



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



# State of the Climate in November 2023



Climate and Agricultural Meteorology Department  
Research Department

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

# **State of the Climate in November 2023**

**Climate and Agricultural Meteorology  
Department**

**Research Department**

**2023**

## CONTENT

1. Introduction.....	1
2. Temperature .....	2
3. Precipitation .....	4
4. Extreme Meteorological Events.....	6
References .....	7

## 1. Introduction

The mean temperature of Türkiye in November 2023 was 12.5°C. This value was 3.2°C above the 1991-2020's normal (9.3°C).

Mean temperatures in November 2023 were above normal in whole Türkiye. This made it 1<sup>st</sup> warmest November since 1971.

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

The lowest temperature was observed in Erzurum with -15.3°C and the highest temperature was observed in Salihli with 32.9°C. There were 67 new extreme maximum temperature records.

Türkiye's areal mean precipitation in November 2023 was 109.3 mm. This value is approximately 88% above the 1991-2020's normal (58.3 mm).

During the November, rainfall were increased 300% in Kırklareli, İstanbul, Zonguldak, Sakarya, Kocaeli, Yalova, Bilecik, Bursa, Balıkesir, Çanakkale, Düzce, Bartın, Tunceli, Erzincan, Erzurum, Bingöl, Adıyaman, Diyarbakır and Şırnak. On the contrary an decreased of 40% compared to normal was recorded in western Antalya, Burdur, Niğde, Karaman, Ordu, Hatay and Iğdır.

In November, the highest precipitation was occurred in Zonguldak with 295.5 mm and lowest recorded with 25.7 mm precipitation in Iğdır.

Regional precipitation in November were above normal (1991-2020) in all regions.

The number of rainy days in November throughout Turkey was above normal with 12.7 days (1991-2020 normal is 8.4 days). The number of rainy days occurred in the range of 15-20 days in the Marmara, western Black Sea Region, coastal areas of Central and Eastern Black Sea Region, Central and north Aegean Region, Antalya and Kahramanmaraş; decreased to around 5 day in Adana and Mersin.

There are 225 extreme events have been reported in November 2023 in TSMS's Kardelen Database. Percentage of extreme events recorded in November 2023 were heavy rain-flood (31%), hail (4%), storm-tornado (59%), lightning (2%), snow (3%) and landslide (%1)

## 2. Temperature

The mean temperature of Türkiye in November 2023 was 12.5°C. This value was 3.2°C above the 1991-2020's normal (9.3°C) (Fig.2.1).

