

Climatological Report for Autumn 2021 in Tunisia

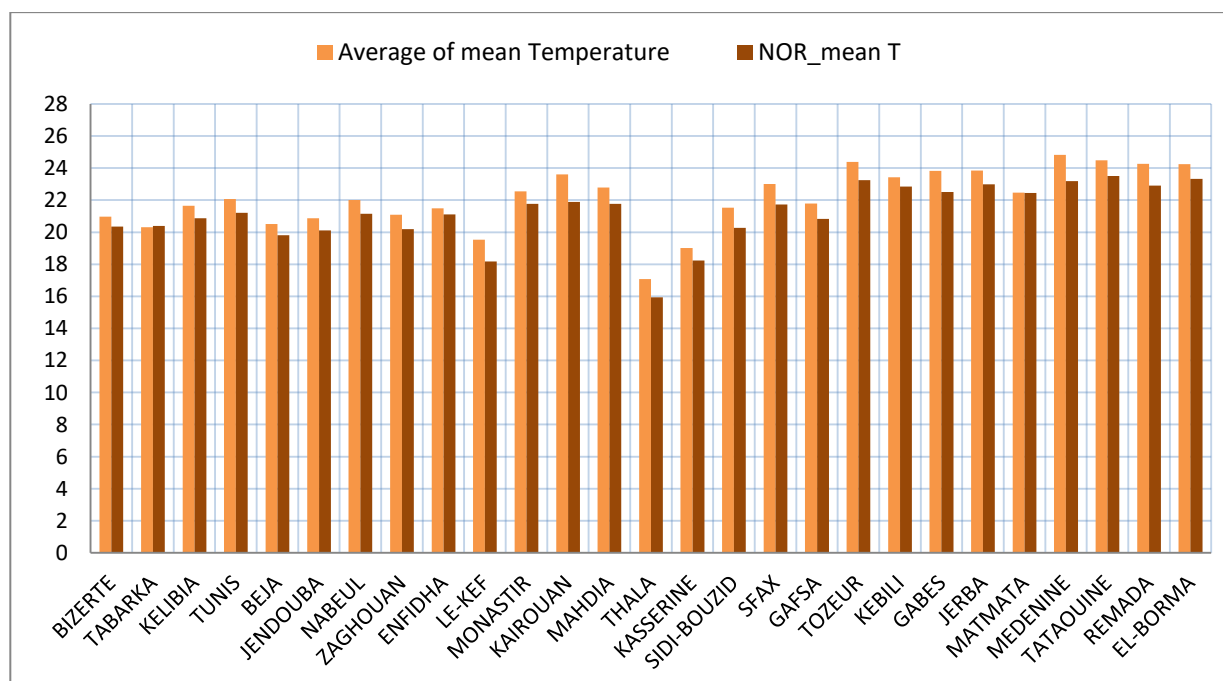
The Autumn of 2021 was characterized by a relative rise of temperatures. The general average of the mean temperature (27 main stations) reached 22.1°C and was above the reference average (1981-2010) with a difference of (+ 0.9°C). Therefore, this Autumn appears in the ninth place of the warmest Autumn seasons since 1970.

As for rain, the seasonal total of rain in all the main stations amounted to 1904.5 millimeters and was less than the reference seasonal total for the same stations (2949.2 millimeters), and the decrease was 36%. The decrease was recorded in most stations except for Bizerte, Tabarka, Kelibia and Beja, where the seasonal total was slightly above the reference total.

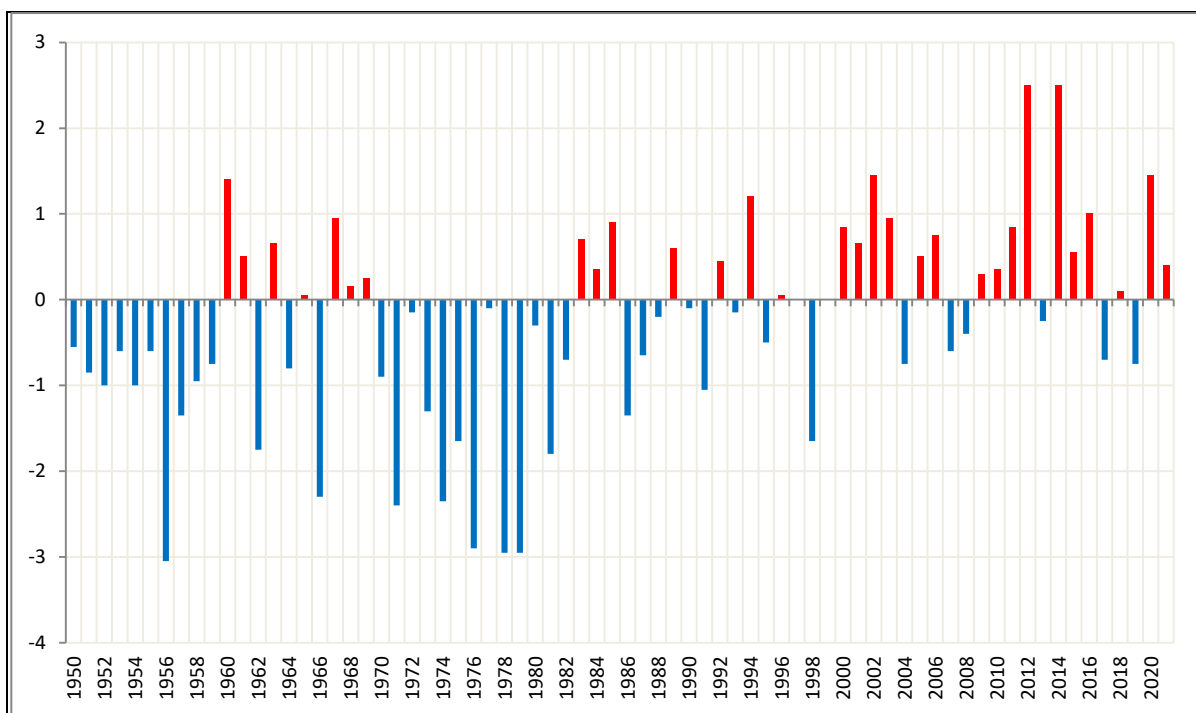
- Mean temperature :

