



Pakistan's Monthly Climate Summary December, 2020

Overview

- National rainfall for the month of December was 38% below normal.
- December 2020 was 8th consecutive month with largely-deficient rains.
- AJK (-10%) & GB (-7%) recorded close to normal rain.
- KP (-20%) & Punjab (-13%) observed slightly below average rain.
- Balochistan (-69%) & Sindh (-90%) experienced largely deficit of monthly rain.
- Jacobabad was the only station in Sindh to have received some precipitation during the month.
- The wettest place of the month in the country was Muzaffarabad in AJK (96 mm).
- The wettest day of the month in country was 13th, when Garhi Dupatta (AJK) recorded 35.5 mm of rain.
- The significant monthly accumulated rainfalls were Muzaffarabad & Balakot (96 mm) and Garhi Dupatta (78 mm).
- Pakistan December 2020 mean temperature was 12.48 °C being -0.67 °C lower-than average.
- Pakistan mean maximum temperature was 1.15 °C lower than average.
- National mean minimum temperature was 0.20 °C cooler than average.
- 3-4 December were the hottest days of the month (Mithi-Sindh 36.5 °C).
- Coldest temperature of -12.0 °C were recorded at four locations on six days.

National weather extremes

Hottest day	36.5 °C	at Mithi (Sindh) on the 3 rd &4 th
Coldest day	-1.5 °C	at Astore (GB) on the 21 st
Coldest night	-12.0 °C	at Kalam (KP) on the 17 th , at Astore (GB) on 18 th & 19 th , at Gupis (GB) on 20 th , at Kalat (Balochistan) on 29 th & 30 th
Warmest night	20.5 °C	at Gwadar (Balochistan) on the 7 th
Wettest day	35.5 mm	at Garhi Dupatta (AJK) on the 13 th
Wettest month	96.0 mm	at Muzaffarabad Airport (AJK)

Synoptic Summary

A shallow low-pressure area persisted over Khyber Pakhtunkhwa (KP) and adjoining areas from 1st to 6th December. Also, a trough of low-pressure area was found prevailing over Balochistan from 4th to 7th December. On 7th December the low over

KP shifted over Gilgit-Baltistan (GB), prevailed over there till 9th December and weakened into a trough the next day.

On 12th December, the trough over GB was found as low over there and trough over NE-Balochistan also turned into a low-pressure area over there. The trough over GB persisted till 25th December, while that over NE-Balochistan was lying as a low over there. Then there were found low-pressure areas over both the areas from 26th December to 28th December which lessened into troughs over there the following day and persisted through the remaining days of the month. Apart from these two synoptic features over said areas, mostly dry continental air prevailed over rest of the country.

December area-weighted rainfall

	Rank (of 60)	Normal (mm)	Average (mm)	Departure (percent)	Comment
Pakistan	32	13.3	8.2	-38.4	Highest record 58.0 mm in 1967
Azad Jammu & Kashmir	40	36.7	32.9	-10.3	Highest record 167.6 mm in 1990
Balochistan	24	12.8	4.0	-68.7	Highest record 54.7 mm in 2006
Gilgit-Baltistan	39	11.9	11.1	-6.7	Highest record 68.3 mm in 2008
Khyber-Pakhtunkhwa	39	31.0	24.9	-19.5	Highest record 129.2 mm in 1967
Punjab	41	10.2	8.9	-12.6	Highest record 72.9 mm in 1967
Sindh	31	3.4	0.4	-89.6	Highest record 46.9 mm in 2008

Rank ranges from 1 (lowest) to 60 (highest).

