

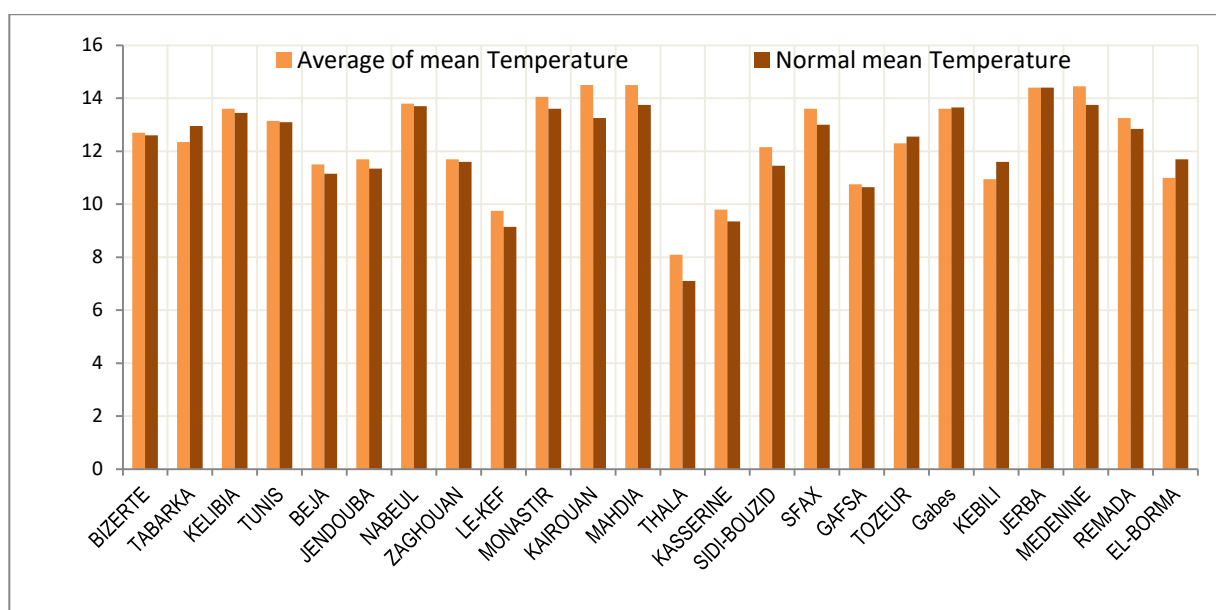
Monthly Climatological Report_ December 2021 in Tunisia

The month of December 2021 was marked by a slight rise in temperature. The general average temperature (24 main stations) reached 12.4°C and was slightly higher than the reference average (1981-2010) for the same stations (12.2°C) with a difference of (+0.2)°C.

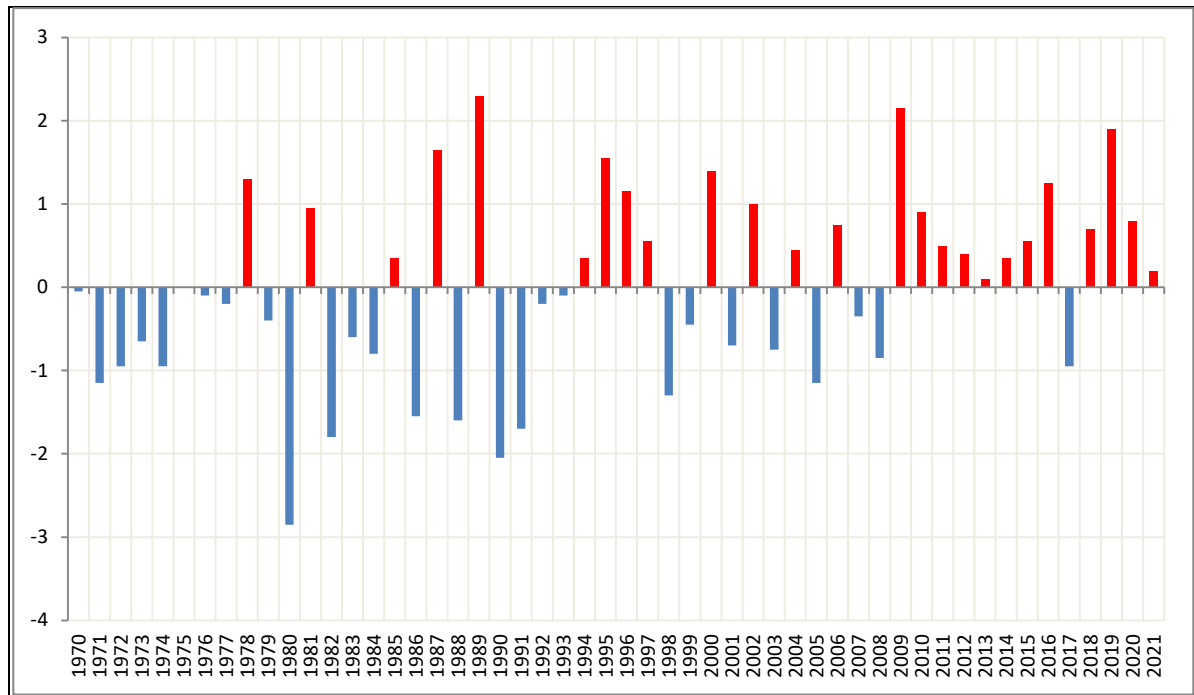
As far as rainfall is concerned, the month of December of this year experienced a rain deficit. This deficit amounted to **27%** compared to the reference cumulative rainfall and it varied from one region to another, with the exception of certain regions in the north-west (Jendouba, Beja and Kef), where the monthly rainfall accumulation was slightly higher than the reference accumulation.

