



Monthly Climatological Report_July 2023 in Tunisia

Hottest July on record

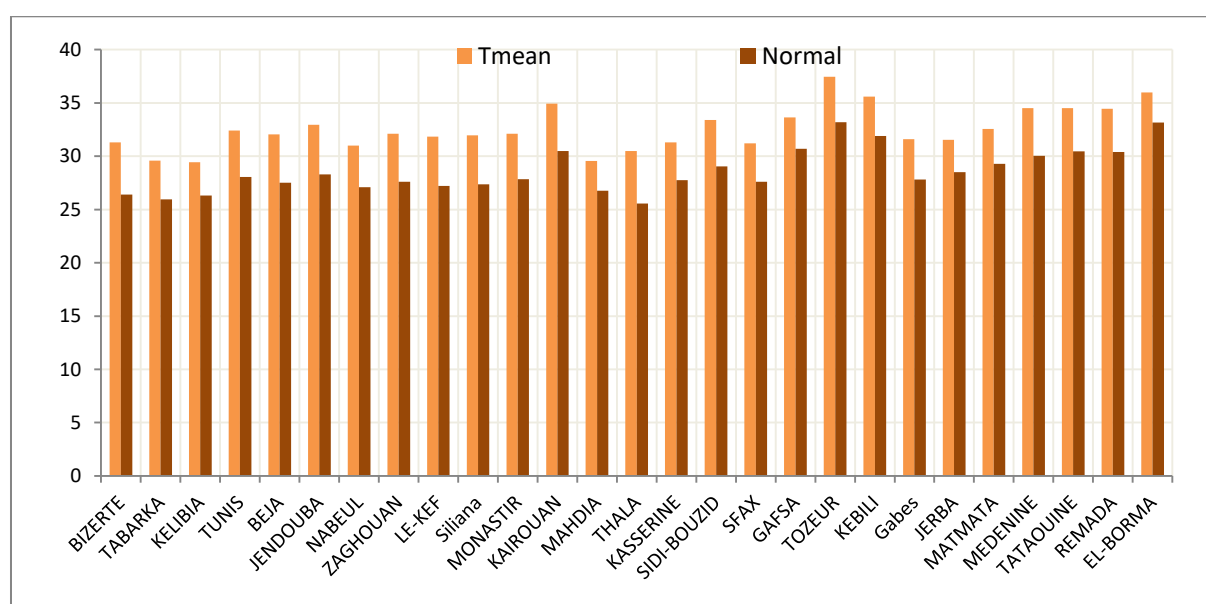
In Tunisia, the month of July 2023 was the hottest ever recorded since 1950. The average temperature (27 main stations) recorded was higher than the reference average (1991-2020) with a significant difference of +4°C.

Even on a global scale, this month was the hottest month ever recorded on earth according to data from the European agency COPERNICUS.

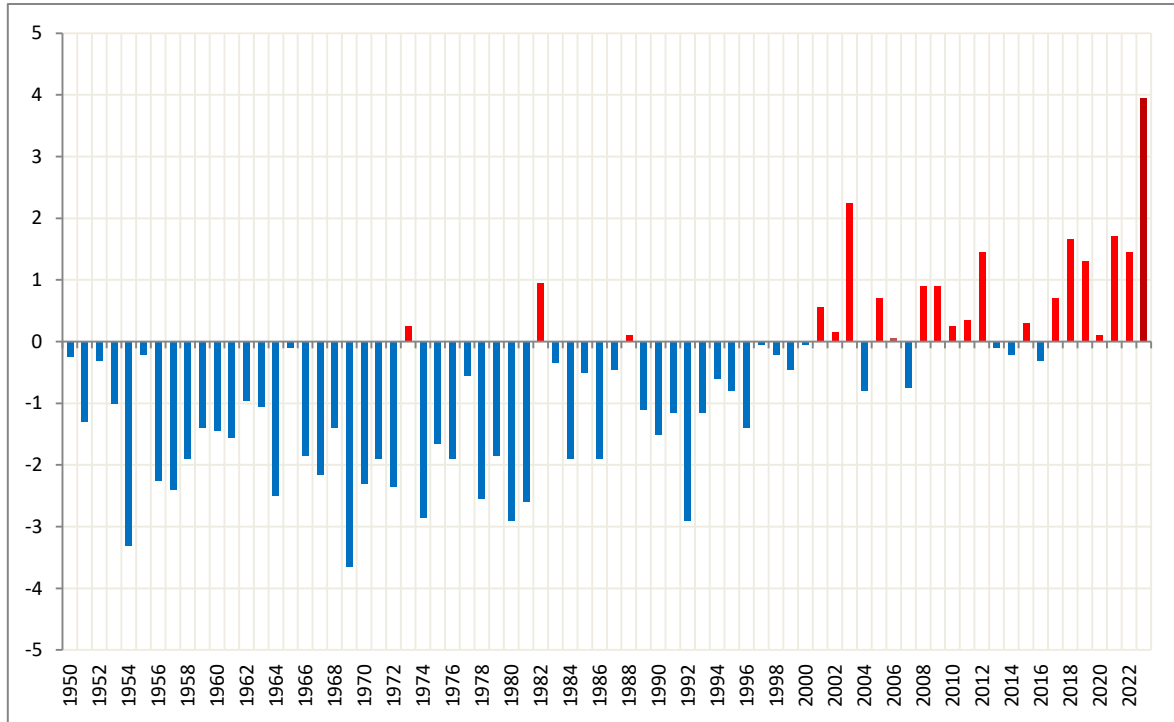
Regarding rainfall, the total monthly cumulative rainfall (27 main stations) was 80.7 mm, while the normal for the same stations was 111.5 mm. The amounts of rainfall recorded during the month of July reached 72.4% of the normal for the month of July (1991-2020).

