



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



# State of the Climate in August 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 August 2023 was 27.1°C. This value was 2°C above the 1991-2020's normal (25.1°C).

Mean temperatures in August 2023 were above normal in most of the places in Türkiye except Antalya and Muğla coasts.

Regional temperatures were above the long-term mean (1991-2020) in all 7 regions.

The lowest temperature was observed in Kangal and Ardahan with 4.9°C and the highest temperature was observed in Cizre with 48.6°C. There were 57 new extreme records in 57 stations.

Türkiye's areal mean precipitation in August 2023 was 6.4 mm. This value is approximately 57% below the 1991-2020's normal.

August precipitation decreased by 60-80% compared to normal, except for the north of Izmir, Aydın, Mersin, Niğde, Hatay, Kayseri, Kahramanmaraş, Sivas, Malatya, Tunceli, Elazığ, Adıyaman, Muş, Bitlis and Siirt. The highest precipitation was occurred in Rize with 106.5 mm and lowest recorded with 0.4 mm precipitation in Mardin.

In August, the highest precipitation was occurred in Rize with 106.5 mm and lowest recorded with 0.4 mm precipitation in Mardin

Regional precipitation in August were below normal (1991-2020) except South East Anatolia regions.

The average number of rainy days in August 2023 in Türkiye was 2.64, which is below the 1991-2020 normal (3 days). The number of rainy days was between 5 and 10 days in the Eastern Black Sea Region, Erzincan, Erzurum, Kars, Ardahan, Ağrı and Iğdır, and between 10 and 15 days in Trabzon and Rize.

There are 29 extreme events have been reported in August 2023 in TSMS's Kardelen Database. Percentage of extreme events recorded in August 2023 were heavy rain-flood (48%), hail (17%), storm-tornado (17%), lightning (7%), landslide (%4), heat wave (4%) and wildfire (3%).

## 2. Temperature

The mean temperature of Türkiye in August 2023 was 27.1°C. This value was 2°C above the 1991-2020's normal (25.1°C) (Fig.2.1).

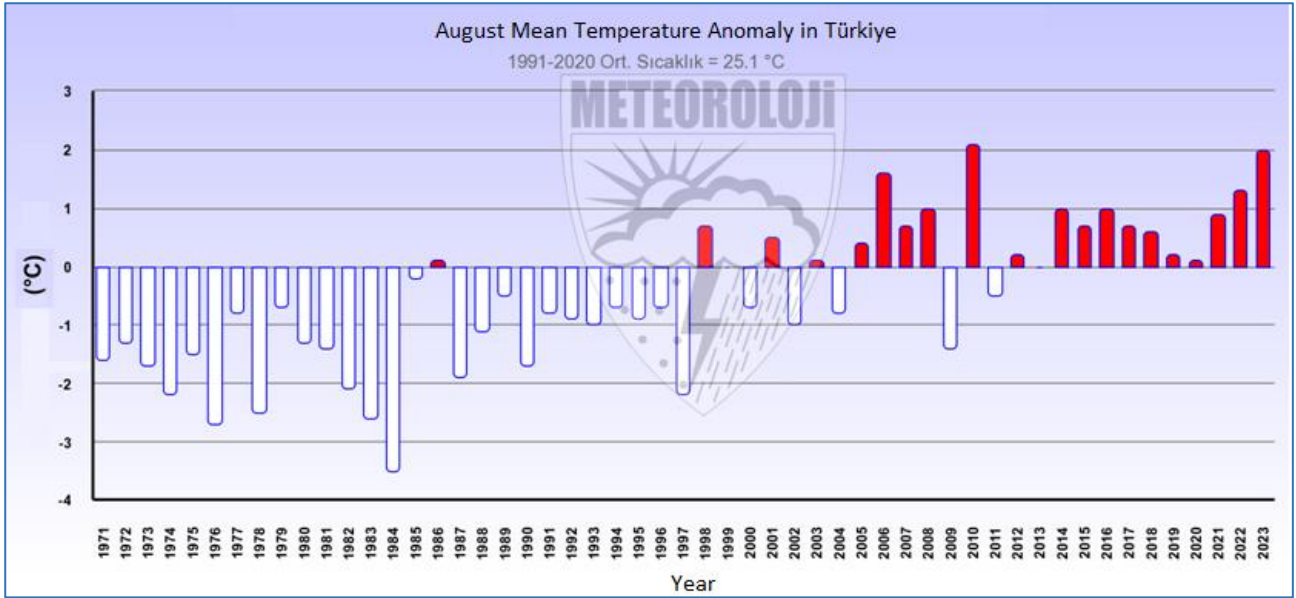


Figure 2.1 Monthly mean temperature anomalies in August (Url 1).