- Mean temperature :

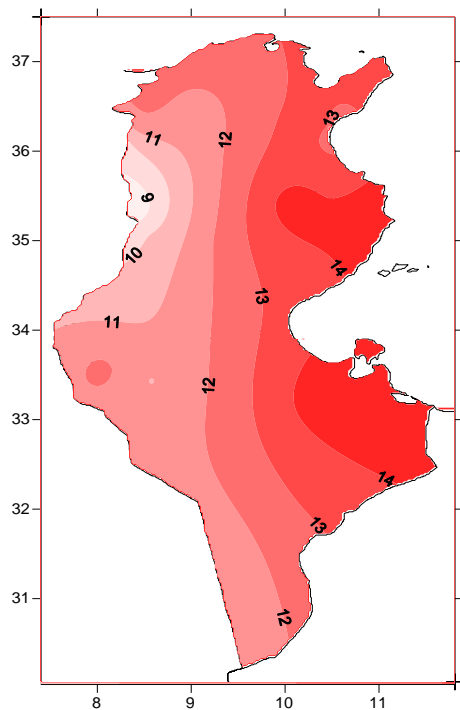
The mean temperatures fluctuated between 8.4°C in Thala and 14.5°C in Kairouan, Mahdia and El Borma, they were higher than the reference averages in most regions with differences between (+0.1) °C in Bizerte and (+1.3)°C in Kairouan, with the exception of Tabarka, Tozeur, Kebili and El-Borma, where the averages were slightly lower than the reference averages. The general average of mean temperatures reached 12.4°C and was slightly higher than the reference average for the same stations (12.2°C), with a deviation of (+0.2)°C



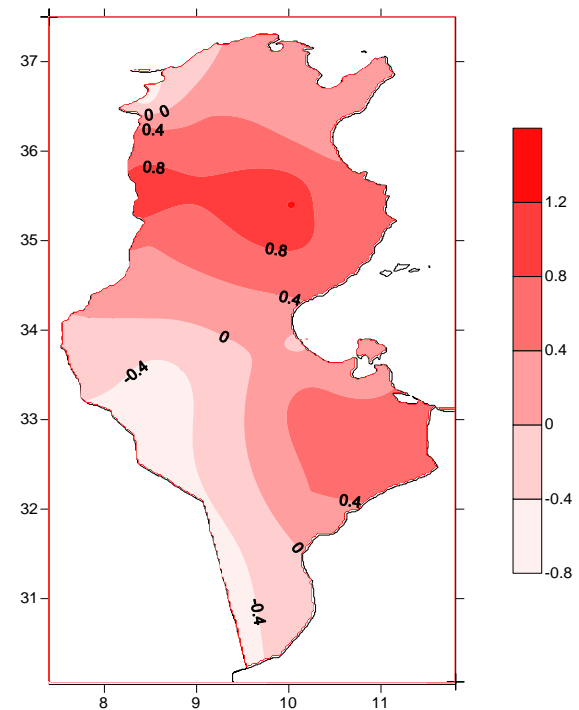
Comparison of mean temperatures (December2021) to normals of December (1981-2010)



**Deviation from normal (1981-2010) of mean temperatures of December
for the years 1970 to 2021**



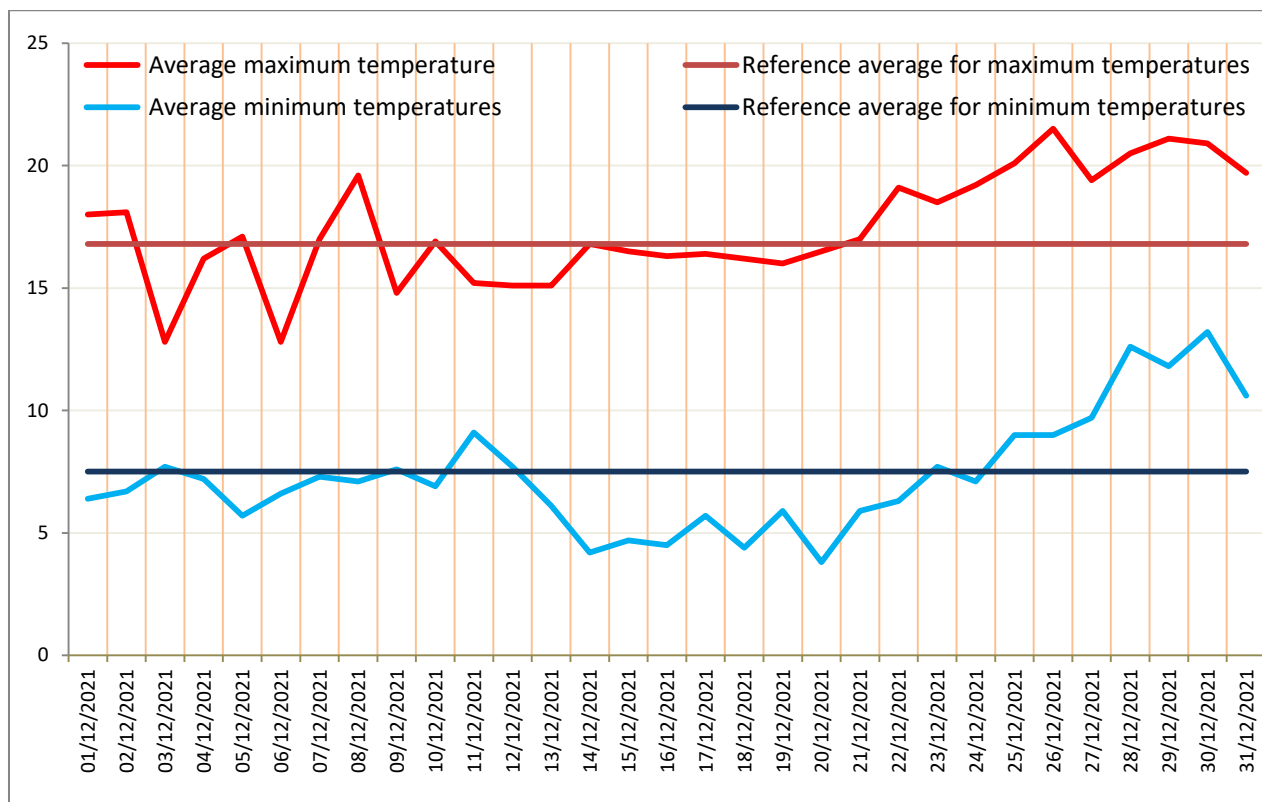
Average of the mean Temperature (°C)



