

AON

Weekly Cat Report

April 26, 2024



Executive Summary



Event	Affected Region(s)	Fatalities	Economic Loss (\$)	Page
Flooding	China	4	100s of millions	3
Severe Convective Storm	United States	0	10s of millions	5
Winter Weather	Western & Central Europe	0	10s of millions	7
Flooding	Iran	10	Unknown	7
Flooding	Indonesia	4	Millions	7
Severe Convective Storm	Thailand	2	Millions	7
Flooding (Update)	Eastern Africa	24+	Unknown	7
Earthquake	Taiwan	0	Negligible	8
Flooding & SCS (Update)	Pakistan, Afghanistan	49+	10s of millions	8

Please note that any financial loss estimate is preliminary and subject to change. These estimates are provided as an initial view of the potential financial impact from a recently completed or ongoing event based on early available assessments. Significant adjustments may inevitably occur. All losses in US dollars (\$) unless noted otherwise.

Along with this report, we continue to welcome users to access current and historical natural catastrophe data and event analysis on Impact Forecasting's Catastrophe Insight website: <http://catastropheinsight.aon.com>

China: Flooding

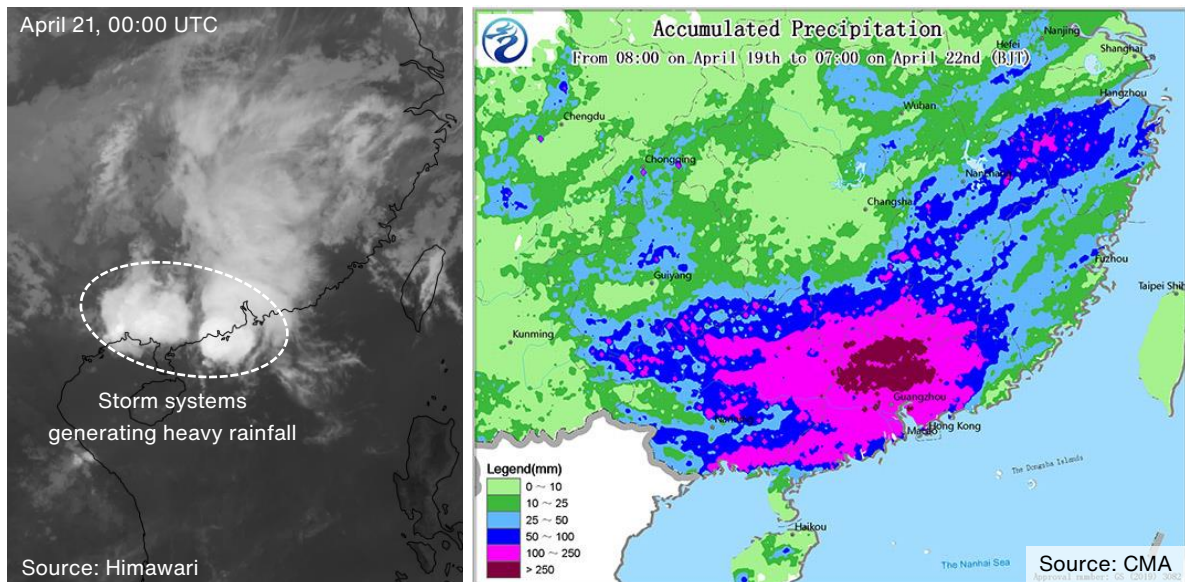
Overview

Persistent heavy rainfall triggered severe floods that resulted in casualties and material damage across southern China on April 19-23. The Guangdong, Guangxi, and Jiangxi provinces were among the worst affected with multiple fatalities, notable structural and infrastructural damages, and more than a million households impacted. Total economic losses can reach into the hundreds of millions of USD.

