



REPUBLIC OF TÜRKİYE  
MINISTRY OF ENVIRONMENT, URBANIZATION AND CLIMATE CHANGE  
Turkish State Meteorological Service



# State of the Climate in March 2023



Climate and Agricultural Meteorology Department  
Research Department

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**2023**

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## 1. Introduction

The mean temperature of Türkiye in March 2023 was 9.8°C. This value was 2.1°C above 1991-2020's normal (7.7°C). With this result, March 2023 became the 4th warmest March.

Mean temperatures in March 2023 are above seasonal normal in eastern and southern parts of Türkiye, Çorum and Sivas ; while it is was around normal in other parts of the country.

Regional temperatures were above the long-term mean (1991-2020) in all regions.

The lowest temperature was observed in Özalp, Van with -15.4°C and the highest temperature was observed in Kozan, Adana with 29.0°C. In March 2023, 1 new extreme (maximum) temperatures were occurred.

Türkiye's areal mean precipitation in March 2023 was 95.5 mm. This value is approximately 65 % above the 1991-2020's normal (61.2 mm).

Precipitation showed a slight decrease in Van, Bitlis, Siirt, Hakkari, Muğla and Edirne while it was above normal in most of the country (Fig. 3.2).

In March, the highest precipitation was occurred in Adıyaman with 257.4 mm and lowest recorded with 36.8 mm precipitation in Iğdır.

Regional precipitation in March was above normal (1991-2020) in all regions

The average number of rainy days in March 2023 in Türkiye was 15.1, which is above the 1991-2020 normal (11.2 days). The number of rainy days was in the range of 15-25 days in the eastern part of the Marmara Region, the Black Sea Region, the northern parts of Eastern Anatolia and Central Anatolia, and around Osmaniye, Kahramanmaraş and Hakkari.

There are 94 extreme events have been reported in March 2023 in TSMS's Kardelen Database. Percentage of extreme events recorded in March 2023 were storm-tornado (50%), heavy rain-flood (23%), hail (11%), snow (7%), frost (3%), avalanche (2%) and lightning (1%).

## 2. Temperature

The mean temperature of Türkiye in March 2023 was 9.8°C. This value was 2.1°C above 1991-2020's normal (7.7°C), (Fig.2.1). With this result, March 2023 became the 4th warmest March.

