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

State of the Climate in March 2026

Climate and Agricultural Meteorology Department
Research Department

2026

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PREFACE

The Turkish State Meteorological Service (TSMS), under the Ministry of Environment, Urbanization, and Climate Change, prepares monthly, seasonal, and annual climate analyses consisting of temperature and precipitation assessments in order to inform the public and raise awareness regarding climate conditions.

Climate is a key environmental factor that directly affects a wide range of sectors, particularly urban development, agriculture, water resources management, energy production, and transportation. Therefore, continuous monitoring and analysis of climatic conditions play a crucial role in the long-term planning processes of these sectors.

Located within the Mediterranean Basin, Türkiye is among the regions most vulnerable to the adverse impacts of climate change, including heat waves, forest fires, droughts, floods, storms, and hail events. In recent years, an increase has been observed in both the frequency and intensity of extreme meteorological events associated with changing climate conditions.

This bulletin presents an assessment of temperature and precipitation observations recorded during the previous month and compares them with the climatological normals for the period 1991–2020. In addition, the report includes analyses of extreme temperature and precipitation events across Türkiye, regional climate evaluations, basin-based precipitation assessments, and the number of precipitation days.

All climate reports prepared by the Turkish State Meteorological Service are publicly available through the “Analyses” section of the official website at https://www.mgm.gov.tr.

We hope that these reports will contribute to increasing public awareness of weather and climate events, incorporating climate considerations into sectoral planning activities, supporting the development of climate-resilient cities, and assisting decision-makers in adaptation and risk-reduction efforts related to food security and disaster management.

Sincerely,

Volkan Mutlu COŞKUN

Director General
Turkish State Meteorological Service

1. Introduction

- The long-term (1991–2020) mean temperature for March is 7.7°C, while the mean temperature in March 2026 was 7.5°C.
- The lowest temperature was recorded as -21.2°C in Özalp, and the highest temperature as 25.6°C in İskenderun.
- In March 2026, mean temperatures were below seasonal normals around Antakya and Cizre, above seasonal normals around Kale (Demre), Bartın, and Yalova, and around seasonal normals across the rest of the country.
- Overall, the March 2026 mean temperature was 0.2°C below the 1991–2020 March normal.
- The areal average precipitation in March 2026 was 81.1 mm, which is approximately 33% above the long-term average (61.2 mm for 1991–2020).
- The highest precipitation was recorded in Şırnak (281.3 mm), while the lowest precipitation was observed in Amasya (21.5 mm).
- Compared to the previous year, March precipitation (28.8 mm) increased by more than 100%, in addition to being 33% above normal.
- In March, precipitation showed:
    - More than 60% decrease relative to normals in Edirne, Çanakkale, Bursa, Bilecik, Zonguldak, Bartın, Kastamonu, Sinop, Samsun, Amasya, Tokat, Kayseri, Malatya, Gümüşhane, Trabzon, and Erzurum,
    - More than 100% increase relative to normals in İstanbul, Yalova, Aydın, Manisa, Konya, Mersin, Adana, Hatay, Ardahan, Kars, Hakkâri, as well as eastern Afyonkarahisar, western Antalya, and the Southeastern Anatolia Region.
- At the provincial scale:
    - The highest precipitation was recorded in Şırnak (281.3 mm), and the lowest in Amasya (21.5 mm).
    - The largest decrease relative to normal occurred in Bartın (61%).
    - March precipitation reached the highest levels of the last 30 years in Siirt, Mersin, Adana, Diyarbakır, Gaziantep, Kilis, and Mardin,
    - while the lowest levels were recorded in Sinop (last 40 years), Bartın (37 years), Tokat (36 years), and Gümüşhane and Samsun (last 33 years).

2. Temperature

In March 2026, mean temperatures were below seasonal normals around Antakya and Cizre, above seasonal normals around Kale (Demre), Bartın, and Yalova, and around seasonal normals across the rest of the country. The mean temperature for March 2026 was 7.5°C, which is 0.2°C below the 1991–2020 March normal of 7.7°C *(Figures 1.1 and 1.2)*.

