



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



State of the Climate in January 2024



Climate and Agricultural Meteorology Department
Research Department

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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 January 2024 was 5.7°C. This value was 2.8°C above the 1991-2020's normal (2.9°C).

Mean temperatures in January 2024 were above normal in whole Türkiye. This made it 1st warmest January since 1971.

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

The lowest temperature was observed in Ardahan with -31.3°C and the highest temperature was observed in Akçakoca with 29.3°C. There were 11 new extreme maximum temperature records.

Türkiye's areal mean precipitation in January 2024 was 87.5 mm. This value is approximately 25% above the 1991-2020's normal (69.8 mm).

During the January, rainfall were increased about 100% in south parts of S.E. Anatolia region, Giresun, Ağrı, Van, Bitlis, Siirt, Şırnak, Hakkari and Diyarbakır. On the contrary an decreased of 30% compared to normal was recorded in Denizli.

In January, the highest precipitation was occurred in Rize with 226.4 mm and lowest recorded with 33.9 mm precipitation in Kars.

Regional precipitation in January were above normal (1991-2020) in all regions except Eagean and Mediterranean.

The number of rainy days in January throughout Turkey was above normal with 15.4 days (1991-2020 normal is 11.7 days). The number of rainy days occurred in the range of 20-25 days in İstanbul, Kocaeli, Sakarya, Kastamonu, Giresun, Rize, Artvin, Bitlis and Siirt; decreased to around 10 day in Denizli and Uşak.

There are 70 extreme events have been reported in January 2024 in TSMS's Kardelen Database. Percentage of extreme events recorded in January 2024 were heavy rain-flood (20%), hail (4%), storm-tornado (36%), snow (29%), landslide (1%), fog (1%), frost (%6) and avalanche (3%).

2. Temperature

The mean temperature of Türkiye in January 2024 was 5.7°C. This value was 2.8°C above the 1991-2020's normal (2.9°C) (Fig.2.1).

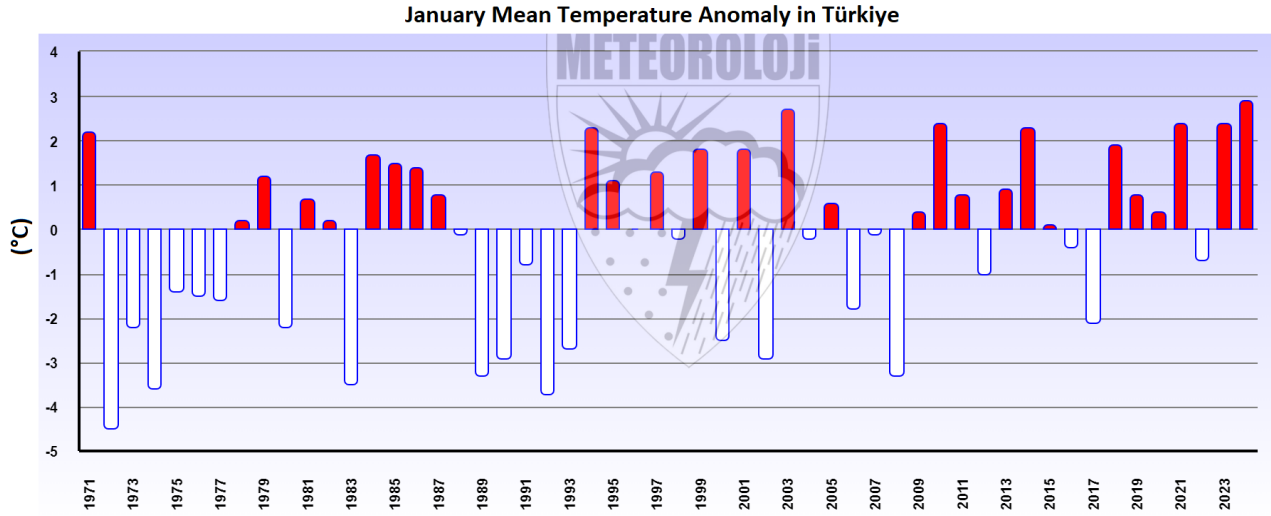


Figure 2.1 Monthly mean temperature anomalies in January (Url 1).