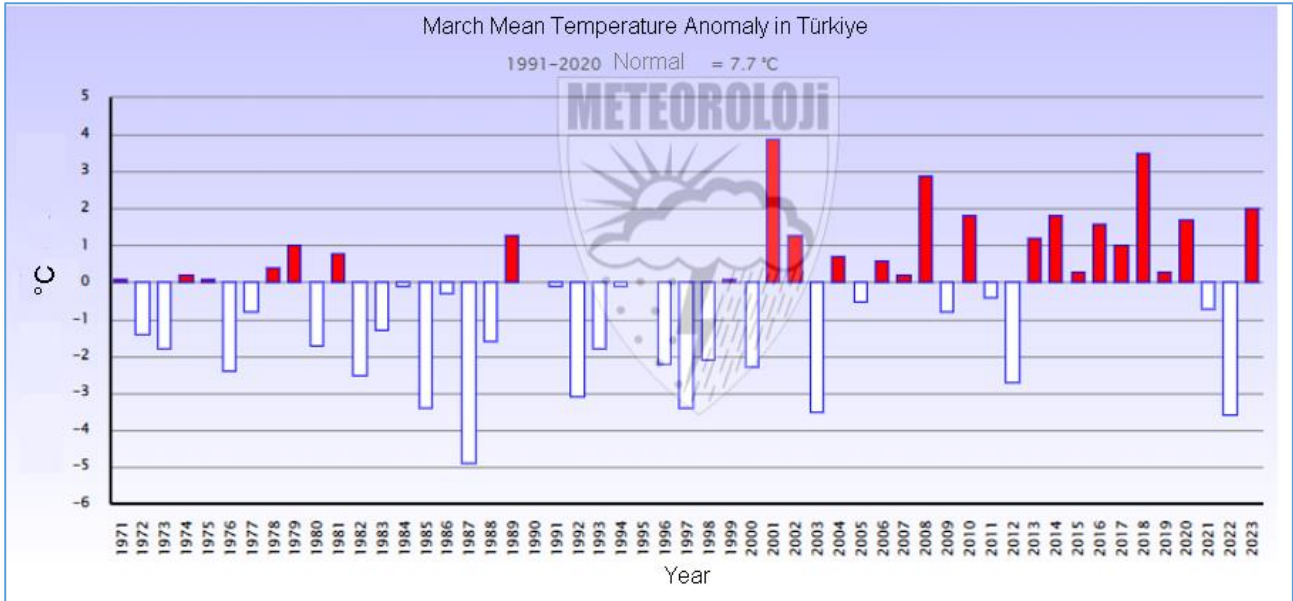


Figure 2.1 Monthly mean temperature anomalies in March

Mean temperatures in March 2023 are above seasonal normal in eastern and southern parts