Mean temperatures in August 2023 were above normal in most of the places in Türkiye except Antalya and Muğla coasts (Fig.2.2).

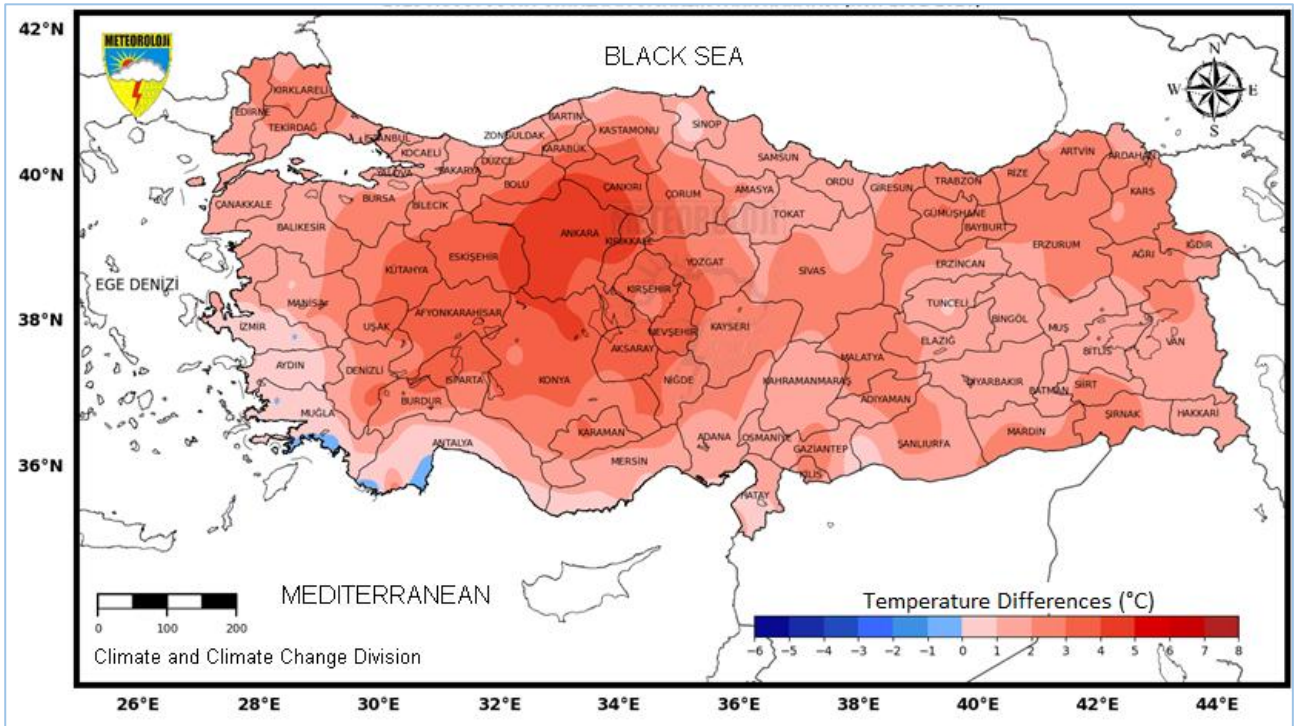
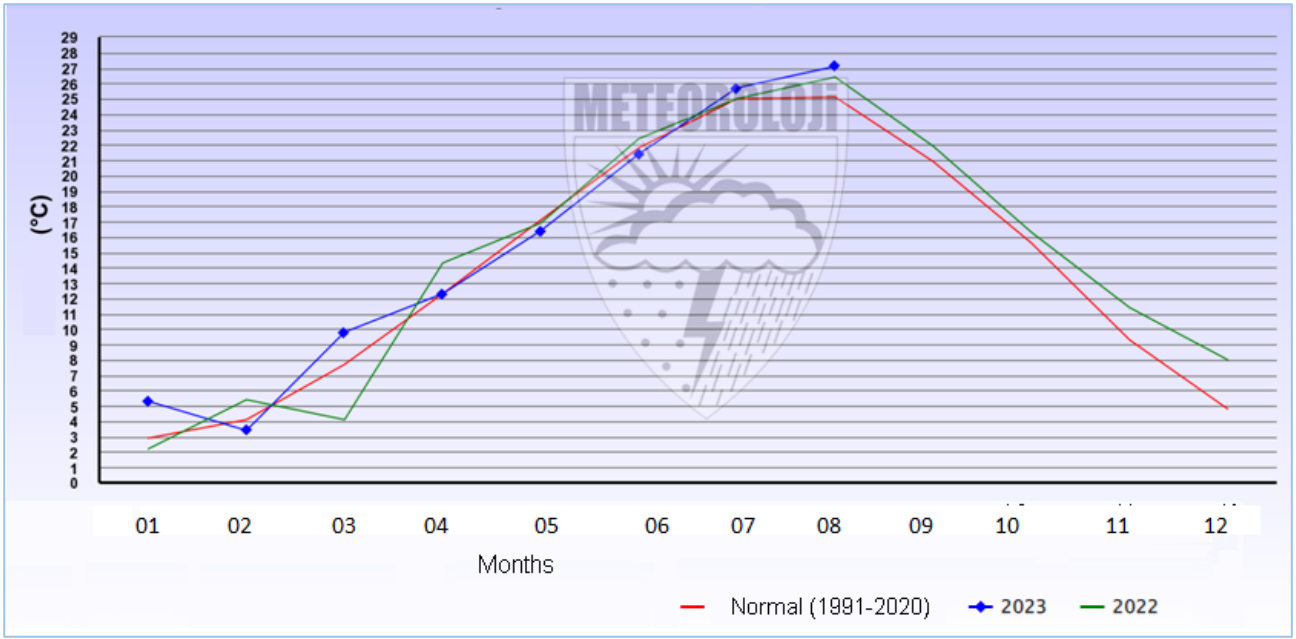