Mean temperatures in January 2024 were above normal in Türkiye. This made it 1st warmest January since 1971 (Fig.2.2).

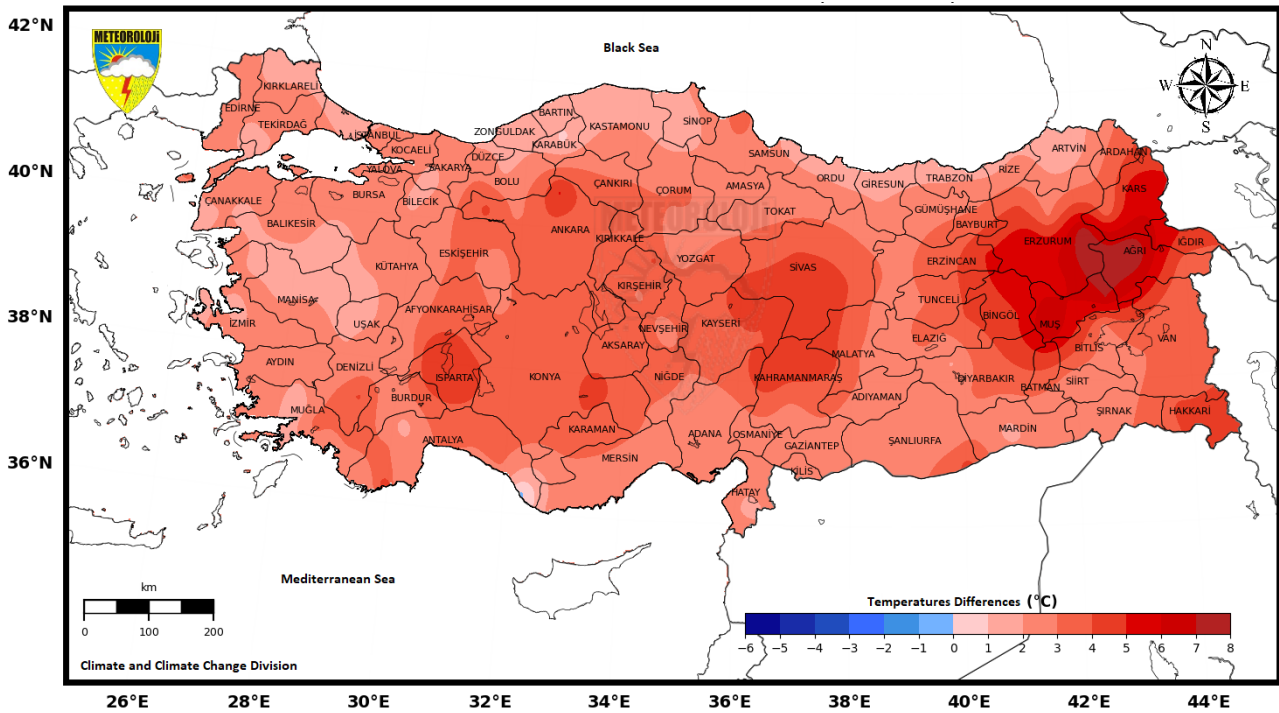


Figure 2.2. Spatial distribution of mean temperature anomaly in Türkiye in January 2024 (Url 1).