The mean temperatures during this Autumn ranged between 17.1°C in Thala and 24.8°C in Medenine, and were above the reference rates in most regions. The difference was (-0.1°C).

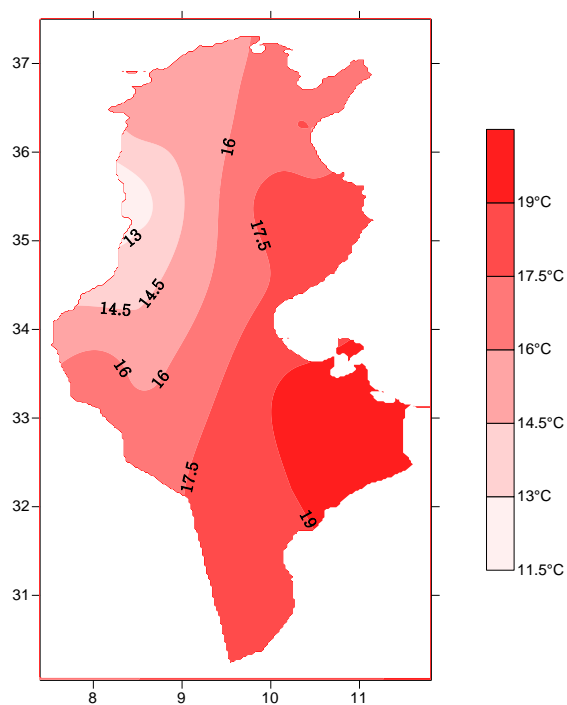
As for the general average of the mean temperature, it reached 22.1°C and was above the reference average (21.2 °C), with a difference of (+0.9°C) .



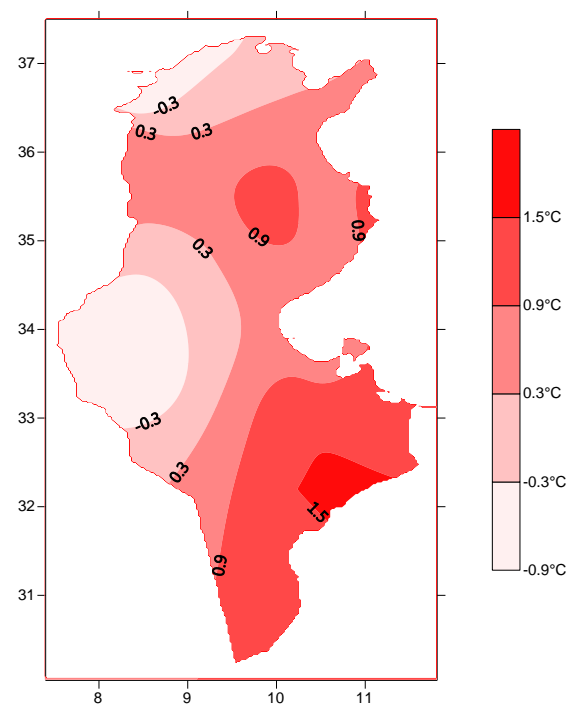
Comparison of mean temperatures (Autumn 2021) to normals of Autumn (1981-2010)



**Deviation from normal (1981-2010) of mean temperatures of Autumn
for the years 1950 to 2021**



Average of the mean Temperature (° C)



