



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



State of the Climate in December 2024



Climate and Agricultural Meteorology Department
Research Department

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1. Introduction

The mean temperature of Türkiye in December 2024 was 6.1°C. This value was 1.3°C above the 1991-2020's normal (4.8°C).

In December 2024, mean temperatures were above seasonal normal in Edirne, Çorlu, Tekirdağ, Kocaeli, Gökçeada, Bandırma, Bursa, Yalova, Uzunköprü, Şile, Lüleburgaz, İpsala, Florya, Geyve, Balıkesir, Manisa, Kuşadası, Aydın, Denizli, Bodrum, Muğla, Datça, Dursunbey, Tavşanlı, Burhaniye, Bergama, Salihli, Seferihisar, Ödemiş, Nazilli, Milas, Yatağan, Burdur, Isparta, Beyşehir, Fethiye, Alanya, Senirkent, Dinar, Eğirdir, Köyceğiz, Dört Yol, Kale-Demre, Gazipaşa, Çankırı, Akçakoca, Bartın, İnebolu, Düzce, Nallıhan and Beypazarı; around seasonal normal in other regions of Türkiye.

Regional temperatures was above normal in all regions.

The lowest temperature was observed in Erzurum with -26.8 °C and the highest temperature was observed in İnebolu with 26.0°C. No extreme temperature were recorded.

Türkiye's areal mean precipitation in December 2024 was 73.0 mm. This value is approximately 4% below the 1991-2020's normal (75.7 mm).

In December, precipitation increased by more than 40% compared to normal in the west of Aegean, Antalya, Burdur, Mersin and Giresun. A decrease of more than 60% compared to normal was observed in Çorum, Amasya, Samsun, Malatya, Şanlıurfa, Mardin, Siirt, Şırnak, Hakkari, Van and Ağrı. In December, the highest precipitation was occurred in Muğla with 314.9 mm and lowest recorded with 12.4 mm precipitation in Iğdır.

Regional precipitation in December were below normal (1991-2020) in all regions except Mediterranean, Marmara, Aegean

The number of rainy days in December 2024 in Türkiye was near normal with 12.9 days (1991-2020 normal is 11.8 days). The number of rainy days was between 20-25 days in the İstanbul, Kocaeli, Sakarya, Yalova, Çanakkale, Balıkesir, İzmir, Muğla and Antalya and dropped below 5 days in the areas around Şırnak, Van, Hakkari, Ağrı, Iğdır and Kars.

There are 74 extreme events have been reported in December 2024 in TSMS's Kardelen Database. Percentage of extreme events recorded in December 2024 were storm-tornado (29%), heavy snow (%18), heavy rain-flood (27%), frost (%4), landslide (%3), fog (7%), hail (4%), lightning (5%), avalanche (3%) (Fig. 4.1).

2. Temperature

The mean temperature of Türkiye in December 2024 was 6.1°C. This value was 1.3°C above the 1991-2020's normal (4.8°C).Fig.2.1).



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

In December 2024, mean temperatures of the regions except Eastern Anatolia above seasonal norms. . (Fig.2.2).

