



# Pakistan's Monthly Climate Summary February, 2022

## In brief

- National rainfall for the month of February 2022 was 66% below normal and ranked 7<sup>th</sup> driest month since 1961.
- February 2022 rainfall was largely below normal over most parts of the country with Balochistan (-89%), Sindh (-95%), Punjab (-62%), KP (-59%) & AJK (-47%) all experienced extreme deficient rainfall except GB (-17%), where it was slightly below normal.
- The wettest day of the month in the country was 6<sup>th</sup> February, when Malam Jabba (KP) recorded 45.7 mm of rainfall, whereas the wettest place was Rawalakot (AJK) with highest monthly total 149.7 mm. Many stations in South Punjab, Sindh and Balochistan have reported nil or only traces of rainfall.
- The national mean monthly temperature of February 2022 for Pakistan as a whole was 15.04 °C, being 1.73 °C warmer than monthly-average.
- The mean maximum (day) temperature at country-level was 22.58 °C, being 2.1 °C warmer than average of 20.48 °C.
- The night (minimum) temperature was 7.5 °C, being 1.31 °C warmer than country-average of 6.19 °C.
- The hottest day of the month was at Tandojam (Sindh) when it recorded 38.5 °C temperature on 21<sup>st</sup> February 2022.
- The coldest temperature of -12.0 °C of the month was recorded at Kalam (KP) on 11<sup>th</sup> February.
- The neutral Indian Ocean Dipole (IOD) event persisted during the month.
- La Niña remained active in the tropical Pacific during February 2022.

## National weather extremes during February 2022

Hottest day	38.5 °C	at Tandojam (Sindh) on the 21 <sup>st</sup>
Coldest day	-0.2 °C	at Skardu (GB) on the 6 <sup>th</sup>
Coldest night	-12.0 °C	at Kalam (KP) on the 11 <sup>th</sup>
Warmest night	21.5 °C	at Karachi Airport (Sindh) on the 22 <sup>nd</sup>
Wettest day	45.7 mm	at Malam Jabba (KP) on the 26 <sup>th</sup>
Wettest month	149.7 mm	at Rawalakot (AJK)

## Synoptic Summary

A trough of low persisted over Gilgit-Baltistan (GB) through the 1<sup>st</sup> week of month with rest of the country remained under dry continental air during the period. On 6<sup>th</sup> February, a low-pressure area formed over northwest Balochistan and adjoining areas which persisted for following two days. Meanwhile, another low-pressure developed

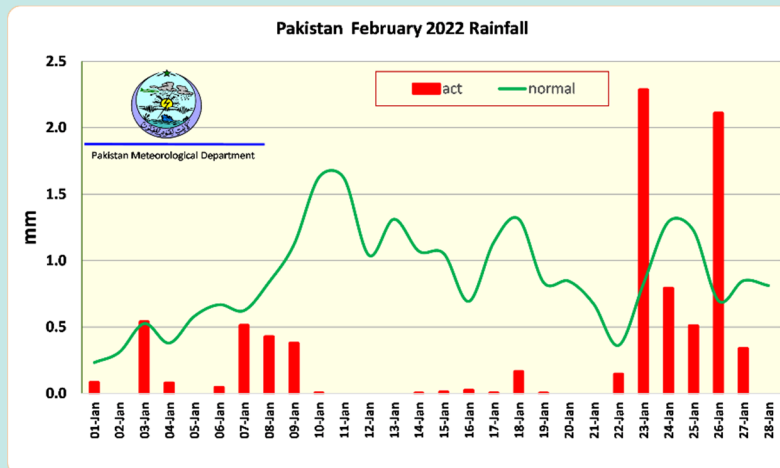
over the GB on 7<sup>th</sup> February and prevailed till 9<sup>th</sup> February before weakening into the trough which persisted over there and adjoining AJK areas till mid of the month. On 15<sup>th</sup> February, a fresh low-pressure area formed over Khyber Pakhtunkhwa (KP), persisted for next two days and then reduced to trough, while rest of the country remained in grip of dry continental air. The trough-low see saw pattern over KP, GB and North Balochistan by and large prevailed through the rest of the month with dry continental air remaining the dominant feature over most parts of the country.