of Türkiye, Çorum and Sivas ; while it is was around normal in other parts of the country (Fig.2.2).

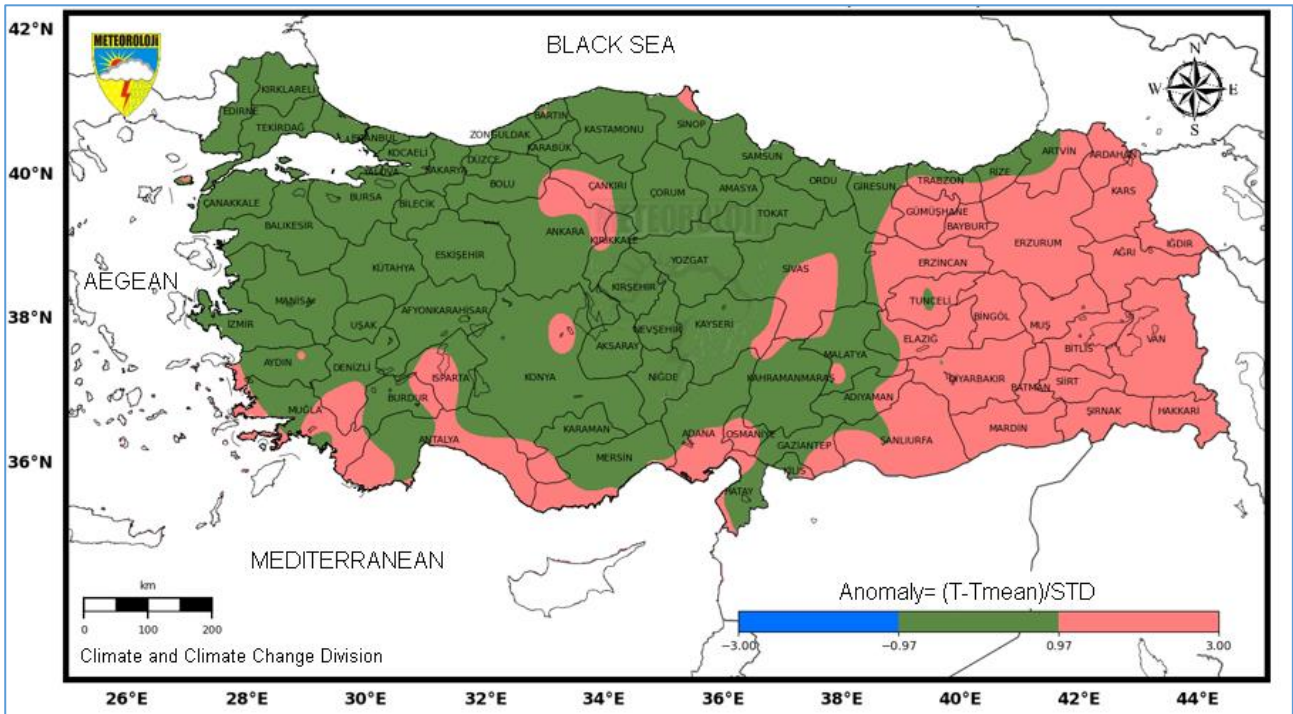
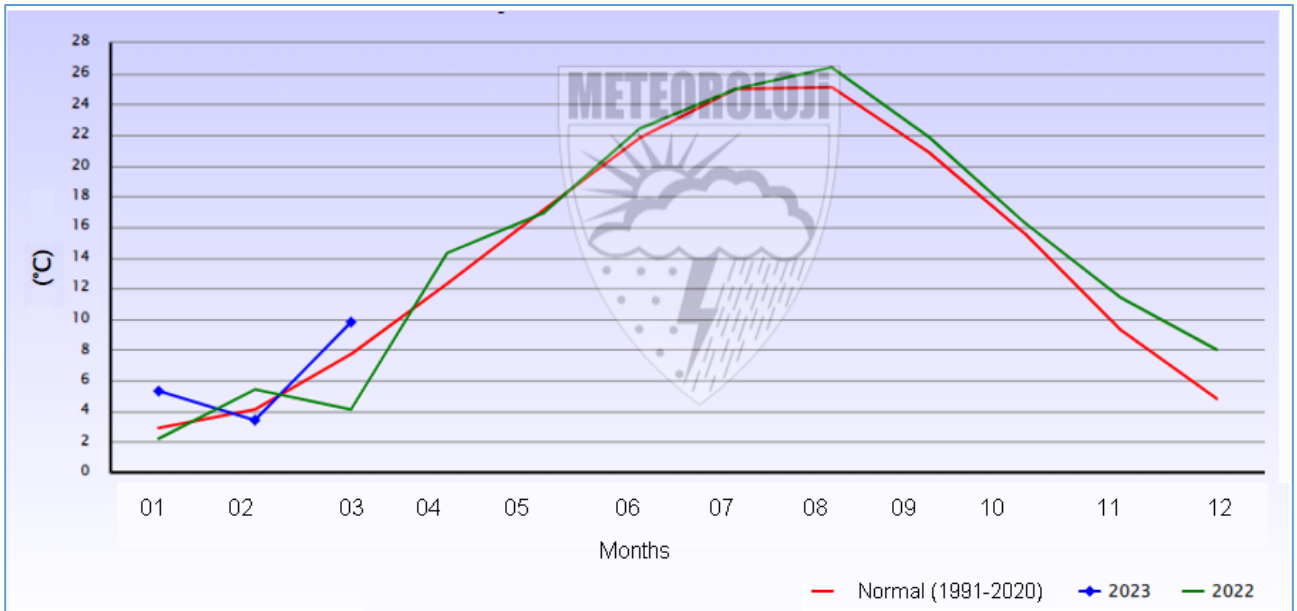


