

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





# State of the Climate in July 2024



## Climate and Agricultural Meteorology Department Research Department

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### Climate and Agricultural Meteorology Department

**Research Department** 

2024

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#### 1. Introduction

The mean temperature of Türkiye in July 2024 was 26.7°C. This value was 1.7°C above the 1991-2020's normal (25.0°C).

Mean temperatures in July 2024 were above normal in whole Türkiye except Erzurum, Kars, Iğdır. The mean temperature of July 2024 has been recorded as the warmest July in the last 53 years.

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

The lowest temperature was observed in Erzurum with 5.2 °C and the highest temperature was observed in Cizre with 45.9°C. There were 3 extreme maximum temperature records.

Türkiye's areal mean precipitation in July 2024 was 32.7 mm. This value is approximately 100% above the 1991-2020's normal (15.6 mm).

During the July, rainfall were increased of approximately 200% in Giresun, Trabzon, Gümüşhane, Burdur, Denizli, Aydın, Yozgat, Karaman and Mersin; increased of approximately 400% in Tunceli. On the contrary an decreased of 40% compared to normal was recorded in Thrace, Balıkesir, coast of Aydın and Muğla, Hatay, Şırnak, Şanlıurfa.

In July, the highest precipitation was occurred in Rize with 159.4 mm and lowest recorded with 1.4 mm precipitation in Şanlıurfa.

Regional precipitation in July were above normal (1991-2020) in all regions except Marmara region.

The number of rainy days in July throughout Turkey was above normal with 6.7 days (1991-2020 normal is 3.2 days). The number of rainy days occurred in the range of 15-20 days in north of Eastern Anatolia region, eastern Black Sea region; in the range of 0-3 in western and south of Türkiye, Nevşehir, Hakkari and South Eastern Anatolia.

There are 195 extreme events have been reported in July 2024 in TSMS's Kardelen Database. Percentage of extreme events recorded in July 2024 were heavy rain-flood (57%), hail (16%), storm-tornado (16%), lightning (9%), and wild fire (2%).

#### 2. Temperature

The mean temperature of Türkiye in July 2024 was 26.7°C. This value was 1.7°C above the 1991-2020's normal (25.0°C)(Fig.2.1).

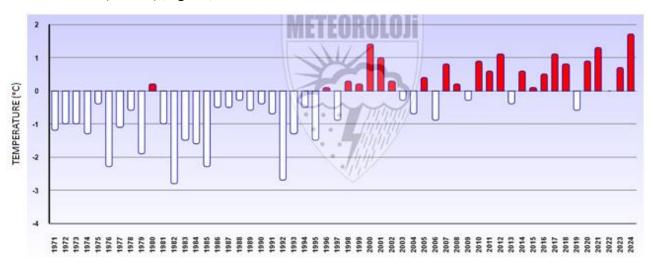


Figure 2.1 Monthly mean temperature anomalies in July (Url 1).

Mean temperatures in July 2024 were above normal in whole Türkiye except Erzurum, Kars, Iğdır. The mean temperature of July 2024 has been recorded as the warmest July in the last 53 years (Fig.2.2).

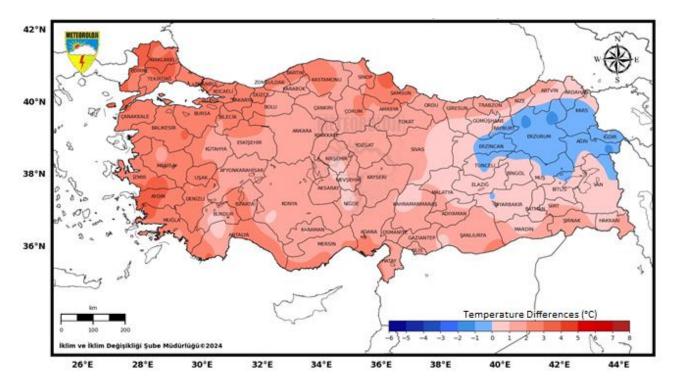


Figure 2.2. Spatial distribution of mean temperature anomaly in Türkiye in July 2024 (Url 1).