### February, 2022 area-weighted rainfall

	Rank (of 62)	Normal (mm)	Average (mm)	Departure (percent)	Comment
Pakistan	07	24.9	8.5	-66.0	7 <sup>th</sup> driest on record
Azad Jammu & Kashmir	13	72.6	38.8	-46.6	---
Balochistan	07	18.9	2.0	-89.1	7 <sup>th</sup> driest on record
Gilgit Baltistan	28	20.9	17.3	-17.3	---
Khyber Pakhtunkhwa	06	70.7	29.0	-58.9	6 <sup>th</sup> driest on record
Punjab	12	23.2	8.9	-61.7	--
Sindh	19	5.3	0.3	-95.2	---

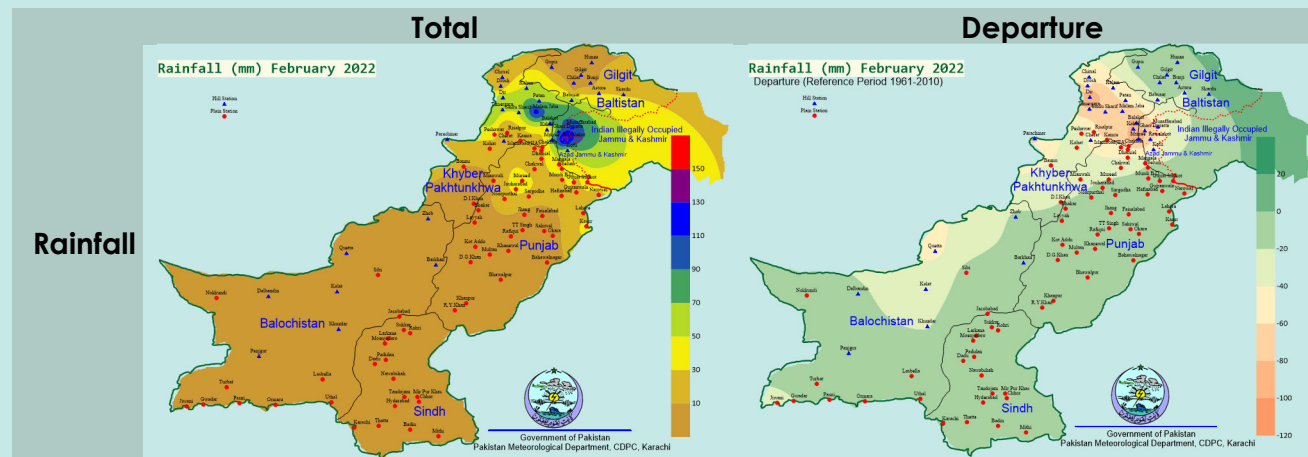
Rank ranges from 1 (lowest) to 62 (highest)

### Rainfall – largely below average over the country.



During February 2022, only a couple of light rainfall events were experienced. February 2022 rainfall was 66% below average for Pakistan as a whole and ranked seventh driest February on record for the country during 1961-2022. Climatologically, the month of February happens to be around an average wet month of the year across Pakistan. However the February 2022 was the largely rainfall deficient month with only 8.4 mm rain (area-weighted) against its normal of 24.9 mm. On average, the February rainfall contribution is of the order of 11.4% and only 2.8% to the Winter (JFM) and annual rainfall respectively.

## February 2022 rainfall maps



On regional scale, all the regions/provinces witnessed dry conditions during the month. The least rainfall occurred in the province of Sindh (0.3mm/-95.2%). Situation in the other regions were not very different as Balochistan (2.0mm/-89.1%), Punjab (8.9mm/-58.9%) KP (29.0mm/-61.7%), AJK (38.8mm/-46.6%) and GB (17.3mm/-17.3%) all experienced extremely dry conditions. The wettest day of the month in the country was 26<sup>th</sup> February, when Malam Jabba (KP) recorded 45.7mm of rainfall, whereas the wettest place was Rawalakot (AJK) with highest monthly total 149.7mm. The other significant monthly total Rainfall recorded in February 2022 were Garhi Dupatta (78.7mm), Muzaffarabad Airport (71.0mm), Muzaffarabad City (87.4mm), Malam Jabba (126.7mm), Pattan (72.0mm). The stations Bahawalnagar, Kot Addu, Multan City, Rahim Yar Khan, Badin, Chhor, Hyderabad, Larkana, Mithi, Thatta, Dadu, Mirpur Khas, Tando Jam Sakrand, Khairpur, Dalbandin, Gawadar, Jiwani, Nokkundi, Panjgur, Pasni, Sibbi, Turbat remained dry with no rain at all during the month. Whereas the stations Bahawalpur, Dera Ghazi Khan, Multan Airport, Shorkot, Khanewal, Gilgit, Dera Ismail Khan, Shaheed Banazirabad, Padidan, Moen-Jo-Daro reported only traces of rainfall.

