

# **Monthly Report of Global Disastrous Weather**

**April 2023**

**Abstract:** In April, the average temperature in some parts of Alaska was significantly lower than usual, while there were many hot weather conditions in the central and southern parts of the Indochinese Peninsula, northwestern Africa, and other places. There were more precipitation in southern areas of the Yangtze River in China, Central Africa, East Africa, Indonesia, and northern South America. The United States experienced large-scale rainfall, snow, and cooling processes, as well as several storm attacks. Large-scale dust weather processes occurred in southern Mongolia and northern China. Two tropical cyclones were generated globally.

## **1. Global Weather Overview of important global weather**

### **Temperature**

In April 2023, the average temperature in Western Siberia, Mongolia, Northwestern China, Eastern Central Asia, Central and Northern South Asia, the Arabian Peninsula, Central Europe, Eastern Southern Europe, Western United States and Alaska, Southern and Central areas of Western Canada, and Australia was 1-3°C lower than usual. Some areas in Alaska were more than 4°C lower than usual. The average temperature in Western Russia, the Japanese Islands, Northern Indochina, Western Central Asia, Eastern Europe, Western Southern Europe, Northern areas of Central Canada, and the Labrador Peninsula, and Eastern United States was 1-3°C higher than usual, with local temperatures being 4-5°C higher (see Figure 1).

### **Precipitation**

In April 2023, areas south of the middle and lower reaches of the Yangtze River in China, Jiangnan, the Japanese Islands, the eastern part of the Kamchatka Peninsula, Indonesia, Central Africa, East Africa, coastal areas of western Canada, southern and western coastal areas of the United States, and northern South America received cumulative rainfall of 100-250mm, with some areas exceeding 300mm. Parts of Northwestern China, eastern Huanghuai, central and southern India, the central and southern Indochinese Peninsula, Central and Eastern Southern Europe, the Great

Lakes region received cumulative rainfall of 60-120mm, with some areas exceeding 150mm. Precipitation in most of the above areas was 40-70% higher than usual, with some areas being more than twice as high (see Figure 2).

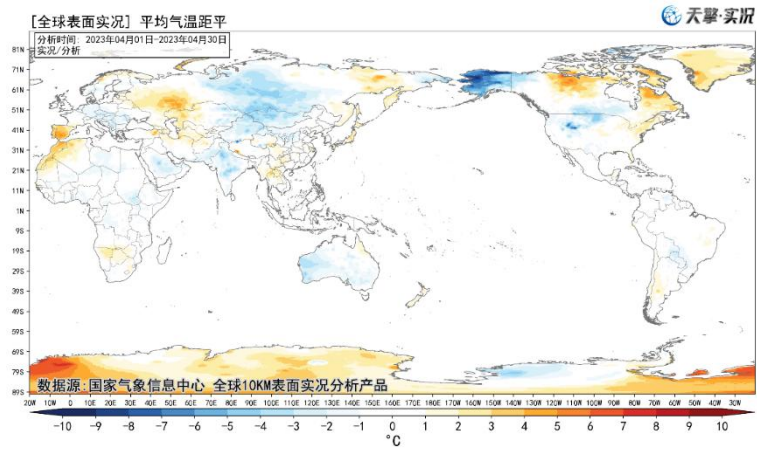


Figure 1 Global Average Temperature Anomaly in April 2023 (unit: °C)