Figure 2.2. Spatial distribution of mean temperature anomaly in Türkiye in March 2023

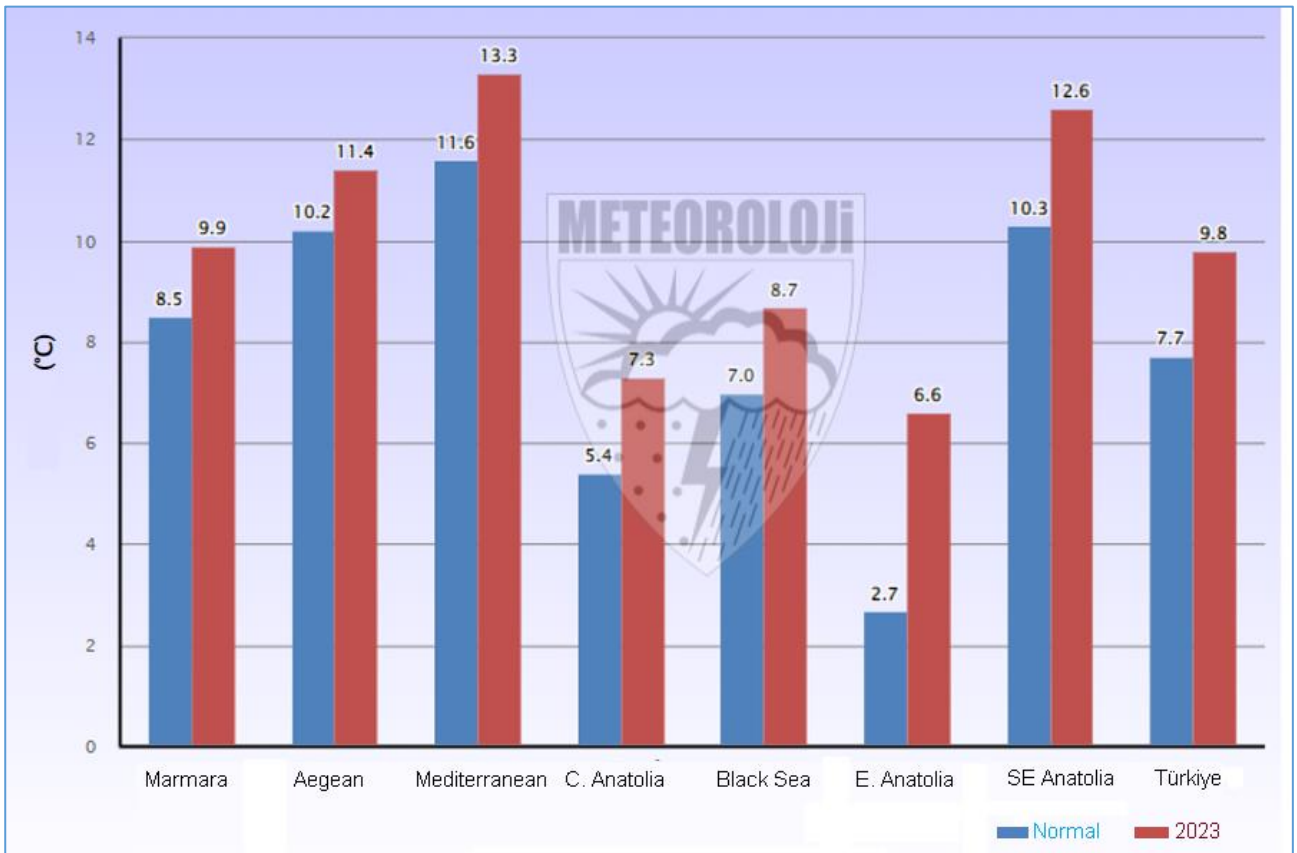


**Figure 2. 3** The difference of the monthly mean temperature in 2023 from normal (1991-2020) and last year's

The monthly mean temperatures of March was above the its normal and last year's

## 2.1. Regional Temperature

Regional temperatures were above the long-term mean (1991-2020) in all regions (Fig. 2.4).