Deviation from the normal of meanTemperature (°C)

- Daily evolution of temperature:

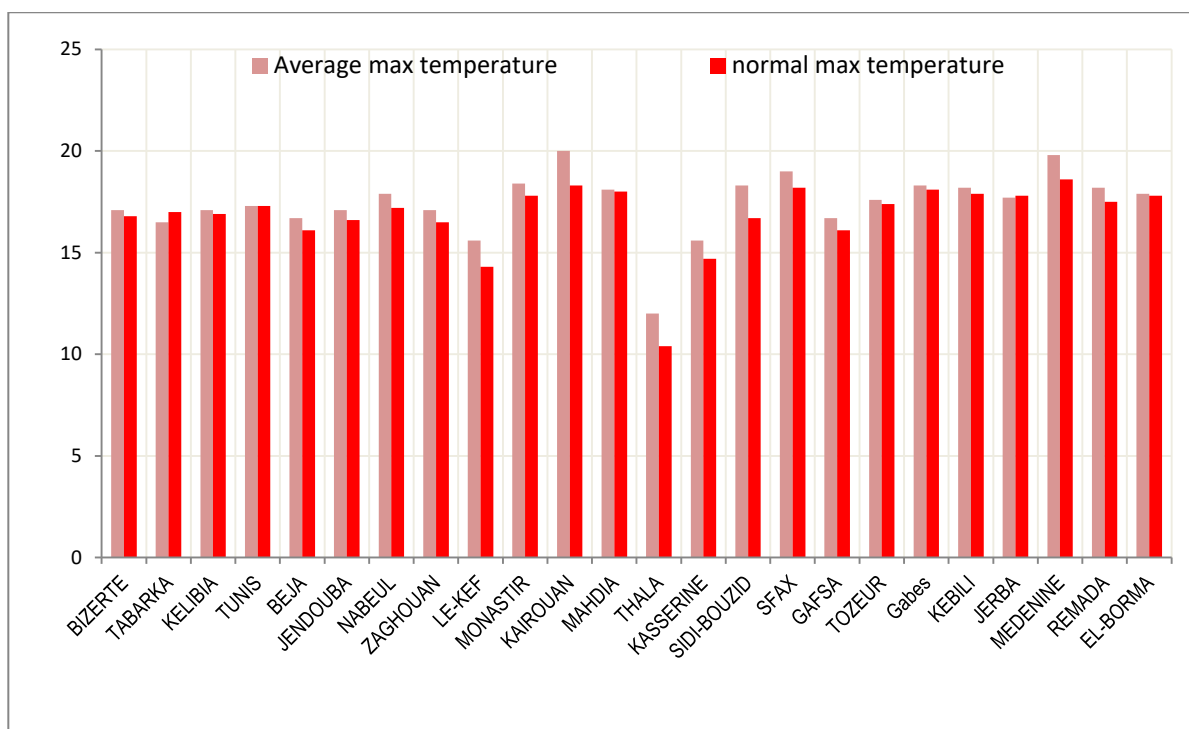
During the first and second dekads of December, maximum and minimum temperatures were close to normal. However, temperatures showed a relatively high increase during the last dekad of the month.