Figure 2.2. Spatial distribution of mean temperature anomaly in Türkiye in August 2023 (Url 1).

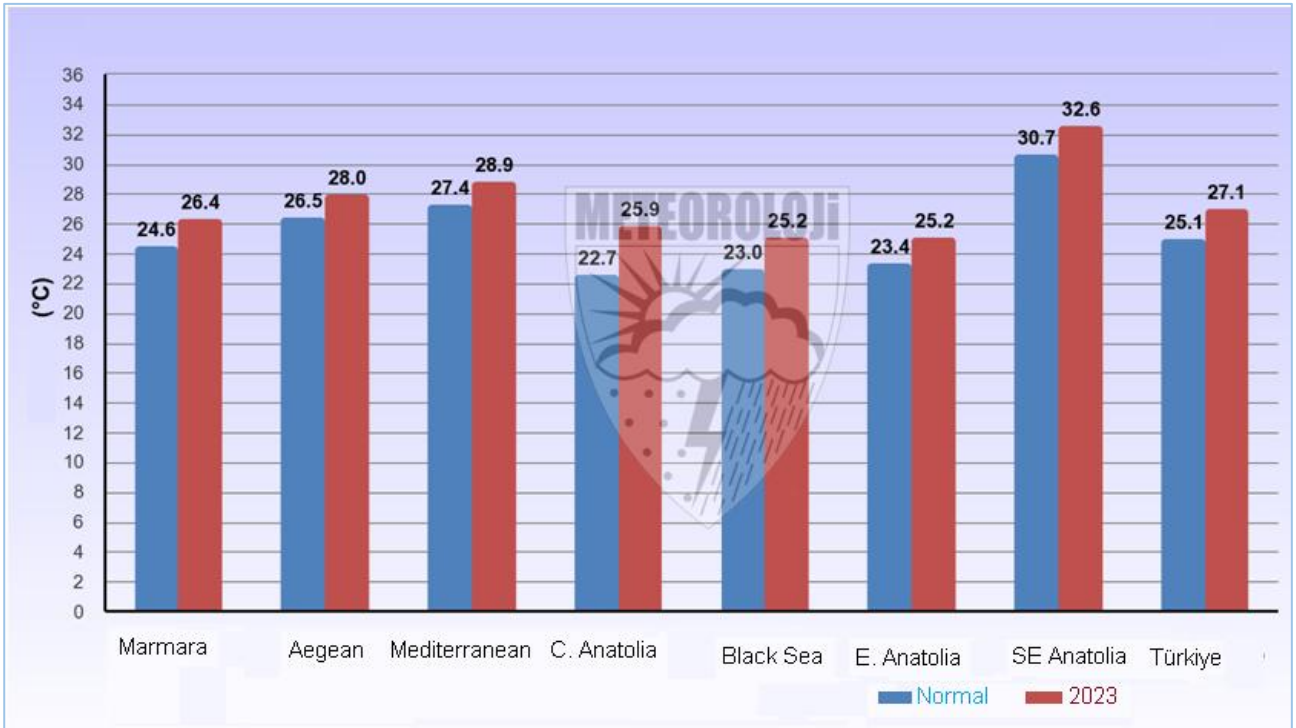


**Figure 2. 3** The difference of the monthly mean temperature in 2023 from normal (1991-2020) (Url 1).

The monthly mean temperatures of August was above normal.

### 2.1. Regional Temperature

Regional temperatures were above the long-term mean (1991-2020) in all 7 regions (Fig. 2.4).



**Figure 2. 4** Regional mean temperature differences in August 2023 (Url 1).

### 2.2. Extreme Temperature

The lowest temperature was observed in Kangal and Ardahan with 4.9°C and the highest temperature was observed in Cizre with 48.6°C. There were 57 new extreme records in 57 stations.

### 3. Precipitation

Türkiye's areal mean precipitation in August 2023 was 6.4 mm. This value is approximately 57% below the 1991-2020's normal (14.8 mm) (Fig. 3.1)