**Figure 2. 4** Regional mean temperature differences in March 2023

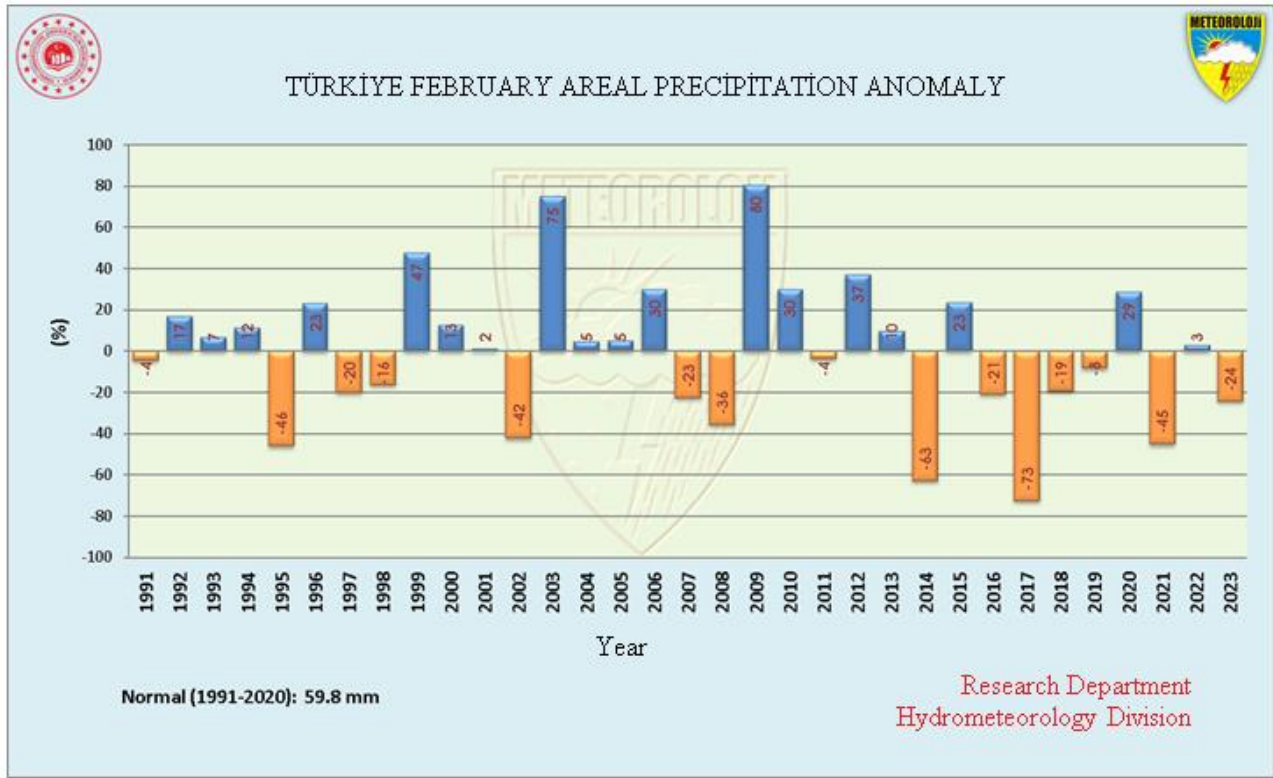
## 2.2. Extreme Temperature

The lowest temperature was observed in Özalp, Van with  $-15.4^{\circ}\text{C}$  and the highest temperature was observed in Kozan, Adana with  $29.0^{\circ}\text{C}$ . In March 2023, 1 new extreme (maximum) temperatures were occurred.