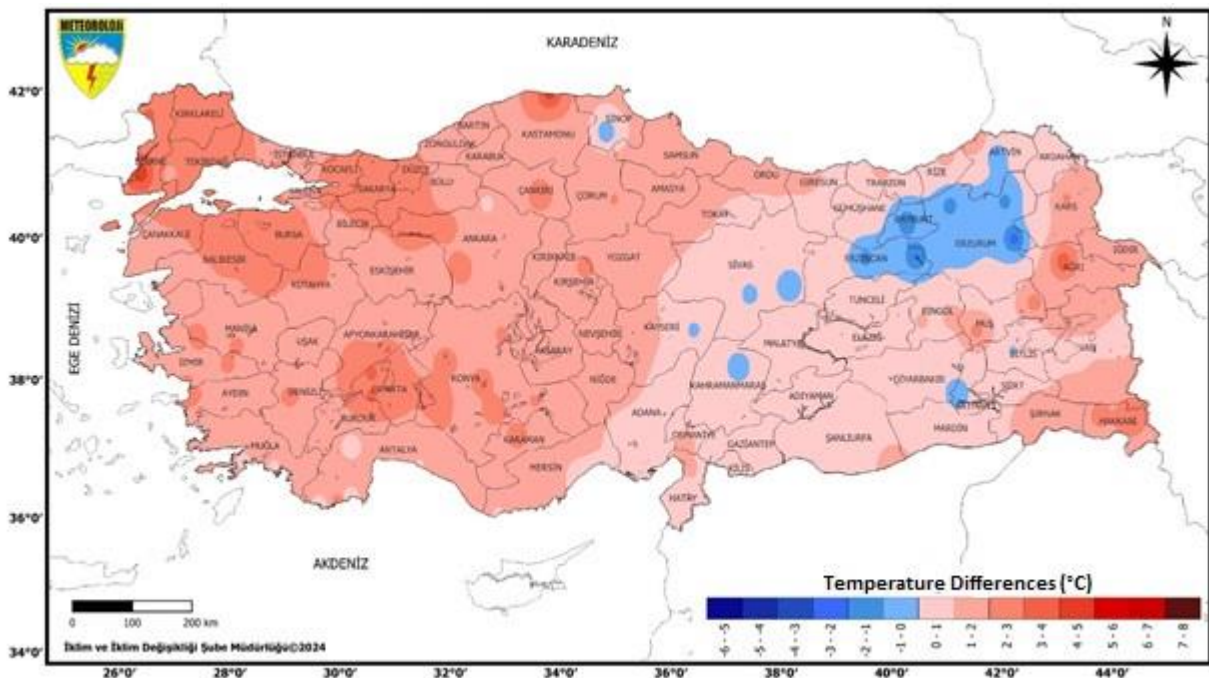


Figure 2.2. Spatial distribution of mean temperature anomaly in Türkiye in December 2024 (Url 1).



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

The monthly mean temperature in December around above seasonal its normal.

2.1. Regional Temperature

Regional temperatures was above normal in all regions (Fig. 2.4).