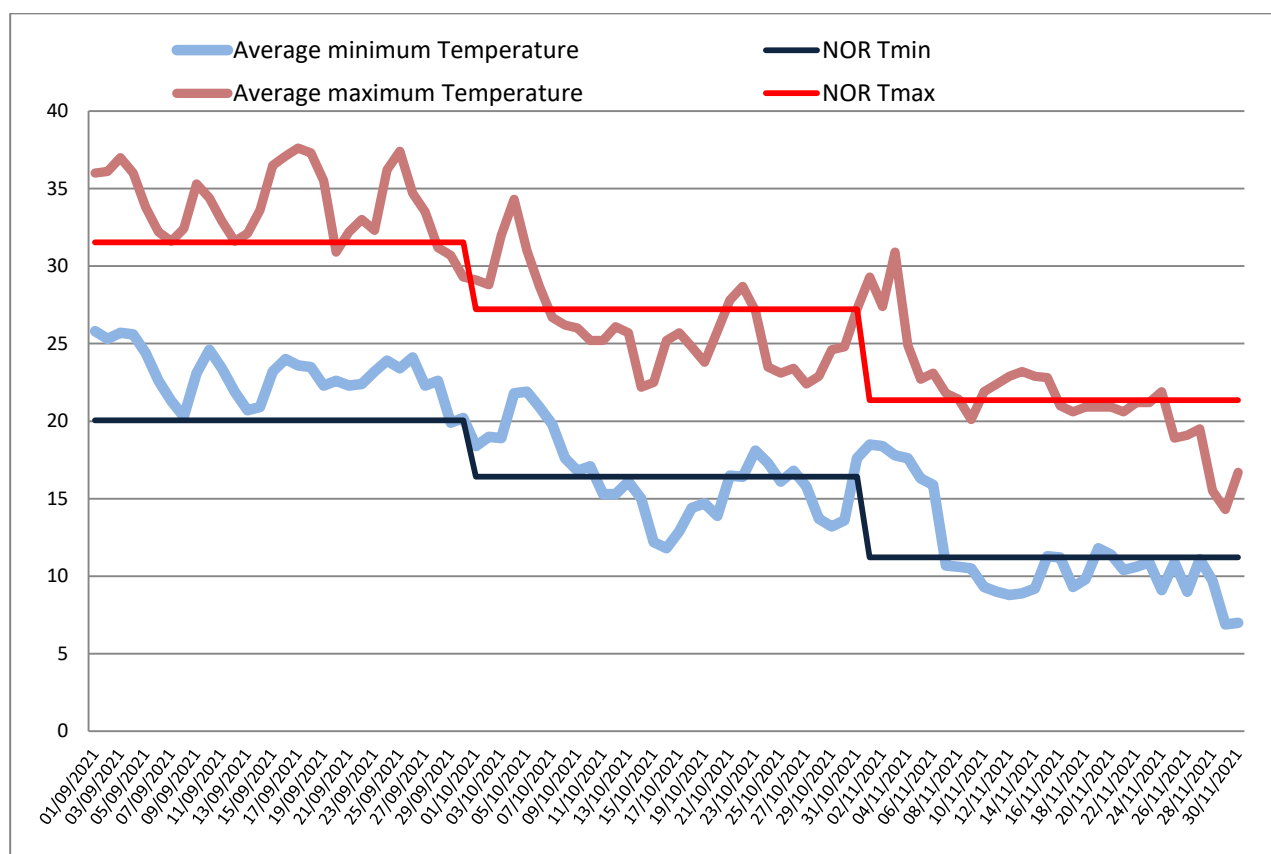
Deviation from the normal of mean Temperature (°C)

- Daily evolution of temperature:

The beginning of the Autumn 2021 was characterized by a high temperature in all regions throughout the month of September, as it exceeded the reference rates.

In October, the temperature continued to rise until the first deciles of the month, then fell below the reference rate during the second and third deciles of October.

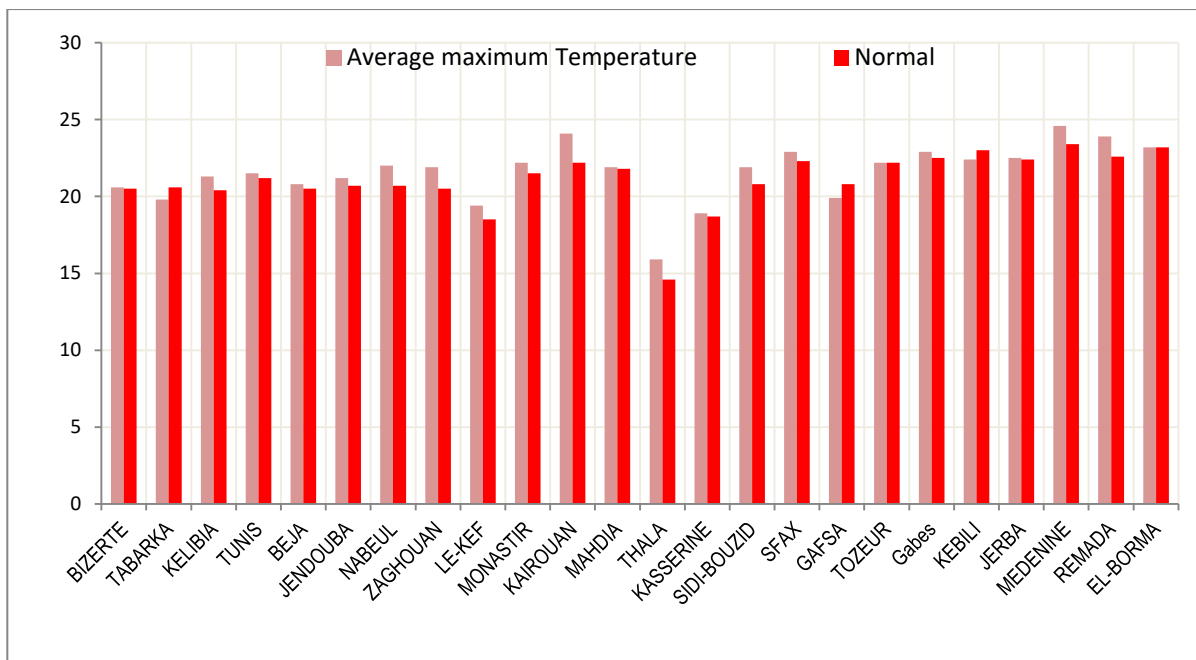
During the month of November, temperatures were often very close to normal with the exception of the last week of the month when most regions experienced a remarkable drop.