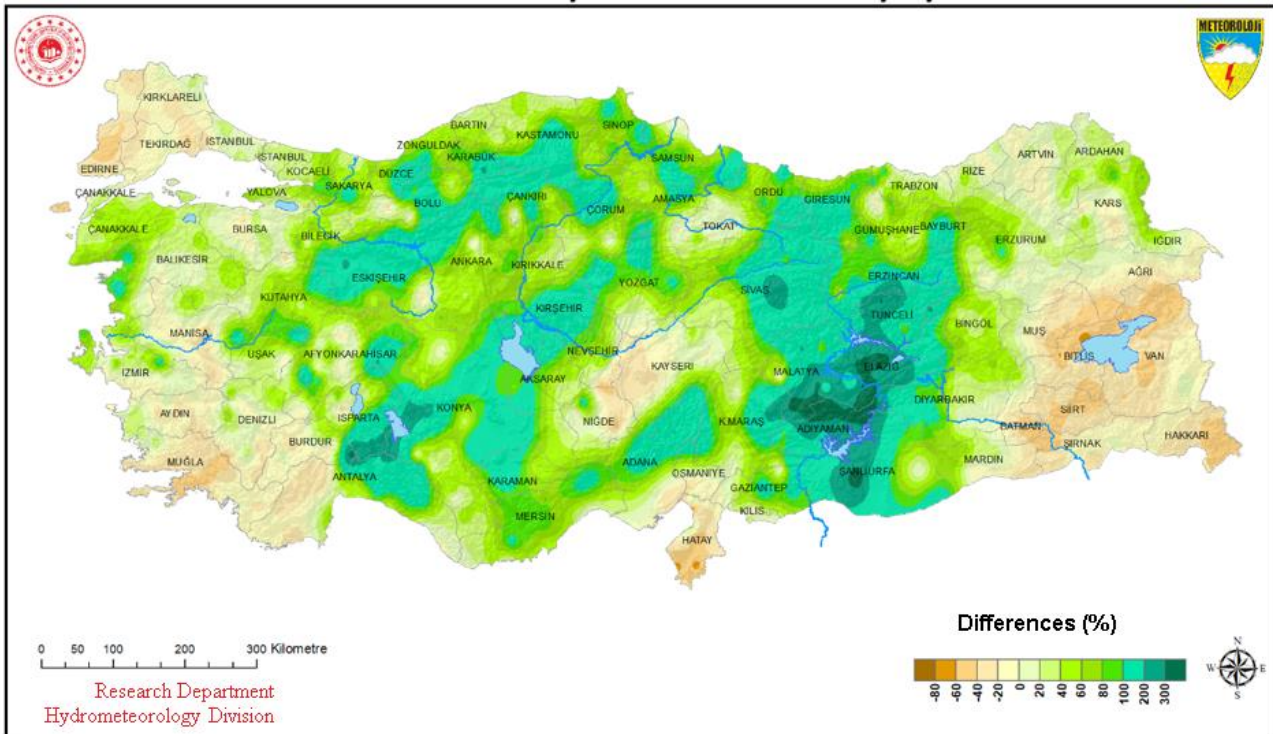


### 3. Precipitation

Türkiye's areal mean precipitation in March 2023 was 95.5 mm. This value is approximately 65 % above the 1991-2020's normal (61.2 mm) (Fig. 3.1).



**Figure 3. 1** Areal precipitation anomaly in March in Türkiye



**Figure 3. 2** Spatial distribution of mean precipitation anomalies in March 2023

Precipitation showed a slight decrease in Van, Bitlis, Siirt, Hakkari, Muğla and Edirne while it was above normal in most of the country (Fig. 3.2). In March, the highest precipitation was occurred in Adıyaman with 257.4 mm and lowest recorded with 36.8 mm precipitation in Iğdır.

### 3.1. Regional Precipitation

Regional precipitation in March was above normal (1991-2020) in all regions (Figure 3.3).