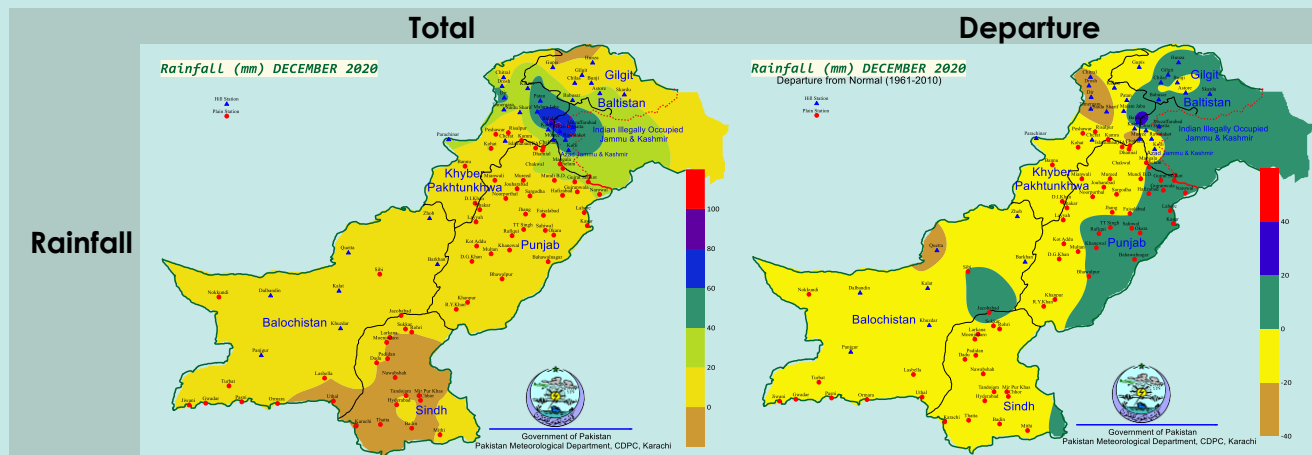
Rainfall

During December 2020, only one significant event has brought some rain to country, especially to Northeastern KP, upper Punjab and parts of AJK. The rainy spell started on 8th December and lasted till 13th December. Over Pakistan, the month of December is not considered as a significant rainy month and its contribution to annual rainfall is minimal i.e. only 4%. December 2020 National rainfall was 8.2 mm against its normal rain of 13.3 mm and was 38% below normal.

The provinces of KP & Punjab recorded slightly below normal rain and Sindh & Balochistan experienced largely below normal rainfall while AJK & GB observed close to normal rain in the month. The wettest day of the month in country was

13th, when Garhi Dupatta (AJK) recorded 35.5 mm of rain. The chief amounts were Muzaffarabad & Balakot (96 mm) and Garhi Dupatta (78mm). Major parts of the Sindh province did not record a single drop of rainfall in the whole month.

