



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



State of the Climate in September 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 September 2024 was 22.2°C. This value was 1.3°C above the 1991-2020's normal (20.9°C).

Mean temperatures In September 2024, while it was close to normal in the inner parts of the Aegean and Black Sea Regions, and in all of the Eastern Anatolia, Southeastern Anatolia, Black Sea and Central Anatolia Regions, it was above normal in other regions of our country..

The mean temperature of September 2024 was recorded as the 7th warmest September in the last 53 years.

Regional temperatures remained around the long-term (1991-2020) normal average in all regions except the Marmara Region.

The lowest temperature was observed in Sarıkamış with -1.2 °C and the highest temperature was observed in Cizre with 44.3°C. There were 1 extreme maximum temperature records.

Türkiye's areal mean precipitation in September 2024 was 33.8 mm. This value is approximately 36% below the 1991-2020's normal (24.9 mm).

In September, precipitation increased by more than 100% compared to normal in the areas of İzmir, Manisa, Konya, Karaman, Mersin, Kırıkkale, Kırşehir, Çorum, Nevşehir, Aksaray, Niğde, Samsun and the east of Antalya, in the entire Southeastern Anatolia Region except Gaziantep and Kilis, in the areas of Tunceli and Erzincan and the east of the Eastern Anatolia Region. There was a decrease of more than 40% in the areas of Kütahya, Denizli, Afyonkarahisar, Kastamonu, Ordu and Giresun.

In September, the highest precipitation was occurred in Rize with 141.6 mm and lowest recorded with 11.0 mm precipitation in Kilis.

Regional precipitation in September was above normal (1991-2020) in all regions except the Marmara region.

The number of rainy days in September throughout Turkey was above normal with 6.1 days (1991-2020 normal is 4.4 days). While the number of rainy days occurred in the range of 10-15 days in Istanbul, Kastamonu, Sinop, Samsun, Erzurum, Kars, Ağrı, Iğdır and the Eastern Black Sea Region, it fell below 3 days in the coastal area of the Aegean Region, Uşak, Afyonkarahisar and the entire Southeastern Anatolia Region.

There are 69 extreme events have been reported in September 2024 in TSMS's Kardelen Database. Percentage of extreme events recorded in September 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 September 2024 was 22.2°C. This value was 1.3°C above the 1991-2020's normal (20.9°C).Fig.2.1).

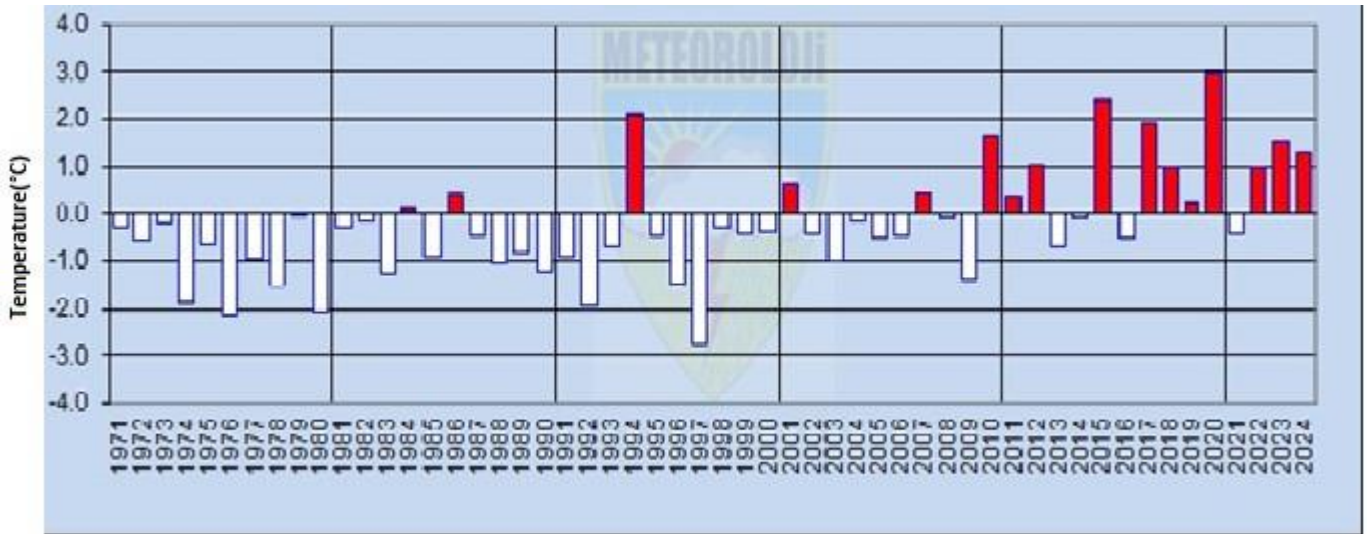


Figure 2.1 Monthly mean temperature anomalies in September (Url 1).