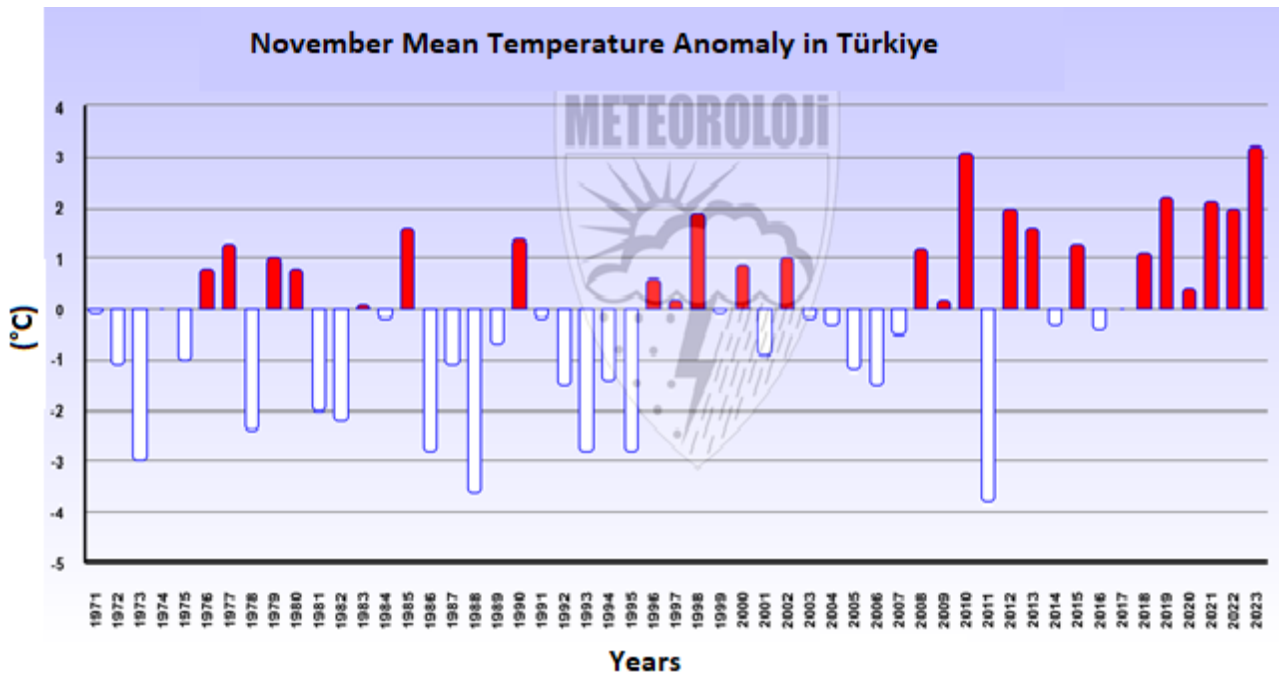


Figure 2.1 Monthly mean temperature anomalies in November (Url 1).

Mean temperatures in November 2023 were above normal in Türkiye. This made it 1<sup>st</sup> warmest November since 1971 (Fig.2.2).

