



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



# State of the Climate in October 2024



Climate and Agricultural Meteorology Department  
Research Department

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**2024**

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## 1. Introduction

The mean temperature of Türkiye in October 2024 was 15.8°C. This value was 0.2°C above the 1991-2020's normal (20.9°C).

Mean temperatures In October 2024, average temperatures are below seasonal norms in the surroundings of Zara, Kızılcıhamam, İspir, Oltu, Ardahan, Kars, Tortum, Horasan, Tercan, Doğubeyazıt, Malazgirt, Birecik; Kadıköy, Gökçeada, İpsala, Edremit, Ayvalık, Burhaniye, Çeşme, Kuşadası, Aydın, Bodrum, Datça, Marmaris, Seferihisar, Nazilli, Isparta, Fethiye, Antalya, Alanya, Kaş, Senyent, Eğirdir, Köyceğiz, Elmalı, Manavgat, Kale( While it is above the seasonal norms around Demre); It was around seasonal normals in other parts of the region.

Regional temperatures remained around long-term (1991-2020) normal averages in all regions.

The lowest temperature was observed in Erzurum with -8.8 °C and the highest temperature was observed in Cizre with 37.8°C. No extreme temperature were recorded.

Türkiye's areal mean precipitation in October 2024 was 26.8 mm. This value is approximately 46% below the 1991-2020's normal (49.4 mm).

In October, precipitation increased by more than 80% compared to normal in the coastal areas of the Black Sea , Kars, Ağrı, around Iğdır, A decrease of more than 60% compared to normal was observed in all of the Marmara, Aegean, Mediterranean Central Anatolia Regions and in the western and southern parts of the Eastern Anatolia Region..

In October, the highest precipitation was occurred in Rize with 331.4 mm and lowest recorded with 0.3 mm precipitation in Aydın and Mugla.

Regional precipitation in October were below normal (1991-2020) in all regions except Black Sea region

The number of rainy days in October throughout Turkey was below normal with 4.5 days (1991-2020 normal is 7.9 days). While the number of rainy days was experienced in the range of 15-20 days in the coastal areas of the Black Sea Region, no rainfall was recorded in the south of İzmir, north of Antalya, Aydın, Manisa, Burdur, Mersin, Niğde, Gaziantep, Kilis, Adıyaman and Şanlıurfa.

There are 33 extreme events have been reported in October 2024 in TSMS's Kardelen Database. Percentage of extreme events recorded in October 2024 were heavy rain-flood (51%), hail (22%), storm-tornado (8%), lightning (13%), and wild fire (6%).

## 2. Temperature

The mean temperature of Türkiye in October 2024 was 15.8°C. This value was 0.2°C above the 1991-2020's normal (15.6°C). (Fig.2.1).