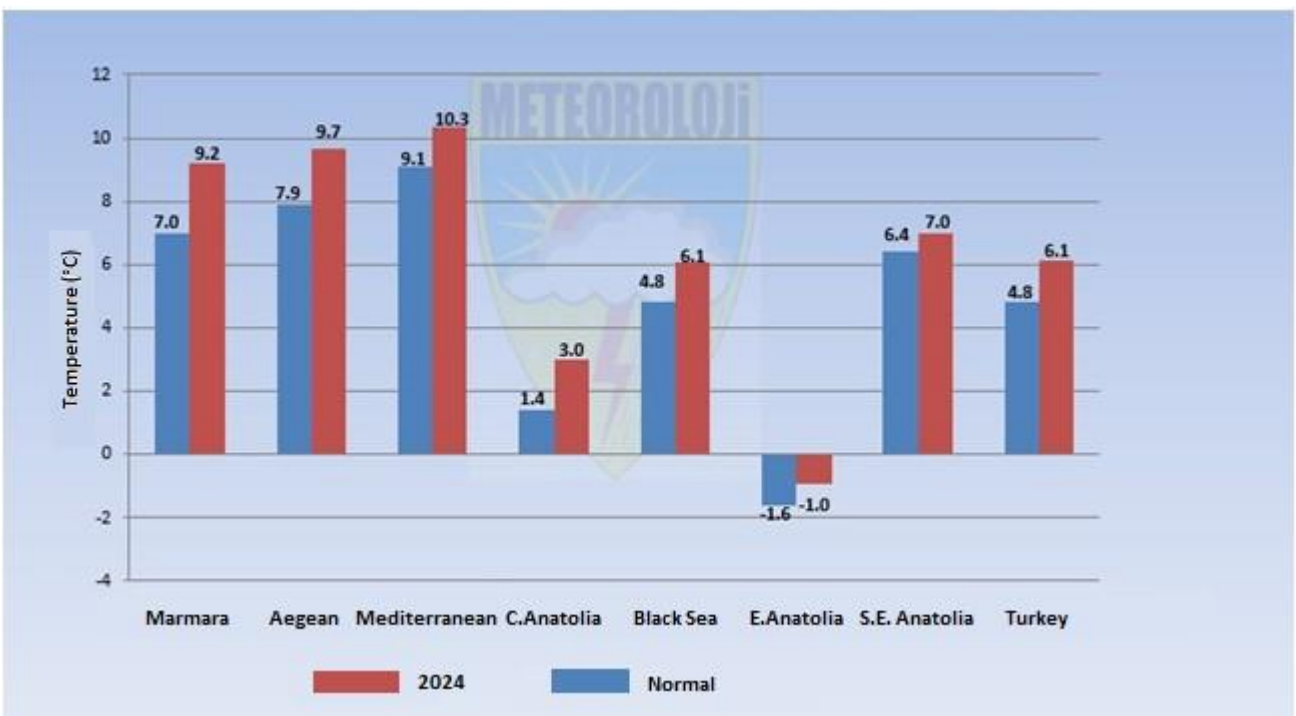


Figure 2. 4 Regional mean temperature differences in December 2024 (Url 1).

2.2. Extreme Temperature

The lowest temperature was observed in Erzurum with $-26.8\text{ }^{\circ}\text{C}$ and the highest temperature was observed in İnebolu with $26.0\text{ }^{\circ}\text{C}$. There were no extreme maximum temperature records observed.

3. Precipitation

Türkiye's areal mean precipitation in December 2024 was 73.0 mm. This value is approximately 4% below the 1991-2020's normal (75.7 mm) (Fig. 3.1)