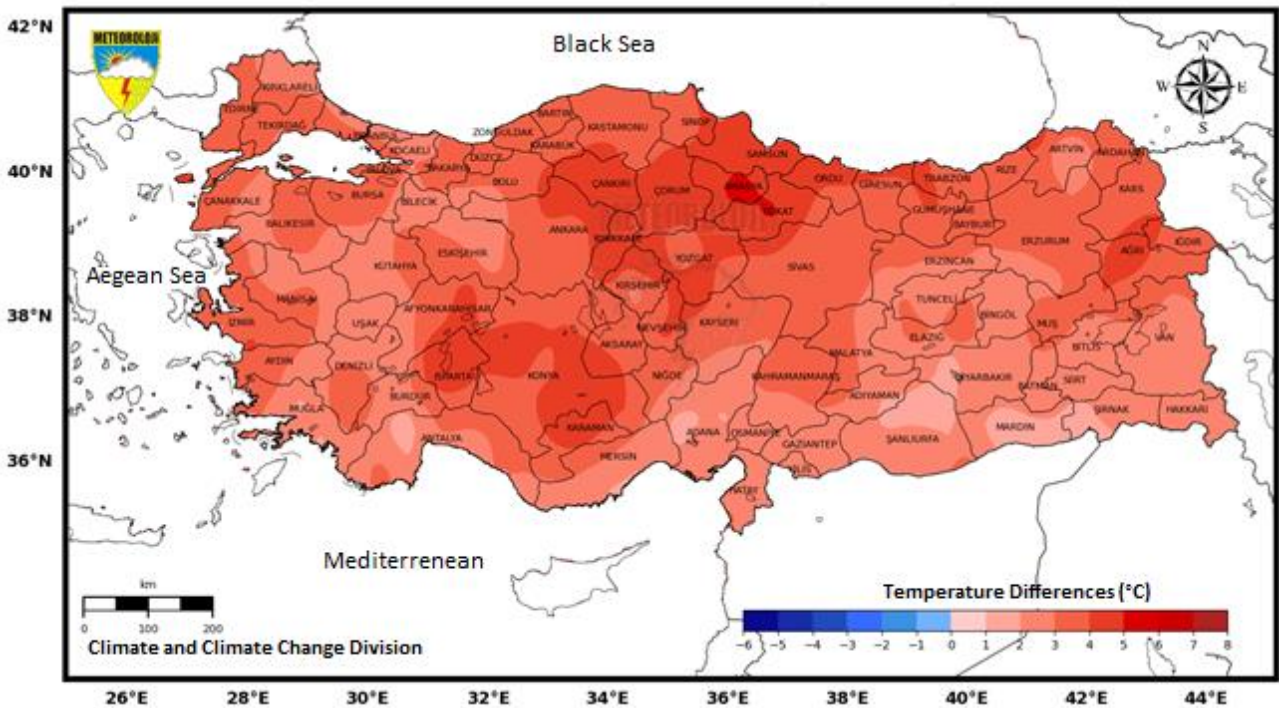


Figure 2.2. Spatial distribution of mean temperature anomaly in Türkiye in November 2023 (Url 1).

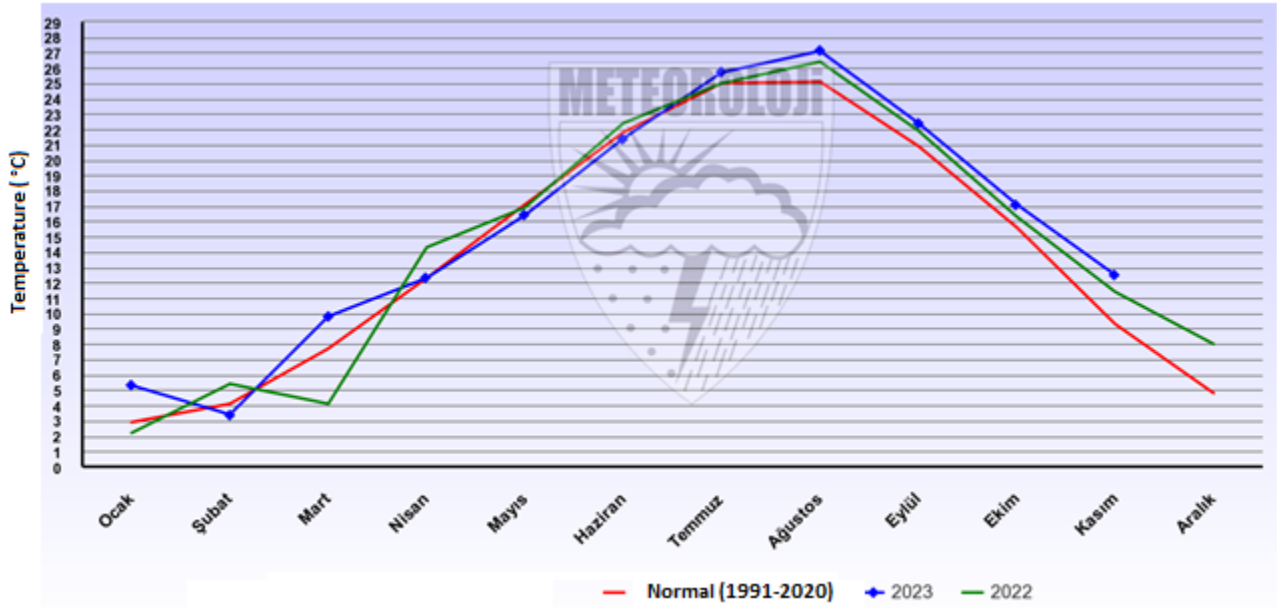


Figure 2. 3 The difference of the monthly mean temperature in 2023 from normal (1991-2020) (Url 1).

The monthly mean temperature of November was above its normal.