Meteorological Recap

Heavy rainfall since April 19 has led to significant flooding across the provinces of Guangdong and Guangxi in southern China. Eastern Guangxi and central and northern Guangdong have experienced heavy rainfall for several consecutive days, with the maximum hourly rainfall intensity of 50 mm (2 in), and locally exceeding 140 mm (5.5 in), according to the China Meteorological Administration (CMA). CMA issued the highest red rainfall warning for parts of Guangdong.

The total event rainfall locally exceeded **300 mm (11.8 in)** of rain (see the map provided by CMA). Dozens of national meteorological stations across the affected provinces saw their historical maximum daily rainfall for April. Guangzhou City, the capital of Guangdong province, has already logged a cumulative rainfall total of **609 mm (24 in)** in April, marking the highest monthly rainfall on record (since 1959). Some regions also experienced severe storms that generated strong wind gusts and several moderate-intensity tornadoes.



Event Details

Severe floods swamped many urban cities in the densely populated Pearl River Delta of the **Guangdong Province**, forcing the evacuations of more than 110,000 people. As many as 1.16 million households lost power at the height of the flooding. Among the worst affected cities includes Shaoguan, Heyuan, and

the provincial capital, Guangzhou. As of April 24, the devastating flooding has killed at least four people across Zhaoqing City (3) and Shaoguan City (1), while 10 other people are still missing. Additionally, local authorities in the Guangxi and Jiangxi provinces reported that several thousand hectares of agricultural have been heavily affected by flood waters.

Financial Loss

As damage assessment remains ongoing across the affected areas, it is still too early to determine total loss figures. Given the massive flooding impact in the densely populated region, total economic losses are expected to be at least in the hundreds of millions of USD, including costly property and vehicular payouts. Moreover, agricultural losses in the Guangxi and Jiangxi Provinces were preliminary estimated to reach 284.5 million yuan (\$40 million) and 41 million yuan (\$5.7 million), respectively.

