

Strong wind and heavy rainfall caused by Typhoon Yagi struck several countries

Severe temperature drop effected large areas through Europe and North America

Abstract: In September 2024, 8 typhoons were generated in the northwestern Pacific, which is more than the usual number for the same period. 4 typhoons made landfall in China, with strong intensity and prolonged impacts upon landfall. Among them, Typhoon Yagi was the strongest typhoon that made landfall in China in autumn since meteorological records began and also the strongest typhoon active in the Beibu Gulf. It successively landed four in the Philippines, Hainan and Guangdong provinces in China, and Vietnam, bringing strong winds and heavy rainfall to the Philippines, South China, Vietnam, Laos, and other countries, causing immense destructive power and severe impacts. The United States and Mexico were also affected by hurricanes, experiencing strong winds, heavy rains, and floods. Europe and central North America were influenced by cold air and cyclones, resulting in widespread cooling, strong winds, and heavy rainfall. Additionally, southern Europe, northern and southeastern Africa, southern Asia, and southwestern North America continued to experience high temperatures, with some regions reaching record highs for the same period.

I. Global weather overview

1. Temperature

In September 2024, extensive high-temperature weather persisted in the mid-to-low latitudes. Most regions in northern South Europe, northern and southeastern Africa, West Asia, South Asia, Southeast Asia, southeastern China, Japan, the Korean Peninsula, central and northern Australia, southwestern Canada, southern and midwestern United States, northern and southeastern Mexico, and southeastern South America experienced daily maximum temperatures exceeding 35°C. In some areas, the highest temperatures reached 37–45°C, with local maximum temperatures in northern Africa, West Asia, and southwestern United States ranging from 48–50°C. Parts of northern Europe, northern South Europe, western East Europe, northwestern West Asia, Bangladesh, the Sichuan Basin and Jiangnan region in China, southwestern Canada, and the western coastal regions of the United States saw their highest temperatures exceed historical records for the same period (Fig. 1).

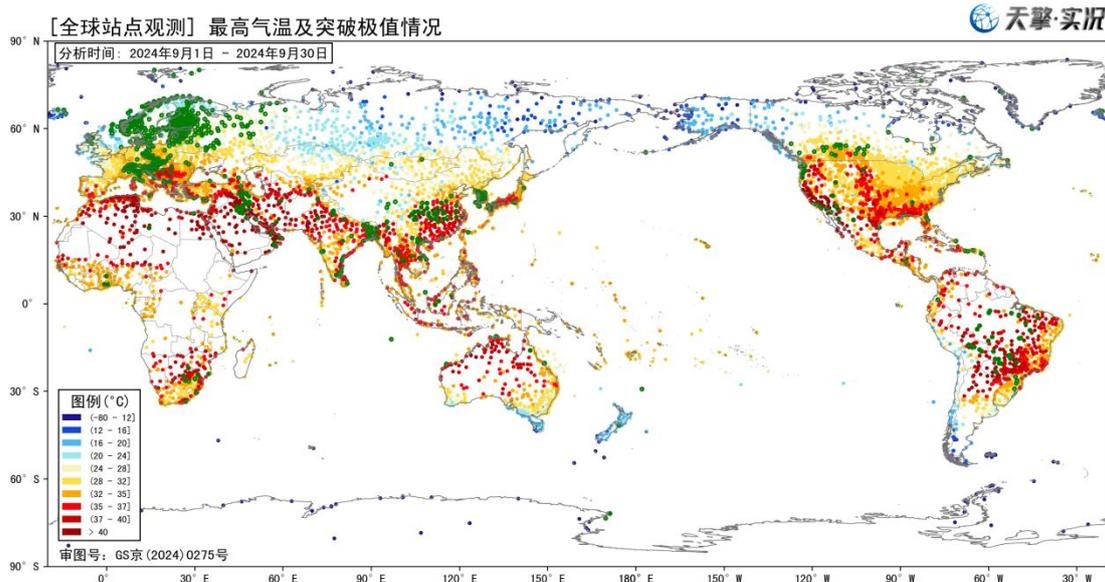


Fig. 1 Global highest temperatures and sites exceeding historical records for the same period in September 2024 (unit: °C, sites exceeding records indicated by green circles)

2. Precipitation

In September 2024, the main regions of heavy precipitation globally were southwestern and southeastern coastal China, South Asia, Southeast Asia, western and southern Russia, Japan, the Korean Peninsula, central Africa, Western Europe, Southern Europe, southeastern United States, Mexico, and northern South America. Most of these regions received cumulative precipitation of 100–260 mm. Parts of the coastal regions of West Africa, northern South Asia, Southeast Asia, southeastern United States, Mexico, and northwestern South America received cumulative precipitation of 300–400 mm, with some areas exceeding 500 mm (Fig. 2).

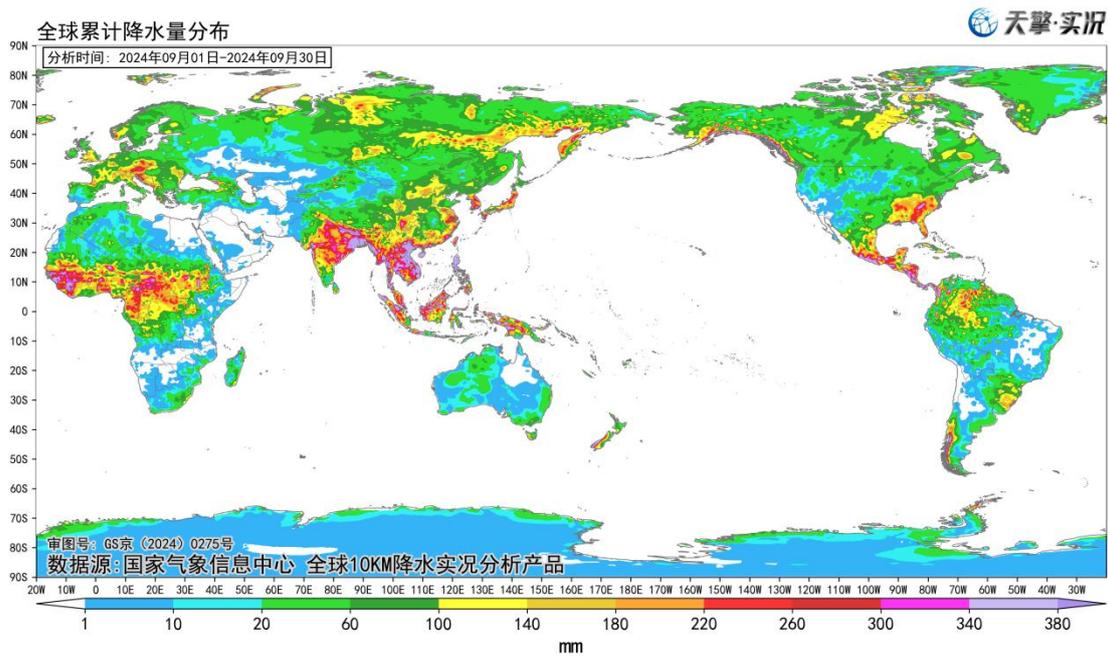


Fig. 2. Global cumulative precipitation in September 2024 (unit: mm)