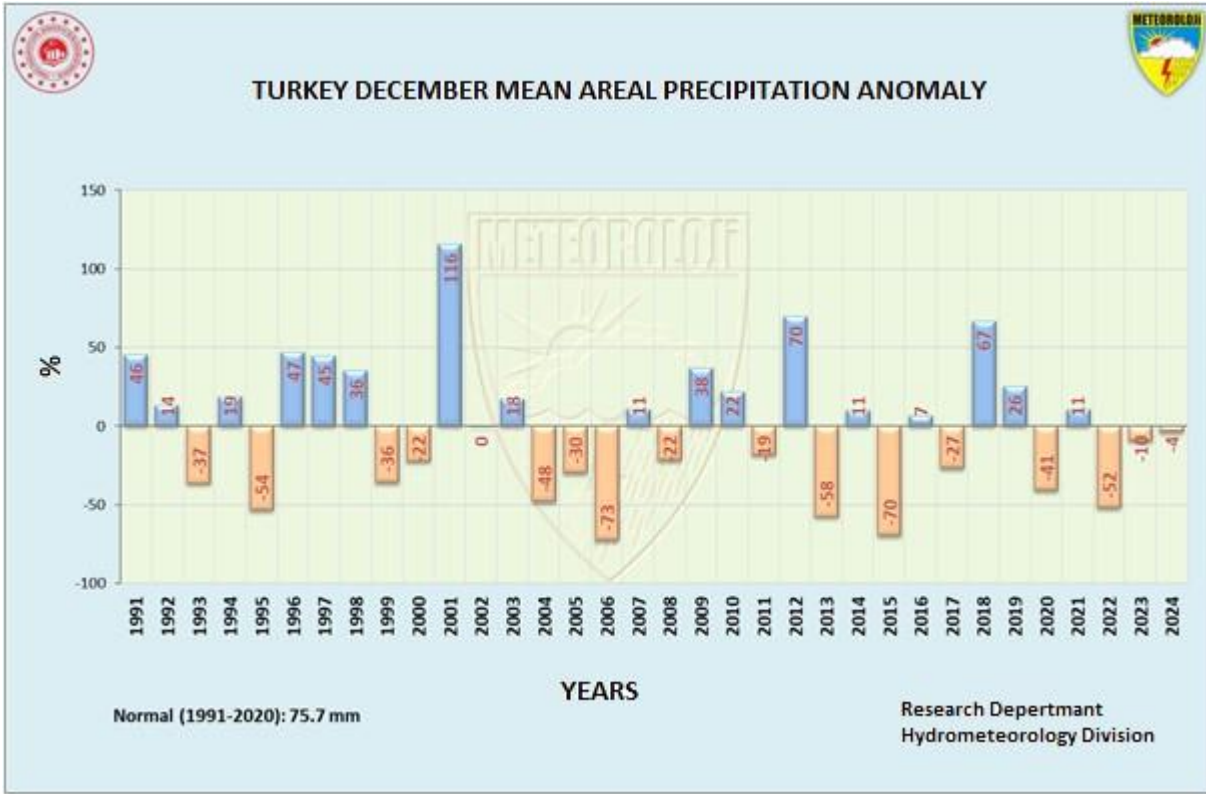


Figure 3. 1 Areal precipitation anomaly in December in Türkiye (Url 2).

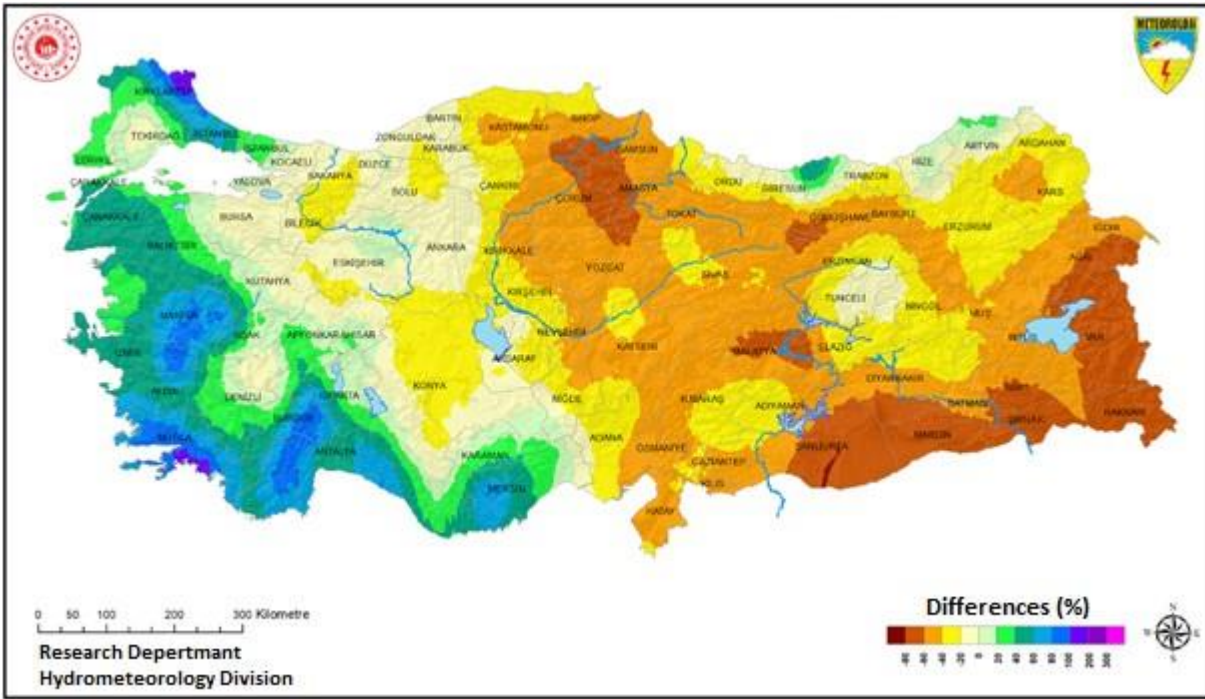


Figure 3. 2 Spatial distribution of mean precipitation anomalies in December 2024 (Url 2).