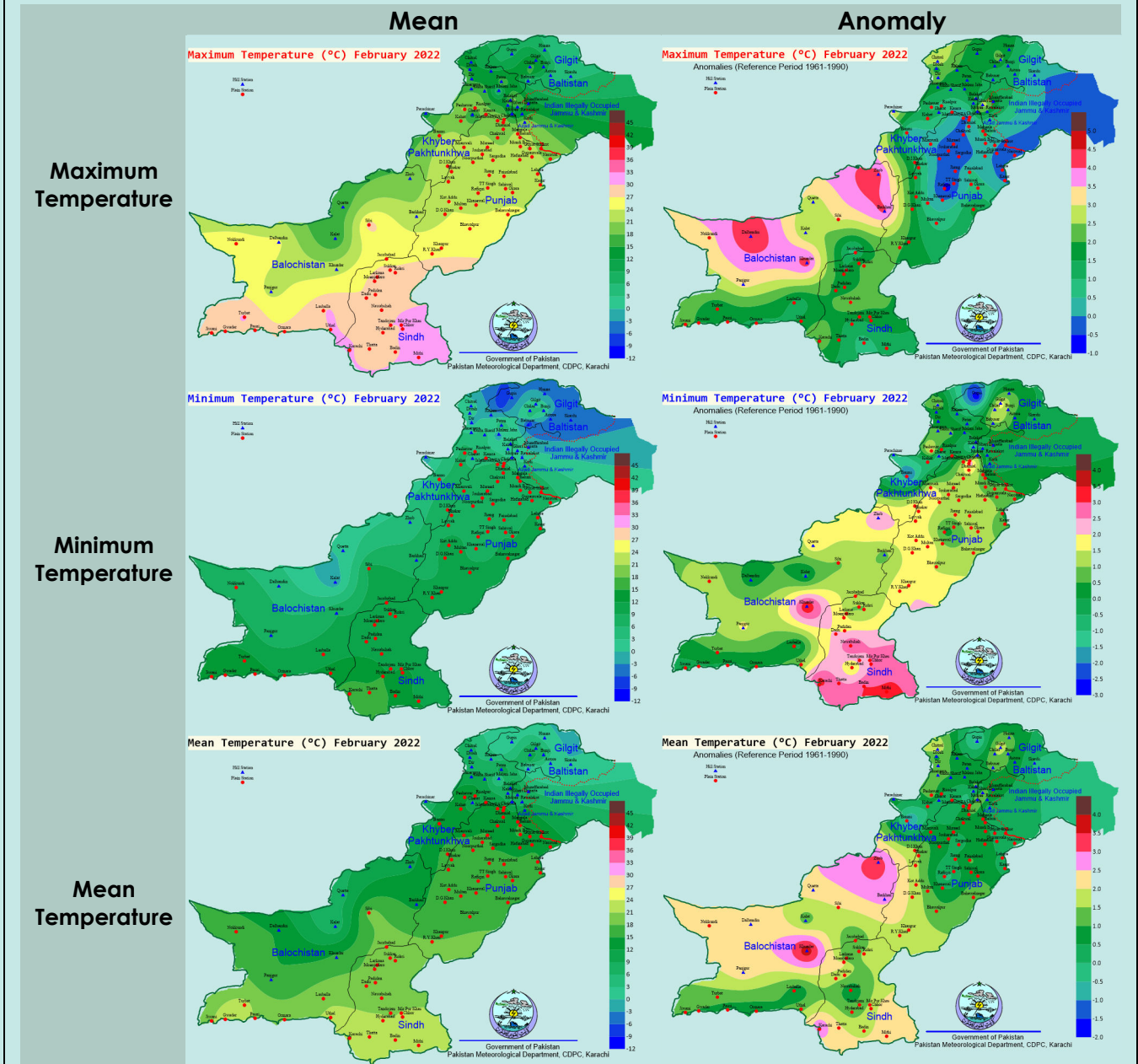
### **Temperatures– Warmer night, day, mean temperatures observed over the country.**

The national mean monthly temperature of February 2022 for Pakistan as a whole was 15.04 °C, being 1.73 °C warmer than average. On regional scale, Balochistan (+2.33 °C), GB (+0.48 °C), Sindh (+1.93 °C), AJK (+0.63 °C), KP (+0.88 °C) and Punjab (+1.08 °C) all recorded warmer than average temperatures for the month.