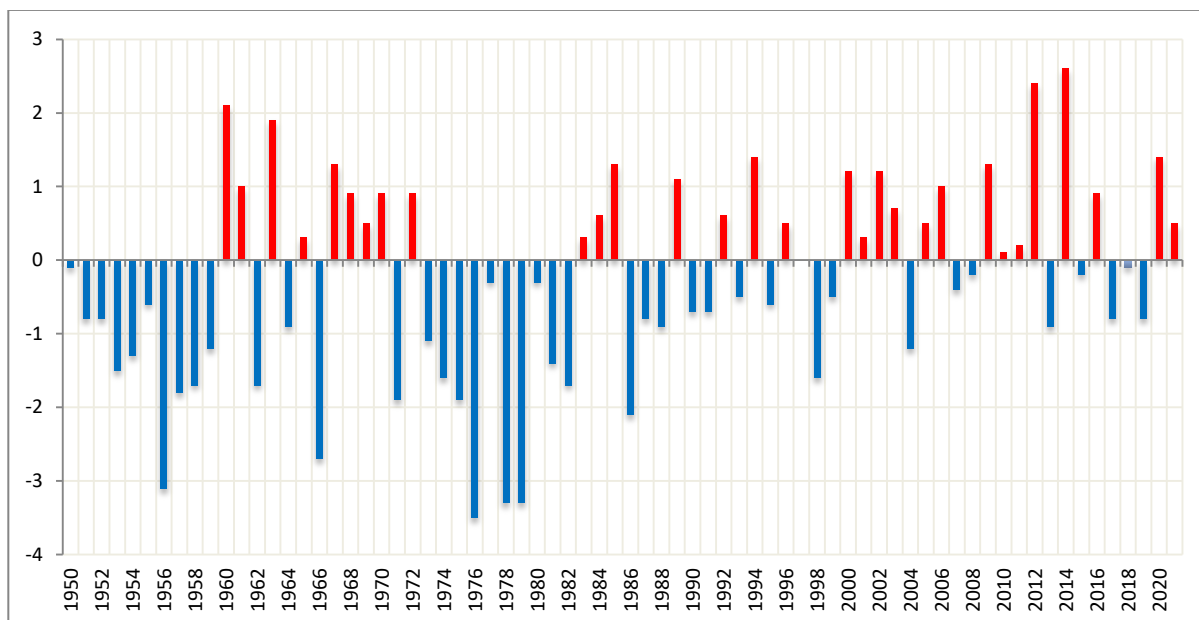
Daily temperature evolution in Tunisia compared to the normal for the autumn

- Maximum temperature :

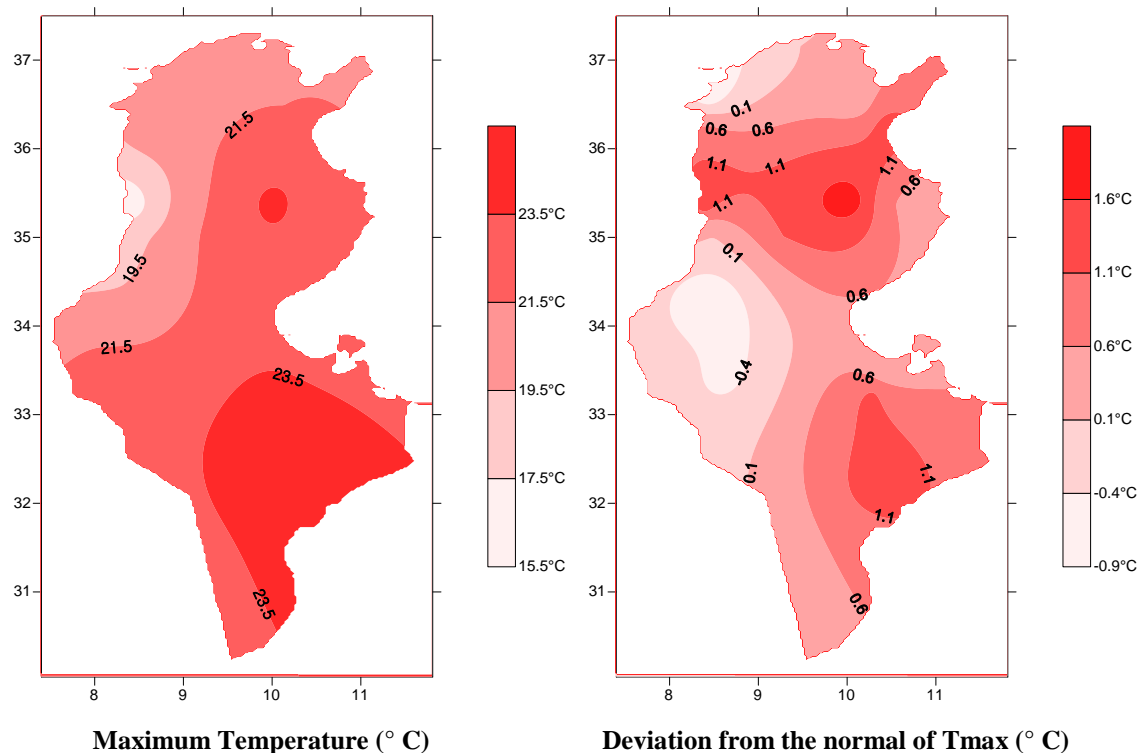
The maximum temperatures for the autumn of 2021 ranged from 22°C in Thala to 30.6°C in Borma and were above the seasonal reference rates in most of the stations, respectively (-0.4°C) in Tabarka and (-0.1°C) in Mahdia. In total, the general average of the maximum temperature reached 27.3°C and it exceeded the seasonal reference rate (26.5°C) with a difference of (+0.8°C).