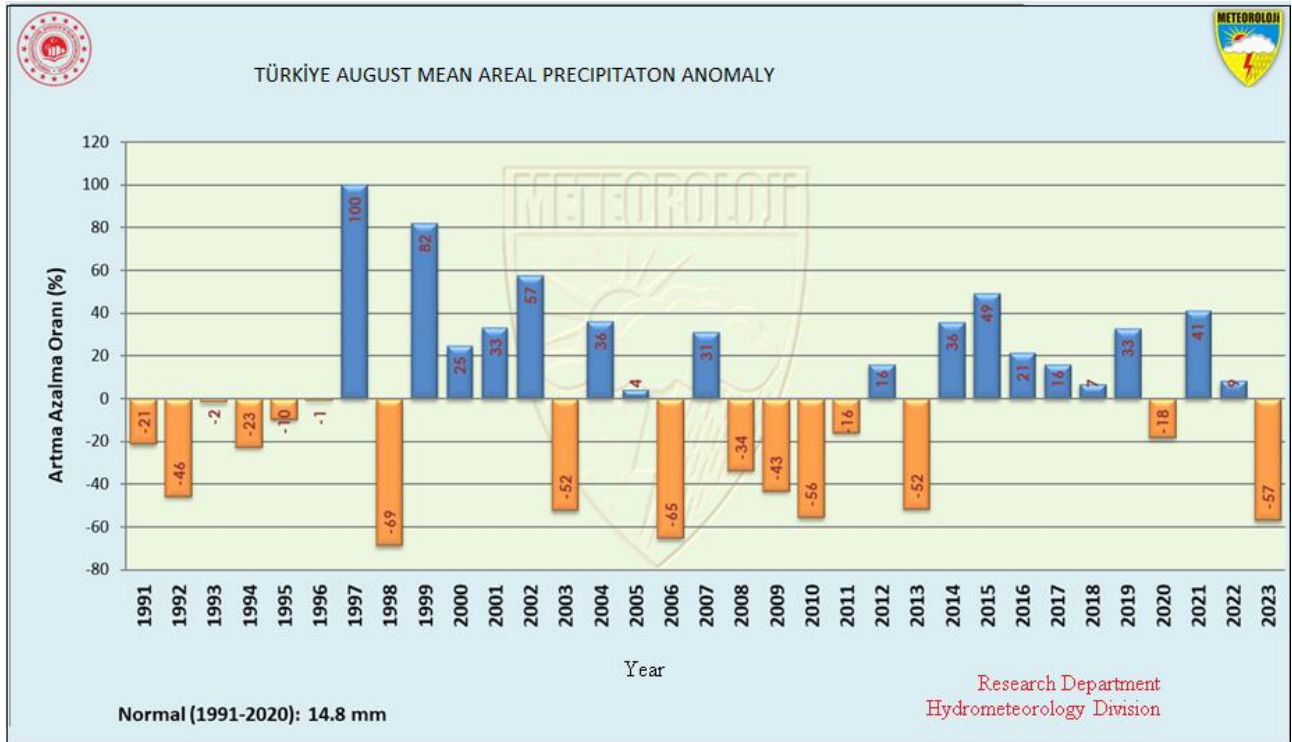


Figure 3. 1 Areal precipitation anomaly in August in Türkiye (Url 2).

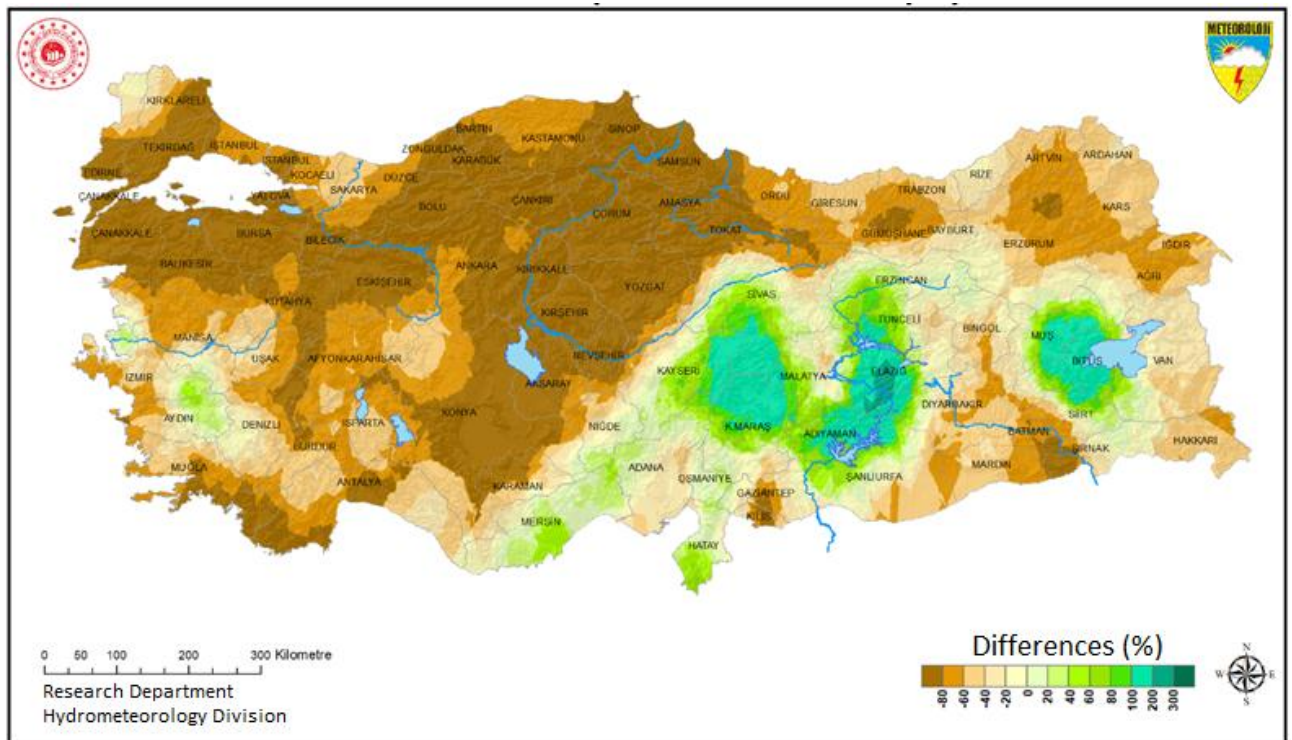


Figure 3. 2 Spatial distribution of mean precipitation anomalies in August 2023 (Url 2).