## 2.1. Regional Temperature

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

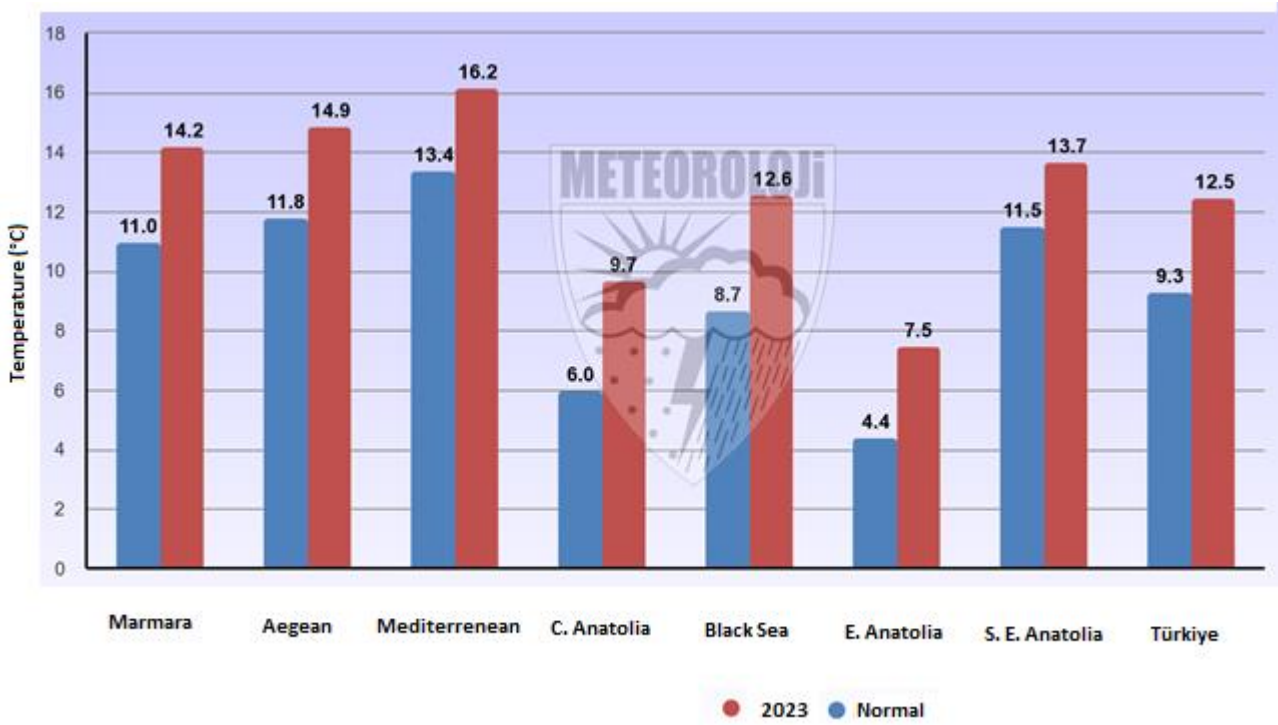


Figure 2. 4 Regional mean temperature differences in November 2023 (Url 1).

## 2.2. Extreme Temperature

The lowest temperature was observed in Erzurum with  $-15.3^{\circ}\text{C}$  and the highest temperature was observed in Salihli with  $32.9^{\circ}\text{C}$ .

## 3. Precipitation

Türkiye's areal mean precipitation in November 2023 was 109.3 mm. This value is approximately 88% above the 1991-2020's normal (58.3 mm) (Fig. 3.1)