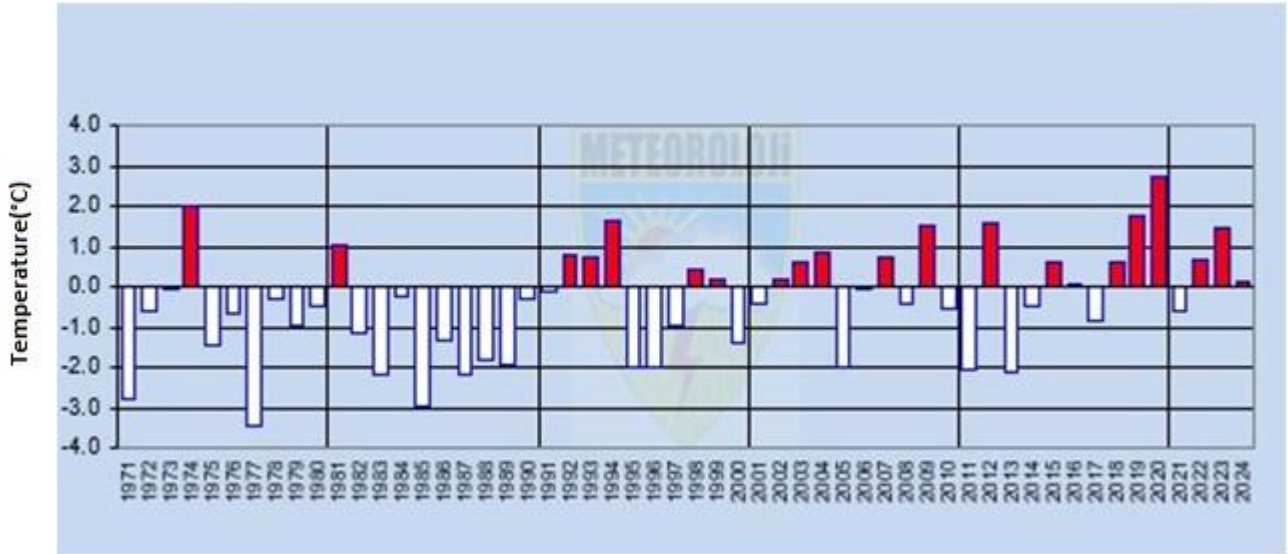
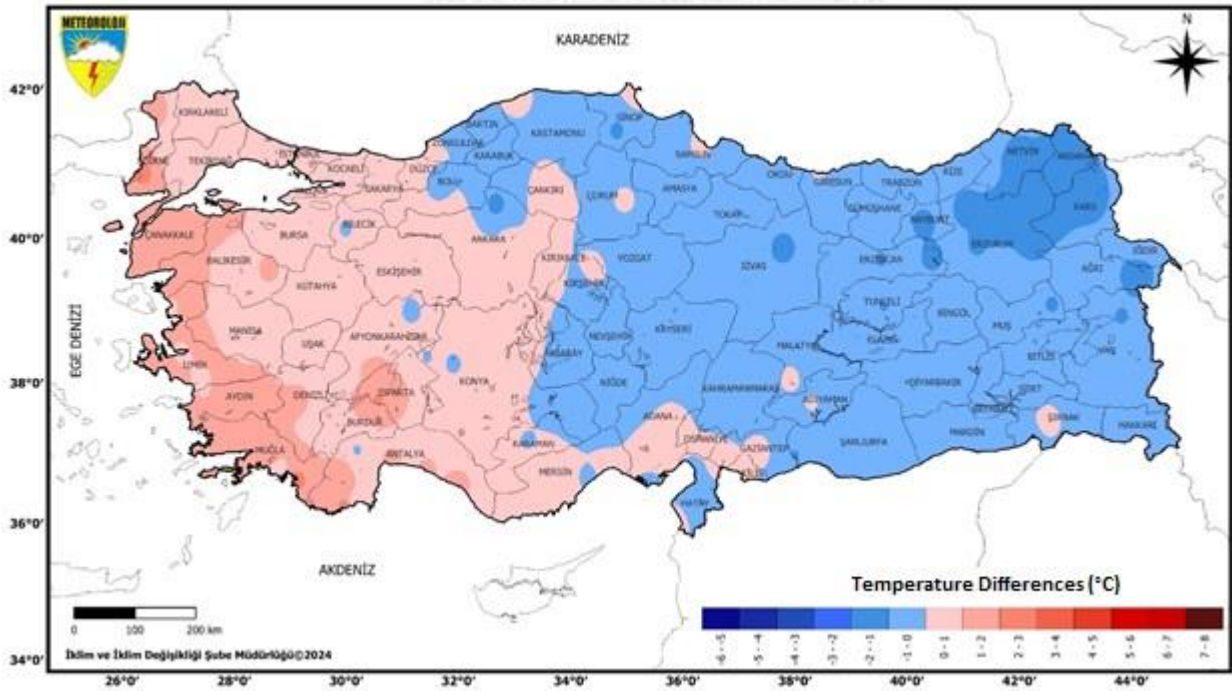