- Mean temperature :

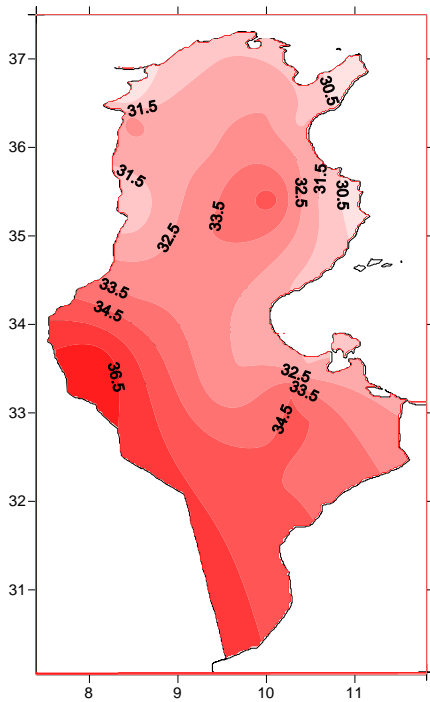
Average temperatures varied between 29.5°C in Kélibia and 37.5°C in Tozeur and were above the reference averages (1991-2020) in all regions. As for the national average temperature (27 main stations), it reached 32.6°C, exceeding the reference average (28.6°C) with a difference of +4°C. With this difference, July 2023 is classified as the 1st of the hottest months of July.



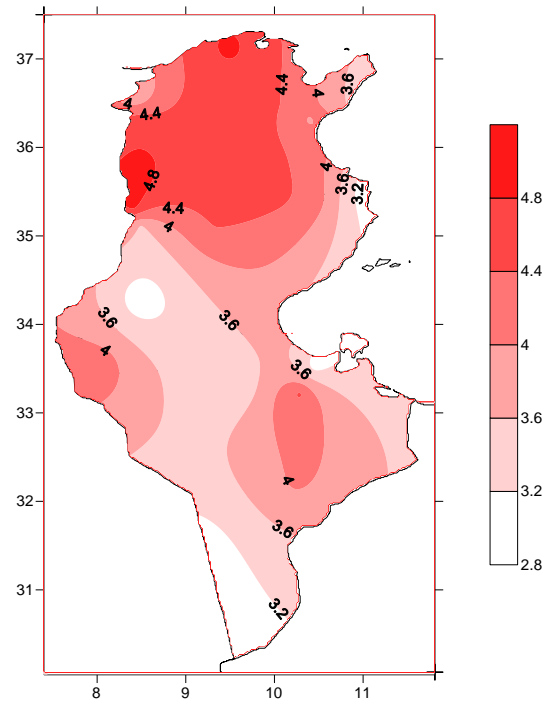
*Comparison of the mean temperatures during July 2023
with the reference rates of the month (1991-2020)*



