Intense sand and dust storms struck China, US in 2025: UN

China and the southern United States were hit last year by some of the worst sand and dust storms in decades, the United Nations said Friday.

The UN's weather and climate agency said these episodes affected public health and the environment, and disrupted transport and economic activity.

In its 10th annual Airborne Dust Bulletin, the World Meteorological Organisation said that globally, overall average dust concentrations last year were similar to 2024 – though with big regional variations.

"Every year, around 2,000 million tonnes of dust enters the atmosphere, and can be transported for hundreds of kilometres and even thousands of kilometres, across continents and oceans," the WMO said.

The main dust sources are major deserts such as the Sahara in Africa, the Gobi in Asia, and the Arabian Desert in the Middle East.

Though a natural process, poor water and land management, drought and environmental degradation "are increasingly to blame" for a hazard which affects more than 150 countries, the WMO said.

The highest annual mean dust concentrations worldwide again were in the Bodele Depression in Chad, one of the world's most active dust source regions.

– Texas takes a hit –

"Sand and dust storms affect air quality and human health," said WMO chief Celeste Saulo.

“They reduce agricultural productivity, disrupt transport and aviation, strain water and energy systems, and damage ecosystems. No country is immune to their impacts.”

The desert border region of Mexico and the United States saw exceptionally frequent, intense and prolonged dust storms in 2025.

El Paso in Texas experienced 50 days with dust weather – more than double the annual average.

The number of dust storms was the greatest since 1935, the WMO said.

The problem peaked on March 18, with a daily average concentrations of inhalable particles (PM10) at 2,064 microgrammes per cubic metre of air.

The highest hourly peak hit 8,142 microgrammes – the highest measured in Texas since hourly PM monitoring began around 27 years ago.

PM10 is particulate matter with a diameter of 10 micrometres.

The World Health Organization’s air quality guideline annual level is 15 microgrammes, or 45 in a 24-hour period.

– China storm –

In April 2025, China suffered its worst dust and sand storm in a decade, in terms of its intensity, duration and influence.

As dust swept in from Mongolia, hourly PM10 concentrations exceeded 1,000 microgrammes per cubic metre in northern China.

In some places, the figure was as high as 3,000 to 4,000 microgrammes.

Saulo said because sand and dust storms cross borders, countries needed to share early warning data.

The agency said artificial intelligence had the potential to improve sand and dust forecasts, but more research was needed at this stage.

Currently, some AI systems are better at forecasting short-lived, rapidly-developing local dust storms, while others are more consistent on large-scale events that develop and travel over several days.