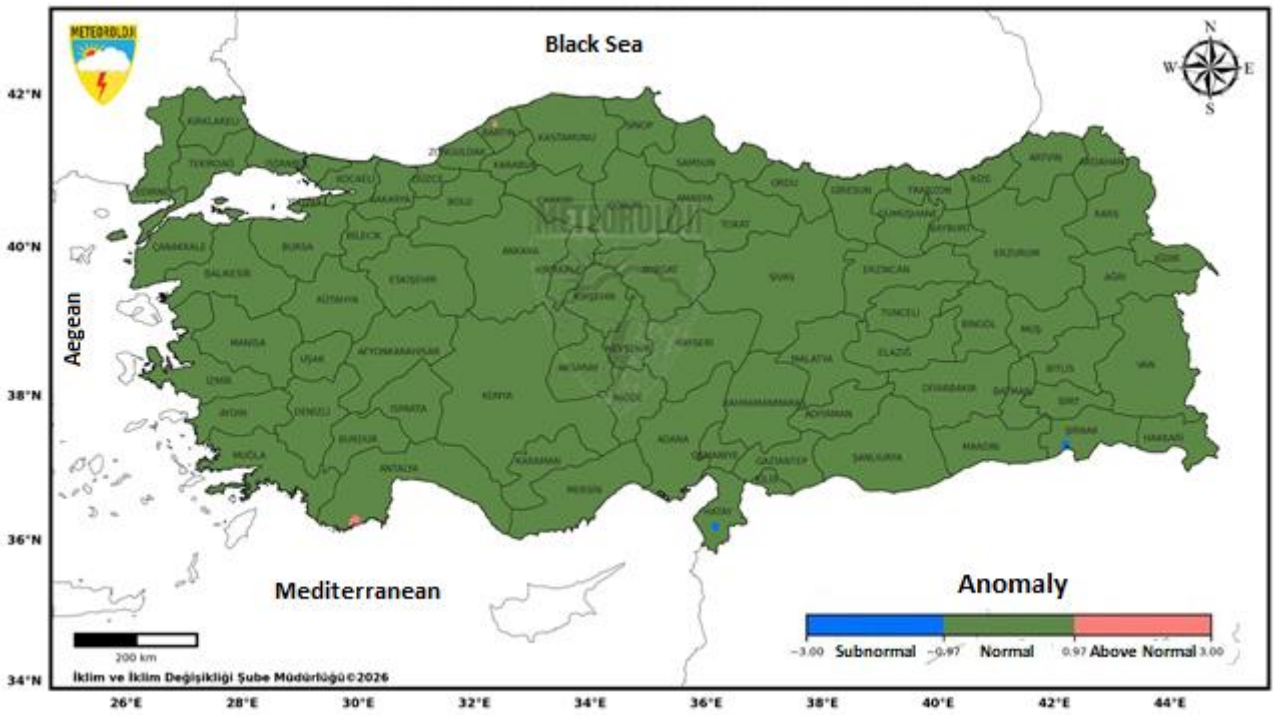

Figure 1.1 Spatial mean temperature anomalies for March 2026

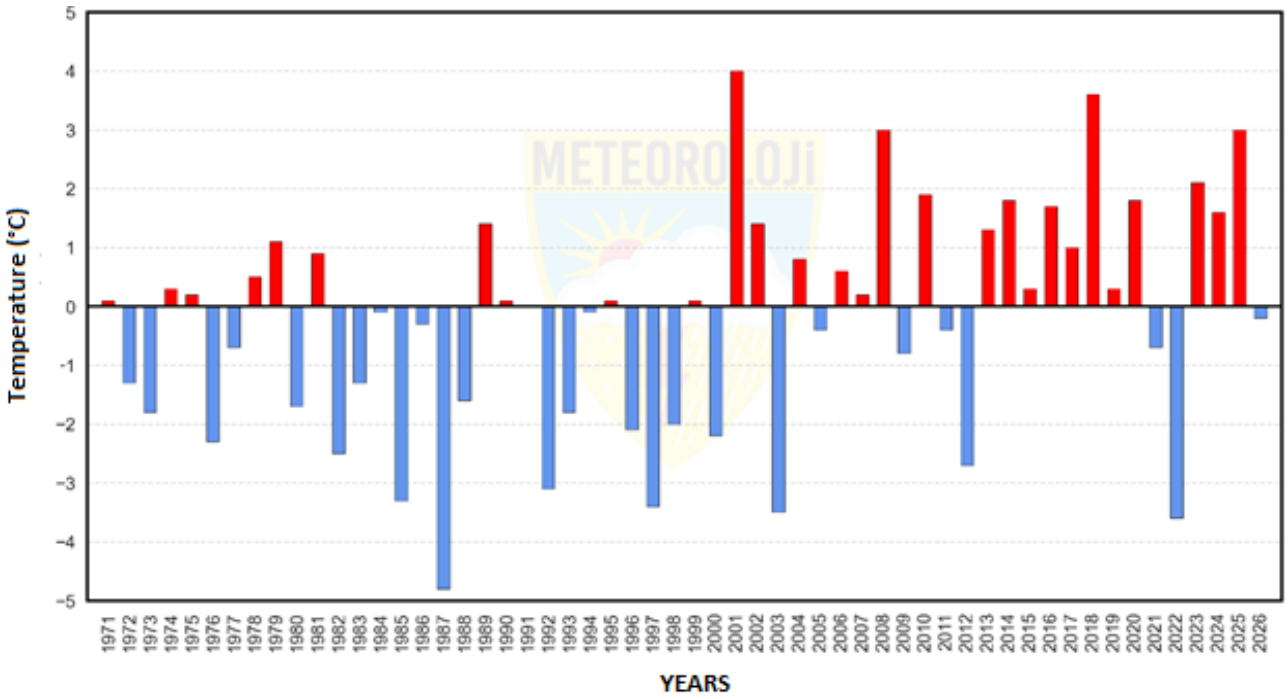

Figure 1.2 Mean temperature anomaly for March in Türkiye

When examining mean temperature anomalies, negative anomalies were observed in the northwestern parts of the country, as well as in Eastern and Southeastern Anatolia *(Figure 1.3)*.