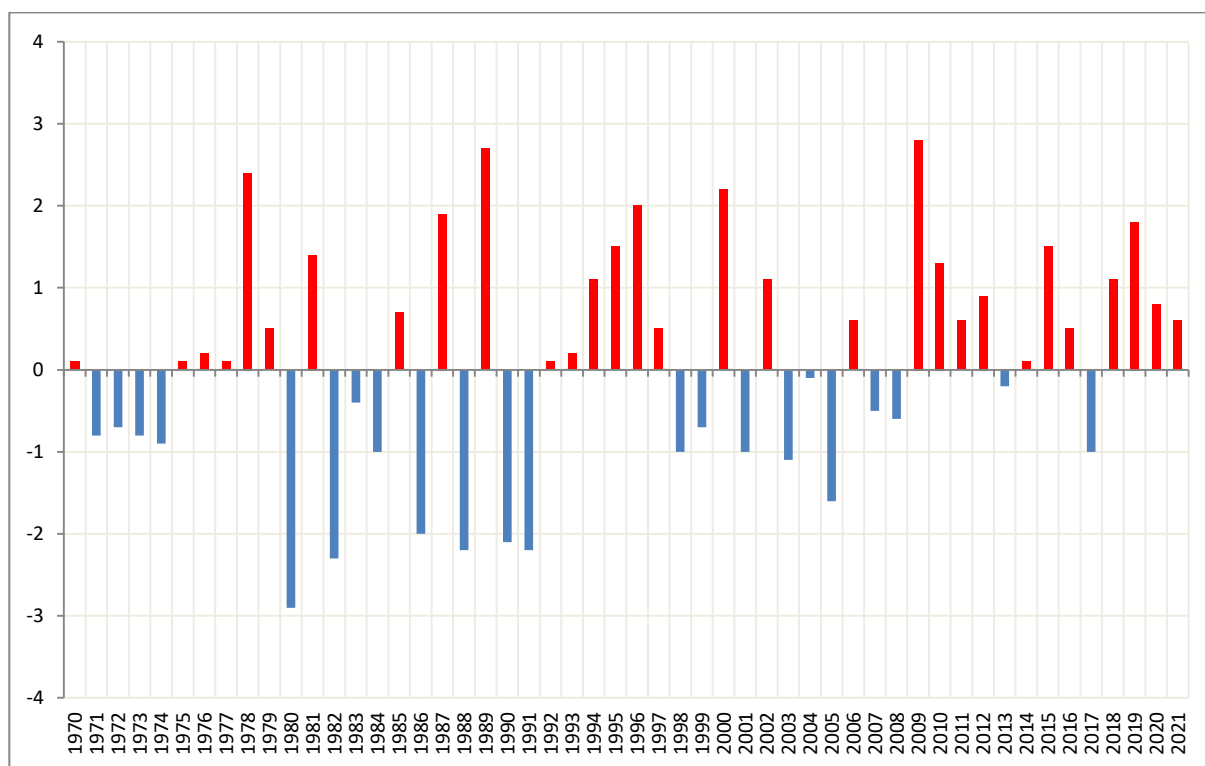
Daily temperature evolution in Tunisia compared to the normal of December (1981-2010)

- Maximum temperature :

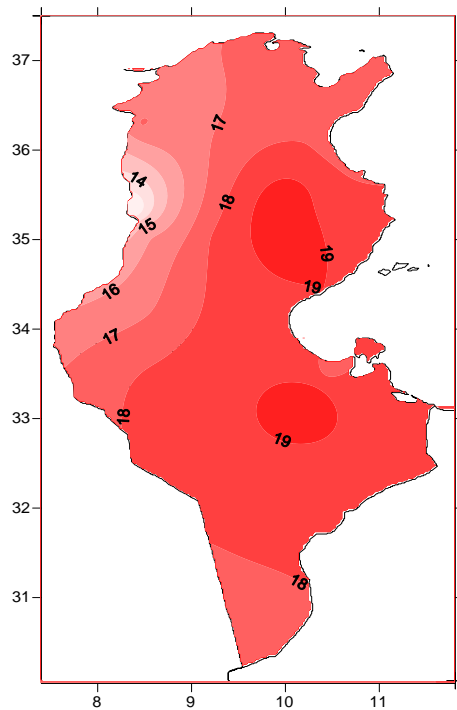
Maximum temperatures varied from 12°C in Thala to 20°C in Kairouan and exceeded the reference averages in most regions with variations ranging from (+0.1)°C in El Borma to (+1.7)°C in Kairouan, with the exception of Jerba and Tabarka, where they were slightly below average and the difference was (-0.1)°C in Jerba and (-0.5)°C in Tabarka. The absolute maximum temperature reached 26.3°C in Medenine on December 26, 2021. As for the general average of maximum temperatures, it reached 17.4°C and exceeded the reference average (16.8°C) with a difference of (+0.6)°C.



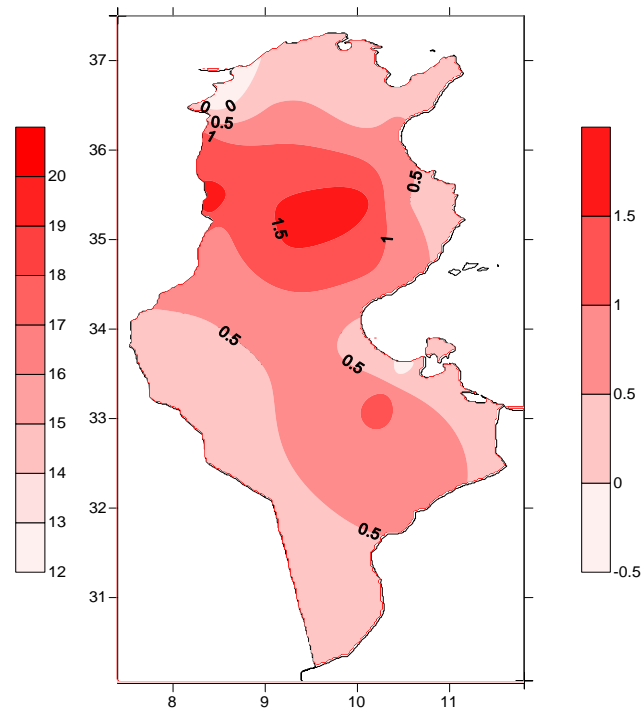
Comparison of maximum temperatures (December 2021) to normal of the December (1981-2010)



Deviation from the normal (1981-2010) of the maximum temperatures of December
for the years 1970 to 2021