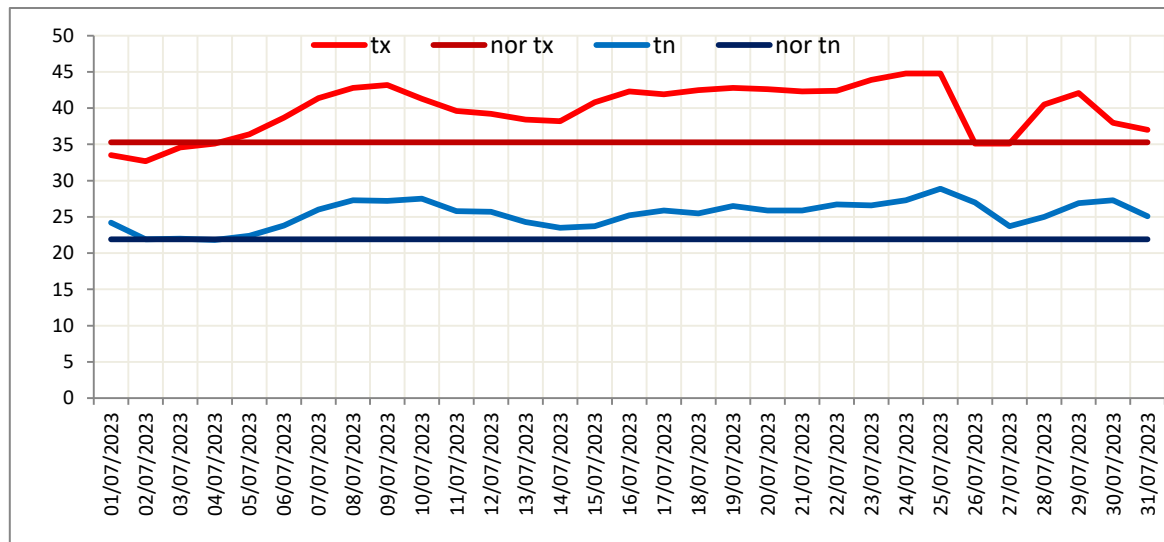
Difference in the mean temperature of July from the reference mean (1991-2020) since 1950



Mean temperature (Tmean)



Deviation from normal of Tmean



Evolution of daily temperatures in Tunisia compared to the normal for the month of July

Temperatures were well above normal. Several records were broken. For the maximum temperature, 18 synoptic stations recorded new records:

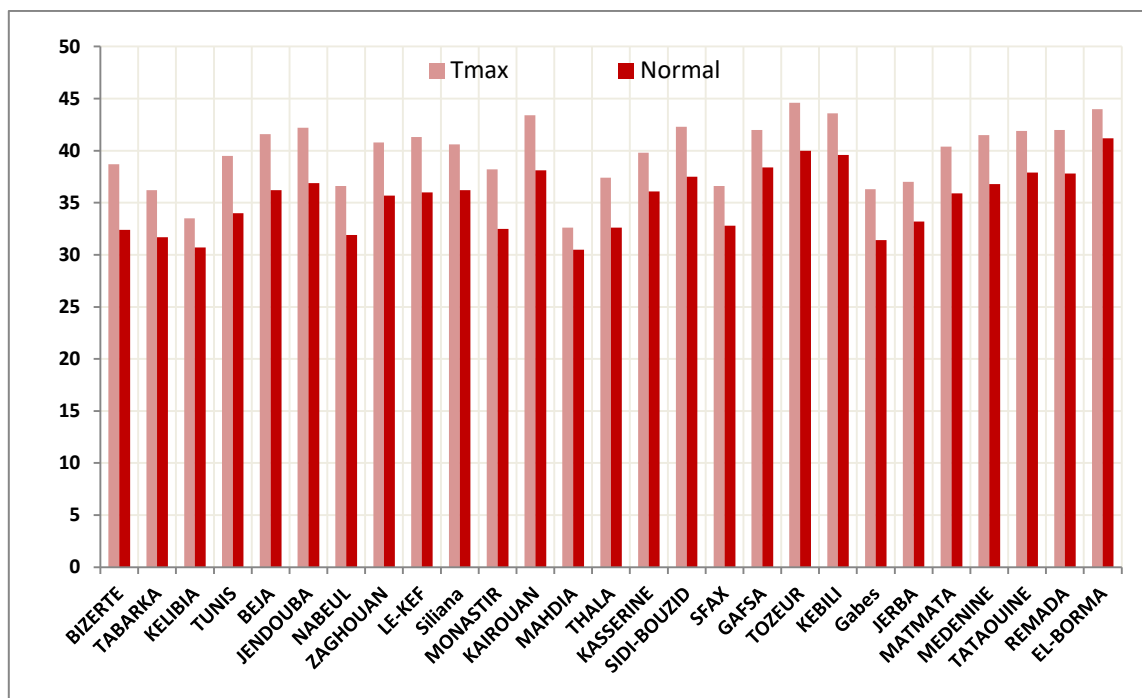
station	New record	Date	Old record	Date
Gabes	49,1	25/07/2023	46,7	31/07/2021
Tabarka	47,4	24/07/2023	47,4	04/07/1993
Monastir	48,3	25/07/2023	46,9	11/07/2012
Sidi Bouzid	47,6	29/07/2023	46,7	14/07/2018
Thala	43,4	29/07/2023	41,4	05/07/2018
Mahdia	47,5	25/07/2023	44,0	26/07/1955
Djerba	46,9	25/07/2023	46,1	24/07/2017
Medenine	49,1	29/07/2023	48,1	19/07/2001
Nabeul	45,7	25/07/2023	42,9	12/07/2017
Kasserine	44,6	29/07/2023	43,9	04/07/2021
Kebili	48,9	29/07/2023	48,8	24/07/1997
Kelibia	41,2	20/07/2023	40,2	12/07/2017
Kairouan	49	23/07/2023	48,3	14/07/2018
Gafsa	46,5	29/07/2023	46,5	14/07/2018
		09/07/2023	46,5	14/07/2018
Tunis	49	24/07/2023	46,8	01/07/1998
Bizerte	48,9	24/07/2023	46,5	01/07/1998
Beja	47,7	24/07/2023	47,7	24/07/2009
		23/07/2023	47,7	24/07/2009
Matmata	48,8	29/07/2023	47,6	04/07/2021
Tataouine	48,6	29/07/2023	48,5	04/07/2021
Remada	48,5	30/07/2023	48,1	04/07/2021