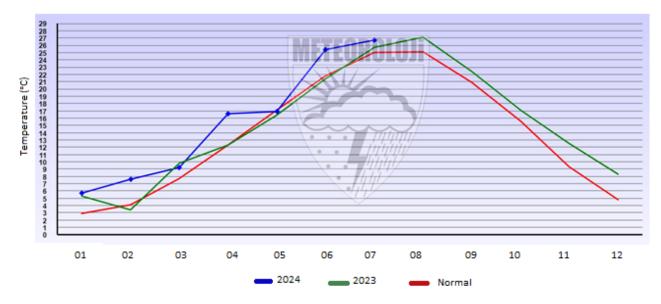
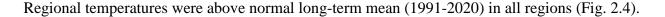


Figure 2. 3 The difference of the monthly mean temperature in 2024 from normal (1991-2020) (Url 1).

The monthly mean temperature of July was above its normal.

#### 2.1. Regional Temperature



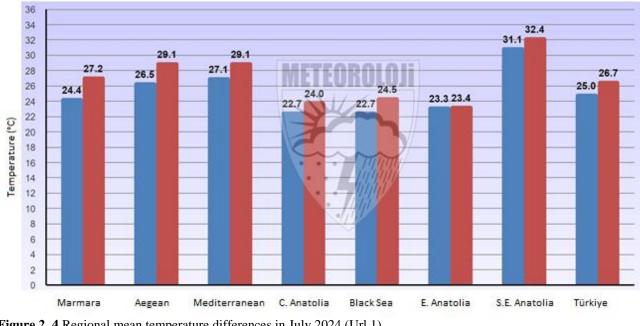


Figure 2. 4 Regional mean temperature differences in July 2024 (Url 1).

#### **2.2. Extreme Temperature**

The lowest temperature was observed in Erzurum with 5.2 °C and the highest temperature was observed in Cizre with 45.9°C. There were 3 extreme maximum temperature records.

#### 3. Precipitation

Türkiye's areal mean precipitation in July 2024 was 32.7 mm. This value is approximately 100% above the 1991-2020's normal (15.6 mm) (Fig. 3.1)

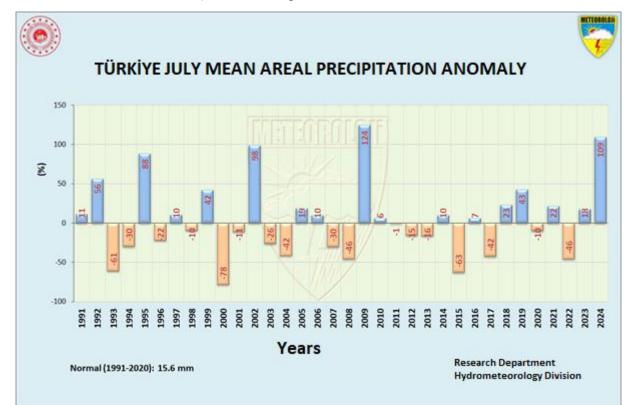


Figure 3. 1 Areal precipitation anomaly in July in Türkiye (Url 2).

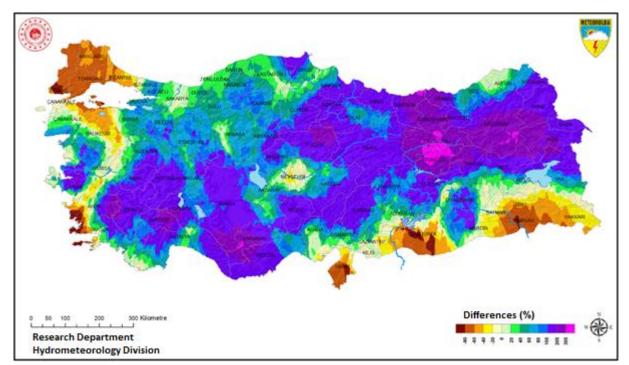


Figure 3.2 Spatial distribution of mean precipitation anomalies in July 2024 (Url 2).