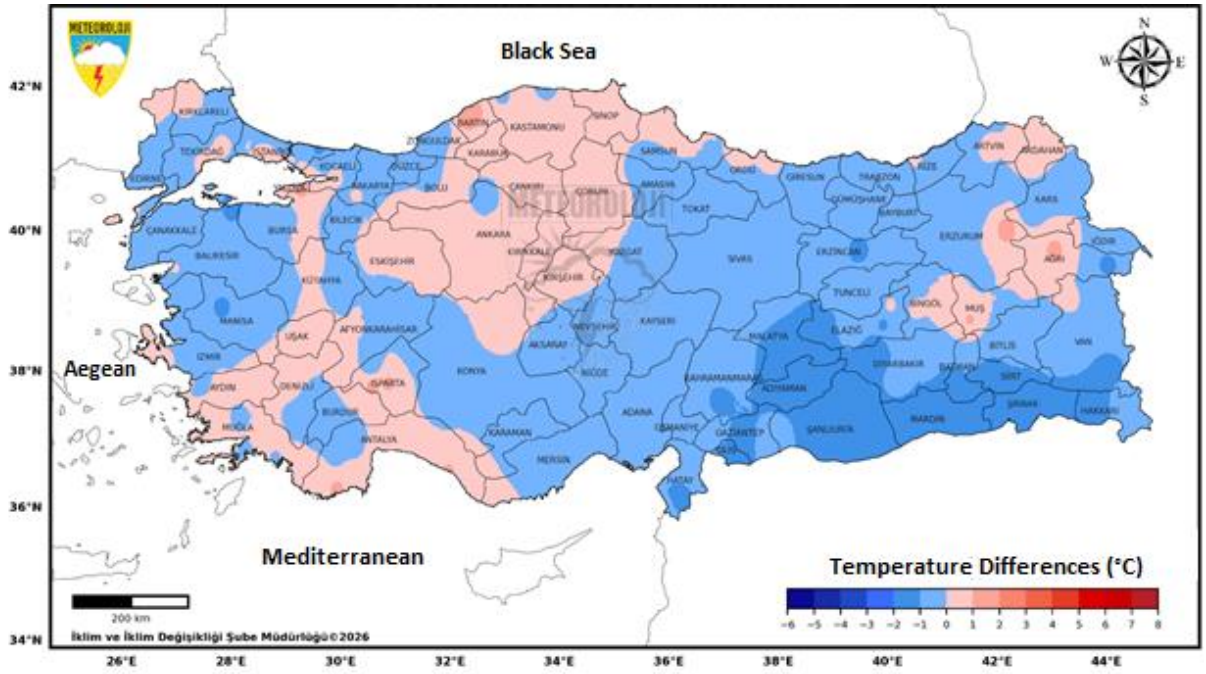

Figure 1.3 Mean temperature anomalies for March 2026

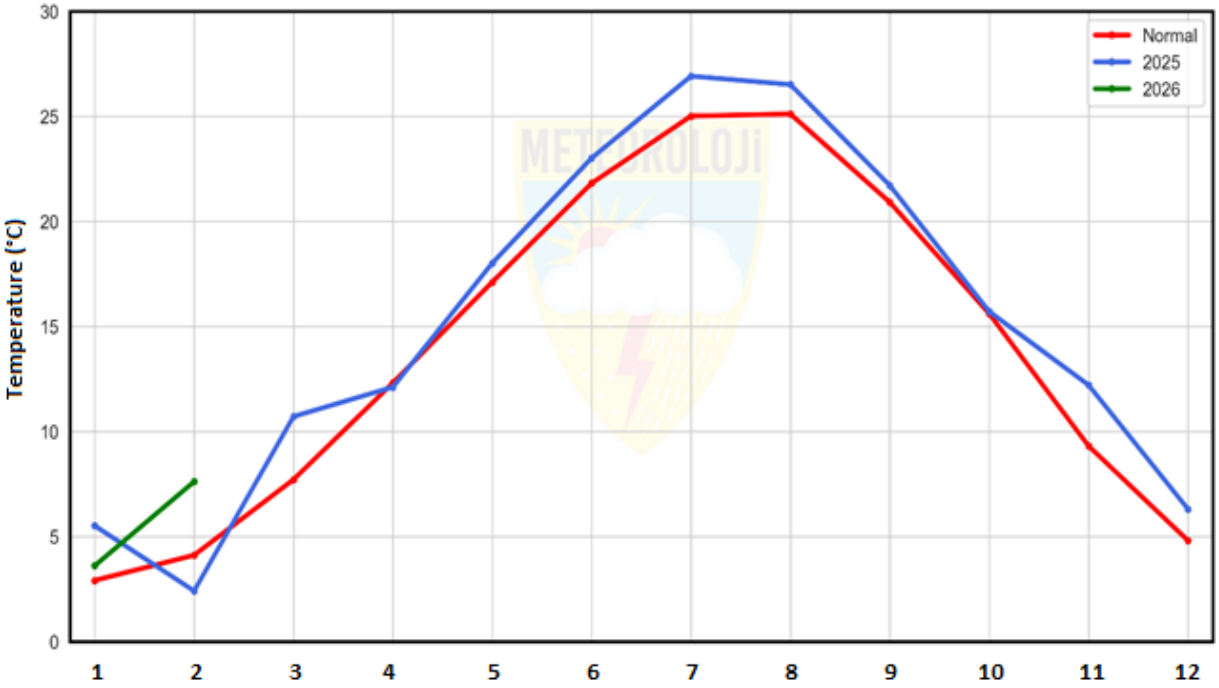

Figure 1.4 Comparison of March 2026 mean temperatures with the long-term average and the previous year

In March (month 3) of 2026, temperatures were near long-term normals. In contrast, March temperatures in 2025 were slightly above normal. This indicates that March 2026 was relatively close to the climatological average, but cooler compared to the previous year.