For the minimum temperature, very high minimum temperatures were recorded at several stations (record for the highest minimum temperatures):

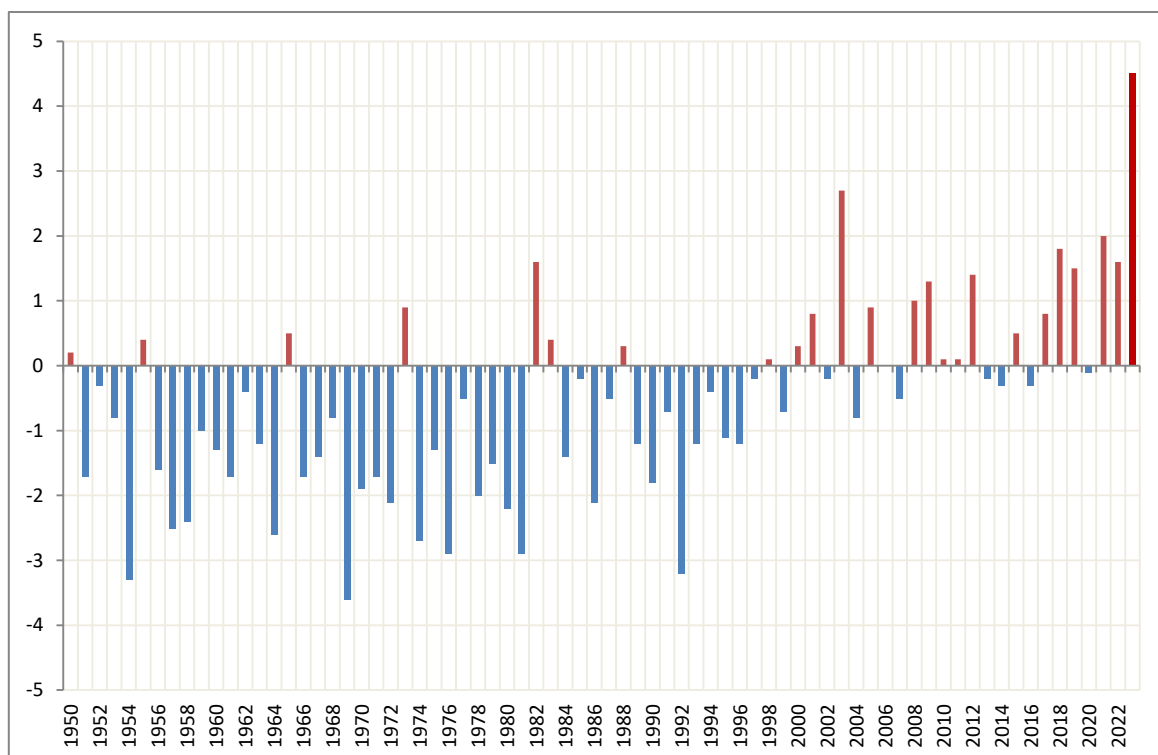
station	date	The highest minimum temperature
Tozeur	09/07/2023	33,8
Nabeul	25/07/2023	30,7
Kelibia	25/07/2023	29,8
Zaghouan	25/07/2023	33
Mahdia	24/07/2023	29,9
Thala	08/07/2023	28,7
Monastir	25/07/2023	30,8
Sfax	10/07/2023	28,9
Jendouba	25/07/2023	29,2
Sidi Bouzid	09/07/2023	29
Kairouan	25/07/2023	30,9
Gabes	21/07/2023	29,9
	26/07/2023	
Tataouine	25/07/2023	33,8
Tunis	25/07/2023	31,6
Kebili	10/07/2023	31,6

- Maximum temperature:

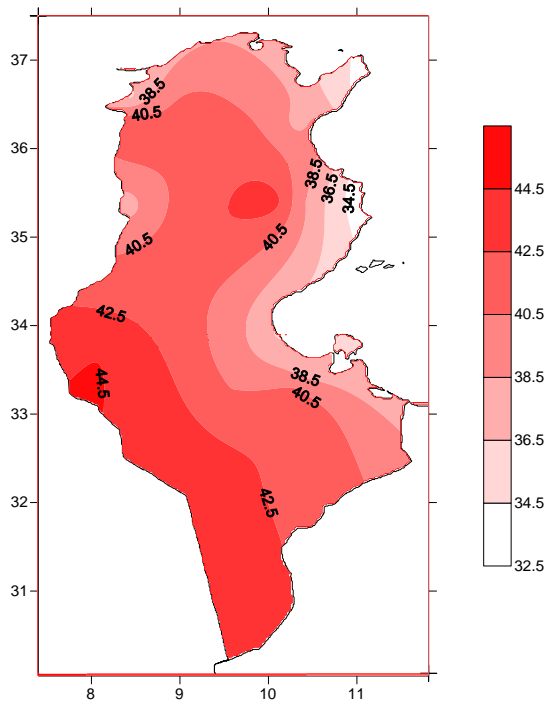
The average maximum temperatures varied between 32.6°C in Mahdia and 44.6°C in Tozeur, they were higher than the reference averages in all regions. The average maximum temperature (27 main stations) reached 39.8°C, it was higher than the reference average for the same stations (35.3°C) with a **significant difference of +4.5°C.**



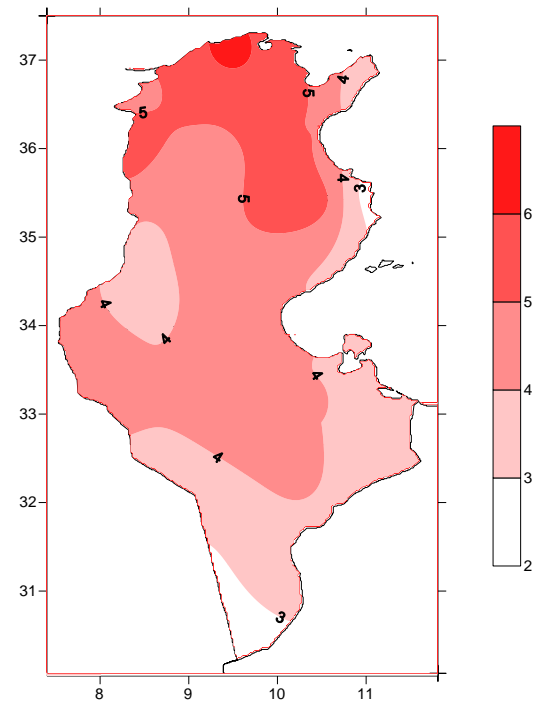
Comparison of maximum and normal temperatures for the month of July



The difference between the maximum temperatures of July from the reference rates (1991-2020) since 1950



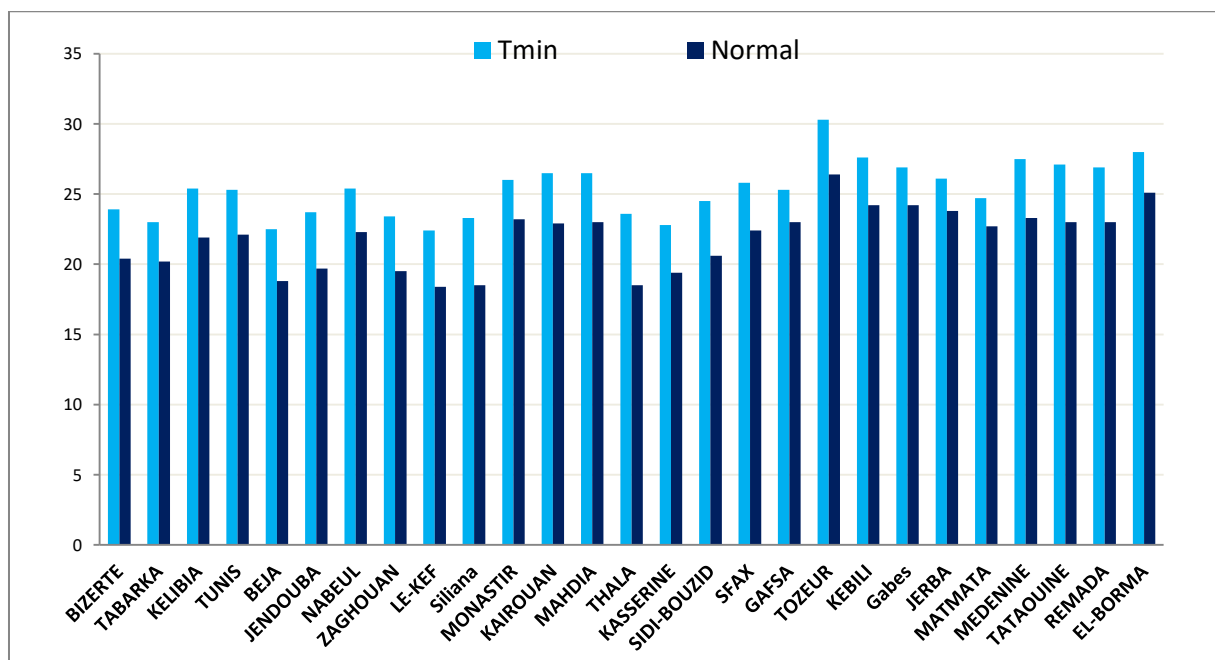
Maximum temperature (Tmax)