During the July, rainfall were increased of approximately 200% in Giresun, Trabzon, Gümüşhane, Burdur, Denizli, Aydın, Yozgat, Karaman and Mersin; increased of approximately 400% in Tunceli. On the contrary an decreased of 40% compared to normal was recorded in Thrace, Balıkesir, coast of Aydın and Muğla, Hatay, Şırnak, Şanlıurfa (Fig. 3.2).

#### **3.1. Regional Precipitation**

Regional precipitation in July were above normal (1991-2020) in all regions except Marmara region (Figure 3.3).

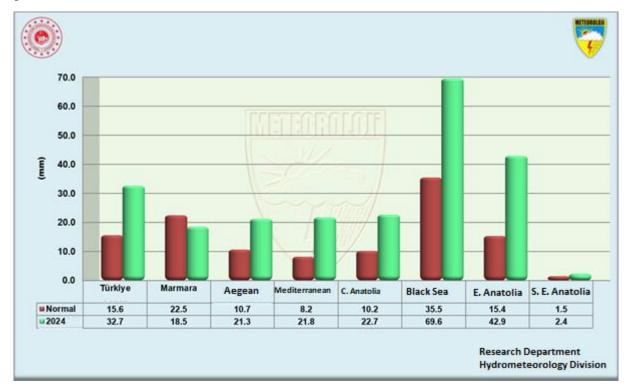


Figure 3. 3 Regional Precipitation Differences in July 2024 (Url 2).

#### **3.2. Rainy Days**

The number of rainy days in July throughout Turkey was above normal with 6.7 days (1991-2020 normal is 3.2 days). The number of rainy days occurred in the range of 15-20 days in north of Eastern Anatolia region, eastern Black Sea region; in the range of 0-3 in western and south of Türkiye, Nevşehir, Hakkari and South Eastern Anatolia (Fig. 3.4).

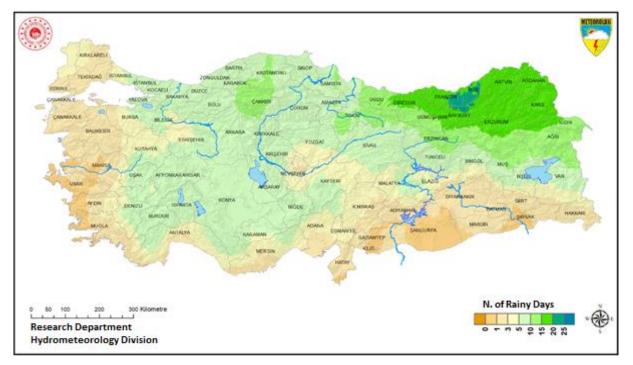


Figure 3. Number of rainy days in July 2024 (Url 2).

#### 4. Extreme Meteorological Events

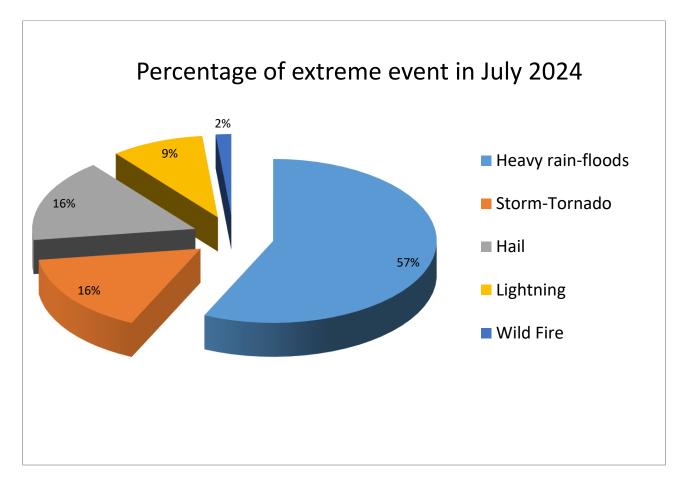


Figure 4.1. Percentage of extreme event in July 2024 (Url 3).

There are 195 extreme events have been reported in July 2024 in TSMS's Kardelen Database. Percentage of extreme events recorded in July 2024 were heavy rain-flood (57%), hail (16%), storm-tornado (16%), ligthning (9%), and wild fire (2%) (Fig. 4.1).

#### References

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



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