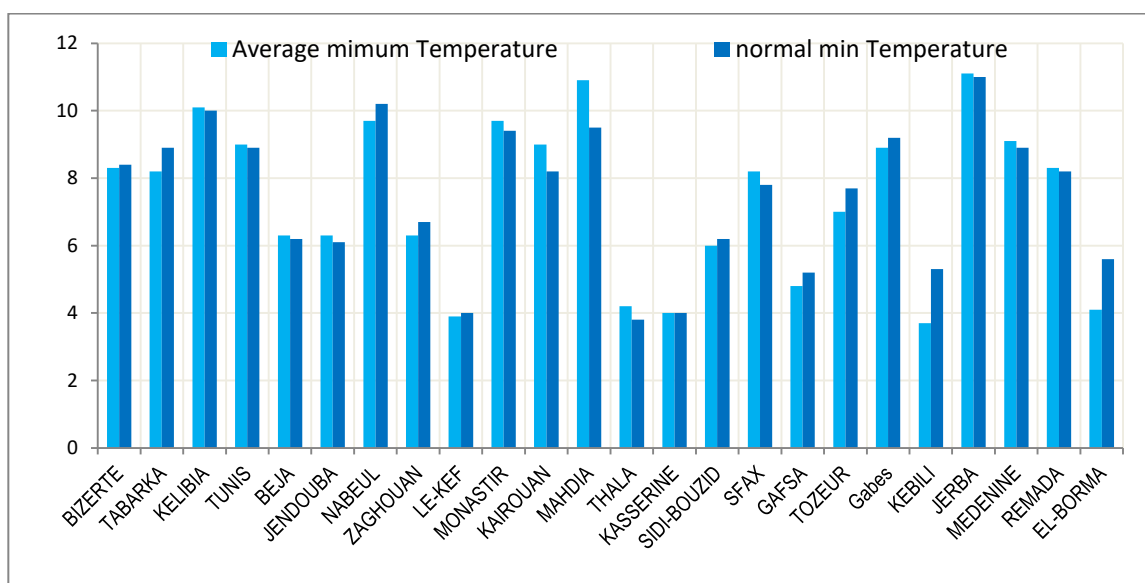
Maximum Temperature (° C)



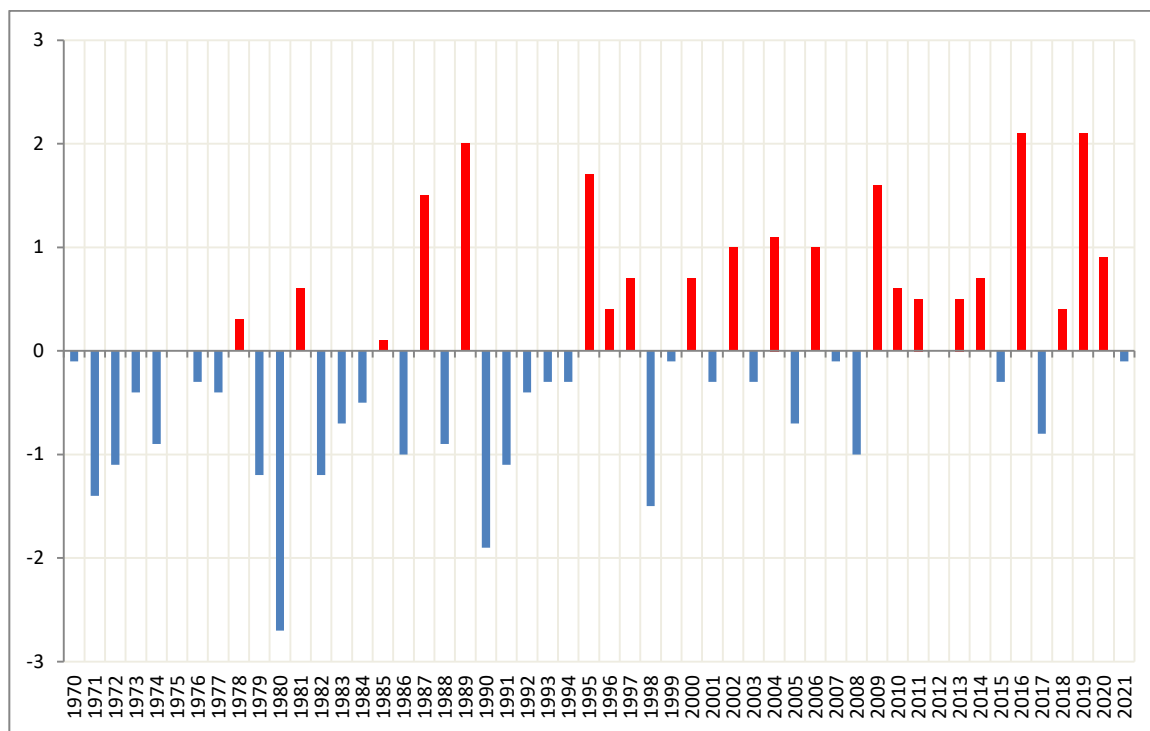
Deviation from the normal of Tmax (° C)

- Minimum temperature :