2.1. Regional Temperature

Marmara Region: Mean temperatures were above seasonal normals around Yalova, while they were around seasonal normals in the rest of the region. The long-term (1991–2020) March mean temperature for the region is 8.5°C, whereas it was 8.3°C in March 2026. Extreme temperatures ranged from a minimum of -3.3°C in Lüleburgaz to a maximum of 24.2°C in Sakarya.

Aegean Region: Mean temperatures were around seasonal normals across the entire region. The long-term March mean temperature is 10.2°C, while it was 10.1°C in March 2026. Extreme temperatures ranged from a minimum of -7.1°C in Tavşanlı to a maximum of 23.5°C in Nazilli.

Mediterranean Region: Mean temperatures were below seasonal normals around Antakya, above seasonal normals around Kale (Demre), and around seasonal normals in the rest of the region. The long-term March mean temperature is 11.6°C, while it was 11.5°C in March 2026. Extreme temperatures ranged from a minimum of -10.3°C in Göksun to a maximum of 25.6°C in İskenderun.

Central Anatolia Region: Mean temperatures were around seasonal normals throughout the region. The long-term March mean temperature is 5.5°C, while it was 5.3°C in March 2026. Extreme temperatures ranged from a minimum of -12.6°C in Kangal to a maximum of 20.0°C in Çiçekdağı.

Black Sea Region: Mean temperatures were above seasonal normals around Bartın, while they were around seasonal normals in the rest of the region. The long-term March mean temperature is 7.0°C, which was also observed in March 2026. Extreme temperatures ranged from a minimum of -13.4°C in Bayburt to a maximum of 24.7°C in Boyabat.

Eastern Anatolia Region: Mean temperatures were around seasonal normals across the region. The long-term March mean temperature is 2.8°C, while it was 2.3°C in March 2026. Extreme temperatures ranged from a minimum of -21.2°C in Özalp to a maximum of 20.8°C in Malatya.

Southeastern Anatolia Region: Mean temperatures were below seasonal normals around Cizre, while they were around seasonal normals in the rest of the region. The long-term March mean temperature is 10.3°C, while it was 9.0°C in March 2026. Extreme temperatures ranged from a minimum of -3.6°C in Batman to a maximum of 23.6°C in Birecik (Figures 1.12, 1.13, Table 1.1).