August precipitation decreased by 60-80% compared to normal, except for the north of Izmir, Aydın, Mersin, Niğde, Hatay, Kayseri, Kahramanmaraş, Sivas, Malatya, Tunceli, Elazığ, Adıyaman, Muş, Bitlis and Siirt. The highest precipitation was occurred in Rize with 106.5 mm and lowest recorded with 0.4 mm precipitation in Mardin (Fig. 3.2).

### 3.1. Regional Precipitation

Regional precipitation in August were below normal (1991-2020) except South East Anatolia regions (Figure 3.3).

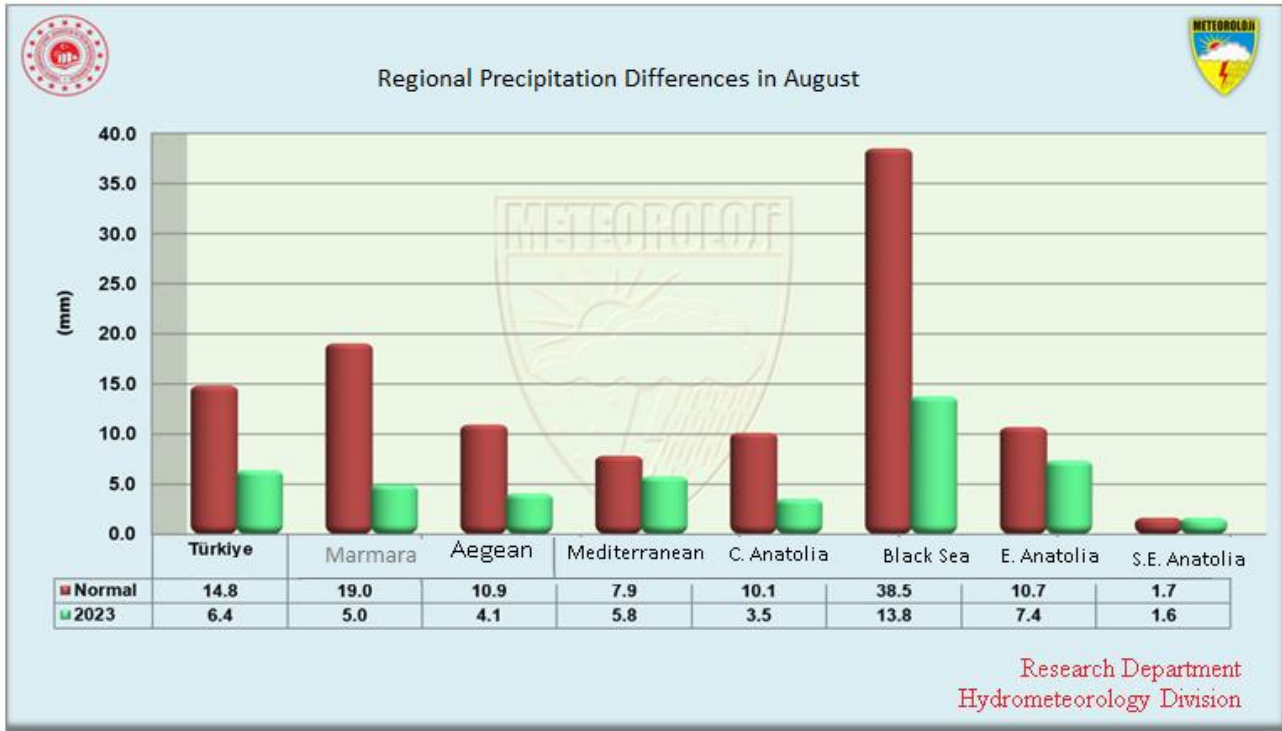


Figure 3. 3 Regional Precipitation Differences in August 2023 (Url 2).

### 3.2. Rainy Days

The average number of rainy days in August 2023 in Türkiye was 2.64, which is below the 1991-2020 normal (3 days). The number of rainy days was between 5 and 10 days in the Eastern Black Sea Region, Erzincan, Erzurum, Kars, Ardahan, Ağrı and Iğdır, and between 10 and 15 days in Trabzon and Rize (Fig. 3.4).