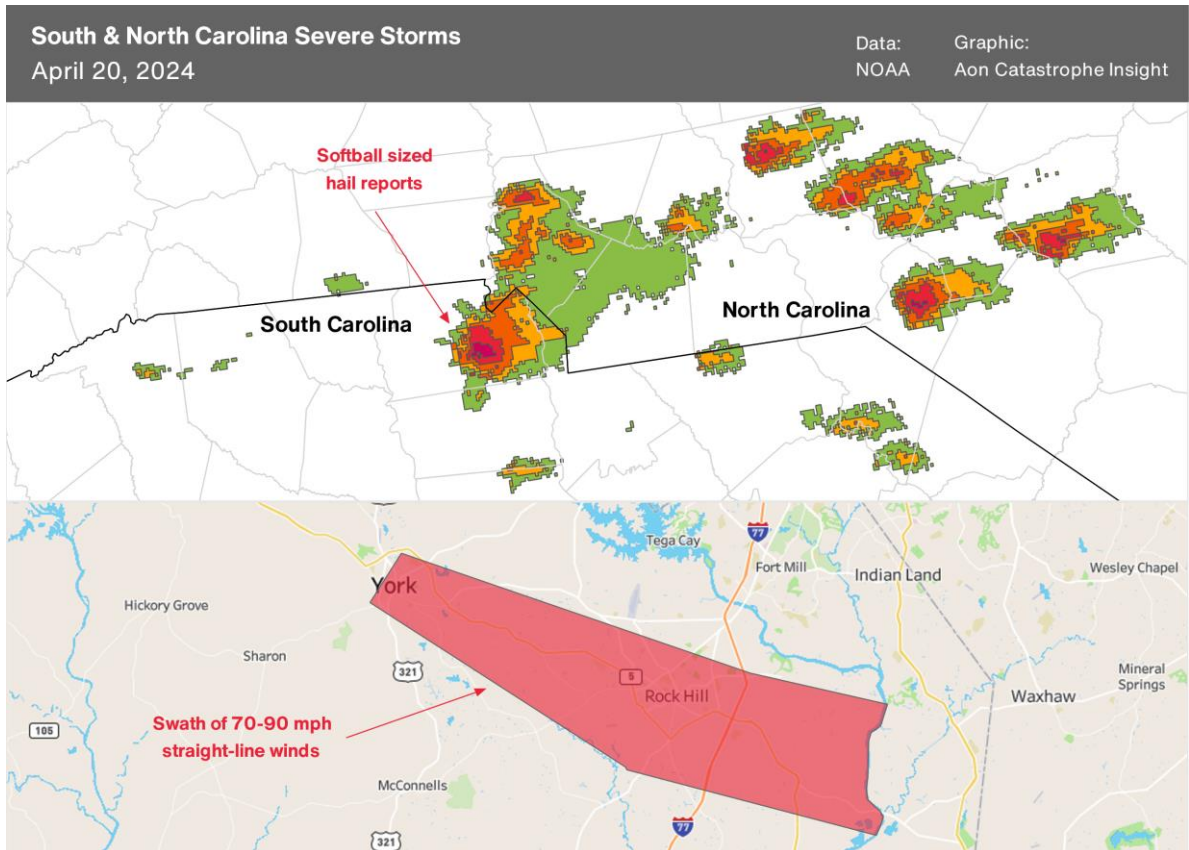
United States: Severe Convective Storm

Overview

Isolated severe thunderstorms in the southern United States produced large hail and strong winds on April 20, primarily within South and North Carolina. The town of Rock Hill in York County, South Carolina was especially hit hard as storms destroyed numerous powerlines and damaged hundreds of homes and vehicles. Other nearby towns and counties also experienced similar impacts. Total economic and insured losses could reach into the tens of millions USD, possibly higher.

Meteorological Recap

On April 20, sufficient moisture and daytime heating allowed strong thunderstorms to develop along a slow-moving cold front across the southern United States. While storms affected a large area spanning from Texas to North Carolina, many of the strongest storms were seen primarily over South and North Carolina. Reports of hail at least 4.0 inches (10.2 cm) in diameter in Rock Hill (SC) and Lumberton (NC) were submitted to the Storm Prediction Center. Additionally, the National Weather Service confirmed a 5.5 mile-wide (8.9 km) swath of straight-line winds up to 90 mph (145 kph) impacted much of York County (SC), including the towns of Rock Hill and York. More severe weather-related impacts were observed in nearby areas, such as Lancaster (SC) and Gaston (NC) counties.



Event Details

The combination of hurricane-force wind gusts and softball-sized hail caused extensive impacts, with the town of Rock Hill (SC) being the worst affected. Initial damage assessments from the York County Office of Emergency Management found hundreds of homes damaged, including nearly 25 that were severely damaged or completely destroyed. Numerous vehicles were damaged by falling trees and large hail, including 80 cars within a Rock Hill dealership that were totaled by hail. Dozens of powerlines across the town were also snapped by powerful winds and downed trees, causing widespread power outages. Other areas sustaining notable but less intense damage include the town of York (SC), Lancaster (SC) county, and Gaston (NC) county.



Straight-line wind damage in Rock Hill, SC

Source: NWS GSP

Financial Loss

According to the South Carolina Department of Insurance, extensive damage caused by the recent storms has resulted in thousands of insurance claims within the state. As a result, total economic and insured losses may reach into the tens of millions USD, possibly higher pending future damage assessments.

Natural Catastrophes: In Brief

Winter Weather (Western & Central Europe)

Parts of Europe experienced a rapid temperature drop last week, shifting from numerous record-breaking, summer-like temperatures to record-breaking late April cold. Subsequent morning frost has extensively damaged fruit harvests across the Czech Republic, with agricultural loss estimates possibly reaching up to 1 billion CZK (43 million USD). There remains a high potential for significant agricultural damage elsewhere across Western and Central Europe, which will likely further increase losses.