The mean maximum (day) temperature in February 2022 at country-level was 22.58 °C, being 2.1 °C warmer than average of 20.48 °C. The night (minimum) temperature was 7.5°C, being 1.31 °C warmer than country-average of 6.19 °C.

The mean temperature anomalies of February lie between 1 to 4 °C in most parts of the country. The Mean Minimum temperature anomalies were  $\pm 3.6$  °C in most parts of the country. The minimum temperature anomalies over Sindh and Eastern Balochistan were considerably higher. The hottest day of the month was at Tandojam (Sindh) when it recorded 38.5 °C temperature on 21<sup>st</sup> February. The coldest temperature of -12.0 °C of the month was recorded at Kalam (KP) on 11<sup>th</sup> February 2022.

### February 2022 Temperature maps



## February 2022 Monthly Averages & Normals

Station	Pressure (mb)		Temperature (°C)			Vapour	Precipitation	
	Station Level	Sea Level	Mean	Maximum	Minimum	Pressure (mb)	Total (mm)	Days
Drosh	854.0	1502.3	6.6	12.4	0.8	4.5	14.4	6
	856.9	1521.9	5.8	10.7	1.0	4.6	74.4	7.4
Peshawar	976.8	1015.4	14.0	21.4	6.4	9.4	35.6	7
	973.8	1016.0	13.1	19.8	6.3	8.7	47.1	6.4
Parachinar	826.7	1497.3	5.8	13.6	-1.9	4.2	26.0	6
	827.2	1506.5	4.7	10.9	-1.8	4.6	76.5	5.6
Rawalpindi	956.2	1015.3	13.4	19.2	7.6	8.5	24.0	4
	956.4	1015.7	12.3	19.2	5.4	8.6	79.7	7.1
Sargodha	991.9	1013.7	15.7	22.4	8.9	12.6	14.2	3
	993.4	1015.0	14.8	22.4	7.1	10.4	24.5	5.5
Jhelum	985.9	1013.4	15.3	22.3	8.2	11.2	37.5	3
	987.5	1015.1	14.7	21.5	7.9	10.1	52.8	6.3
Sialkot	983.9	1013.9	14.4	20.8	7.9	11.7	43.2	5
	985.2	1015.1	14.0	20.7	7.4	10.9	48.5	5.7
Zhob	857.0	1473.3	11.4	18.6	4.3	4.5	9.0	1
	858.6	1487.3	8.0	14.6	1.5	5.2	25.0	2.4
D.I.Khan	993.5	1013.7	16.4	23.5	9.1	11.6	0.0	0
	994.7	1015.0	14.8	22.2	7.3	9.7	15.0	4.1
Lahore	988.7	1013.8	15.8	21.8	9.9	11.7	15.1	2
	989.7	1014.9	15.7	22.1	9.4	10.5	30.3	5.3
Quetta	842.5	1515.2	8.3	15.7	1.0	3.7	3.0	1
	841.5	1507.6	6.2	12.8	-0.9	5.7	49.5	6.6
Multan	998.8	1013.3	16.7	23.7	9.6	12.0	0.0	0
	1000.6	1015.2	15.5	23.3	7.8	10.3	11.1	2.9
Barkhan	889.0	1474.3	14.2	21.4	6.9	4.6	3.0	1
	891.7	1496.8	12.0	17.9	6.4	5.8	21.2	1.9
Nokkundi	935.2	1012.1	16.5	24.8	8.1	5.1	0.0	0
	937.1	1015.0	14.1	21.6	6.2	6.5	7.6	1
Dalbandin	919.3	1506.0	14.7	24.5	4.8	5.3	0.0	0
	919.7	1504.3	12.3	20.4	4.6	6.1	16.3	1.5
Jacobabad	1006.2	1012.7	18.9	25.9	11.9	13.7	1.0	1
	1008.1	1014.6	17.8	25.2	10.3	10.0	6.9	0.7
Khanpur	1002.2	1012.6	17.8	26.3	9.3	12.5	2.1	1
	1004.1	1014.5	15.8	24.2	7.4	10.1	5.3	1.4
Panjgur	903.3	1491.6	15.2	23.0	7.3	6.7	0.0	0
	905.6	1507.7	12.7	19.6	5.7	4.2	16.5	1.5
Khuzdar	877.1	1497.1	15.9	22.9	8.8	5.6	5.0	1
	877.3	1487.0	12.0	18.8	5.2	3.0	29.9	1.7
Nawabshah	1009.2	1012.6	20.8	29.7	11.8	13.2	0.0	0
	1011.3	1015.0	17.8	27.2	8.4	11.9	3.3	0.2
Jiwani	1007.0	1013.6	20.9	27.0	14.8	16.1	0.0	0
	1008.6	1015.1	20.0	25.1	14.9	14.8	31.0	0.9
Pasni	1012.9	1013.5	20.8	27.9	13.6	13.2	0.0	0
	1013.4	1014.2	19.6	26.5	13.4	13.4	21.5	0.6
Hyderabad	1007.4	1012.3	22.2	29.3	15.0	12.3	0.0	0
	1010.4	1014.5	20.7	27.7	13.7	11.0	4.3	0.9
Chhor	1011.5	1012.2	21.4	31.1	11.6	13.1	0.0	0
	1013.2	1013.8	19.0	29.3	8.5	10.4	3.6	0.3
Karachi	1010.1	1012.8	23.1	30.2	15.8	15.1	0.4	0
	1012.1	1014.8	20.4	27.9	13.0	12.2	10.4	1