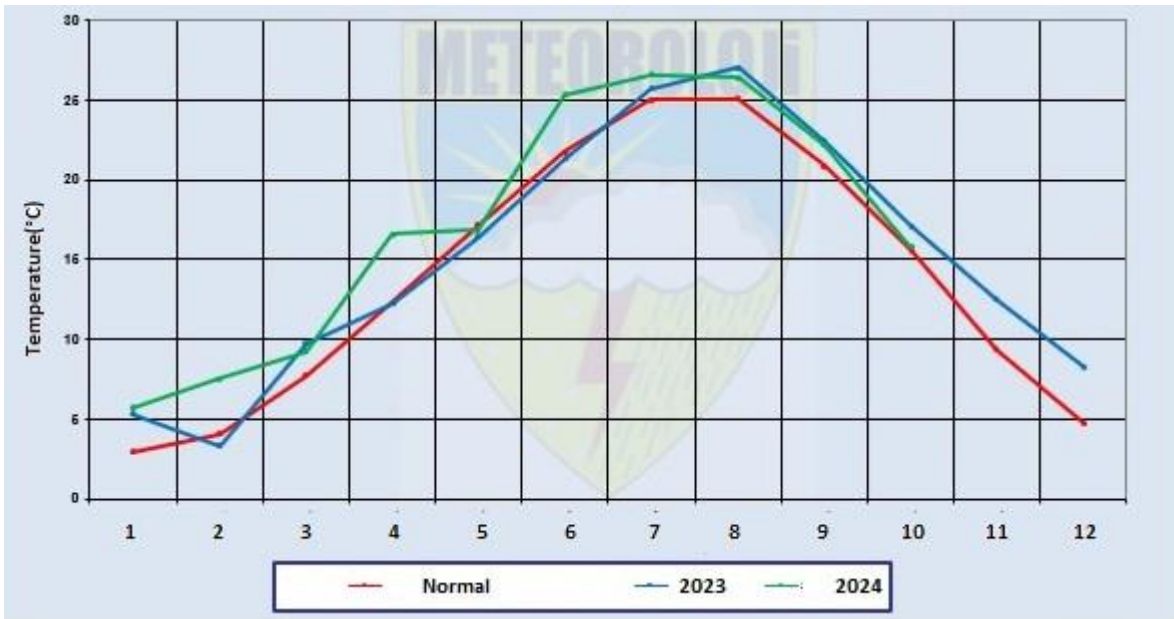
Figure 2.1 Monthly mean temperature anomalies in October (Url 1).

In October 2024, average temperatures of the regions were around seasonal norms.

. (Fig.2.2).



**Figure 2.2.** Spatial distribution of mean temperature anomaly in Türkiye in October 2024 (Url 1).



**Figure 2. 3** The difference of the monthly mean temperature in 2024 from normal (1991-2020) (Url 1).

The monthly average temperature in October around seasonal its normal.

### 2.1. Regional Temperature

Regional temperatures followed normal long-term averages (1991-2020) in all regions except the Aegean Region and some parts of the Eastern Anatolia Region. (Fig. 2.4).