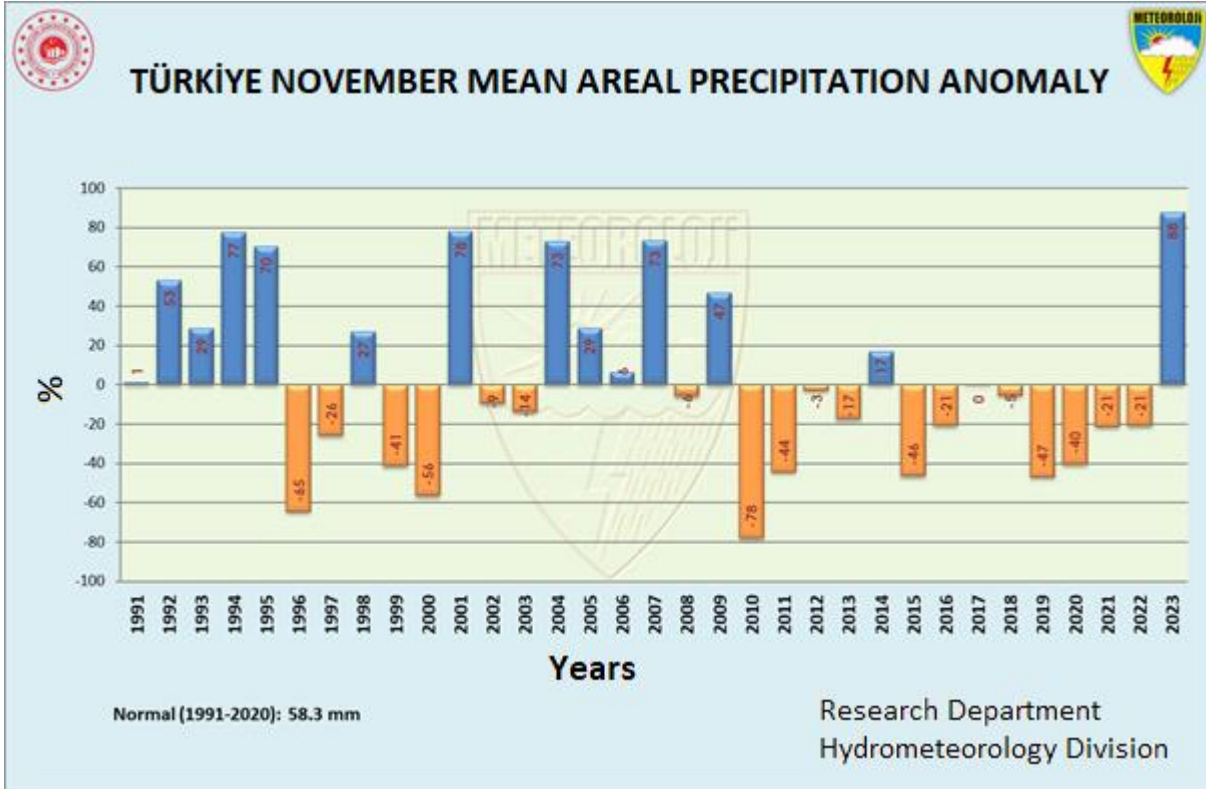


Figure 3. 1 Areal precipitation anomaly in November in Türkiye (Url 2).