In September 2024, while it was around seasonal norms in the inner parts of the Aegean and Black Sea Regions, and almost all of the Eastern Anatolia, Southeastern Anatolia, Black Sea and Central Anatolia Regions, it was above seasonal norms in other regions of our country.. (Fig.2.2).

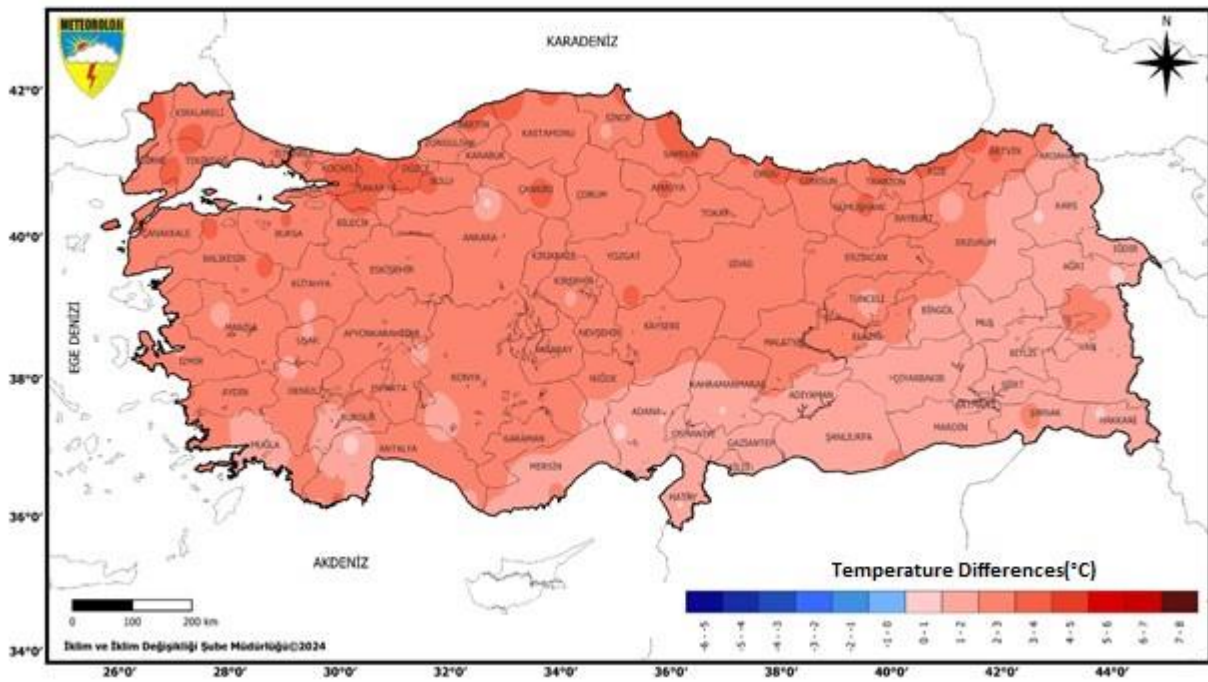


Figure 2.2. Spatial distribution of mean temperature anomaly in Türkiye in September 2024 (Url 1).