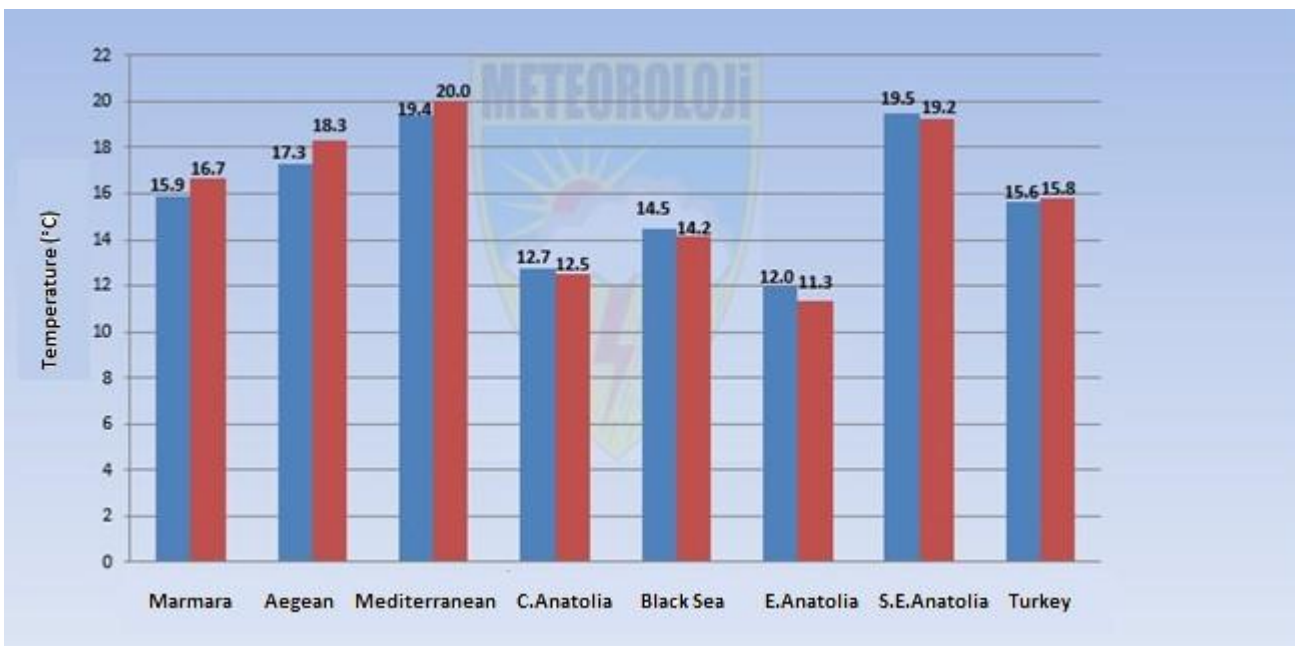


Figure 2. 4 Regional mean temperature differences in October 2024 (Url 1).

## 2.2. Extreme Temperature

The lowest temperature was observed in Erzurum with  $-8.8\text{ }^{\circ}\text{C}$  and the highest temperature was observed in Cizre with  $37.8\text{ }^{\circ}\text{C}$ . There were no extreme maximum temperature records observed.

## 3. Precipitation

Türkiye's areal mean precipitation in October 2024 was 26.8 mm. This value is approximately 45.8% below the 1991-2020's normal (49.4 mm) (Fig. 3.1)