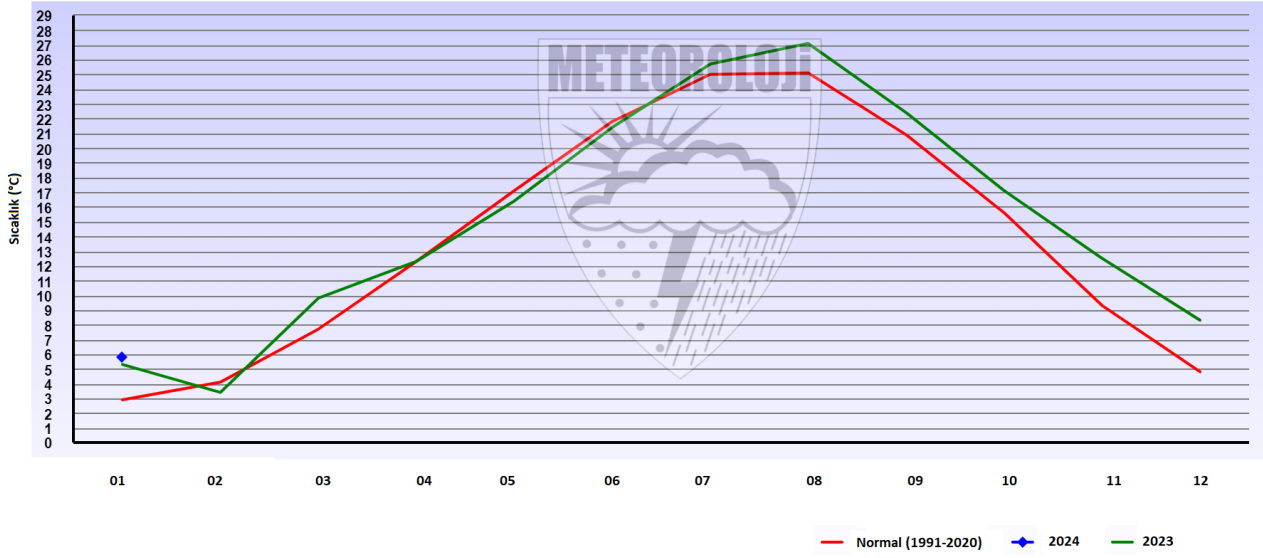


Figure 2. 3 The difference of the monthly mean temperature in 2024 from normal (1991-2020) (Url 1).

The monthly mean temperature of January 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).

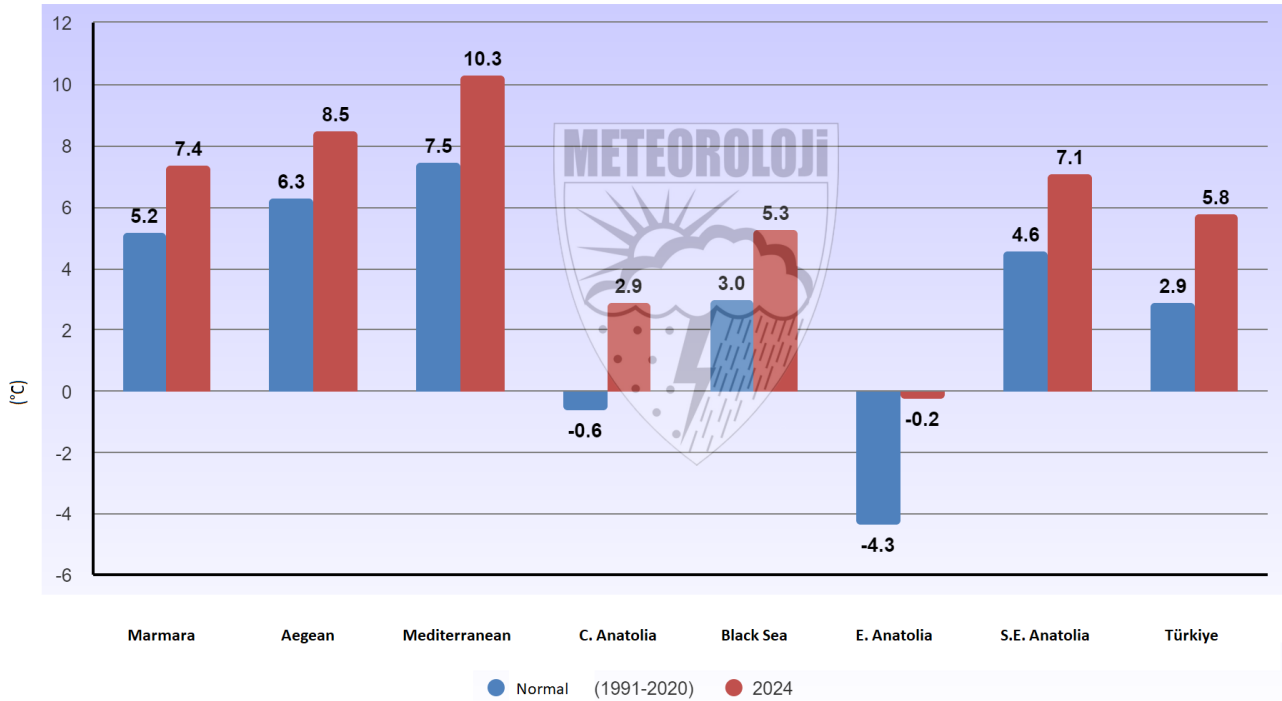


Figure 2. 4 Regional mean temperature differences in January 2024 (Url 1).