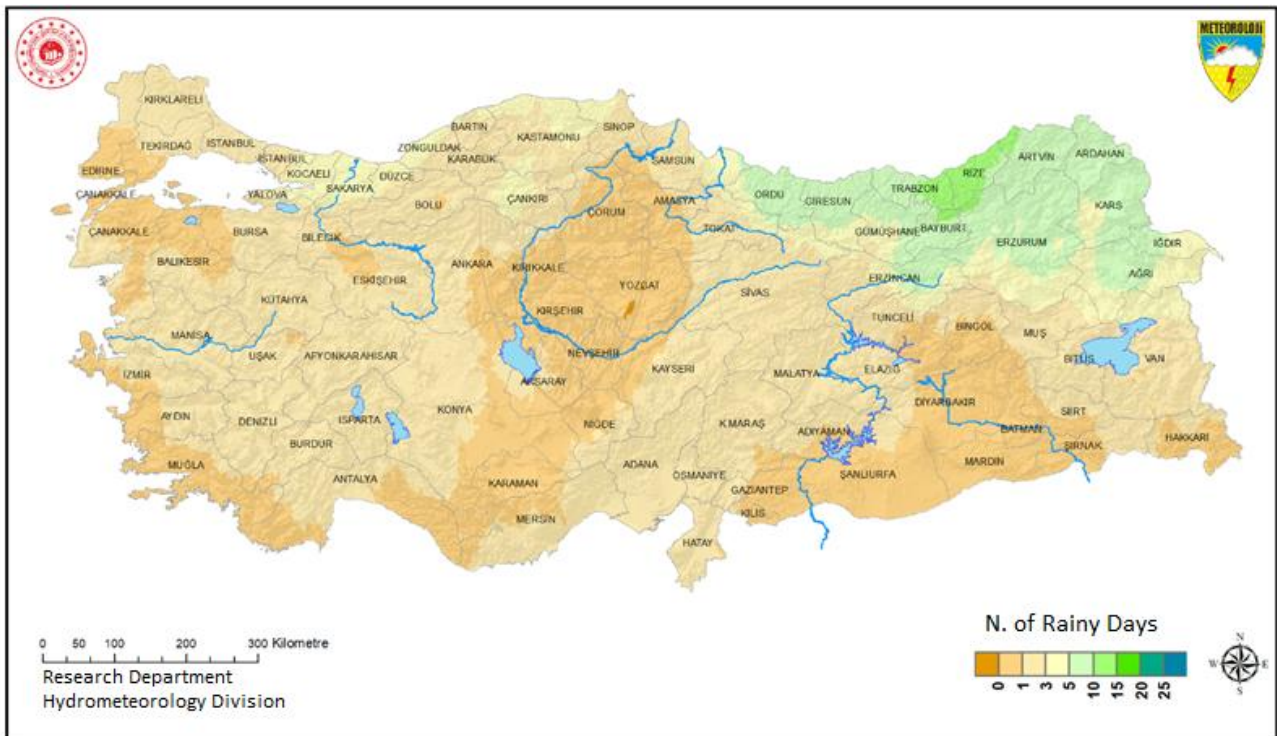