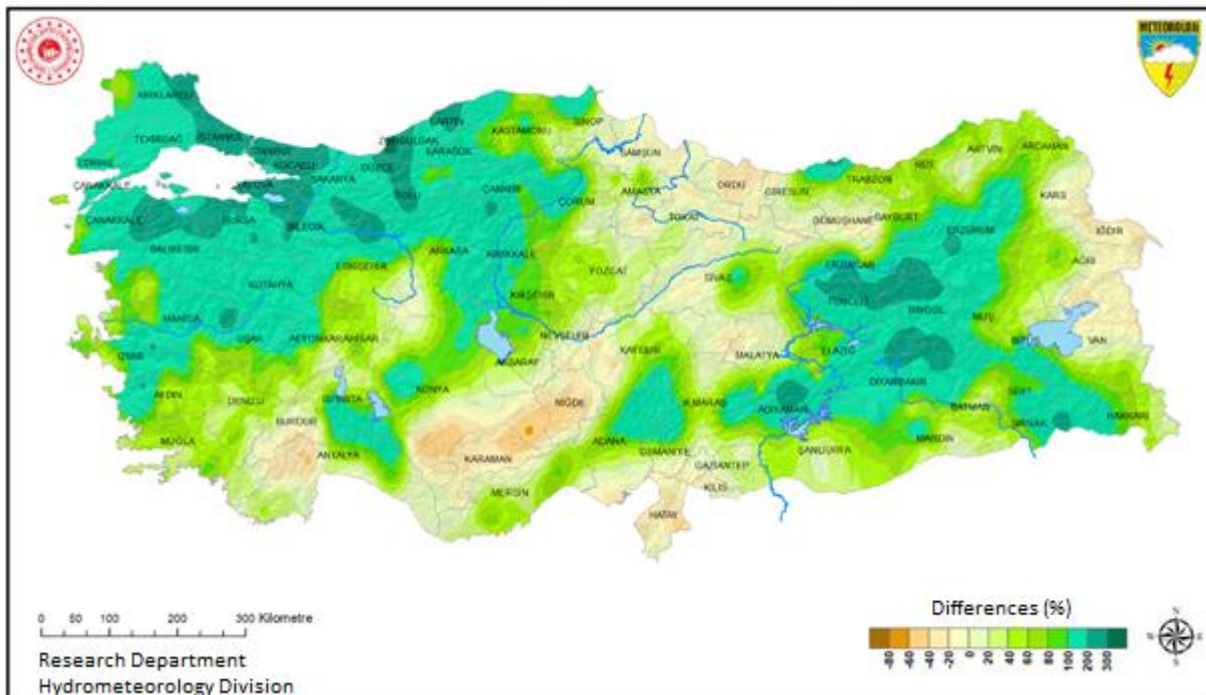


Figure 3. 2 Spatial distribution of mean precipitation anomalies in November 2023 (Url 2).

During the November, rainfall were increased 300% in Kırklareli, İstanbul, Zonguldak, Sakarya, Kocaeli, Yalova, Bilecik, Bursa, Balıkesir, Çanakkale, Düzce, Bartın, Tunceli, Erzincan, Erzurum, Bingöl, Adıyaman, Diyarbakır and Şırnak. On the contrary an decreased of 40% compared to normal was recorded in western Antalya, Burdur, Niğde, Karaman, Ordu, Hatay and Iğdır (Fig. 3.2).

### 3.1. Regional Precipitation

Regional precipitation in November were above normal (1991-2020) in all regions (Figure 3.3).