2.2. Extreme Temperature

The lowest temperature was observed in Ardahan with -31.3°C and the highest temperature was observed in Akçakoca with 29.3°C . There were 11 new extreme maximum temperature records.

3. Precipitation

Türkiye's areal mean precipitation in January 2024 was 68.5 mm. This value is approximately 10% below the 1991-2020's normal (75.7 mm) (Fig. 3.1)

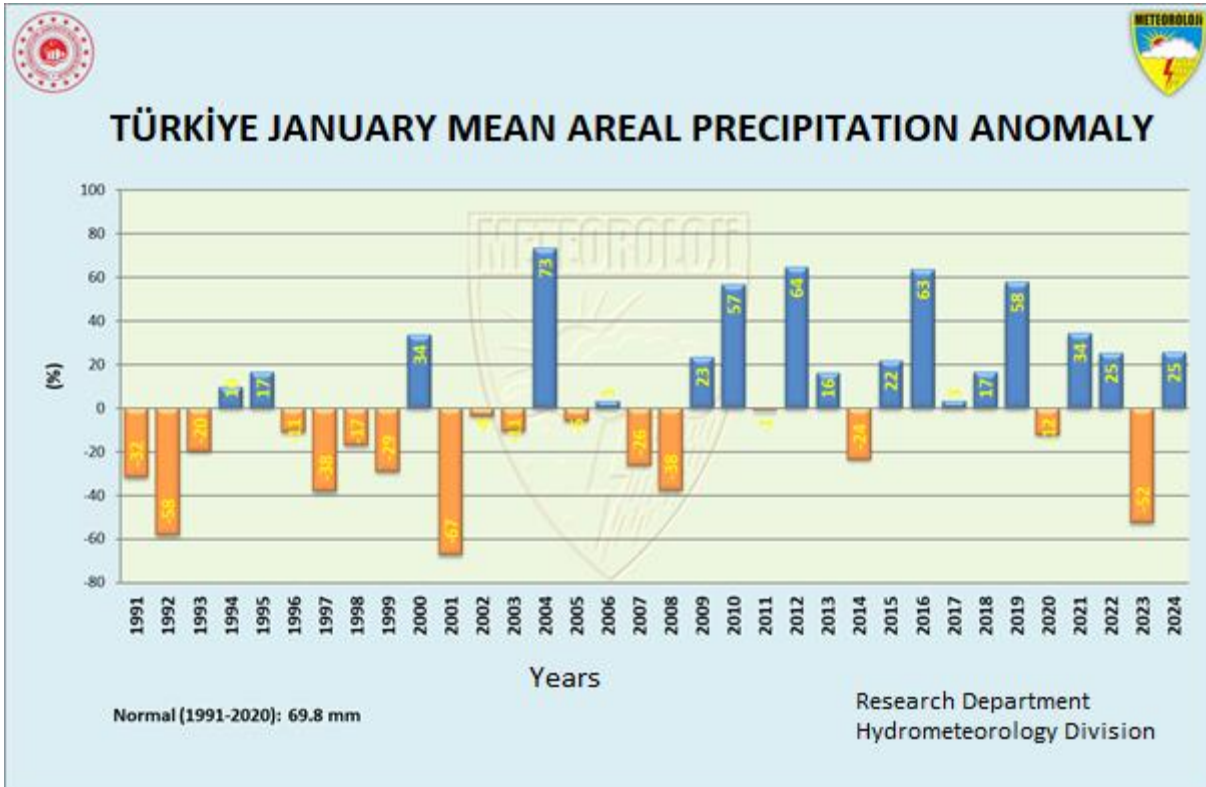


Figure 3. 1 Areal precipitation anomaly in January in Türkiye (Url 2).