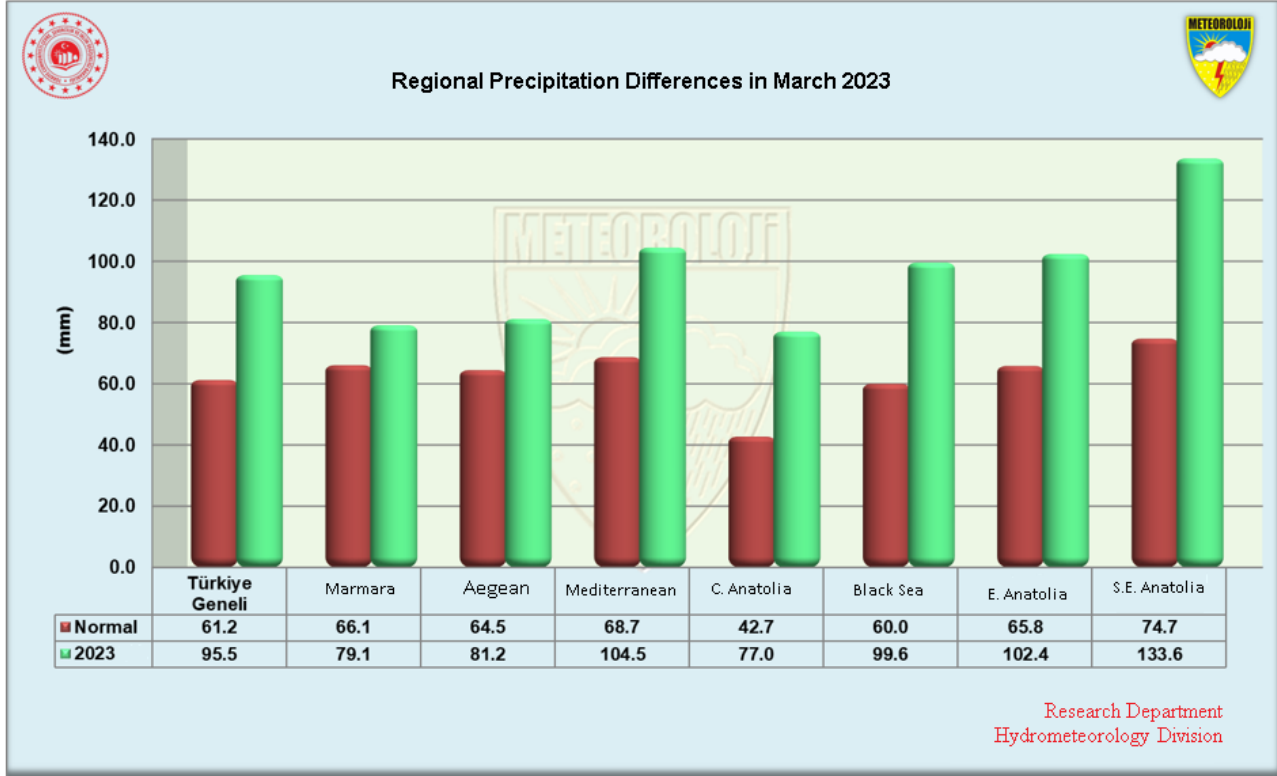


Figure 3. 3 Regional Precipitation Differences in March 2023

### 3.2. Rainy Days

The average number of rainy days in March 2023 in Türkiye was 15.1, which is above the 1991-2020 normal (11.2 days). The number of rainy days was in the range of 15-25 days in the eastern part of the Marmara Region, the Black Sea Region, the northern parts of Eastern Anatolia and Central Anatolia, and around Osmaniye, Kahramanmaraş and Hakkari. (Fig. 3.4).