Flooding (Iran)

Heavy rainfall has affected southeastern Iran, in particular the provinces of Sistan and Baluchistan, in recent days. Severe flooding has left at least 10 people dead, as well as causing notable damage to local infrastructure and about 2,000 dwellings. In total, more than 46,000 people have been affected. The rains also damaged about 6,000 hectares (14,800 acres) of agricultural land. Unfortunately, this same region is still reeling from catastrophic flooding experienced earlier in March of this year.

Flooding (Indonesia)

Heavy rainfall has been affecting Indonesian Sumatra Island since April 16, particularly the North Musi Rawas Regency. According to the National Disaster Management Agency (BNPB), about 52,000 people have been displaced due to floods and at least four people have lost their lives. In addition, notable damage to about 670 houses and local infrastructure has been incurred.

Severe Convective Storm (Thailand)

Storms and strong winds have affected northern Thailand since April 18, resulting in floods and severe weather-related losses. Provinces of Chiang Rai, Nan, Bueng Kan, Phayao, Nong Bua Lam Phu, Nakhon Ratchasima, Udon Thani Phetchabun, and Nong Bua Lamphu were among the worst affected with thousands of affected people. According to the ASEAN Disaster Information Network (ADINet), at least two people died, and three were injured. Hundreds of buildings were flooded and potentially damaged.

Flooding (Eastern Africa) - Update

Seasonal flooding continues to wreak havoc in many parts of Eastern Africa (see previous Weekly Cat Report). Deadly flooding has been reported in Tanzania, Kenya, Uganda, and elsewhere in the region recently. In Kenya, the flood impact is still increasing with 32 fatalities, 25 injuries, several missing, and more than 100,000 individuals affected, as of April 22. Four flood-related deaths have occurred in Somalia's states of Somaliland and Hirshabelle since April 19. Widespread floods, landslide events, and a significant rise in the water level of Lake Tanganyika have triggered population displacement in Burundi. As of April 19, more than 160,000 people have been affected and thousands of houses have been flooded within the Burundi provinces of Bujumbura Mairie, Rumonge, Makamba, and Cibitoke. Floods have also severely impacted important ports in Rumonge and Bujumbura. Additionally, a recent landslide in the Muhuta commune has caused one fatality, four injuries, and 500 destroyed homes and damaged infrastructure.

Earthquake (Taiwan)

A series of strong earthquakes with magnitudes up to 6.1 occurred in the area of Hualien County in eastern Taiwan on April 22. The earthquakes jolted the same area which was severely hit by a magnitude-7.4 quake earlier this month. According to the media, several buildings have been damaged following the recent seismic sequence. No casualties have been reported as of this writing.