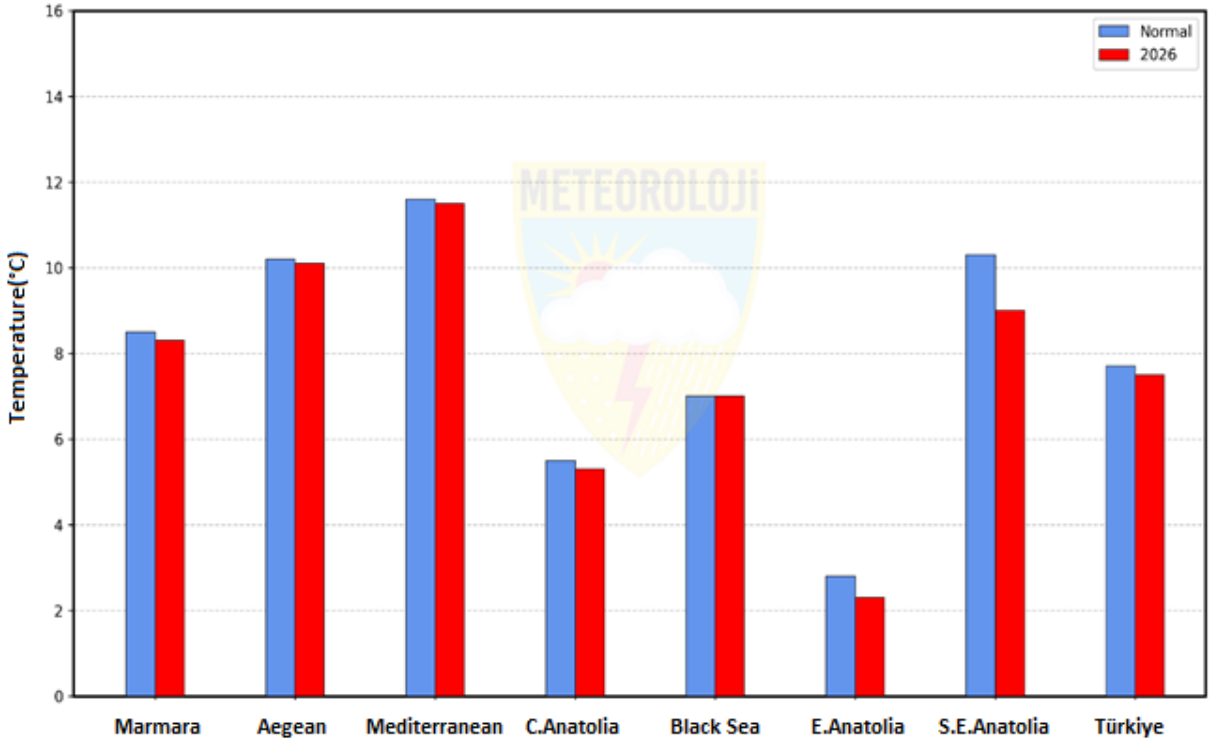

Figure 2. 5 Regional mean temperature differences in March 2026 (URL 1).

2.2. Extreme Temperature

No new extreme (maximum or minimum) temperature records were observed in March 2026.

3.Precipitation

The graph indicates that precipitation in March 2026 increased by approximately 33% compared to the long-term average. This places 2026 among the years with a positive precipitation anomaly relative to recent March values. However, it is notable that higher positive anomalies were observed in some previous years (e.g., 2023).

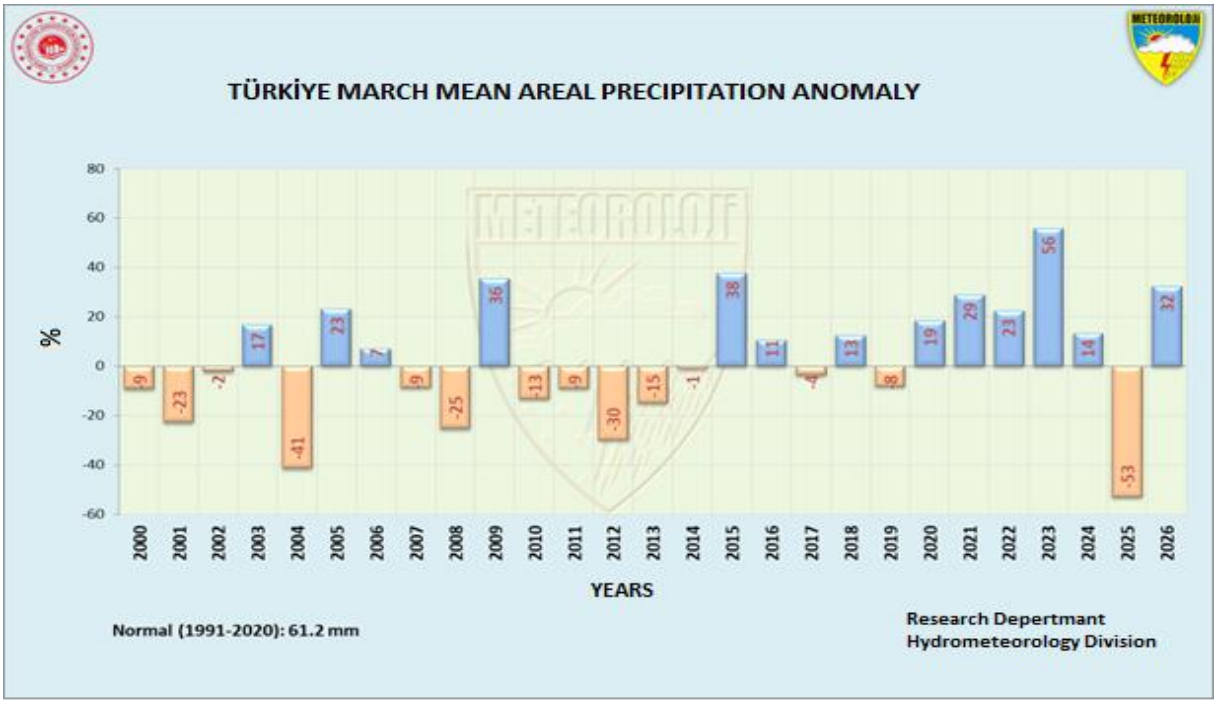

Figure 3. 1 Areal precipitation anomaly in March in Türkiye (Url 2).