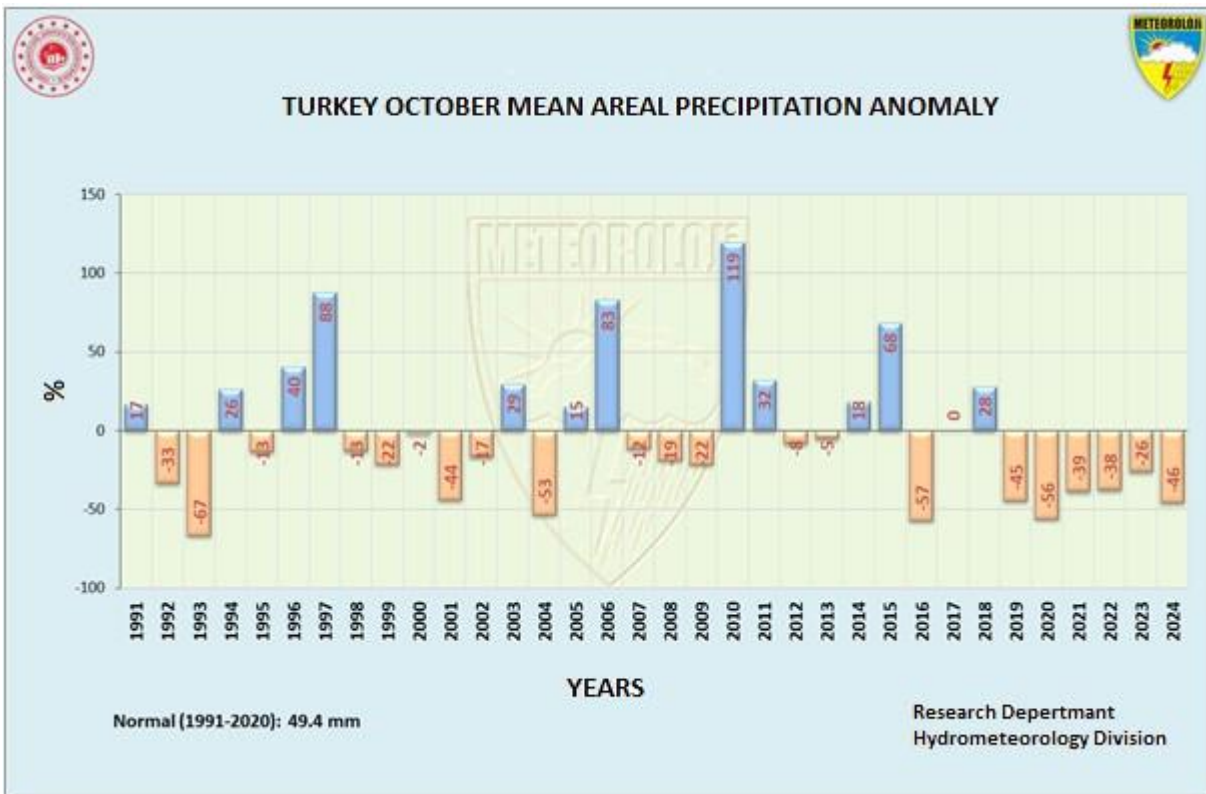
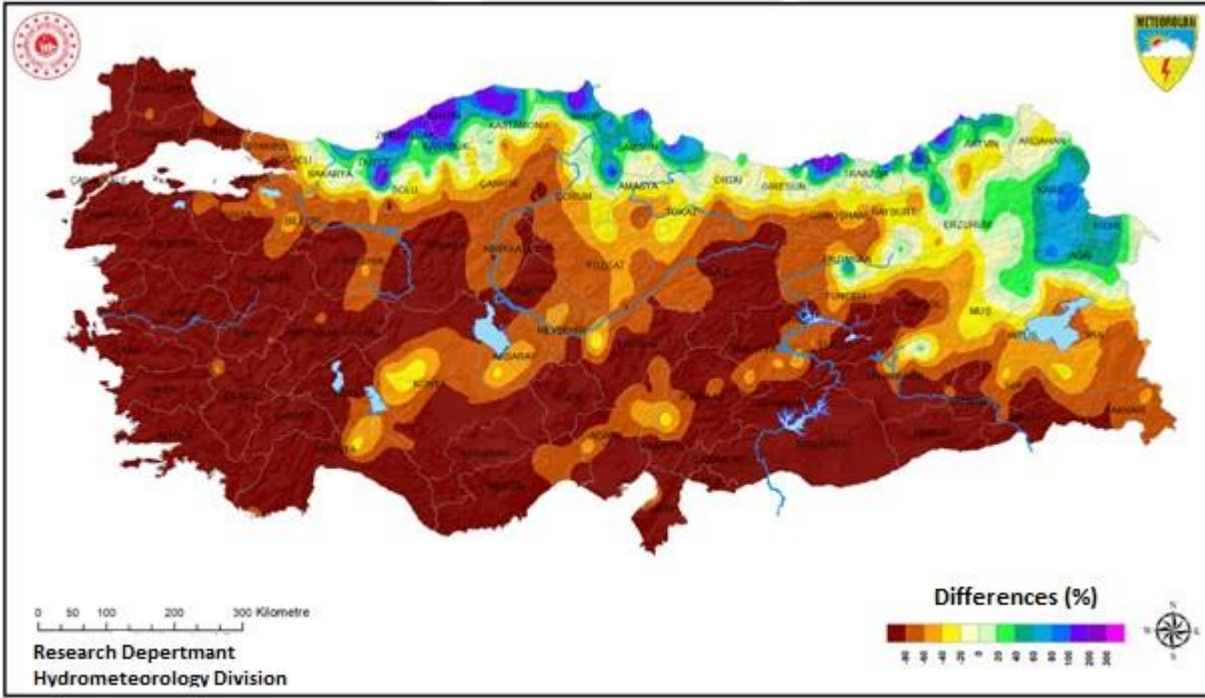


Figure 3. 1 Areal precipitation anomaly in October in Türkiye (Url 2).