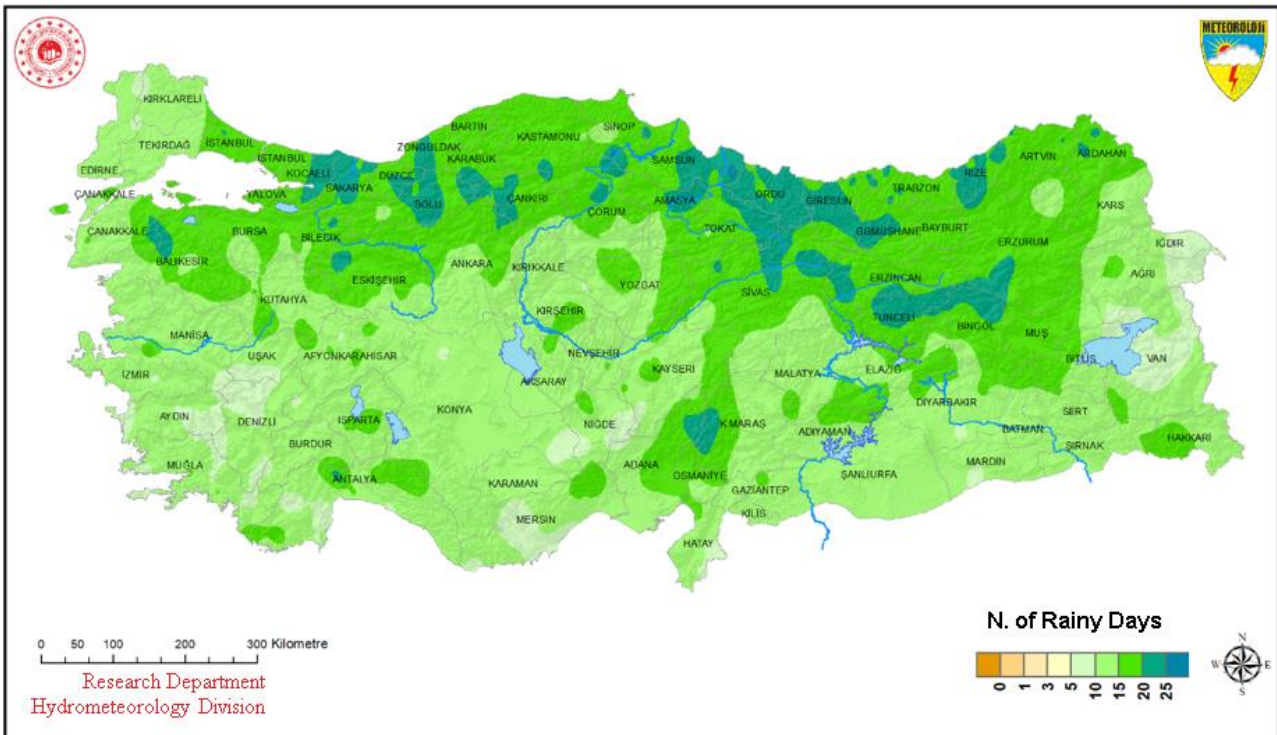
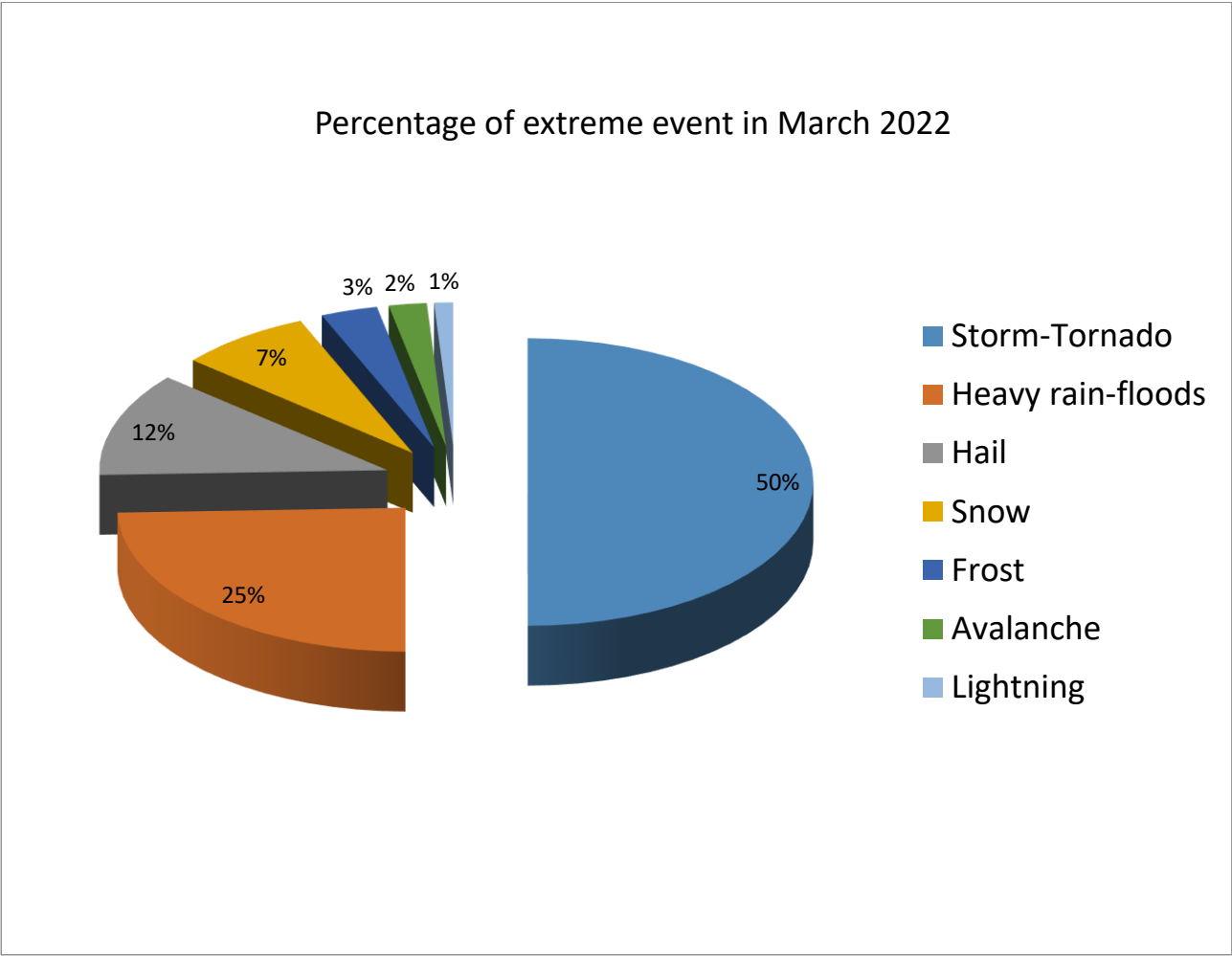


Figure 3. 4 Number of rainy days in March 2023



3. Extreme Meteorological Events



**Figure 4.1.** Percentage of extreme event in March 2023

There are 94 extreme events have been reported in March 2023 in TSMS’s Kardelen Database. Percentage of extreme events recorded in March 2023 were storm-tornado (50%), heavy rain-flood (23%), hail (11%), snow (7%), frost (3%), avalanche (2%) and lightning (1%) (Fig. 4.1).

## References

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