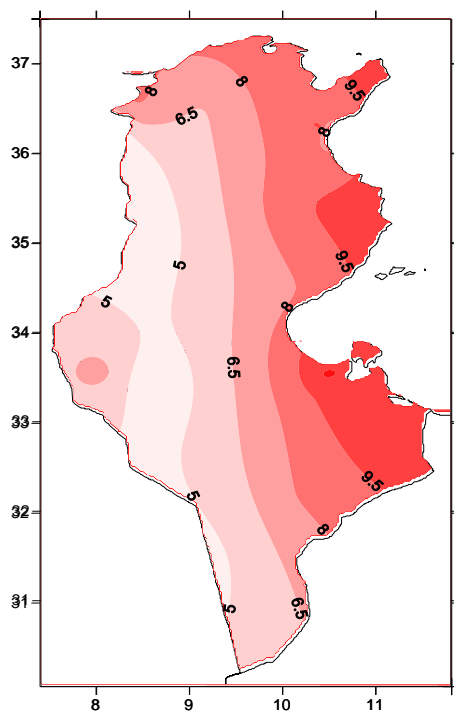
As for the minimum temperatures, they were generally close to the reference averages and they oscillated between 3.9°C in Kef and 11.1°C in Jerba. The absolute minimum temperature reached (-1.7)°C in Kasserine on December 14, 2021. The general average minimum temperature was 7.4°C and it was slightly lower than the reference average (7. 5°C) with a small difference of (- 0.1)°C.



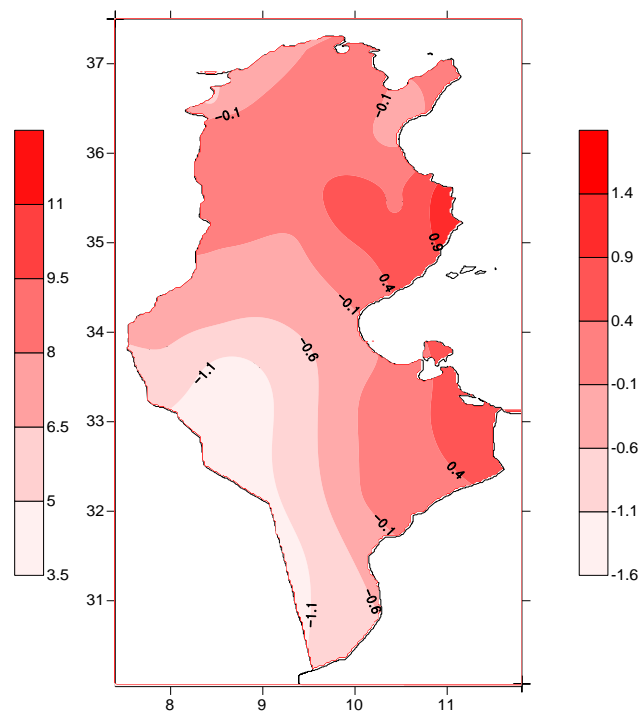
Comparison of minimum temperatures (December 2021) to normals of December (1981-2010)



**Deviation from normal (1981-2010) of minimum temperatures of December
for the years (1970 to 2021)**



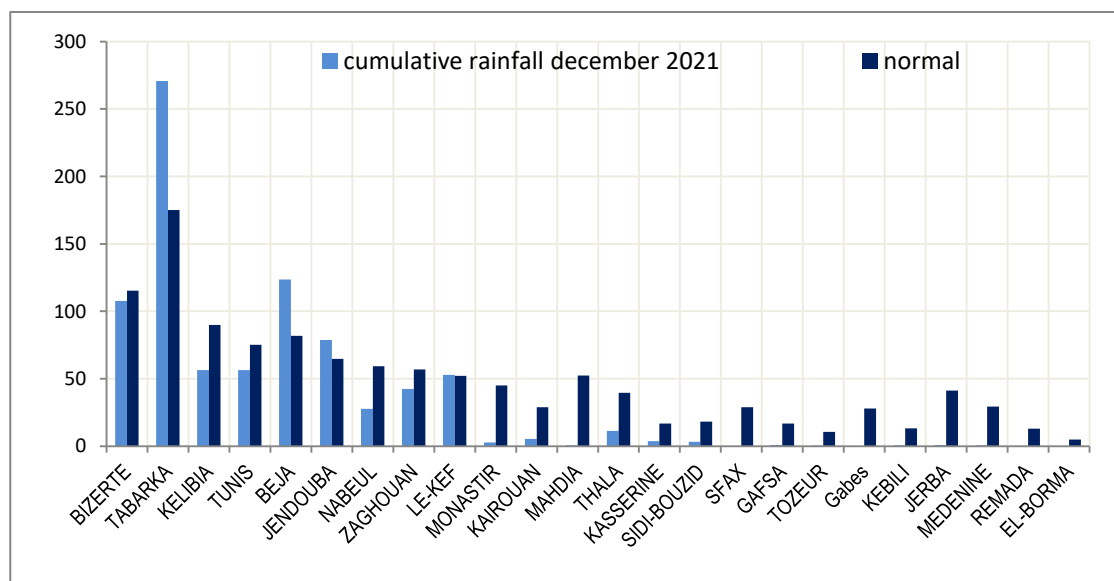
Minimum Temperature (°C)