**Figure 3. 2** Spatial distribution of mean precipitation anomalies in October 2024 (Url 2).

In October, precipitation increased by more than 80% compared to normal in the coastal areas of the Black Sea , Kars, Ağrı, around Iğdır, A decrease of more than 60% compared to normal was observed in all of the Marmara, Aegean, Mediterranean Central Anatolia Regions and in the western and southern parts of the Eastern Anatolia Region. (Fig. 3.2).

### 3.1. Regional Precipitation

Regional precipitation in October were below normal (1991-2020) in all regions except Black Sea region (Figure 3.3).



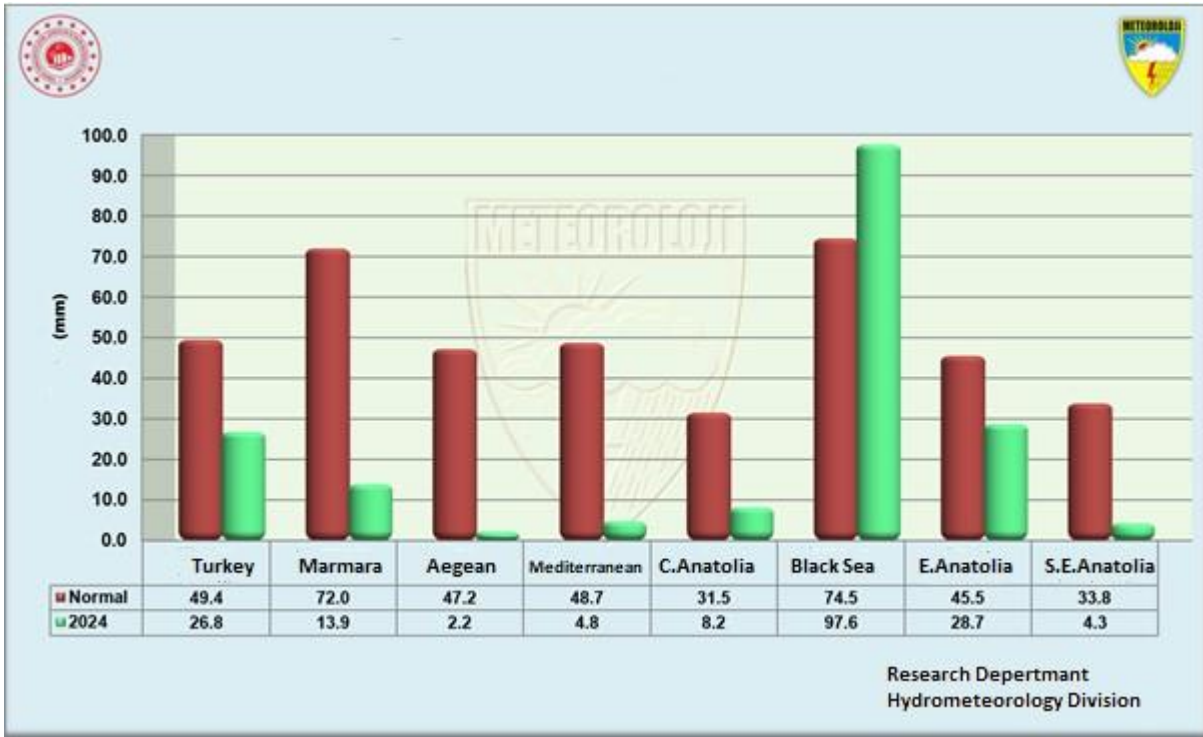


Figure 3. 3 Regional Precipitation Differences in October 2024 (Url 2).