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



## February 2022 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	9.0	18	4.1	6*	15.7	13*	-1.2	1*	5.0	26	14	3*
Peshawar	17.5	21	11.0	4*	26.3	21	3.0	5	23.0	26	8	20
Parachinar	9.3	14	2.0	04	17.0	14	-6.0	7	8.0	23	18	3
Rawalpindi	15.7	21	10.7	04	23.8	21	5.2	11*	11.2	23	29	20
Sargodha	18.8	20	10.3	04	28.2	20	5.7	5	6.5	23	6	2*
Jhelum	17.3	17	11.3	04	26.5	21	5.1	12	21.0	23	8	22*
Sialkot	17.3	23	9.8	05	24.3	21	4.7	13	15.0	26	8	11*
Zhob	15.3	21	9.0	6*	23.5	21	1.0	1	9.0	23	13	28
D.I.Khan	19.8	20	12.3	04	29.5	20	7.5	11*	0.0	0	6	2*
Lahore	18.6	25	10.6	05	25.4	21	6.5	6	8.0	26	6	9*
Quetta	14.7	21	4.8	04	23.5	21	-3.5	4*	3.0	22	26	2
Multan	20.1	21	11.9	05	29.3	21	7.2	5*	0.0	0	20	22
Barkhan	17.8	21	11.3	09	28.0	21	5.0	6*	3.0	9	10	2
Nokkundi	21.8	28	11.8	04	31.0	21	2.0	4*	0.0	0	18	2*
Dalbandin	18.8	27	10.5	04	29.0	21*	0.0	4*	0.0	0	10	2*
Jacobabad	23.0	21	15.3	05	32.0	21	7.5	4	1.0	8	4	1*
Khanpur	22.3	21	12.7	06	32.6	21	5.0	4	2.1	9	8	5*
Panjgur	19.3	27*	9.3	03	28.0	21	1.5	4	0.0	0	24	2
Khuzdar	20.0	21	11.5	3*	28.5	21	4.0	9	5.0	8	10	2*
Nawabshah	25.6	21	16.7	06	38.2	21	8.5	5	0.0	0	14	21
Jiwani	23.0	2*	19.3	08	29.5	2*	13.0	4	0.0	0	12	2*
Pasni	22.8	20	18.8	05	31.0	20*	12.5	1*	0.0	0	14	2*
Hyderabad	27.1	21	19.5	8*	36.2	21	11.4	4	0.0	0	12	6*
Chhor	25.3	23	18.6	10	35.0	25	8.0	10*	0.0	0	14	22
Karachi	26.3	22	20.0	5*	33.6	20	12.5	5*	0.4	9	14	27

\* 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).

### Contact

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