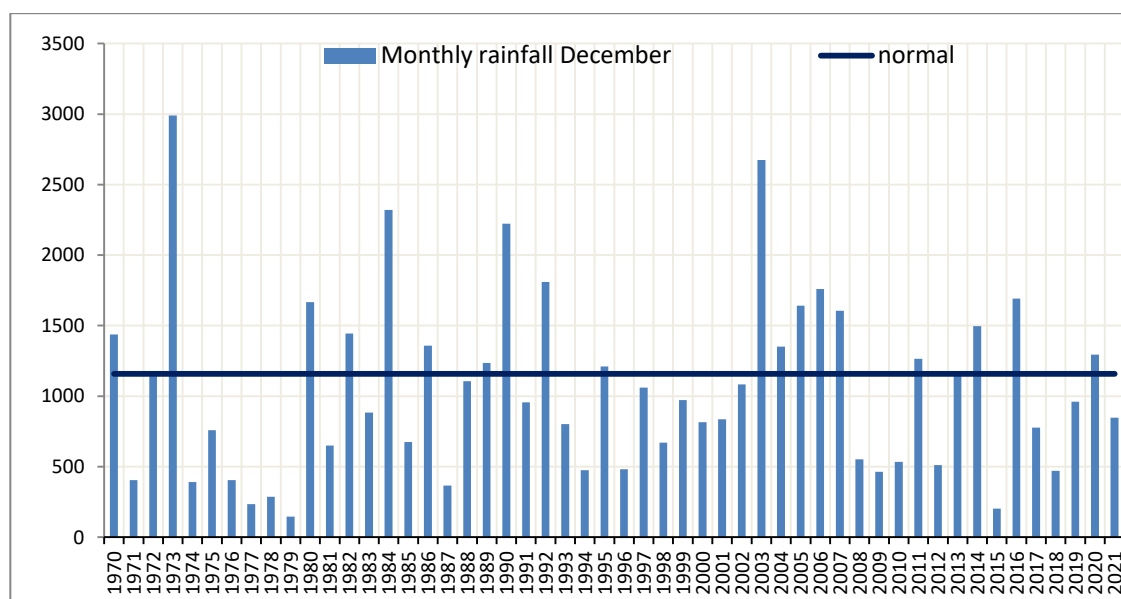
Deviation from normal of Tmin (°C)

- Rainfall :

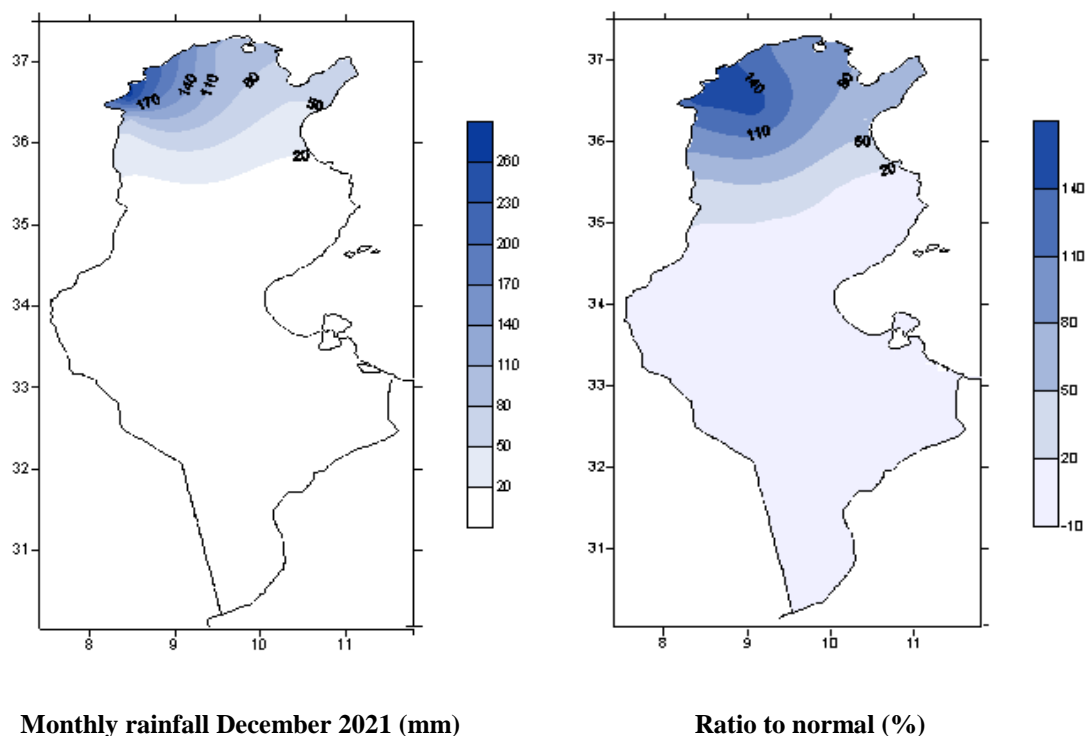
Regarding rainfall, the month of December 2021 was deficient. The monthly accumulation for the month was 847.4 mm, while the reference accumulation for the same stations is 1158.1 mm. Thus the month of December 2021 experienced a rainfall deficit of 27%. This deficit varied from one station to another with the exception of the northwestern regions (Le Kef, Jendouba, Tabarka and Béja) where their accumulations exceeded normal.



Comparison of Monthly Rainfall (December 2021) with the reference averages
of the accumulations (1981-2010)



Monthly rainfall in the main stations for the months of December
for the years 1970 to 2021



- The winds :

As for the winds, they were generally light to moderate and their speeds increased during the days of December 03, 05 and 06, 2021 in most regions, where the maximum varied from 54 km / h in Kebili to 86 km / h In Enfidha, note that the winds were strong to violent on December 6 in Bizerte, Nabeul and Tabarka reaching 101 km/h in Bizerte and 104 km/h in Tabarka and Nabeul.

The wind speed also increased during the period from 08 to 12 December in most regions with a maximum speed ranging from 61 km/h in Remada to 90 km/h in Tataouine and a maximum of 130 km/h in Kasserine on December 12, 2021.