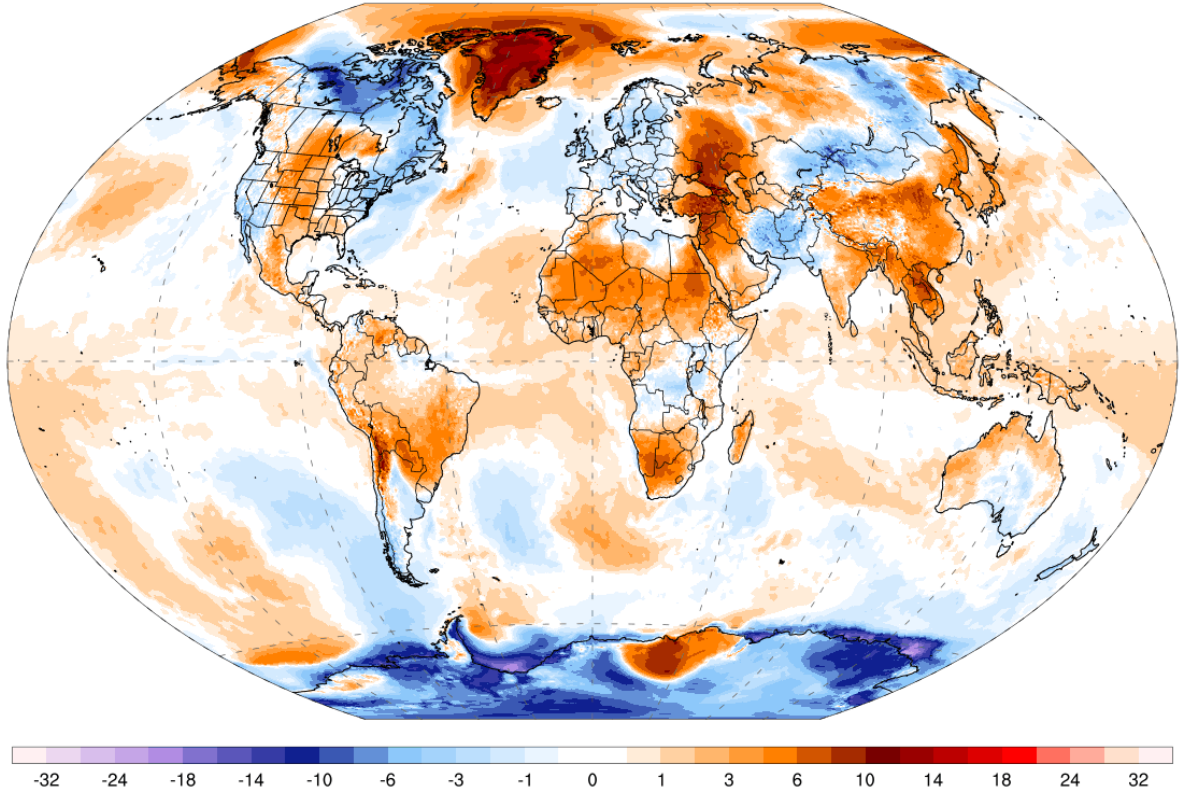
Flooding & SCS (Pakistan, Afghanistan) - Update

The number of casualties and material losses due to recent severe flooding and storms continues to rise in Pakistan and Afghanistan (see previous Weekly Cat Report). According to the latest reports from the regional disaster authorities, in Pakistan, the death toll rose by 29 to 100 (64 in Khyber Pakhtunkhwa, 21 in Punjab, and 15 in Balochistan). As of April 21, no fewer than 94 others have been injured, and more than 3,500 houses have been damaged or destroyed, including hundreds of schools. In Afghanistan, the total number of fatalities increased by 20 to 90, as of April 23. More than 2,000 houses have been damaged.