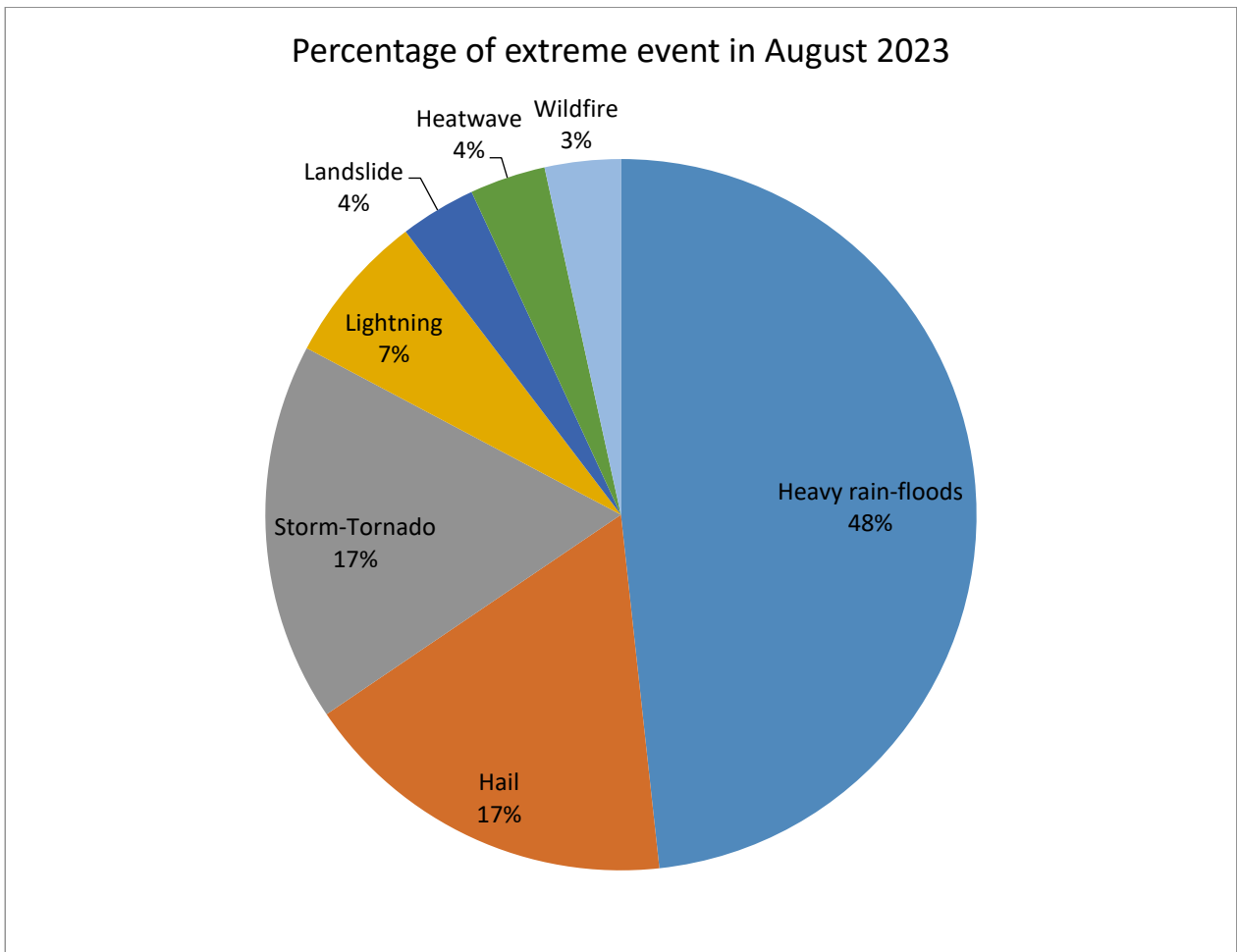