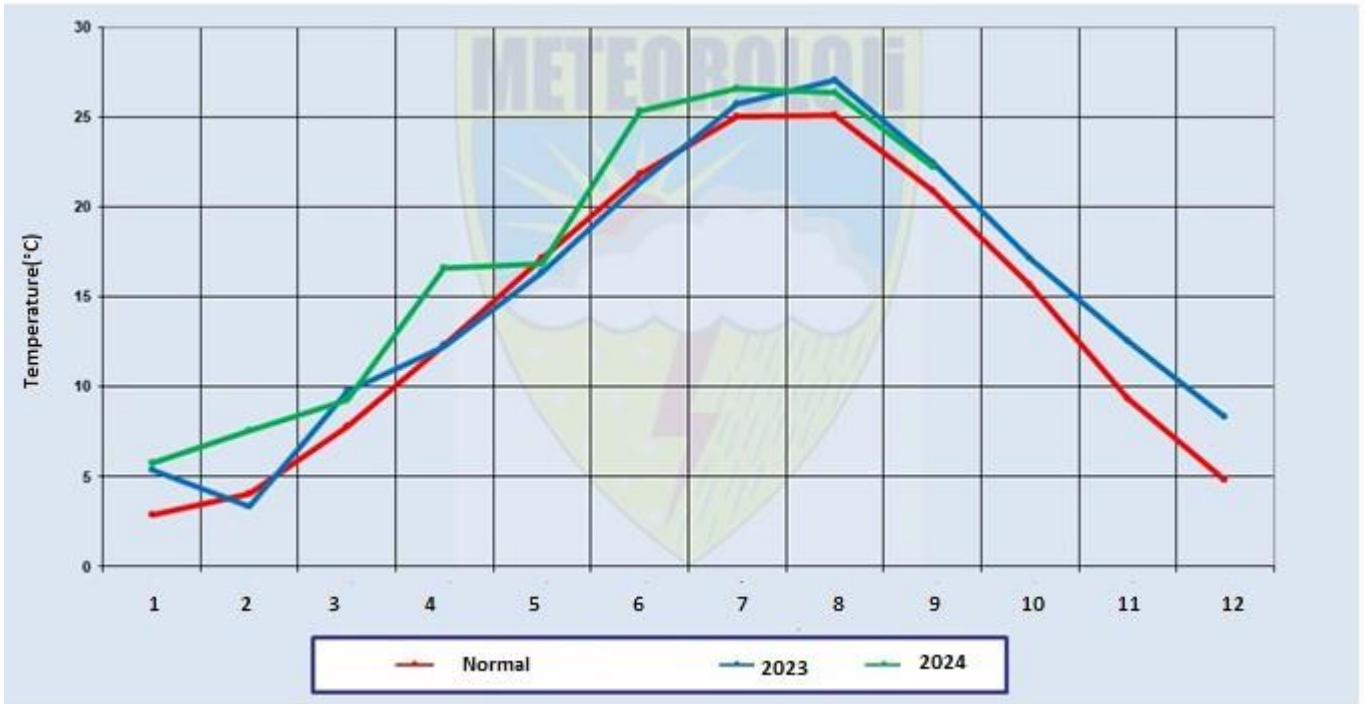


Figure 2. 3 The difference of the monthly mean temperature in 2024 from normal (1991-2020) (Url 1).

The monthly mean temperature of September was above its normal.

2.1. Regional Temperature

Regional temperatures followed normal long-term averages (1991-2020) in all regions except the Marmara Region. (Fig. 2.4).