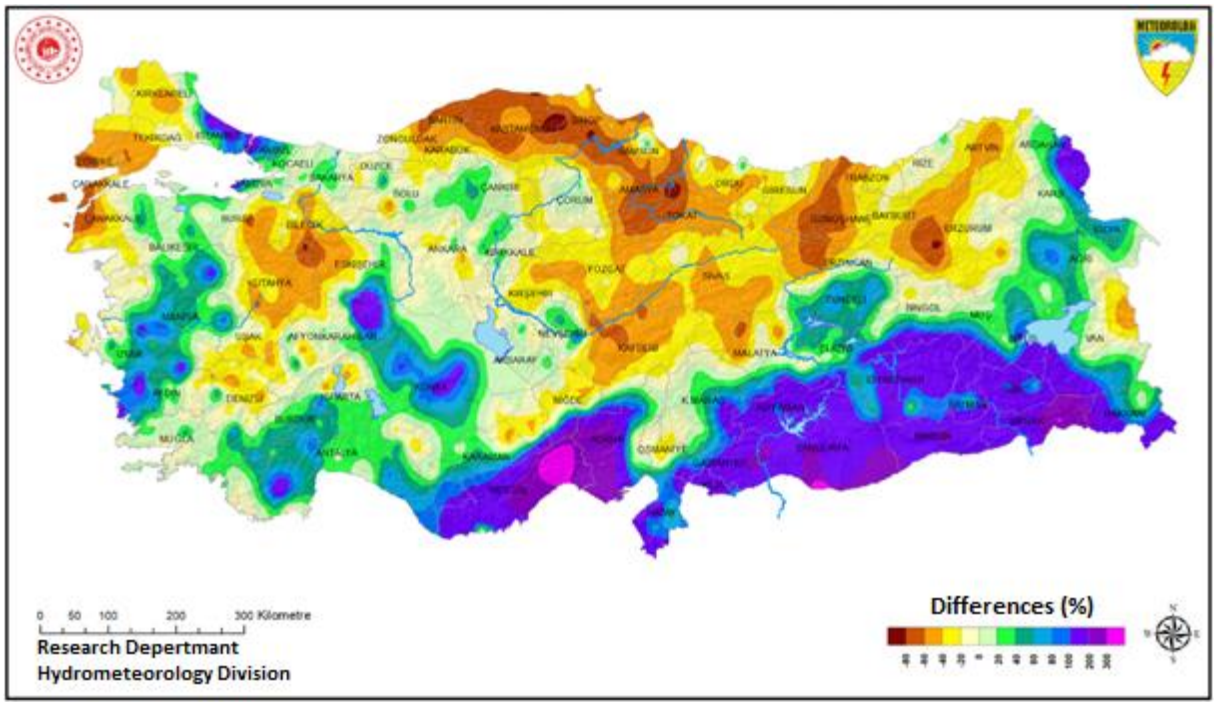

Figure 3.2. Deviation of March 2026 precipitation from the climatological normals.

Across Türkiye, a total of 81.1 mm of precipitation was recorded in March. The long-term (1991–2020) March normal is 61.2 mm, while precipitation in March of the previous year was 28.8 mm. Accordingly, March precipitation increased by 33% compared to the long-term normal and by more than 100% compared to the previous year.

Precipitation showed a decrease of more than 60% relative to normal in the surroundings of Edirne, Çanakkale, Bursa, Bilecik, Zonguldak, Bartın, Kastamonu, Sinop, Samsun, Amasya, Tokat, Kayseri, Malatya, Gümüşhane, Trabzon, and Erzurum, while it showed an increase of more than 100% relative to normal in İstanbul, Yalova, Aydın, Manisa, Konya, Mersin, Adana, Hatay, Ardahan, Kars, Hakkâri, as well as in the eastern parts of Afyonkarahisar, the western parts of Antalya, and the Southeastern Anatolia Region.

At the provincial scale, the highest precipitation was recorded in Şırnak (281.3 mm), while the lowest precipitation was observed in Amasya (21.5 mm). The largest decrease relative to normal occurred in Bartın (61%). March precipitation reached the highest levels of the last 30 years in Siirt, Mersin, Adana, Diyarbakır, Gaziantep, Kilis, and Mardin, while the lowest levels were recorded in Sinop (last 40 years), Bartın (37 years), Tokat (36 years), and Gümüşhane and Samsun (last 33 years).

3.1. Regional Precipitation

Regional precipitation was above normal in the Aegean, Mediterranean, Eastern Anatolia, and Southeastern Anatolia regions, around normal in the Marmara Region, and below normal in the Central Anatolia and Black Sea regions.

The Southeastern Anatolia Region received more than twice its normal precipitation, reaching the highest level of the last 30 years. In the Mediterranean Region, the highest March precipitation of the last 11 years was recorded (Figure 3.3).

In the Marmara Region, the highest precipitation was recorded in İstanbul (114.8 mm), while the lowest was observed in Bilecik (34.1 mm).

In the Aegean Region, the highest precipitation was recorded in Aydın (97.8 mm), and the lowest in Kütahya (41.4 mm).

In the Mediterranean Region, the highest precipitation was recorded in Hatay (202.4 mm), while the lowest was observed in Burdur (75.9 mm).

In the Central Anatolia Region, the highest precipitation was recorded in Karaman (70.7 mm), and the lowest in Yozgat (29.0 mm).

In the Black Sea Region, the highest precipitation was recorded in Rize (106.7 mm), while the lowest was observed in Amasya (21.5 mm).

In the Eastern Anatolia Region, the highest precipitation was recorded in Hakkari (208.3 mm), and the lowest in Erzurum (42.5 mm).

In the Southeastern Anatolia Region, the highest precipitation was recorded in Şırnak (281.3 mm), while the lowest was observed in Şanlıurfa (159.9 mm).