Comparison of maximum temperatures (Autumn 2021) to normals of the Autumn (1981-2010)

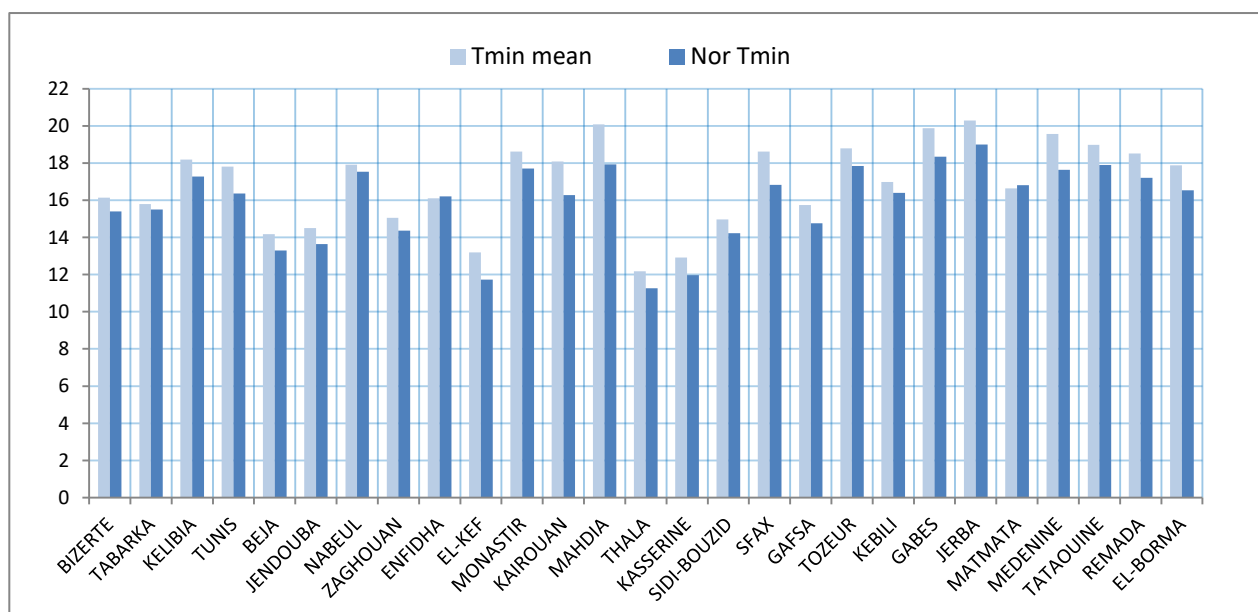


Deviation from the normal (1981-2010) of the maximum temperatures of Autumn
for the years 1950 to 2021

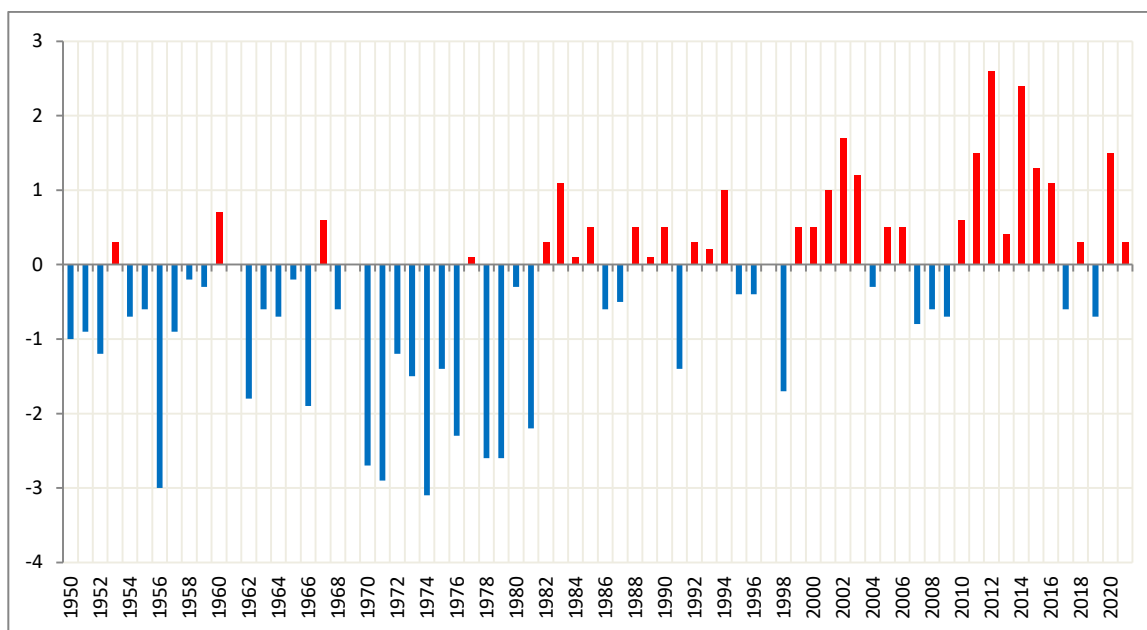


- Minimum temperature :