Global Temperature Anomaly Forecast

GFS 2m T Anomaly (°C) [CFSR 1979-2000 baseline]
Days 1-3 Avg | Thu, Apr 25, 2024

ClimateReanalyzer.org
Climate Change Institute | University of Maine

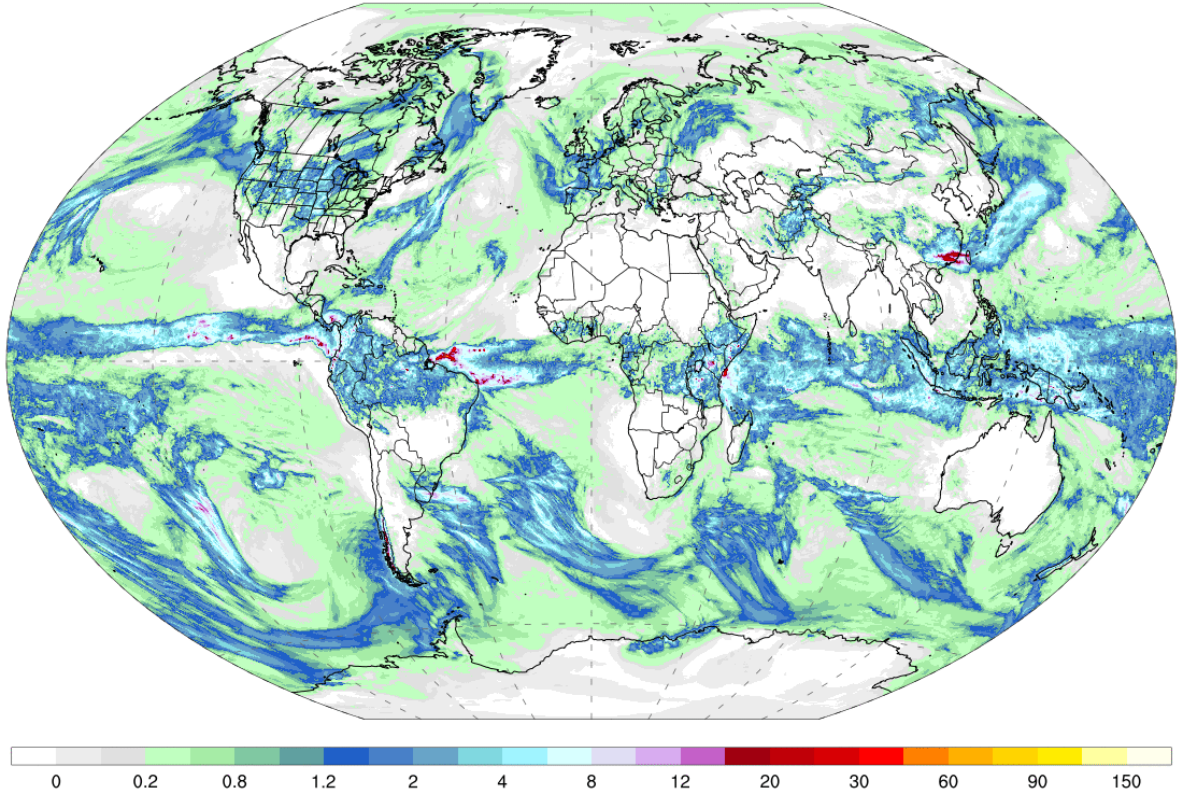


Source: Climate Reanalyzer, Climate Change Institute, University of Maine, USA

Global Precipitation Forecast

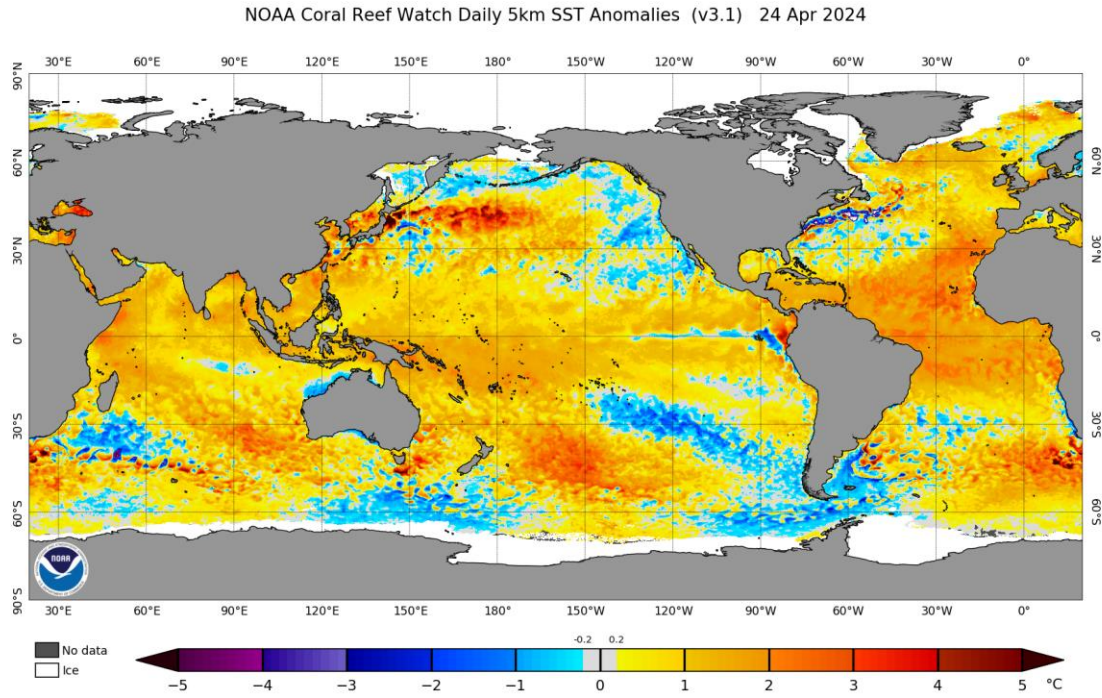
GFS Accumulated Precipitation (cm)
Days 1-3 Total | Thu, Apr 25, 2024