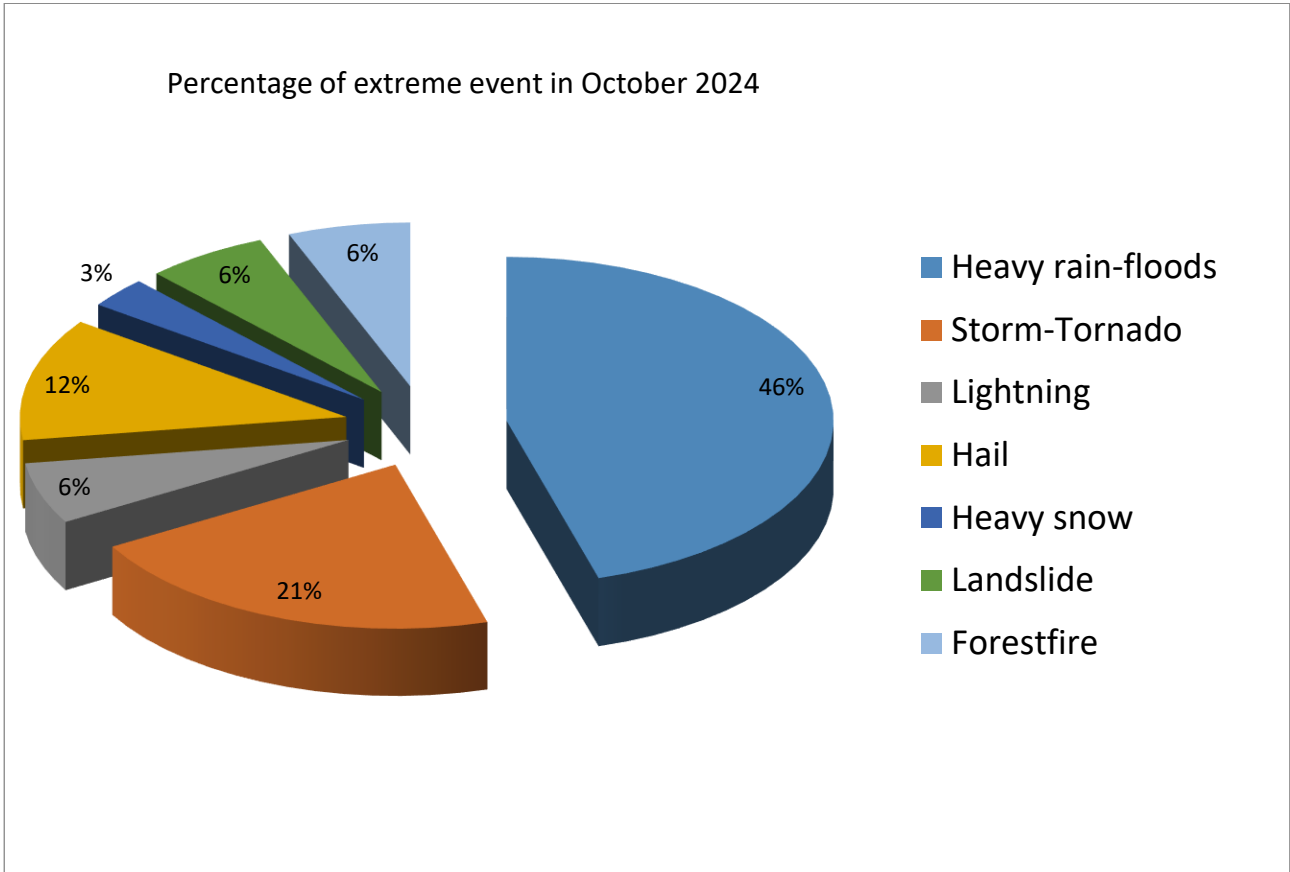
### 3.2. Rainy Days

The number of rainy days in October throughout Turkey was below normal with 4.5 days (1991-2020 normal is 7.9 days). While the number of rainy days was experienced in the range of 15-20 days in the coastal areas of the Black Sea Region, no rainfall was recorded in the south of İzmir, north of Antalya, Aydın, Manisa, Burdur, Mersin, Niğde, Gaziantep, Kilis, Adıyaman and Şanlıurfa. (Fig. 3.4).



**Figure 3.** Number of rainy days in October 2024 (Url 2).

#### 4. Extreme Meteorological Events



**Figure 4.1.** Percentage of extreme event in October 2024 (Url 3).

There are 33 extreme events have been reported in October 2024 in TSMS’s Kardelen Database. Percentage of extreme events recorded in October 2024 were heavy rain-flood (46%), landslide (6%), heavy snow (3%), hail (12%), storm-tornado (21%), lightning (6%), and forest fire (6%) (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  
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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>**