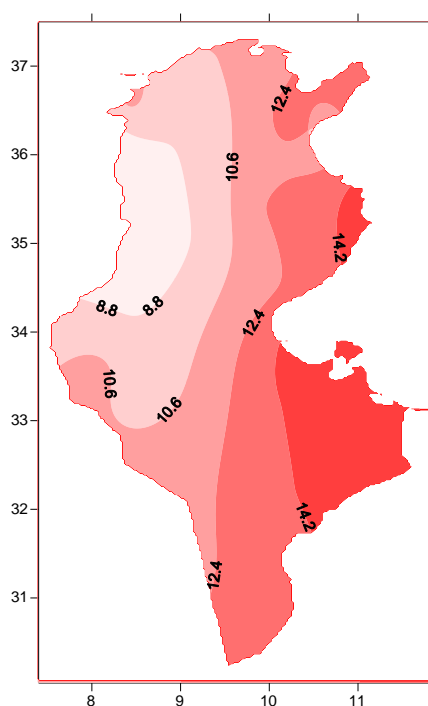
As for the minimum temperature, the averages ranged from 12.2°C in Thala to 20.3°C in Djerba and were above the reference rates and the differences ranged from (+0.3°C) in Tabarka to (+1.9°C) in Medenine, with the exception of Enfidha and Matmata, where the rates were slightly lower than the reference rates and the difference, respectively (-0.1°C) in Enfidha and (-0.2°C) in Matmata. The absolute minimum temperature reached 1.5°C degrees in Thala on November 30, 2021. The general average of the minimum temperature has reached 17°C and it was above the reference average (15.9 °C) with a difference of (+1.1°C)



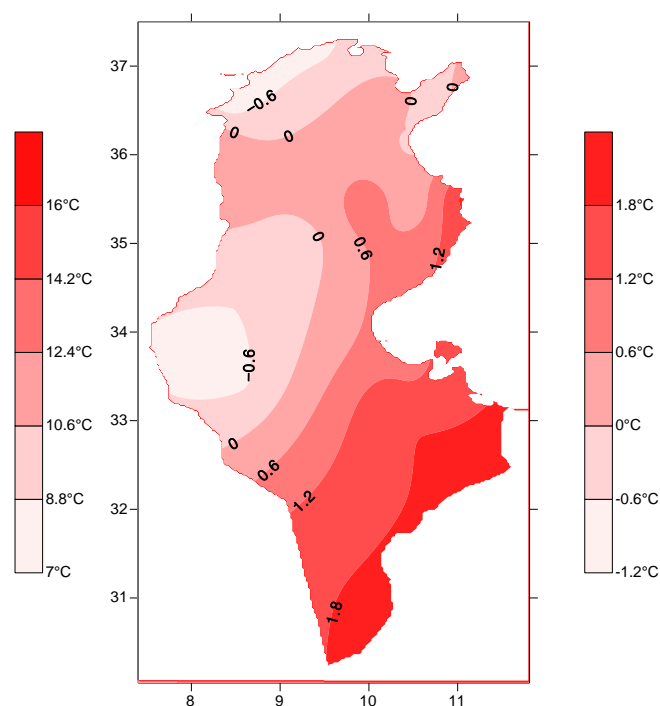
Comparison of minimum temperatures (Autumn 2021) to normals of Autumn (1981-2010)



**Deviation from normal (1981-2010) of minimum temperatures of the Autumn
for the years (1950 to 2021)**



Minimum Temperature (° C)

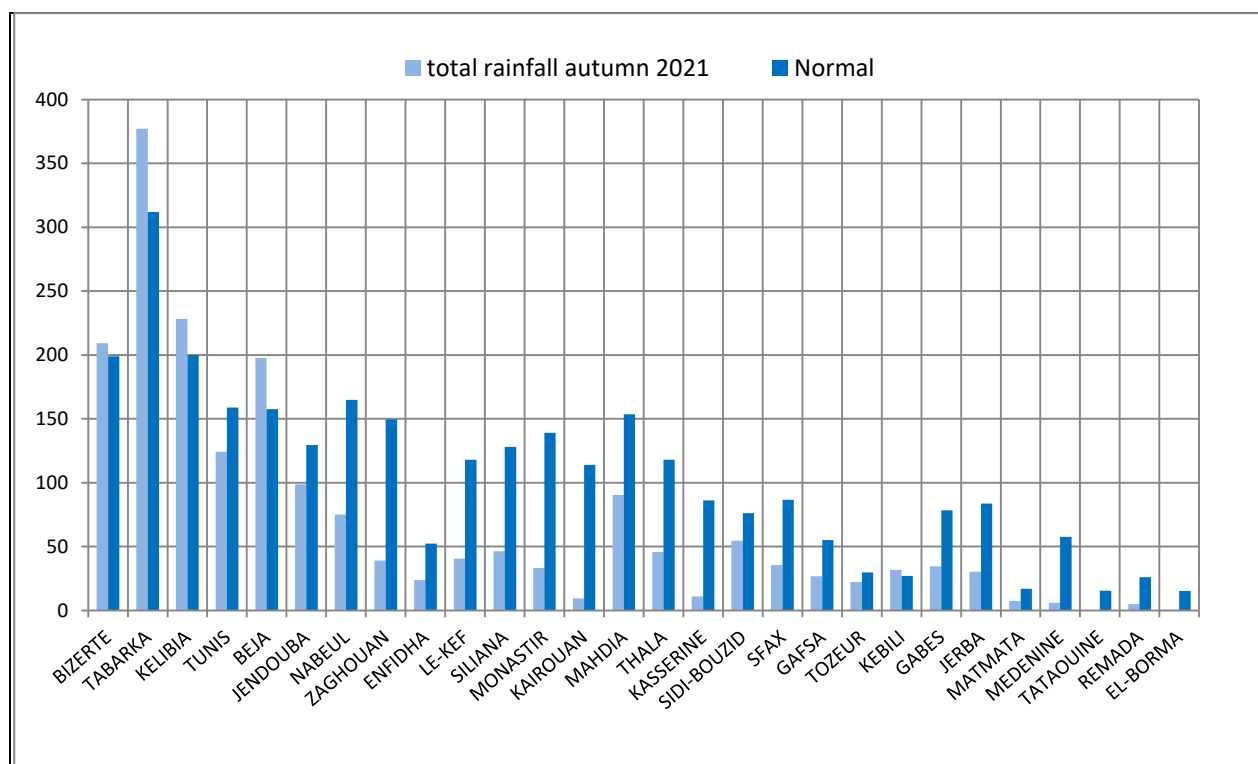


Deviation from normal of Tmin in (° C)