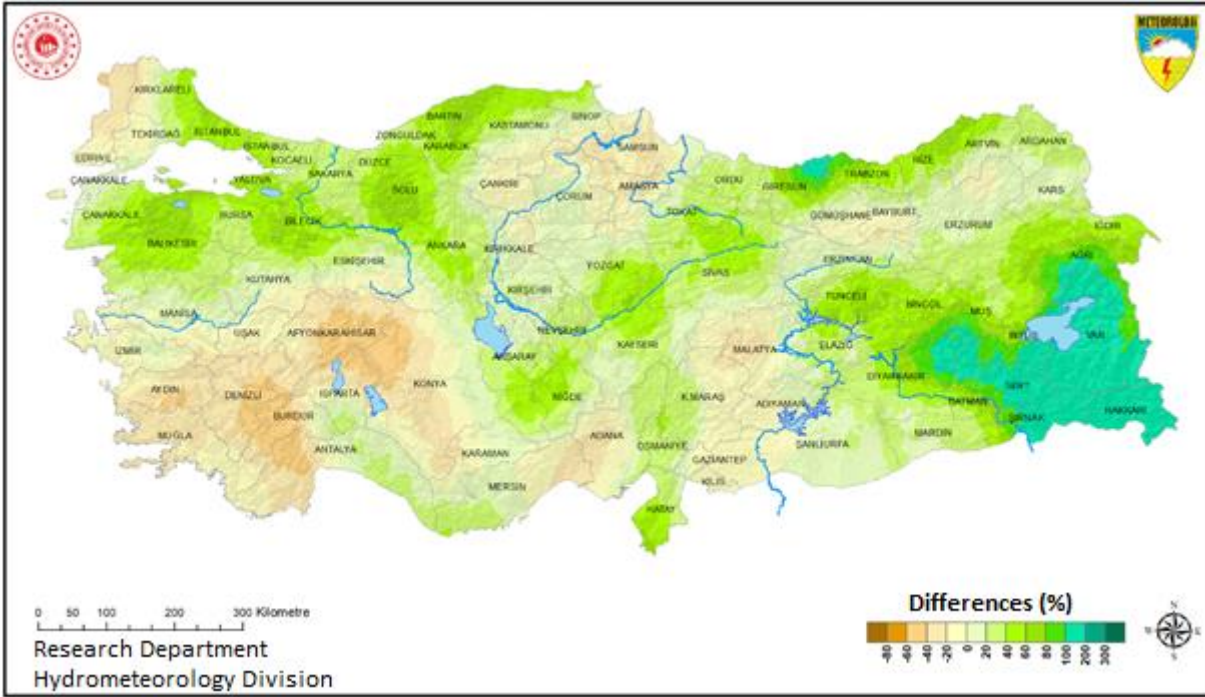


Figure 3. 2 Spatial distribution of mean precipitation anomalies in January 2024 (Url 2).

During the January, rainfall were increased about 100% in south parts of S.E. Anatolia region, Giresun, Ağrı, Van, Bitlis, Siirt, Şırnak, Hakkari and Diyarbakır. On the contrary an decreased of 30% compared to normal was recorded in Denizli (Fig. 3.2).

3.1. Regional Precipitation

Regional precipitation in January were above normal (1991-2020) in all regions except Eagean and Mediterranean (Figure 3.3).