In December, precipitation increased by more than 40% compared to normal in the west of Aegean, Antalya, Burdur, Mersin and Giresun. A decrease of more than 60% compared to normal was observed in Çorum, Amasya, Samsun, Malatya, Şanlıurfa, Mardin, Siirt, Şırnak, Hakkari, Van and Ağrı. In December, the highest precipitation was occurred in Muğla with 314.9 mm and lowest recorded with 12.4 mm precipitation in Iğdır (Fig. 3.2).

3.1. Regional Precipitation

In December, Regional precipitation in were below near normal (1991-2020) in , Black Sea, E. Anatolia C. Anatolia, S. E. Anatolia; above normal in Marmara, Aegean, Mediterranean region. (Figure 3.3).



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

3.2. Rainy Days

The number of rainy days in December 2024 in Türkiye was near normal with 12.9 days (1991-2020 normal is 11.8 days). The number of rainy days was between 20-25 days in the İstanbul, Kocaeli, Sakarya, Yalova, Çanakkale, Balıkesir, İzmir, Muğla and Antalya and dropped below 5 days in the areas around Şırnak, Van, Hakkari, Ağrı, Iğdır and Kars (Fig. 3.4).

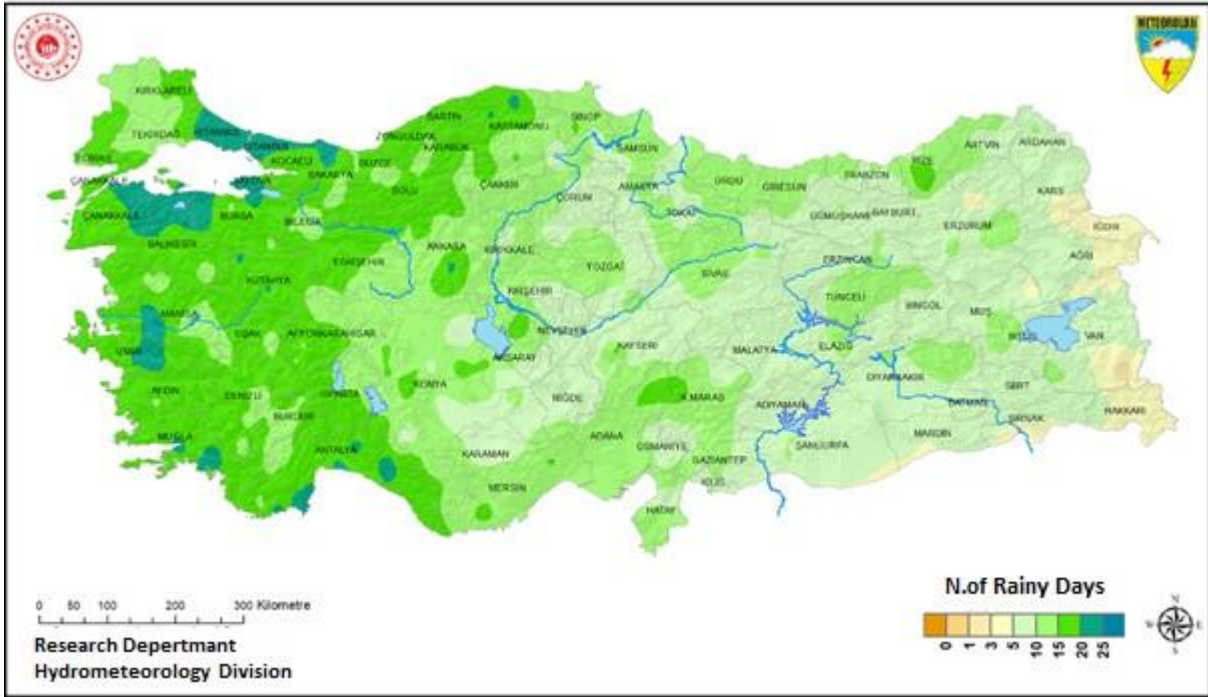


Figure 3. Number of rainy days in December 2024 (Url 2).

