	32.4	37.6	27.9	30.8	36.4	3.5
Barkhan	882.8	1432.5	29.6	36.2	24.1	19.0	35.0	3
	882.8	1428.6	28.2	34.5	23.2	22.2	87.7	4.8
Nokkundi	924.3	995.9	34.9	41.7	27.4	5.6	0.0	0
	923.7	995.1	34.5	41.7	26.7	11.7	0.4	0.1
Dalbandin	908.6	1442.9	34.3	41.6	21.9	10.2	0.0	0
	907.0	1433.4	33.7	40.8	22.4	9.3	0.3	0.1
Jacobabad	993.3	999.5	33.7	38.9	27.8	32.1	0.0	0
	991.8	997.9	33.1	37.8	28.2	32.2	35.4	1.3
Khanpur	989.6	999.4	32.9	39.3	27.1	32.1	0.0	0
	988.3	998.2	32.3	38.1	25.9	30.4	17.4	1.8
Panjgur	895.2	1441.5	32.2	38.8	24.7	11.5	0.0	0
	895.9	1437.3	30.9	38.1	23.4	10.1	7.4	0.5
Khuzdar	870.7	1444.9	30.1	37.6	23.0	9.7	3.2	1
	868.5	1411.7	29.3	35.7	22.9	9.0	57.4	3.4
Nawabshah	996.4	999.6	32.7	40.1	26.2	30.1	0.0	0
	995.1	998.9	31.9	38.6	26.0	31.8	46.3	1.6
Jiwani	996.1	1002.5	28.3	31.5	24.2	29.3	0.0	0
	994.5	1000.8	28.3	31.0	25.6	29.2	2.1	0.5
Pasni	1002.4	1002.9	28.8	32.2	25.4	31.5	0.0	0
	1000.0	1000.8	28.7	32.2	25.9	30.1	11.5	0.2
Hyderabad	996.4	1001.2	30.6	36.1	26.8	28.2	0.0	0
	995.6	999.6	30.4	36.0	26.6	29.1	63.1	2.4
Chhor	1000.9	1001.6	31.0	36.4	26.1	31.7	0.0	0
	999.1	992.1	29.9	34.7	25.4	30.2	69.3	3.2
Karachi	1000.1	1002.7	29.5	32.8	27.4	30.0	0.0	0
	998.6	1001.2	28.7	31.9	26.2	29.8	60.1	2.8

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

August 2021 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	30.0	10	22.0	31	38.7	9	13.0	31	9.0	28	18	30
Peshawar	34.3	26	27.0	30	40.4	27	22.0	20*	17.0	4	8	19
Parachinar	20.9	9	15.5	22	30.0	5*	10.5	22	27.0	7	5	1*
Rawalpindi	31.8	25	24.6	30	37.7	18	19.0	30	56.8	30	36	13
Sargodha	34.9	18	29.8	6*	41.0	20	23.2	6	22.0	6	8	8
Jhelum	33.5	25	27.6	30	39.0	18	22.5	16	15.4	6	12	14
Sialkot	32.8	19	27.0	22	37.5	19	22.7	21	32.0	15	8	8*
Zhob	31.8	13	24.8	31	39.0	13	20.0	17*	50.0	6	13	9*
D.I.Khan	35.1	25	30.1	4	42.0	24*	23.0	4	22.0	4	6	4*
Lahore	34.1	18	27.9	6	38.5	19	22.0	6	60.4	1	12	15
Quetta	29.5	11	25.8	30	36.5	11	16.5	26	0.0	0	20	6*
Multan	35.1	7	29.0	31	39.5	20	23.0	31	16.0	31	18	4*
Barkhan	31.9	25	26.8	20	39.5	13	19.5	16	23.0	16	8	14
Nokkundi	36.8	10*	32.6	29	44.0	12	24.5	72	0.0	0	24	5*
Dalbandin	36.4	10	32.3	26	43.5	10	19.5	12*	0.0	0	6	9*
Jacobabad	35.6	1	31.6	15	41.0	1*	26.0	15*	0.0	0	6	5*
Khanpur	34.3	5	30.3	31	40.7	23	24.8	31	0.0	0	10	13*
Panjgur	34.6	5*	30.3	30	41.0	6*	23.0	11*	0.0	0	22	24
Khuzdar	33.1	13*	25.9	31	40.0	7*	20.5	17	3.2	22	6	10*
Nawabshah	34.6	3	31.0	29	43.3	3	25.0	14*	0.0	0	16	2*
Jiwani	29.4	6	27.5	23	32.5	5*	23.0	23	0.0	0	10	9*
Pasni	29.5	5	28.3	19*	32.5	1*	24.5	22*	0.0	0	20	25
Hyderabad	33.4	31	29.8	13*	39.4	22	25.4	18	0.0	0	30	9
Chhor	33.8	31	29.8	25	41.5	31	25.0	17*	0.0	0	16	11*
Karachi	31.6	31	28.6	3*	36.8	31	26.8	28	0.0	0	16	25

* 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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