Figure 3. 4 Number of rainy days in August 2023 (Url 2).



### 3. Extreme Meteorological Events



**Figure 4.1.** Percentage of extreme event in August 2023 (Url 3).

There are 29 extreme events have been reported in August 2023 in TSMS's Kardelen Database. Percentage of extreme events recorded in August 2023 were heavy rain-flood (48%), hail (17%), storm-tornado (17%), lightning (7%), landslide (4%), heat wave (4%) and wildfire (3%) (Fig. 4.1).

## References

1. URL 1, Turkish State Meteorological Service, temperature analysis  
<http://www.mgm.gov.tr/veridegerlendirme/sicaklik-analizi.aspx>
2. URL 2, Turkish State Meteorological Service, precipitation analysis  
<http://www.mgm.gov.tr/veridegerlendirme/yagis-raporu.aspx>
3. URL 3, Turkish State Meteorological Service, Kardelen, meteorological extreme event database  
<http://kardelen.mgm.gov.tr/BultenGenel/Klima/fevkGlnYeni.aspx>



**Turkish State Meteorological Service**  
**Kütükçü Alibey Cad. No:4 06120 Kalaba/ANKARA**  
**Tel : (+90 312) 359 75 45**  
**Faks : (+90 312) 360 25 51**  
**<https://mgm.gov.tr>**