4. Extreme Meteorological Events

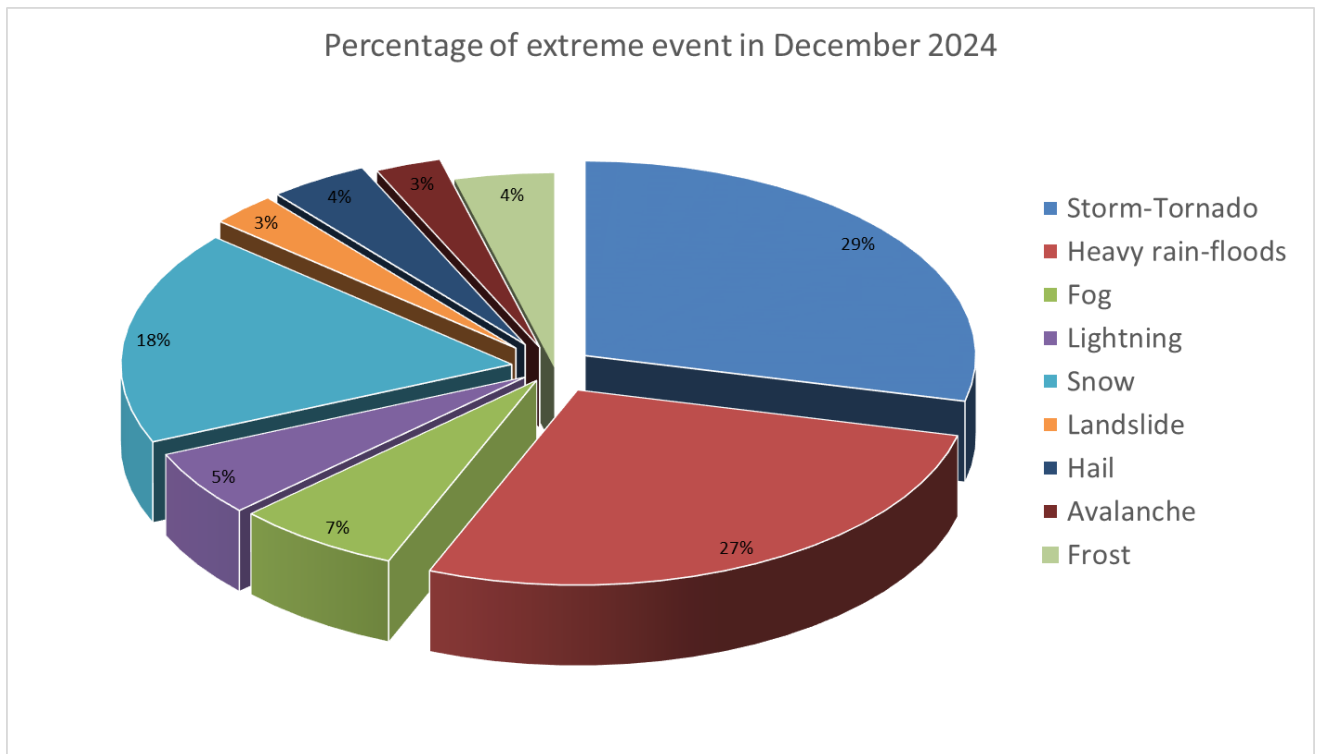


Figure 4.1. Percentage of extreme event in December 2024 (Url 3).

There are 74 extreme events have been reported in December 2024 in TSMS's Kardelen Database. Percentage of extreme events recorded in December 2024 were storm-tornado (29%), heavy snow (%18), heavy rain-flood (27%), frost (%4), landslide (%3), fog (7%), hail (4%), lightning (5%),avalanche (3%) (Fig. 4.1).

References

1. URL 1, Turkish State Meteorological Service, temperature analysis
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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>