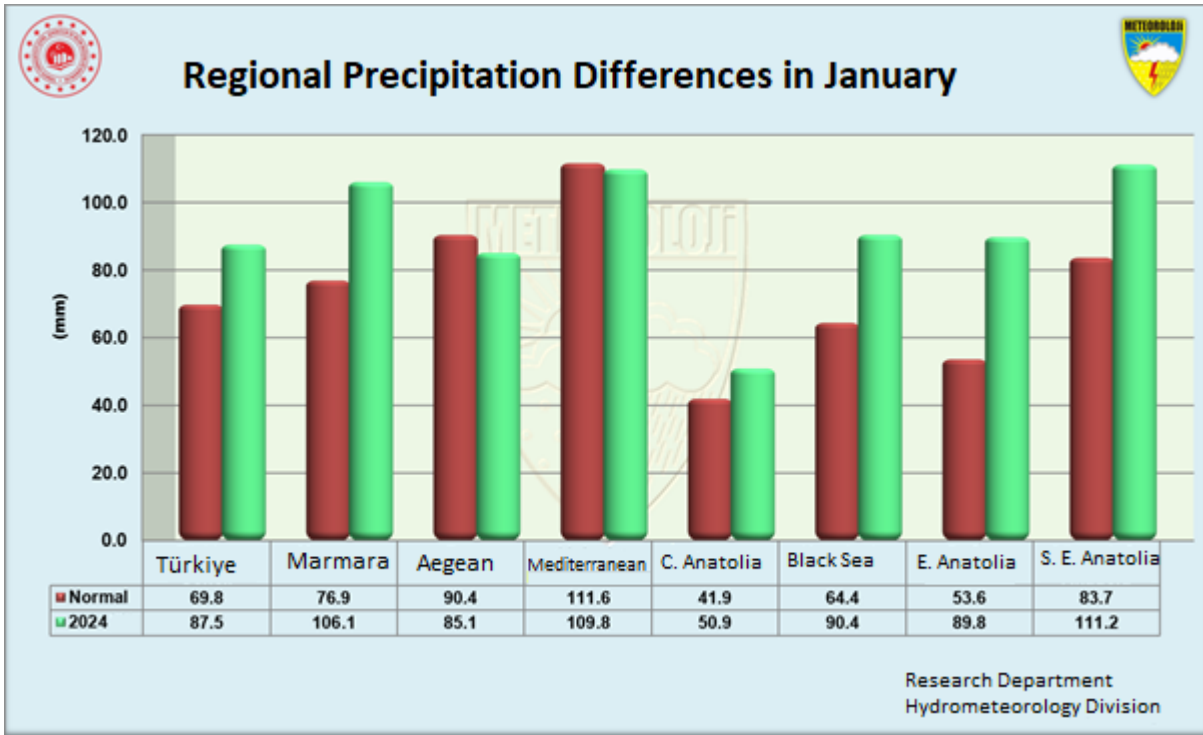


Figure 3. 3 Regional Precipitation Differences in January 2024 (Url 2).

3.2. Rainy Days

The number of rainy days in January throughout Turkey was above normal with 15.4 days (1991-2020 normal is 11.7 days). The number of rainy days occurred in the range of 20-25 days in İstanbul, Kocaeli, Sakarya, Kastamonu, Giresun, Rize, Artvin, Bitlis and Siirt; decreased to around 10 day in Denizli and Uşak (Fig. 3.4).