December rainfall maps



Temperatures

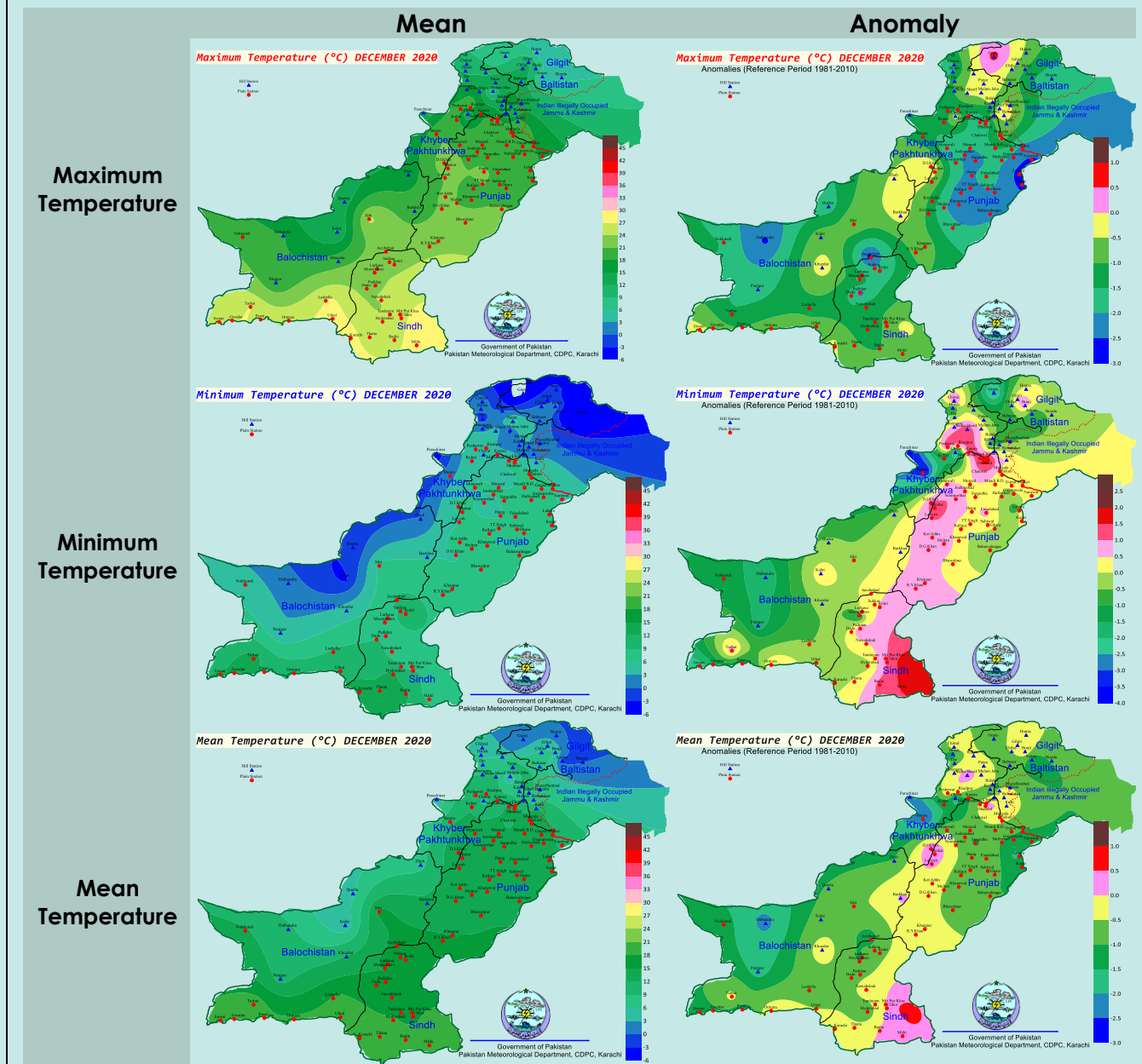
The national mean monthly temperature for Pakistan as a whole was 12.48 °C, being 0.67 °C cooler than average for December. The mean maximum (day) temperature of the country was 19.76 °C being 1.15 °C lower than average of 20.90 °C. The night temperature (minimum) for December was 5.20 °C which was 0.20 °C lower than country average of 5.40 °C. On regional basis, all provinces except Punjab & Sindh recorded cooler than normal monthly minimum temperatures.

The monthly mean temperatures of all the regions were lower than averages. The mean temperature anomalies of December were 0 to -1.5 °C over major parts of the country except Southeastern Balochistan and Eastern parts of KP where it ranged 2-3 °C cooler than its normal value.

Mean Maximum temperatures were 0-2 °C lower than average over major parts of the country except Punjab where its anomalies were in -2 to -3 °C range. The mean minimum temperature anomalies for the month were between 0 to +2 °C over

major parts of Sindh & Punjab while it were around -1 to -2 °C over parts of Balochistan & KP. December 3-4 were the hottest days of the month over country when Mithi (Sindh) recorded 36.5 °C day temperature. The coldest temperature of -12.0 °C of the month were recorded at Kalam (KP) on the 17th, at Astore (GB) on 18th & 19th, at Gupis (GB) on 20th, at Kalat (Balochistan) on 29th & 30th.