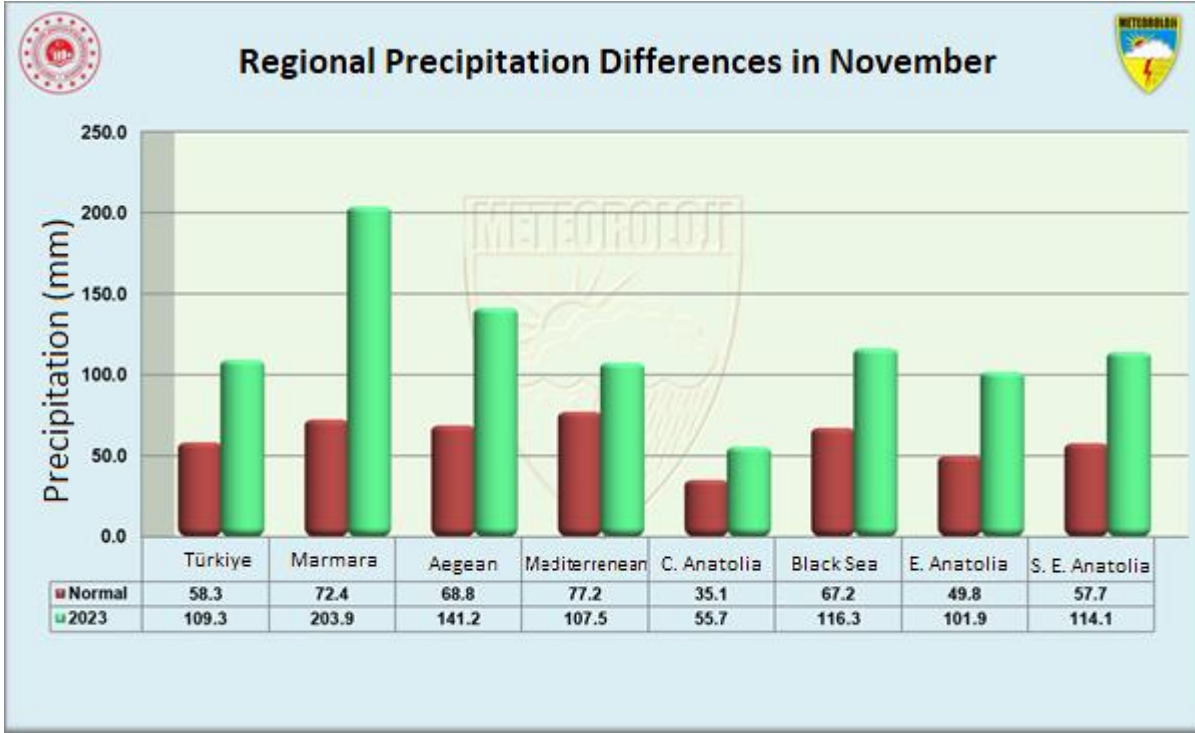


Figure 3. 3 Regional Precipitation Differences in November 2023 (Url 2).

### 3.2. Rainy Days

The number of rainy days in November throughout Turkey was above normal with 12.7 days (1991-2020 normal is 8.4 days). The number of rainy days occurred in the range of 15-20 days in the Marmara, western Black Sea Region, coastal areas of Central and Eastern Black Sea Region, Central and north Aegean Region, Antalya and Kahramanmaraş; decreased to around 5 day in Adana and Mersin (Fig. 3.4).



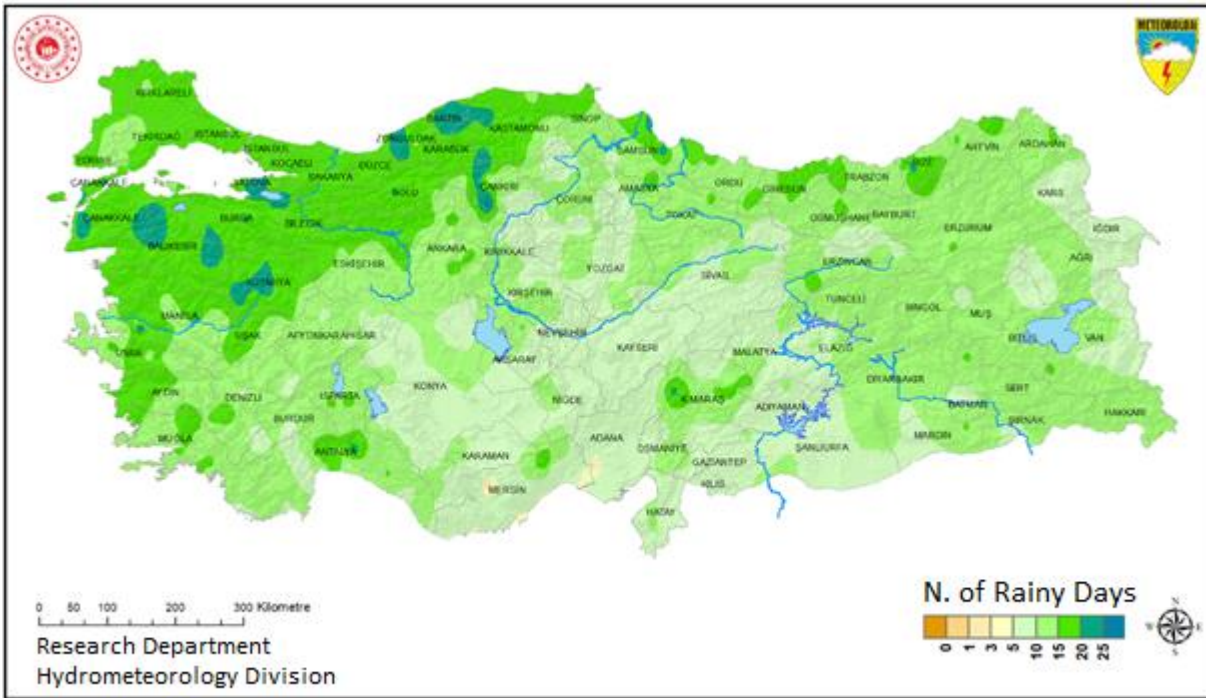


Figure 3. 4 Number of rainy days in November 2023 (Url 2).