ClimateReanalyzer.org
Climate Change Institute | University of Maine



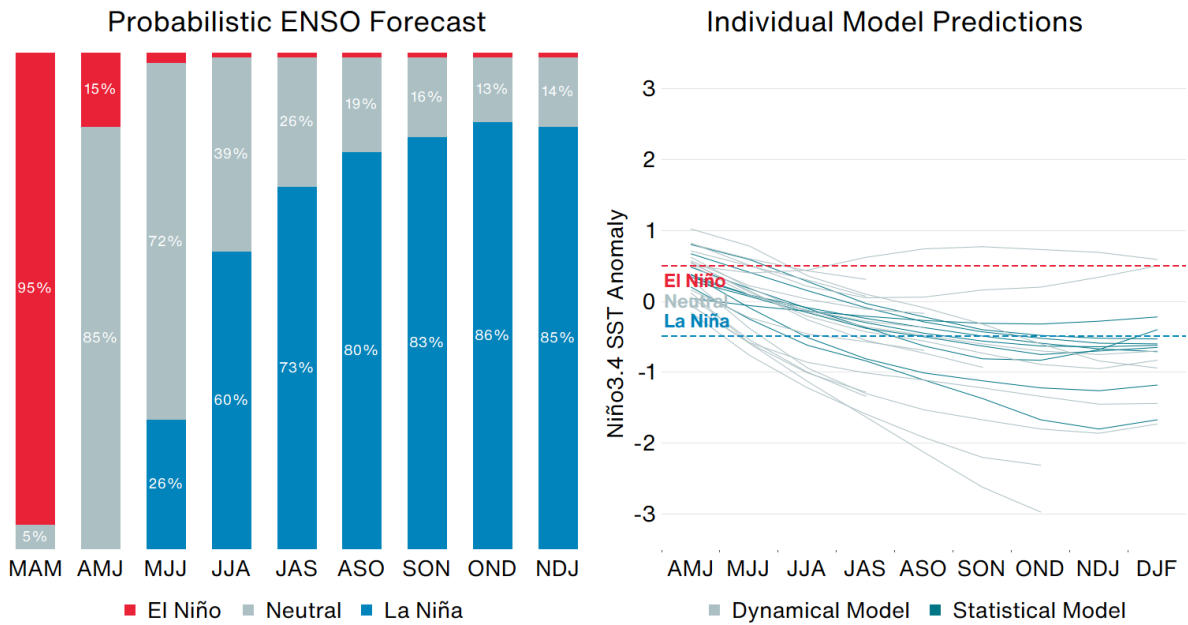
Source: Climate Reanalyzer, Climate Change Institute, University of Maine, USA

Weekly Sea Surface Temperature (SST) Maps (°C)



El Niño-Southern Oscillation (ENSO)

Probabilistic ENSO Model Projections: April 2024



El Niño: Warm phase of an ENSO cycle. Sea surface temperatures of +0.5°C occur across the east-central equatorial Pacific.