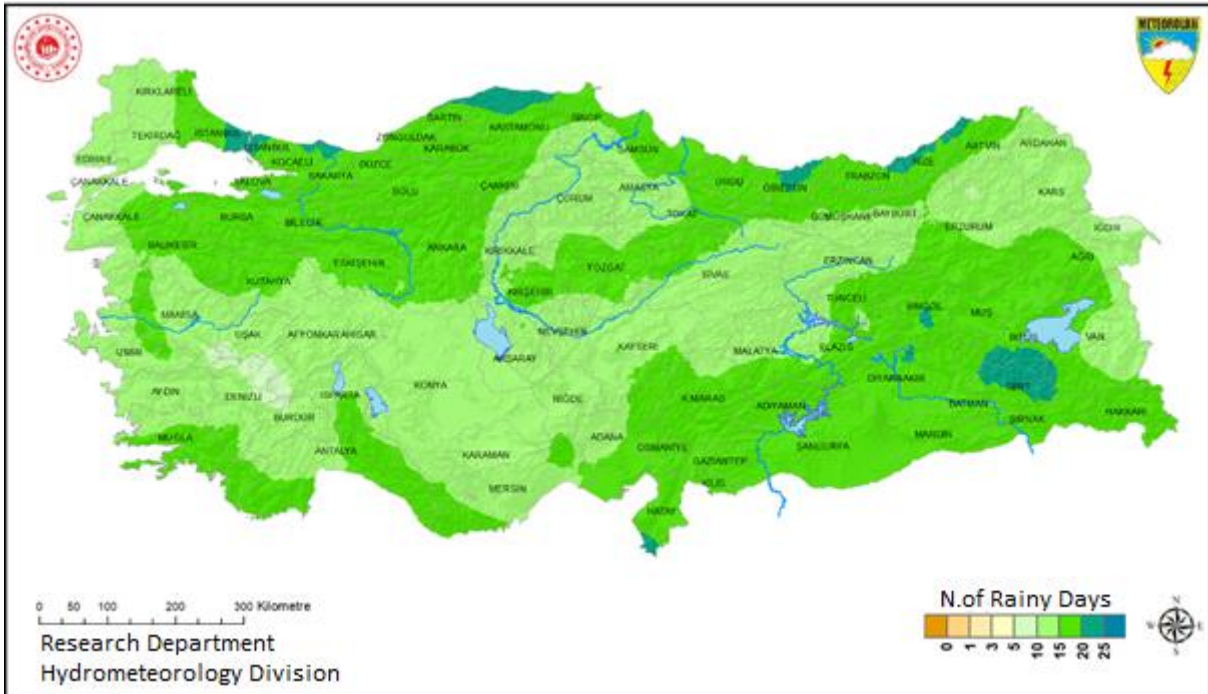


Figure 3. 4 Number of rainy days in January 2024 (Url 2).

3. Extreme Meteorological Events

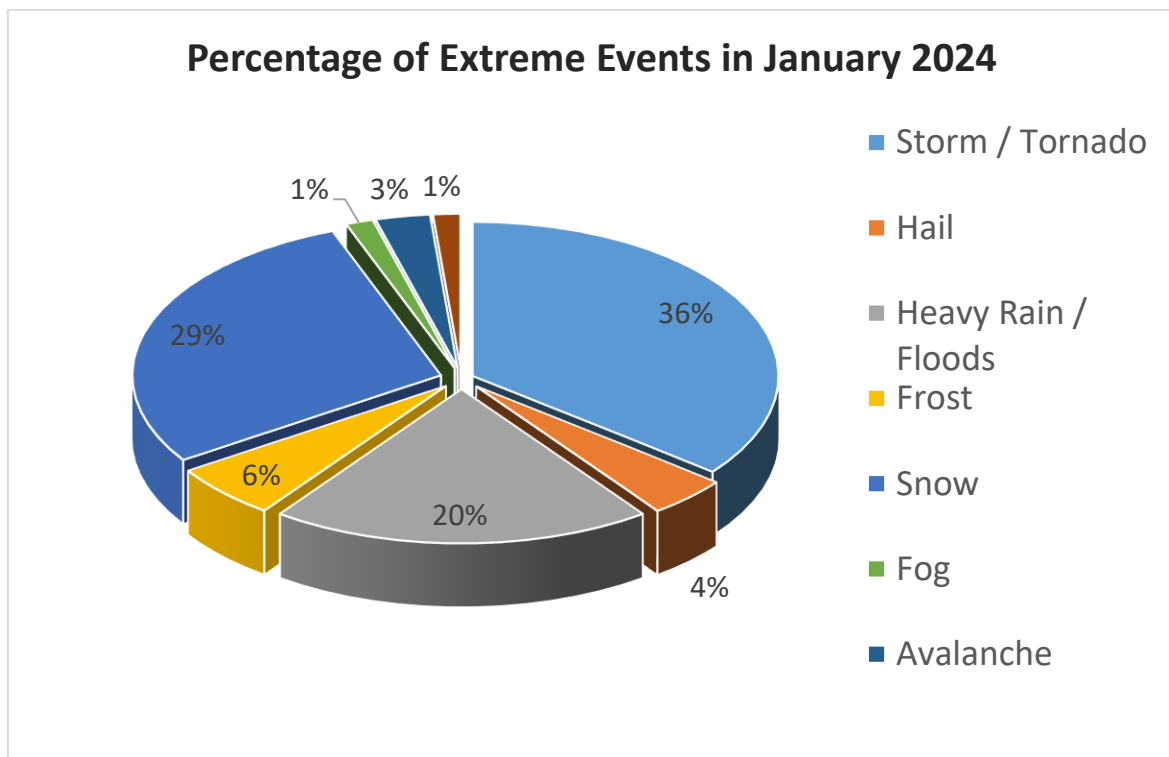


Figure 4.1. Percentage of extreme event in January 2024 (Url 3).

There are 70 extreme events have been reported in January 2024 in TSMS's Kardelen Database. Percentage of extreme events recorded in January 2024 were heavy rain-flood (20%), hail (4%), storm-tornado (36%), snow (29%), landslide (1%), fog (1%), frost (%6) and avalanche (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
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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>