December Temperature maps



December Monthly Averages & Normals

Station	Pressure (mb)		Temperature (°C)			Vapour (mb)	Precipitation	
	Station Level	Sea Level	Mean	Maximum	Minimum	Pressure	Total (mm)	Days
Drosh	857.3	1533.7	5.6	10.6	0.8	5.0	16.8	8
	858.8	1548.4	6.9	12.2	2.3	4.4	37.7	5.5
Peshawar	980.1	1019.0	12.2	19.8	5.3	9.6	9.1	4
	976.3	1018.7	11.7	20.7	5.1	8.9	16.9	3.5
Parachinar	830.7	1538.2	2.7	12.2	-5.1	4.8	26.0	6
	830.2	1530.6	6.7	13.4	-0.3	4.4	28.6	3.7
Rawalpindi	959.1	1018.7	11.7	18.4	6.4	9.4	24.8	4
	942.8	1019.0	11.1	20.0	4.0	8.3	31.2	4.5
Sargodha	992.9	1014.9	13.9	20.0	7.5	12.0	2.6	2
	996.0	1018.3	13.5	22.0	5.6	10.6	9.5	3.4
Jhelum	989.2	1017.0	12.9	20.9	6.5	11.0	26.1	3
	990.1	1017.9	12.9	21.5	6.3	10.3	26.6	4
Sialkot	986.9	1017.2	11.4	18.1	6.2	11.3	24.0	2
	987.8	1018.1	12.4	20.2	5.6	10.8	24.0	3.3
Zhob	861.1	1512.6	9.0	16.1	0.2	4.2	8.0	3
	861.3	1515.5	8.8	16.3	1.0	4.8	11.5	0.7
D.I.Khan	996.7	1017.2	14.4	22.5	6.8	11.0	8.2	2
	997.2	1017.9	13.6	22.2	5.7	10.1	8.8	2.3
Lahore	991.9	1017.4	13.7	19.3	7.7	11.3	16.8	3
	992.5	1017.9	14.3	21.9	7.8	10.6	9.9	3.1
Quetta	845.7	1547.1	5.8	12.5	-1.8	3.5	6.0	1
	844.3	1533.5	6.2	14.0	-1.9	5.0	37.5	4.3
Multan	1002.8	1017.2	14.4	21.0	7.6	11.0	4.4	1
	1003.6	1018.4	14.1	23.0	6.3	10.8	2.7	0.9
Barkhan	893.0	1509.1	12.4	19.2	5.9	4.0	2.0	1
	894.3	1521.6	12.6	20.9	6.0	5.5	6.0	0.6
Nokkundi	940.2	1018.9	12.5	20.0	4.7	2.8	2.5	1
	939.8	1018.1	13.8	21.4	5.5	6.1	1.8	0.3
Dalbandin	923.9	1533.7	10.1	18.1	1.3	5.4	4.0	2
	922.5	1527.1	11.8	18.7	1.8	5.8	12.5	0.9
Jacobabad	1010.8	1017.5	15.8	21.7	9.1	11.5	14.0	3
	1011.1	1017.7	17.0	24.3	8.9	10.3	2.9	0.2
Khanpur	1006.2	1016.8	14.5	23.2	6.9	11.3	3.4	1
	1006.9	1017.6	14.9	23.8	5.9	10.3	2.7	0.7
Panjgur	908.0	1526.5	11.5	18.4	3.5	5.7	0.0	0
	907.8	1527.4	13.2	19.8	5.2	3.9	8.9	1
Khuzdar	880.9	1530.2	12.5	19.8	4.6	6.2	6.9	1
	878.7	1510.4	12.9	19.8	4.7	2.9	14.3	1.2
Nawabshah	1014.0	1017.5	16.5	25.0	8.2	11.8	0.0	0
	1014.0	1018.0	16.4	26.0	7.8	11.8	1.8	0.2
Jiwani	1010.4	1017.0	20.9	26.2	12.4	10.8	0.0	0
	1010.6	1017.1	21.1	26.0	15.1	14.9	23.5	1.4
Pasni	1016.3	1016.9	19.6	26.3	11.1	13.9	5.0	1
	1015.6	1016.3	20.5	26.9	12.9	14.0	19.6	0.9
Hyderabad	1011.1	1016.2	18.9	24.8	12.8	11.2	0.0	0
	1013.0	1017.1	19.5	26.5	13.0	11.2	1.4	0.2
Chhor	1015.1	1015.8	18.4	28.3	8.7	10.5	0.0	0
	1015.7	1016.4	17.9	28.6	6.8	9.9	0.2	0
Karachi	1013.4	1016.2	20.6	27.7	12.5	9.5	0.0	0
	1014.3	1017.1	20.1	27.9	12.2	11.6	3.9	0.6