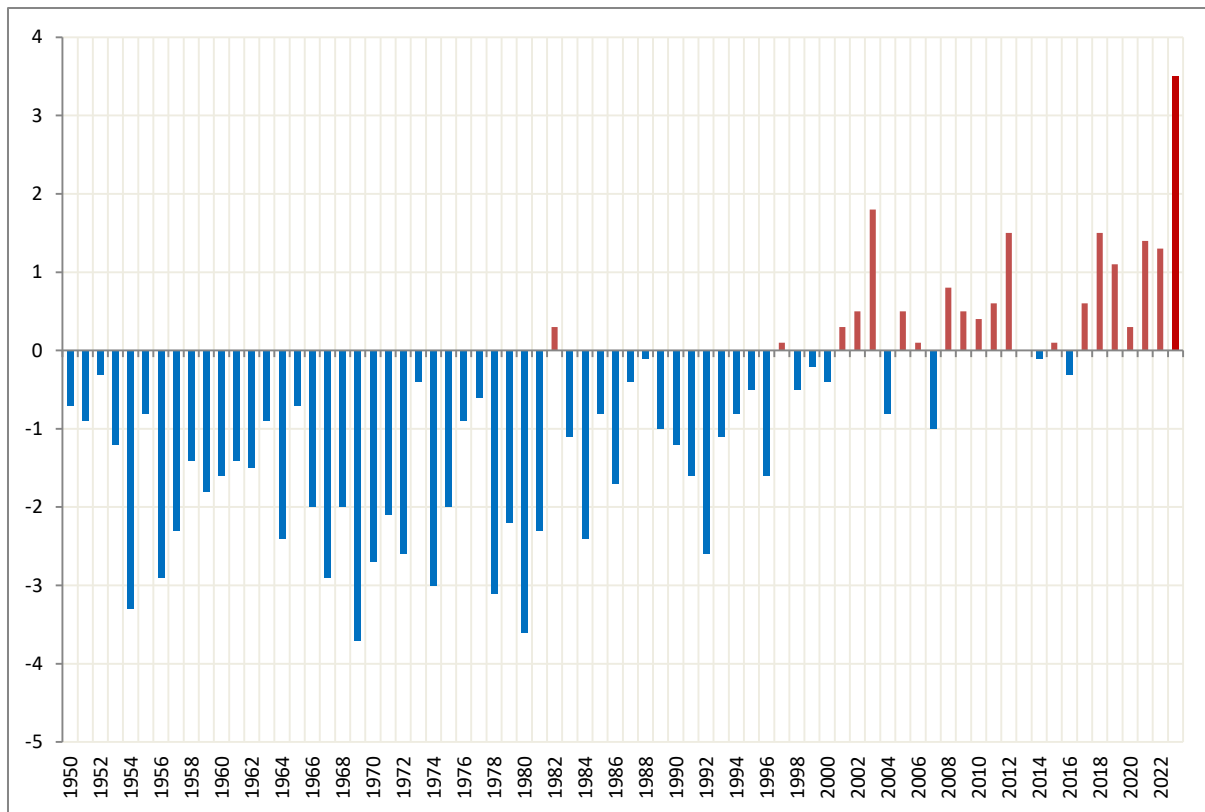
Deviation from normal of Tmax in (°C)

- Minimum temperature:

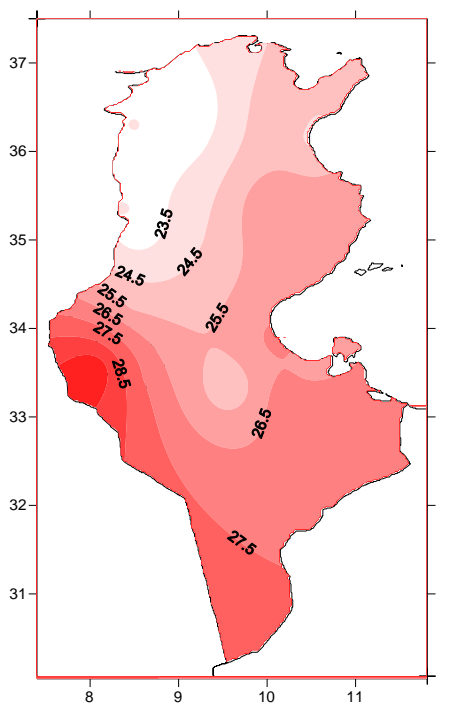
Minimum temperatures varied from 22.4°C in Kef to 30.3°C in Tozeur. As for the national average minimum temperature, it reached 25.3°C; exceeding the reference average (21.9°C) with a deviation of +3.5°C.



