



Dust and Sandstorms Events in August 2025

Executive Summary:

This report presents an in-depth analysis of dust and sandstorm (SDS) events across Saudi Arabia during August 2025, benchmarked against the 21-year climatological average (2003–2024). A total of 178 dust hours distributed over 25 days were recorded, reflecting an 8% decrease in dust hours and a 9% increase in dust storm days compared to the long-term mean. Regional variations were pronounced: the Western and Northern regions (notably Yenbo, Guriat, Al-Karj, and Rafha) exhibited significant increases, with anomalies ranging from +9 to +14 hours and +2 to +3 days. In contrast, the Central and Eastern regions (especially Riyadh, Al-Ahsa, and Arar) reported sharp declines, with reductions of –15 to –22 hours and –3 to –4 days, in some cases reaching zero events. Southern stations such as Najran showed near-normal activity, while Gizan and Dawadmi exhibited sharp declines. On the event scale, blowing dust dominated with 159 cases (90%), though below the historical 184-case average, whereas sandstorms increased to 11 cases (vs. 8 historically), and dust storms rose to 8 cases (vs. 2 historically). A case study from Yanbu on 14 August 2025 highlighted a thunderstorm-induced sandstorm, driven by strong northeasterly winds of 34 knots and convective outflows. These results emphasize spatial contrasts in SDS dynamics across the Kingdom and underscore the influence of synoptic drivers such as pressure troughs, temperature gradients, and wind regimes.