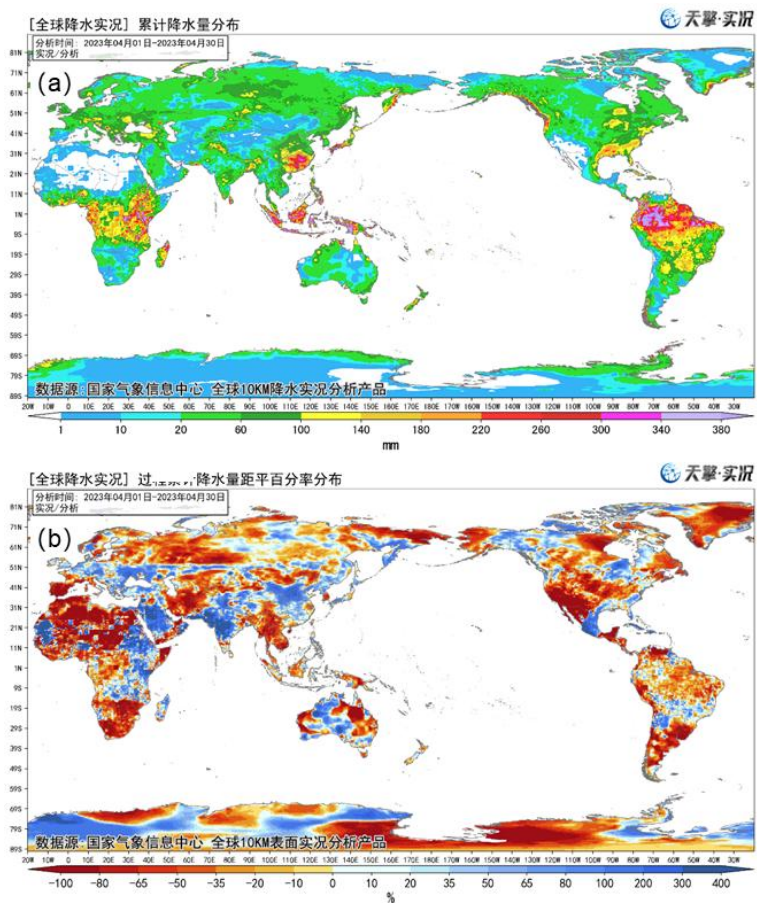
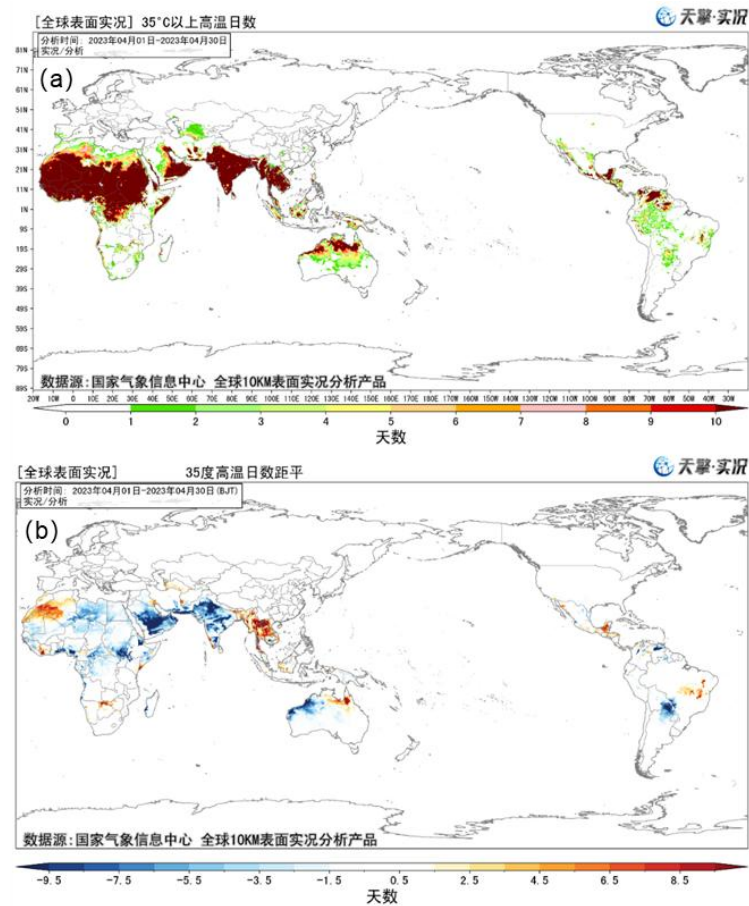


Figure 2 (a) Global Accumulated Precipitation in April 2023 and (b) hit rate for precipitation (unit: %)

## **2. Main Disastrous Weather Conditions**

In April 2023, the main disastrous weather conditions worldwide were high temperatures, dust storms, tornadoes, hail, thunderstorms, strong cold air, heavy rainfall, and snow and freezing rain . High-temperature weather conditions with daily maximum temperatures above 35°C mainly occurred in Southeast Asia, South Asia, southern Arabian Peninsula, northern Africa, northwestern South America, Mexico, northern Australia, and other areas (see Figure 3), with temperatures exceeding 40°C in many places. Only some areas in the central and southern parts of the Indochinese Peninsula, northwestern Africa, and northeastern Australia had more hot days than usual, while most of the above areas had fewer hot days than usual. Heatwaves caused a surge in electricity demand in Bangladesh and India, forcing them to take compulsory measures such as temporary power outages. The United States experienced five large-scale rainfall, snow, and cooling processes, as well as several storm attacks. The Storm Prediction Center in the United States received a total of 119 tornado reports, with reports being most concentrated on April 4th and 15th. This resulted in damage to buildings, tree falls, and even casualties in some areas. Large-scale dust weather processes occurred in southern Mongolia. Afghanistan's Kabul, Yemen's Sanaa, southern Israel, northern and coastal Peru were hit by heavy rain and flooding.



**Figure 3** (a) Number of days with daily maximum temperature above 35 °C in April 2023 and (b) its departure from average.

In April, there were two tropical cyclones globally, namely “ILSA” in the waters near Australia and “SANVU” in the northwest Pacific, which was 1.5 fewer than the usual number. “Ilsa” made landfall in northwestern Australia on the night of April 13 as a Category 5 severe tropical cyclone.

#### 4. Outlook

Over the next two weeks, temperatures are expected to be above normal in most parts of northern China, South Asia, Southeast Asia, northern Europe, Africa, North America, and South America. However, temperatures will be below normal in Mongolia, Siberia, southern Europe, and Australia. Precipitation is expected in southern parts of China's Jiangnan and South China, Southeast Asia, eastern Southern Europe, West Africa, central United States, and northwest South America.

On the night of the 10th, the low pressure in the Bay of Bengal will develop into a

cyclonic storm and move northeast on the 12th. It may reach a maximum intensity of 15-16 level (48-55m/s), equivalent to a strong typhoon or super typhoon in China, and land along the western coast of Myanmar to the eastern coast of Bangladesh on the 14th (14-15 level, strong typhoon).