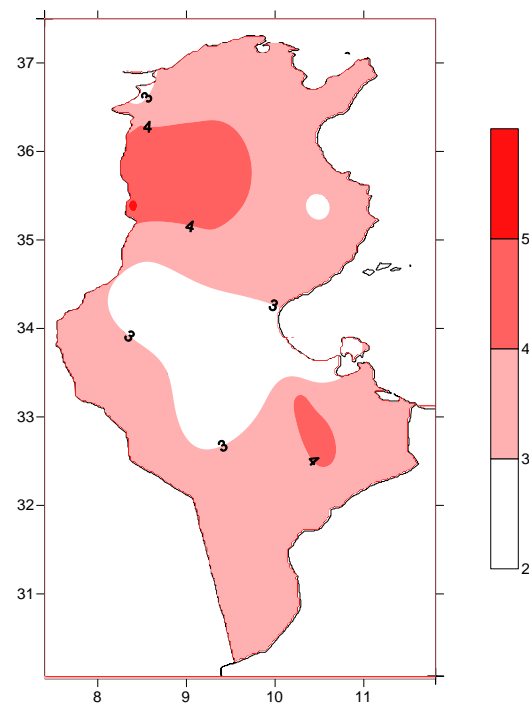
Comparison of minimum and normal temperatures for the month of July



Deviation from the 1991-2020 normal of minimum temperatures since 1950: Month of July



Minimum temperature (T min)

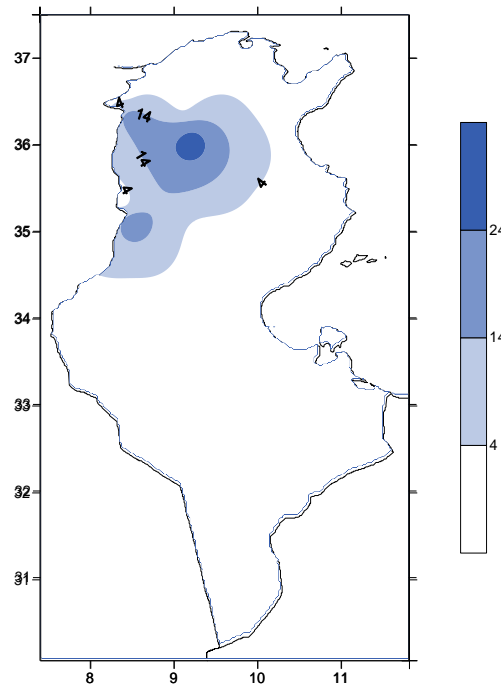


Deviation from normal of Tmin in (°C)

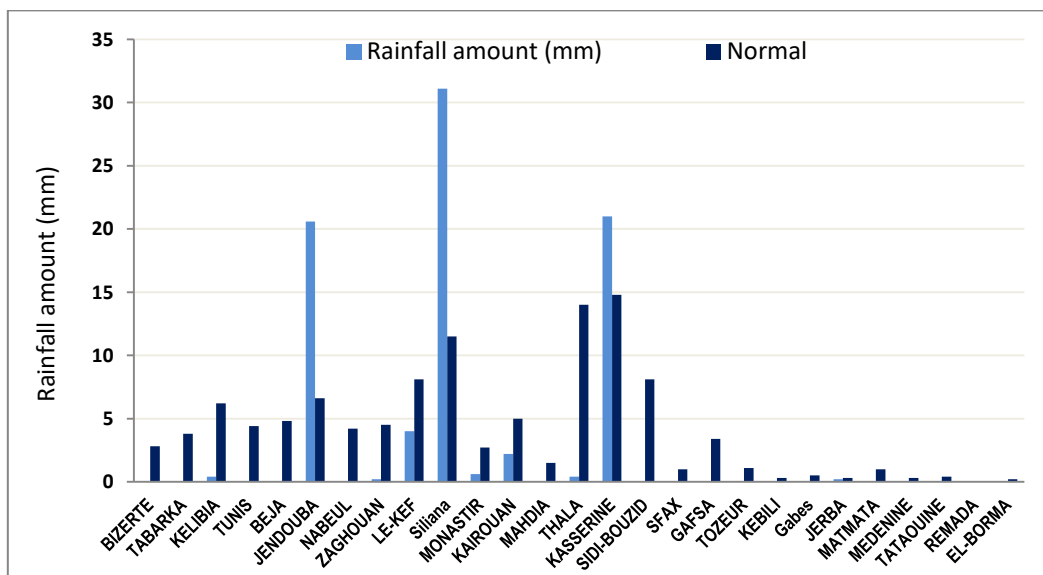


- Rainfall:

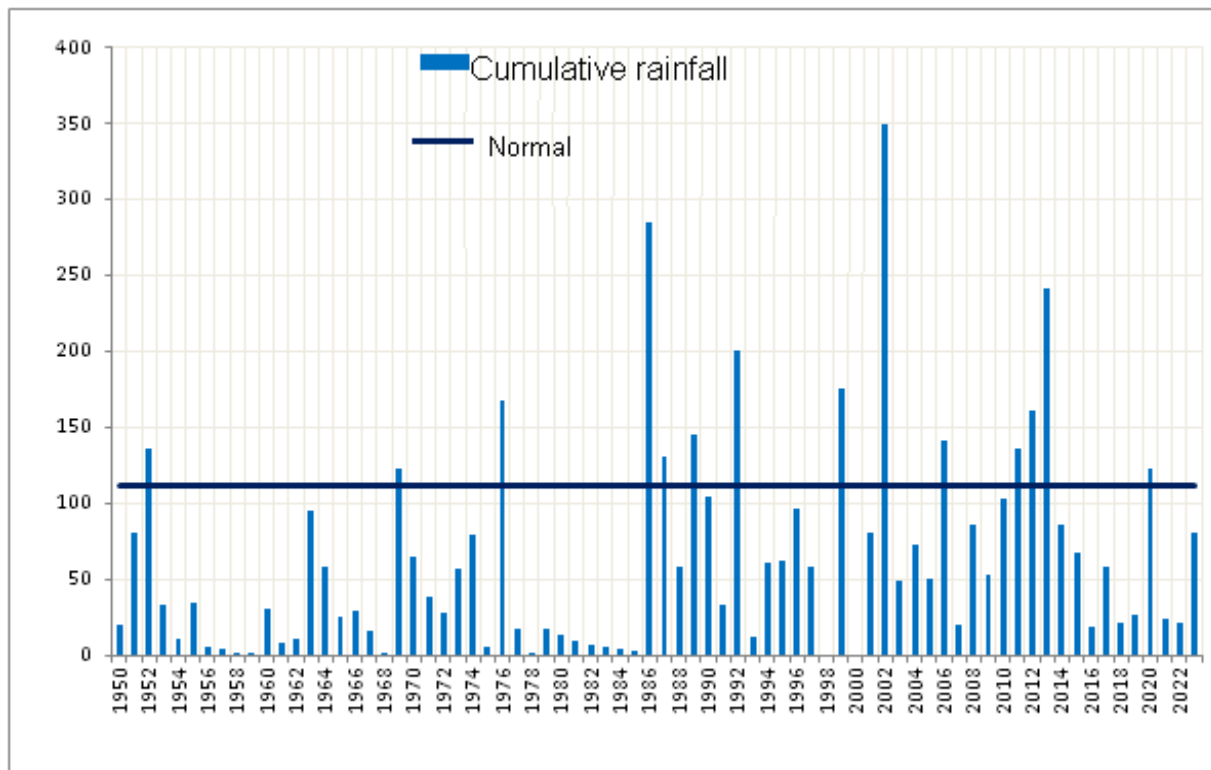
The total cumulative rainfall (27 main stations) for the month was 80.7 mm, while the normal for the same stations was 111.5 mm. The amounts of rainfall recorded during this month reached 72.4% of the normal for the month of July. Over the whole of Tunisia, rainfall was low except for the three stations which exceeded the average and there was a surplus following rainy and stormy episodes during the first dekad of the month, particularly in Jendouba, Siliana and Kasserine.



Cumulative monthly rainfall (mm)_July 2023



Comparison of monthly rainfall totals with to the reference averages of the accumulations



Cumulative monthly precipitation since 1950 in Tunisia: Month of July

- The winds :

The winds were generally weak to moderate and their speed increased on July 01 and 02, 2023 over most regions, with a maximum speed ranging from 54 km/h in Tunis-Carthage to 68 km/h in Remada and El-Borma.

During the period from July 6 to 9, 2023, the winds were also strong in the north, center and south-west regions, with a maximum speed ranging from 60 km/h in Zaghouan to 86 km/h in Tozeur and reaching a maximum of 101 km/h in Jendouba.

Also, the winds were strong during the period from July 23 to 26 in most regions, and their maximum speed varied from 54 km/h in Beja and Medenine to 83 km/h in Bizerte. The strong winds generated sand phenomena in the south where horizontal visibility was reduced to less than 400 meters.

The winds were also strong on July 30 in the southwestern regions, where their maximum speed varied from 72 km/h in Kébili to 94 km/h in Gafsa with sand phenomena where horizontal visibility was reduced to less than 1000 meters.