On the days of December 29 and 30, the winds were strong in the north and the center with a maximum speed varying from 60 km/h in Zaghuan to 90 km/h in Kasserine, and the maximum was 104 km/h in Nabeul on December 29, 2021.

(Figures 1 and 2):

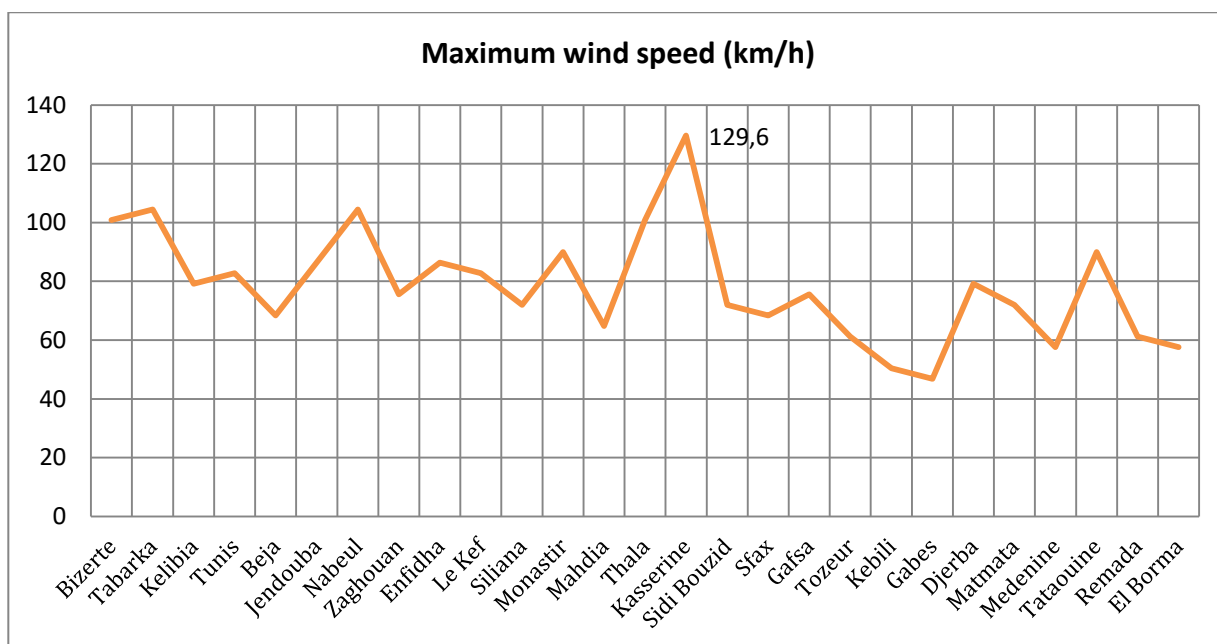


Fig. W°1

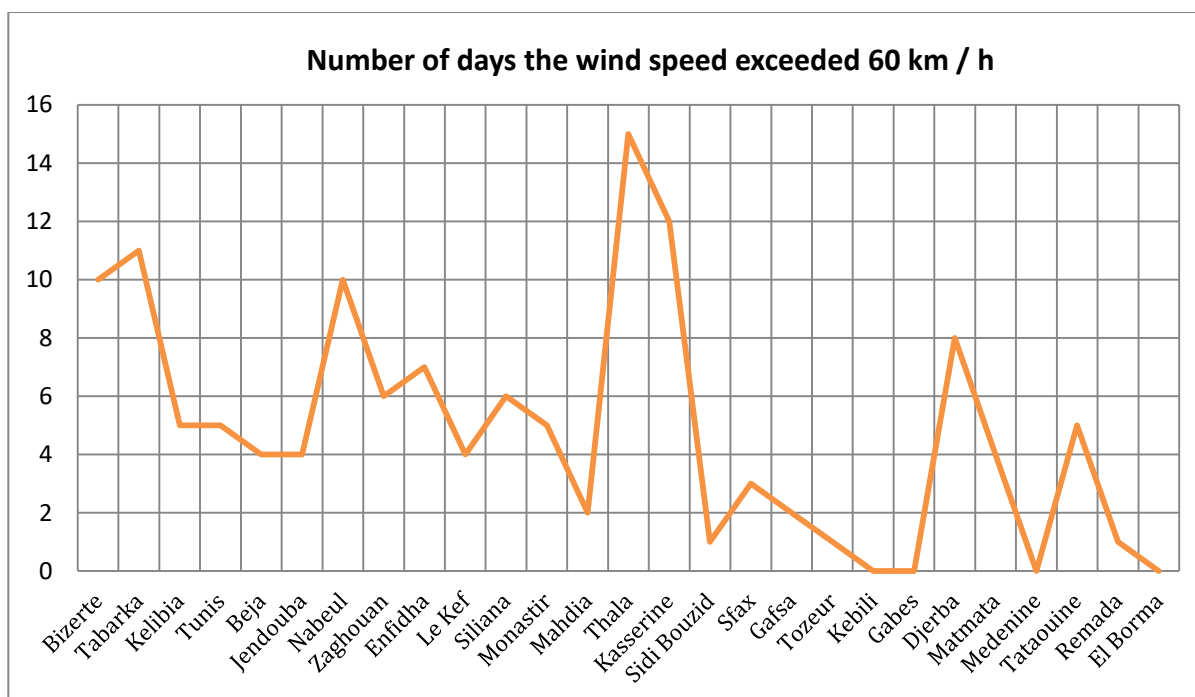


Fig. W°2