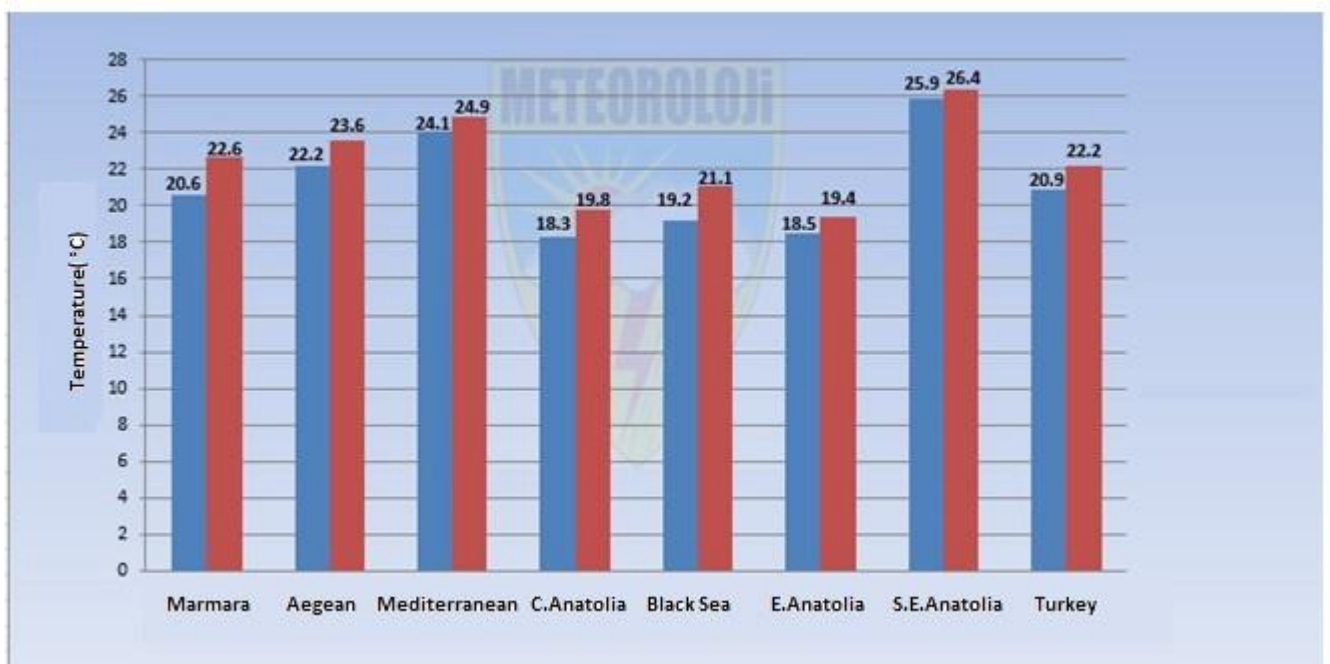


Figure 2. 4 Regional mean temperature differences in September 2024 (Url 1).

2.2. Extreme Temperature

The lowest temperature was observed in Sarıkamış with $-1.2\text{ }^{\circ}\text{C}$ and the highest temperature was observed in Cizre with 44.3°C . There were 1 extreme maximum temperature records.

3. Precipitation

Türkiye’s areal mean precipitation in September 2024 was 33.8 mm. This value is approximately 36% above the 1991-2020’s normal (24.9 mm) (Fig. 3.1)