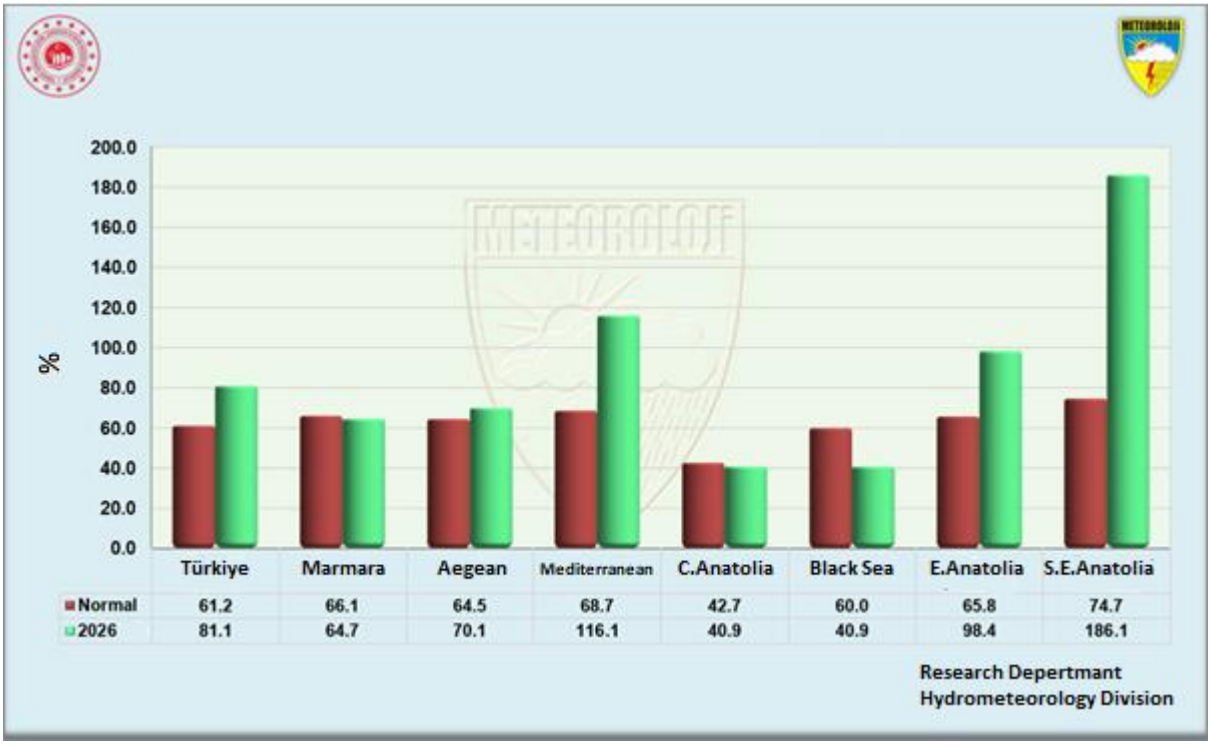

Figure 3. 3 Regional Precipitation Differences in March 2026 (Fig 3.3)

3.2. Number of Rainy Days

Across Türkiye, an average of 11.5 precipitation days was observed in March (1991–2020 normal: 11.3 days).

The number of precipitation days ranged between 5–10 days in the Aegean Region, western parts of the Marmara and Mediterranean regions, the Central Black Sea, and central parts of Central Anatolia, while it exceeded 25 days around Hakkâri and Şırnak *(Figure 3.4)*.