### 3. Extreme Meteorological Events

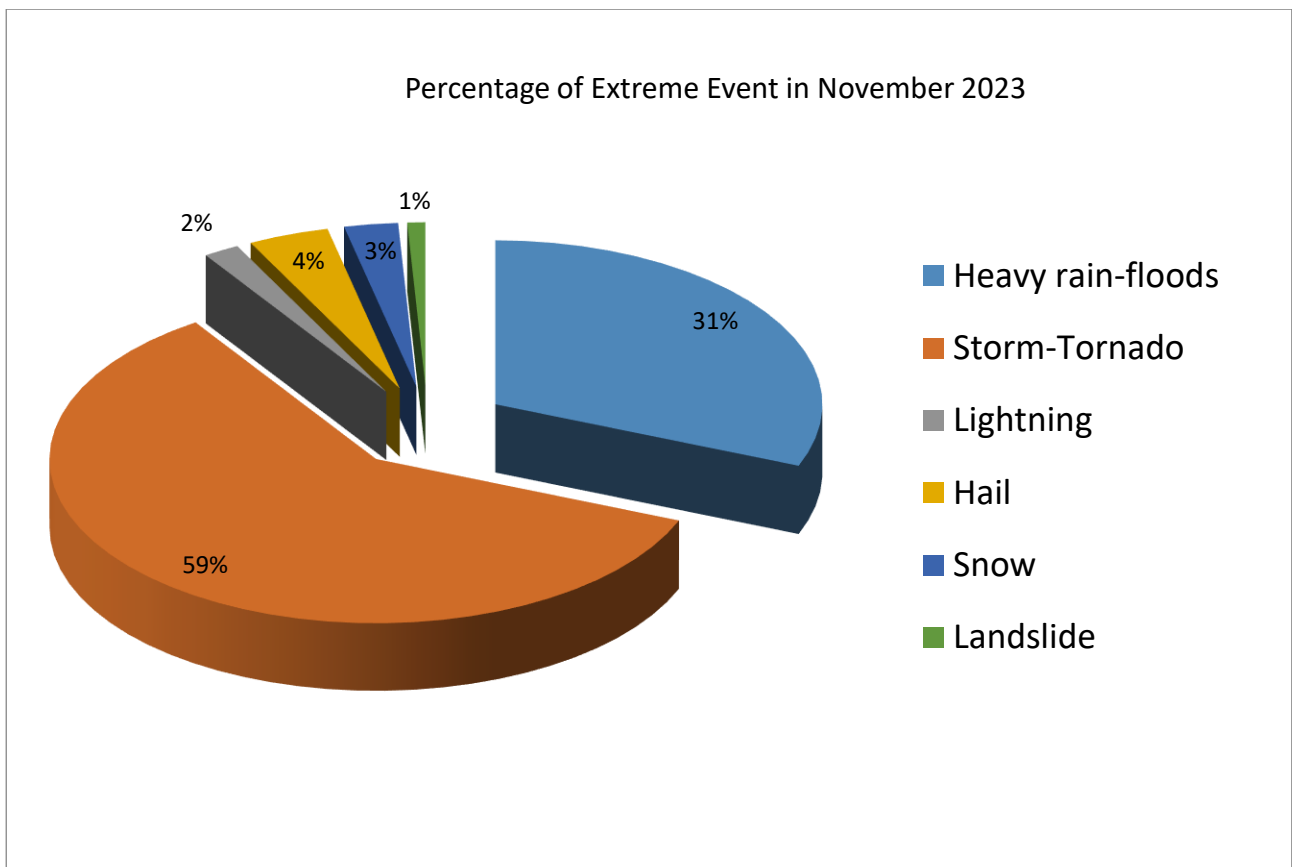


Figure 4.1. Percentage of extreme event in November 2023 (Url 3).

There are 225 extreme events have been reported in November 2023 in TSMS's Kardelen Database. Percentage of extreme events recorded in November 2023 were heavy rain-flood (31%), hail (4%), storm-tornado (59%), lightning (2%), snow (3%) and landslide (%1) (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>**