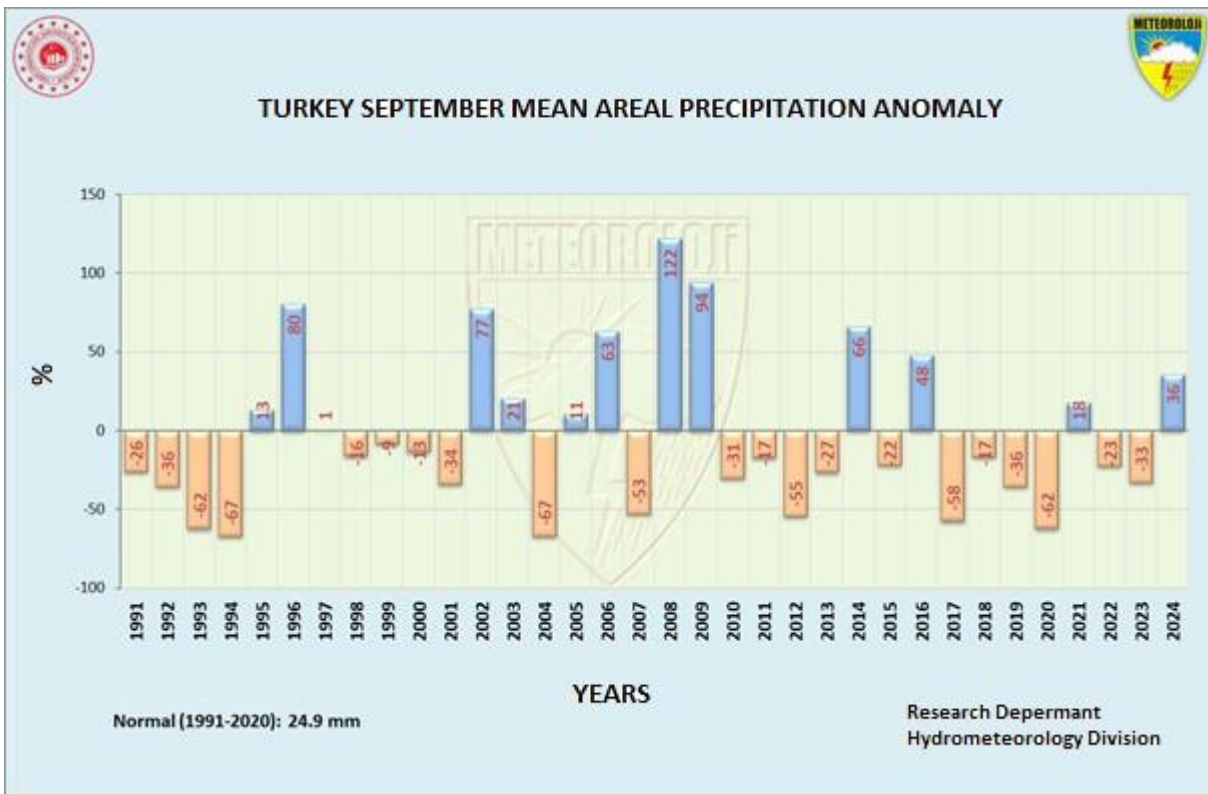


Figure 3. 1 Areal precipitation anomaly in September in Türkiye (Url 2).

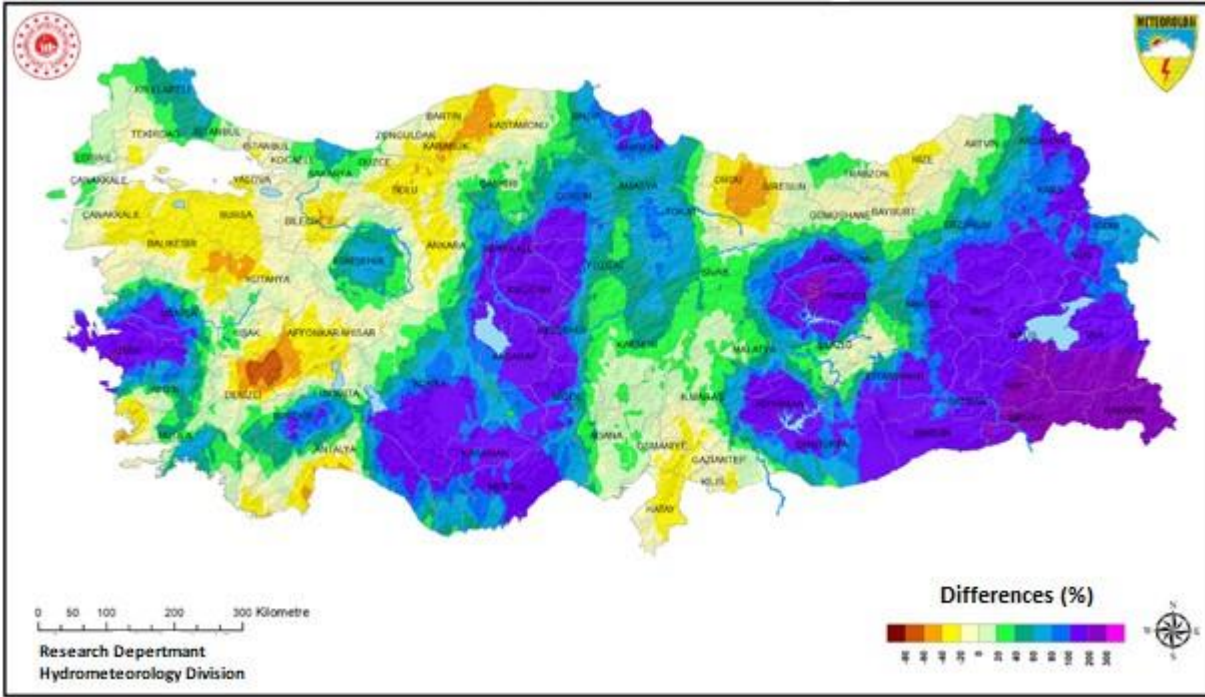


Figure 3. 2 Spatial distribution of mean precipitation anomalies in September 2024 (Url 2).

In September, precipitation increased by more than 100% compared to normal in the areas of İzmir, Manisa, Konya, Karaman, Mersin, Kırkkale, Kırşehir, Çorum, Nevşehir, Aksaray, Niğde, Samsun and the east of Antalya, in the entire Southeastern Anatolia Region except Gaziantep and Kilis, in the areas of Tunceli and Erzincan and the east of the Eastern Anatolia Region. There was a decrease of more than 40% in the areas of Kütahya, Denizli, Afyonkarahisar, Kastamonu, Ordu and Giresun. (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 September 2024 (Url 2).