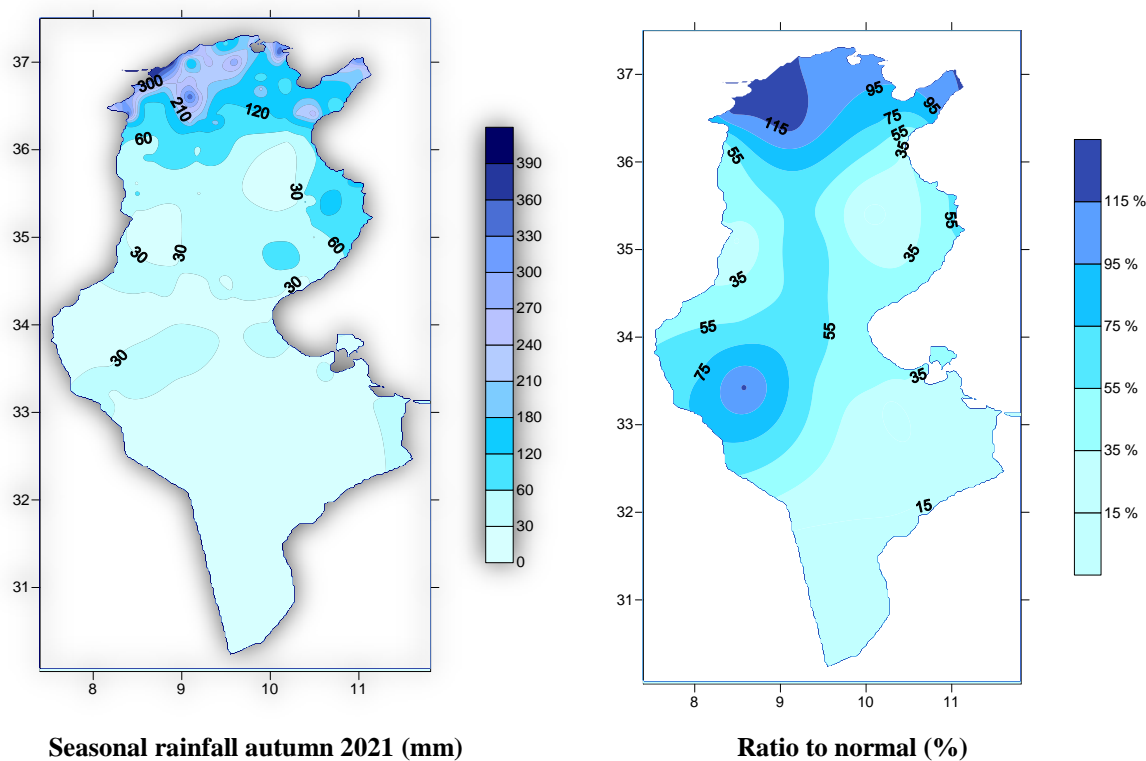
- Rainfall :

During the Autumn of 2021, the total seasonal rainfall of the main stations reached 1904.5 mm and was lower than the seasonal cumulative reference of the same stations (2949.2 mm).

The Autumn of 2021 saw a rainfall deficit of 36%. This deficit varied from one station to another, except the stations of Bizerte, Tabarka, Beja, Kelibia and Kebili where the total rainfall was higher than the seasonal total of reference and the excess was respectively 5% in Bizerte, 20.9% in Tabarka, 25.4% in Beja, 14% in Kelibia and 17.8% in Kebili.



**Comparison of seasonal Rainfall totals (autumn 2021) with the reference averages
of the accumulations**



- The winds :

As for the winds, they were generally weak to moderate and their speeds increased during certain days of the Autumn season of this year 2021, when the maximum speed was between 60 and 97 km / h and sometimes intensified while exceeding 100 km / h.

The wind speed during this Autumn exceeded the 100 km / h mark five times:

- During the month of September 2021, the maximum wind speed reached 108 km / h at Kasserine on 01 September and 122 km / h at Thala on 03 September 2021.
- On October 2021, its top speed was 101 km / h at Kasserine on October 25, 2021.
- On November 2021, the maximum wind speed increased on November 29, 2021, reaching 101 km / h in Tabarka (Jendouba) and 104 km / h in Thala (Kasserine).