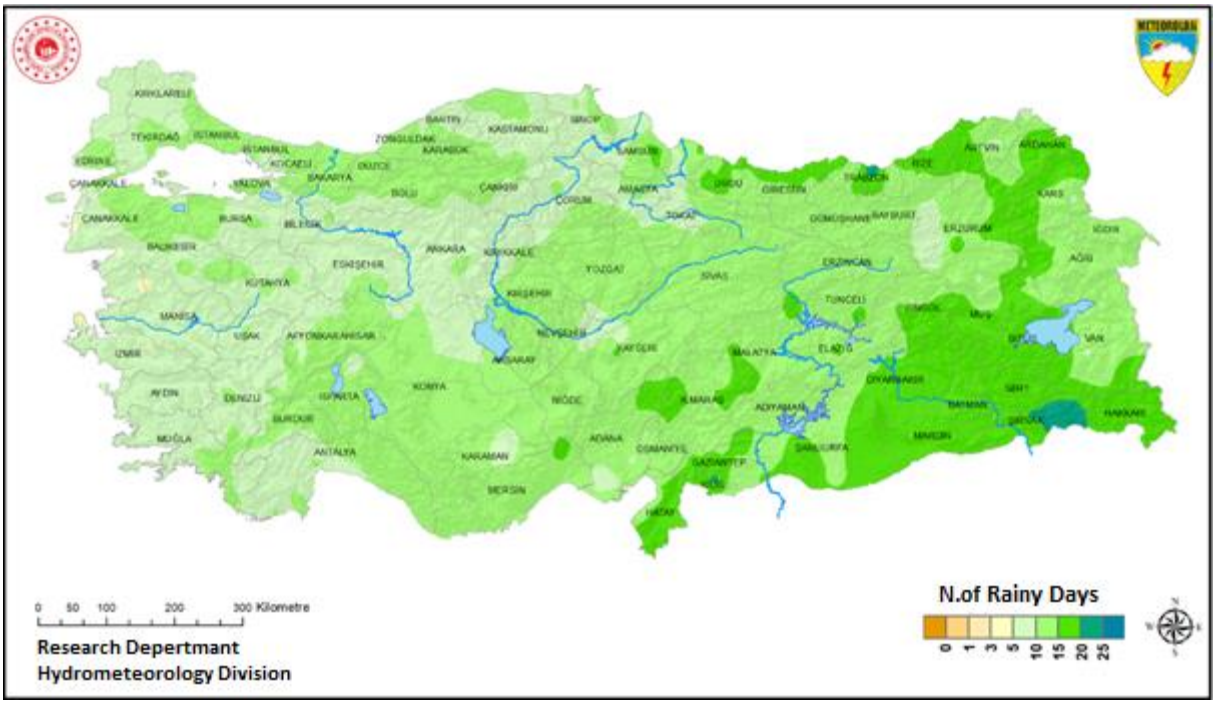

Figure 3.4 Number of rainy days in March 2026 (Url 2).

4. Extreme Meteorological Event

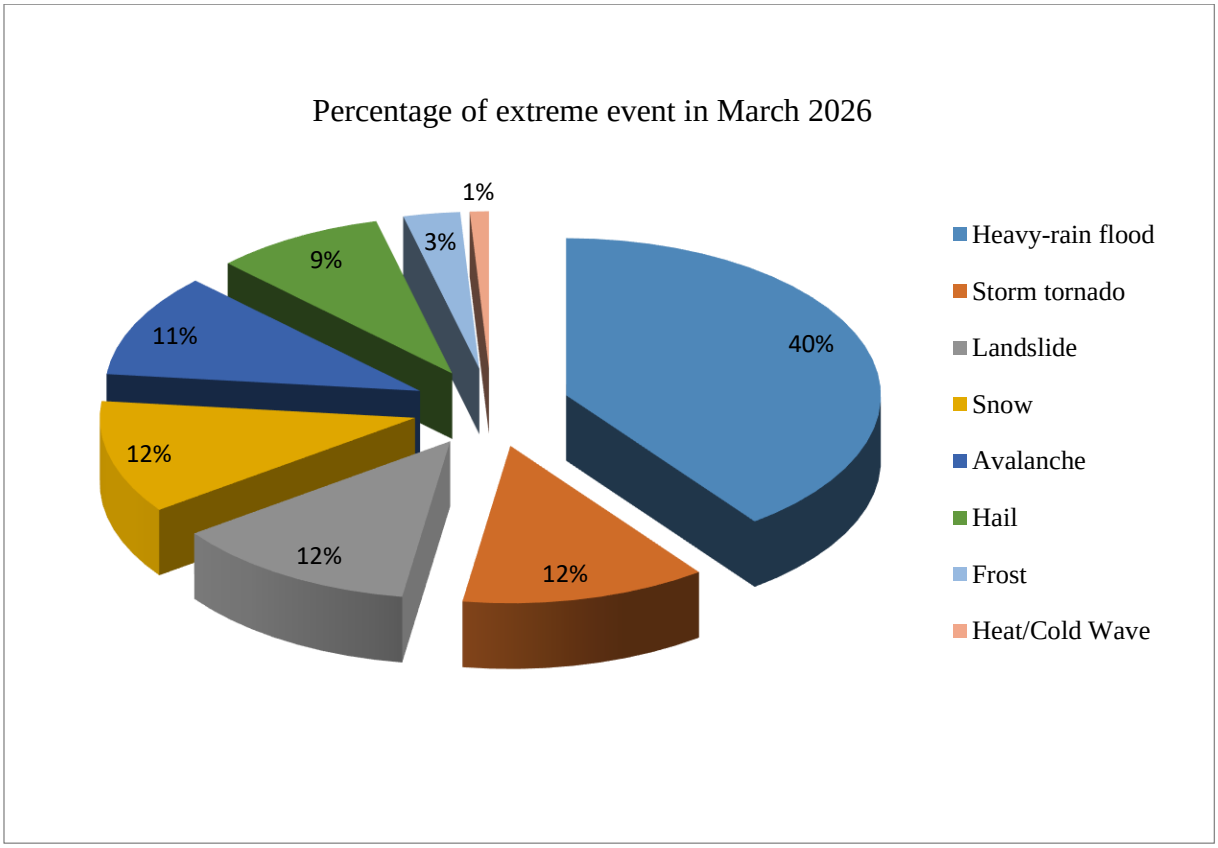

Figure 4.1. Percentage of extreme event in March 2026 (Url 3).

During this period, a total of 103 extreme events were recorded in March 2026. Heavy rain and flood events were the most dominant, with 41 cases (approximately 40%), followed by storm/tornado (13 cases, 12%) and landslides (13 cases, 12%). Snow events (12 cases, 12%) and avalanches (11 cases, 11%) occurred at similar levels, while hail (9 cases, 9%) contributed moderately. In contrast, frost (3 cases, 3%) and heat/cold waves (1 case, 1%) were observed only in limited numbers. Overall, the period was characterized predominantly by hydrometeorological and precipitation-related extreme events, with temperature-related extremes remaining minimal.

References

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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

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