3.2. Rainy Days

The number of rainy days in September throughout Turkey was above normal with 6.1 days (1991-2020 normal is 4.4 days). While the number of rainy days occurred in the range of 10-15 days in Istanbul, Kastamonu, Sinop, Samsun, Erzurum, Kars, Ağrı, Iğdır and the Eastern Black Sea Region, it fell below 3 days in the coastal area of the Aegean Region, Uşak, Afyonkarahisar and the entire Southeastern Anatolia Region. (Fig. 3.4).



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

4. Extreme Meteorological Events

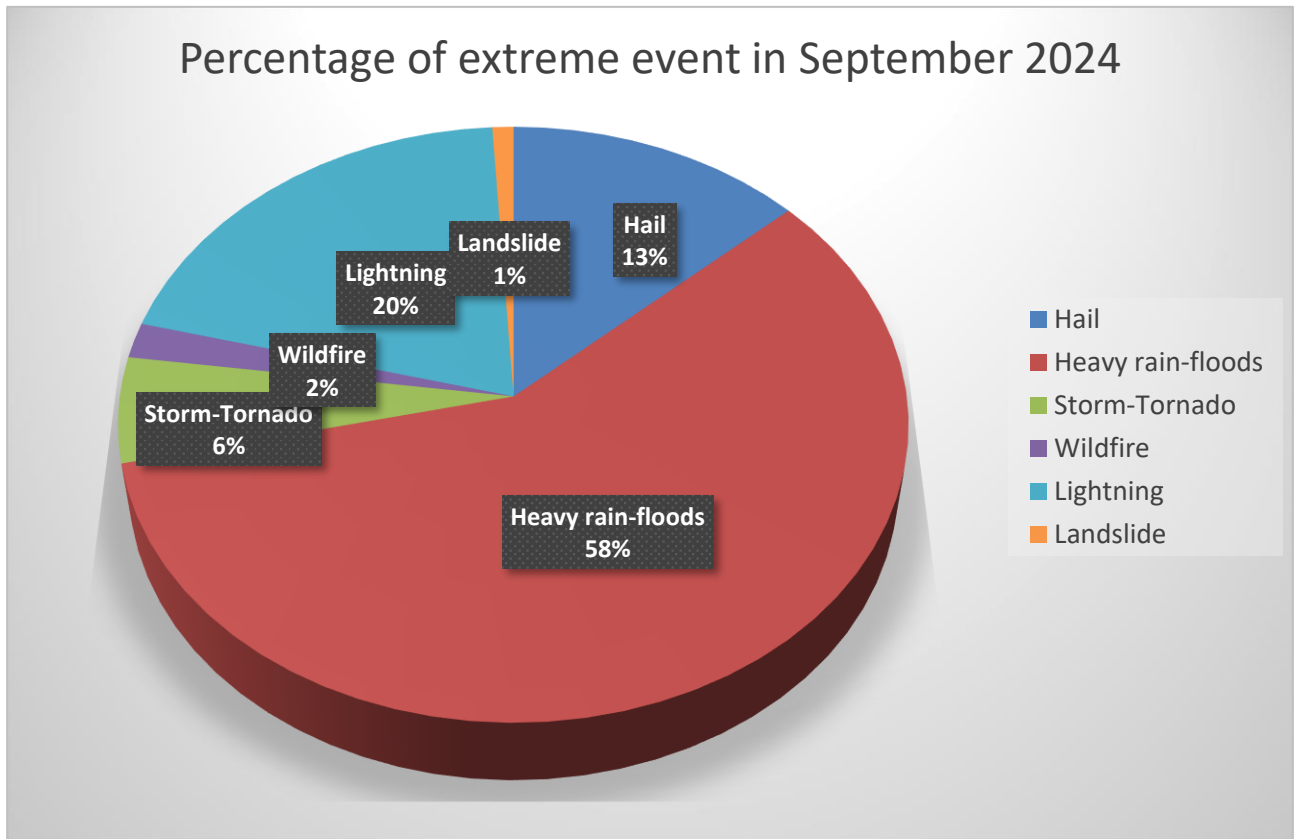


Figure 4.1. Percentage of extreme event in September 2024 (Url 3).

There are 105 extreme events have been reported in September 2024 in TSMS's Kardelen Database. Percentage of extreme events recorded in September 2024 were heavy rain-flood (58%), landslide (%1), hail (13%), storm-tornado (6%), lightning (20%), and wild fire (2%) (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>



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