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

Extreme values of month

STATION	Mean Temperature (°C)				Temperature (°C)				Highest (mm & knots)			
	Highest	Date	Lowest	Date	Highest	Date	Lowest	Date	Rain	Date	Wind Speed	Date
Drosh	9.5	3	3.3	21	15.8	3	-1.4	23	3.8	8	16	9
Peshawar	16.0	2	8.1	28	26.5	2	1.0	17	3.8	27	4	15
Parachinar	5.5	10	-0.3	5	16.0	14	-6.5	3	6.0	27	5	4
Rawalpindi	15.6	2	8.0	27	25.1	2	1.7	18	19.4	12	14	11
Sargodha	19.0	2	8.8	27	29.0	3	3.0	17	1.6	28	6	8
Jhelum	17.6	7	7.6	27	28.8	2	1.7	18	11.2	28	10	26
Sialkot	16.1	6	6.8	29	24.2	7	1.5	19	13.0	12	10	16
Zhob	15.1	2	3.4	15	24.5	1	-5.0	17	3.0	18	13	8
D.I.Khan	19.5	1	10.1	15	30.0	2	1.5	17	7.0	12	4	27
Lahore	19.5	3	8.1	27	27.2	3	3.0	31	11.8	12	6	8
Quetta	14.3	7	-1.6	15	21.5	1	-9.0	16	6.0	8	26	27
Multan	18.8	7	10.3	15	26.7	2	2.7	29	3.6	12	8	26
Barkhan	19.1	3	6.5	15	28.0	2	0.0	17	2.0	12	6	26
Nokkundi	19.4	2	6.9	30	29.0	2	-1.5	16	2.5	11	22	11
Dalbandin	18.5	7	4.4	30	28.5	3	-5.5	29	2.0	8	8	11
Jacobabad	21.0	4	11.4	16	28.0	3	3.5	17	9.0	12	4	26
Khanpur	20.3	3	9.5	14	31.8	3	1.5	30	3.4	12	8	27
Panjgur	19.3	7	5.0	27	28.5	3	-1.0	16	0.0	0	28	10
Khuzdar	19.3	4	6.6	27	28.5	1	-1.5	30	6.8	11	10	11
Nawabshah	21.5	4	12.0	29	32.5	4	0.9	27	0.0	0	12	26
Jiwani	24.3	5	16.5	31	30.0	5	5.5	31	0.0	0	12	16
Pasni	23.1	5	16.3	27	30.0	2	6.5	28	5.0	11	22	5
Hyderabad	25.6	4	14.5	16	35.0	4	6.0	28	0.0	0	18	11
Chhor	24.0	5	12.9	29	35.3	3	1.8	28	0.0	0	6	9
Karachi	25.1	4	16.4	31	33.2	4	7.0	29	0.0	0	14	15

* 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 Pakistan weather events occurred in Pakistan 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 results contained above 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 while normal period for temperature is 1981-2010.

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