(Figures n°1 and n°2):

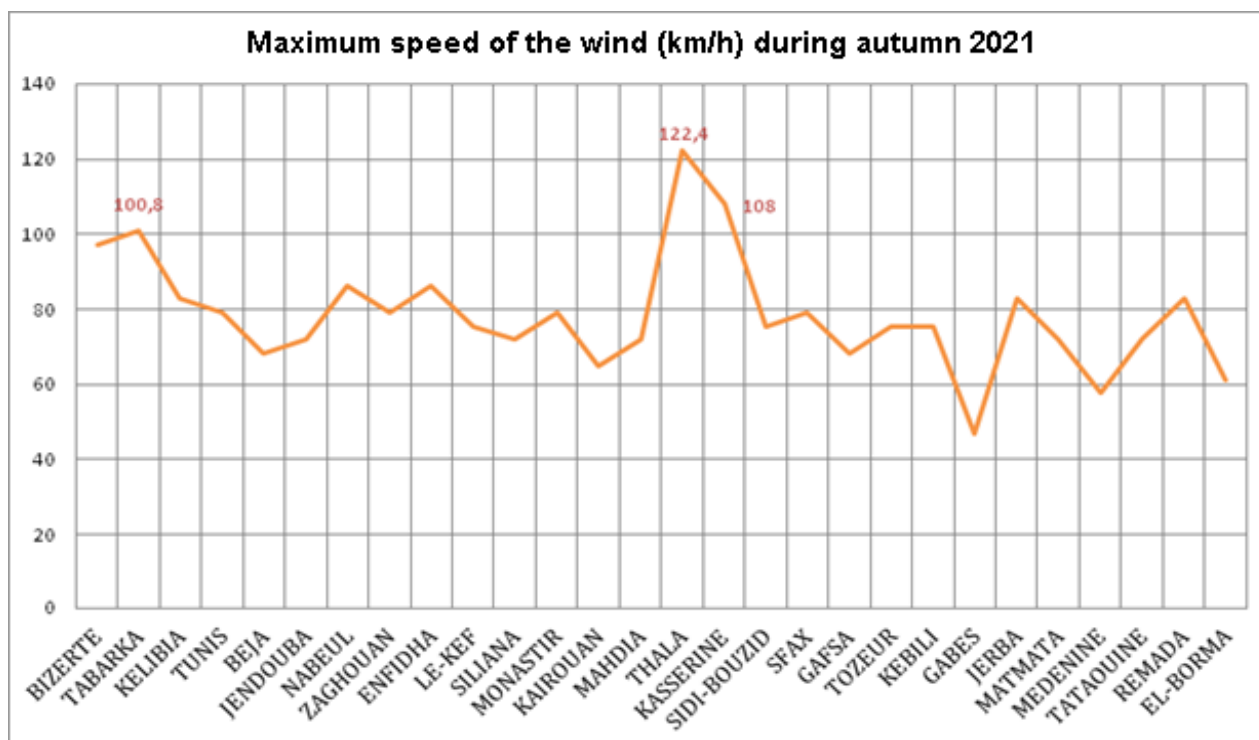


Fig. W°1

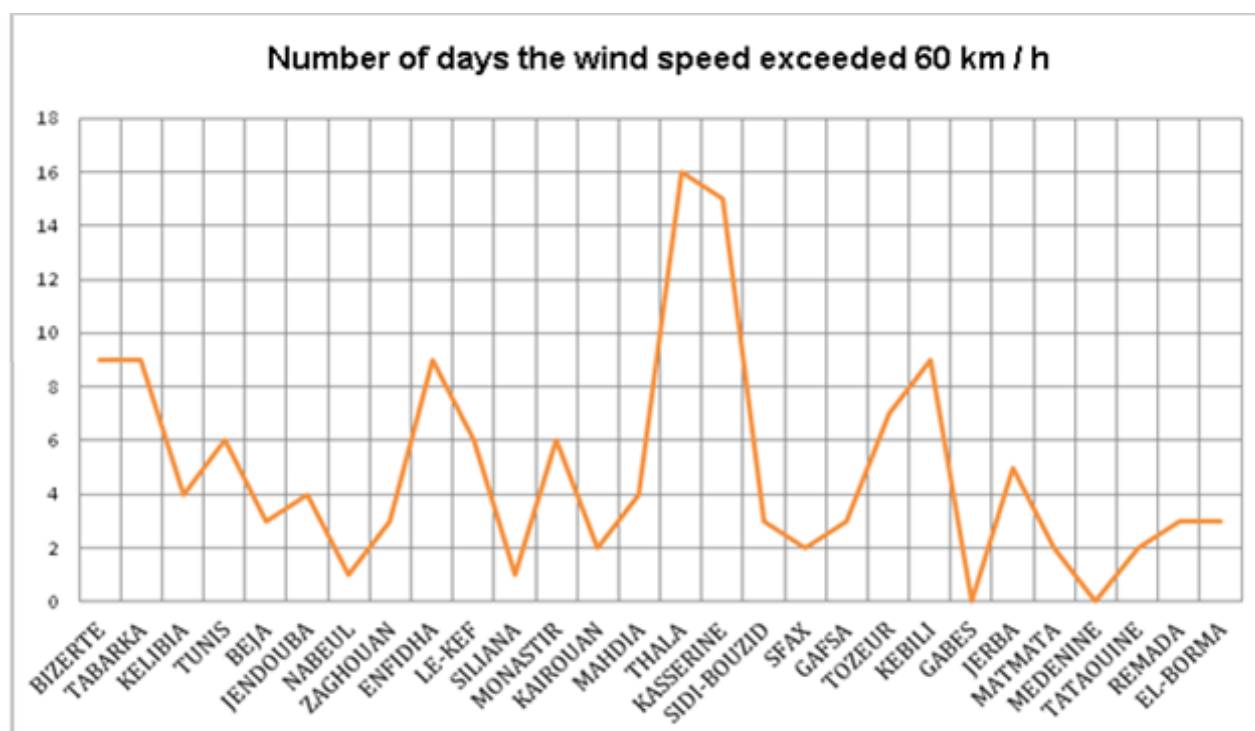


Fig. W°2