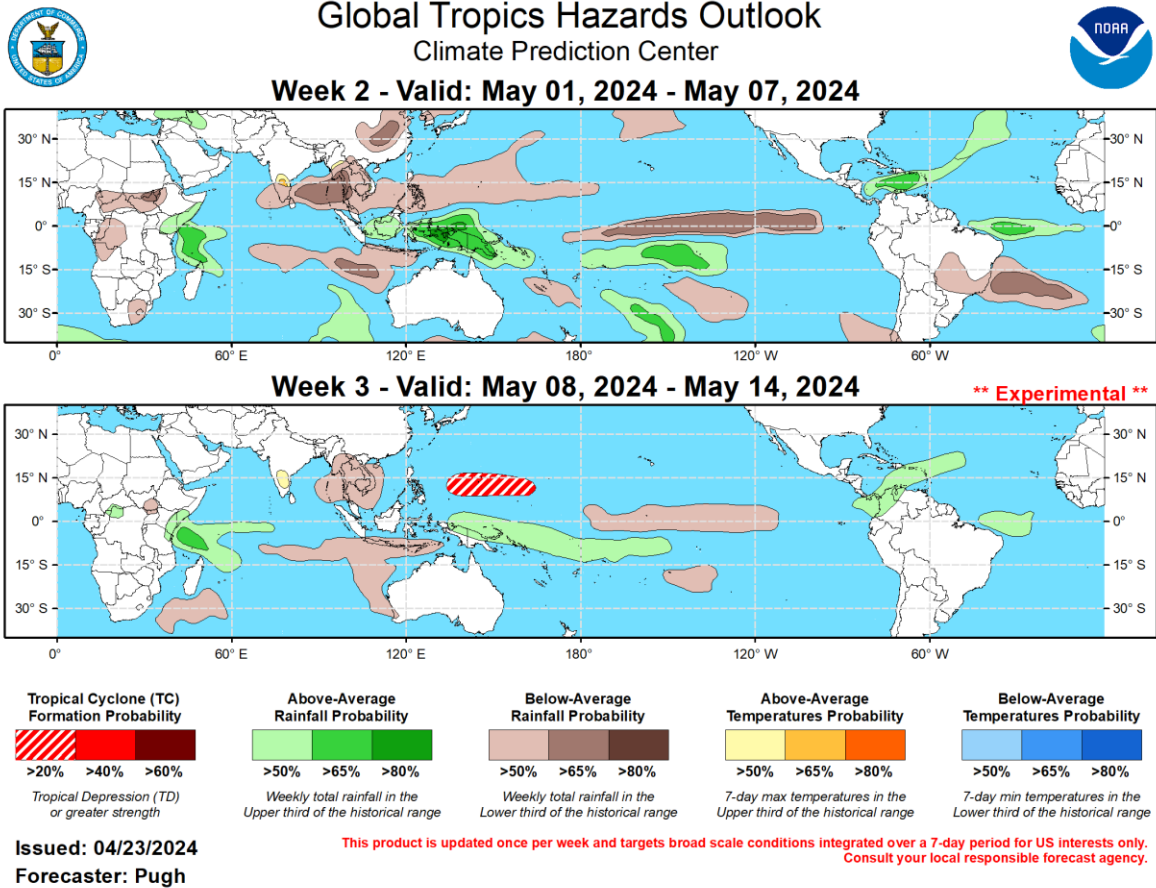
La Niña: Cool phase of an ENSO cycle. Sea surface temperatures of -0.5°C occur across the east-central equatorial Pacific.

Neutral: A period when neither El Niño nor La Niña conditions are present.

El Niño (La Niña) is a phenomenon in the equatorial Pacific Ocean characterized by a five consecutive 3-month running mean of sea surface temperature (SST) anomalies in the Niño 3.4 region that is above the threshold of +0.5°C (-0.5°C). This is known as the Oceanic Niño Index (ONI).

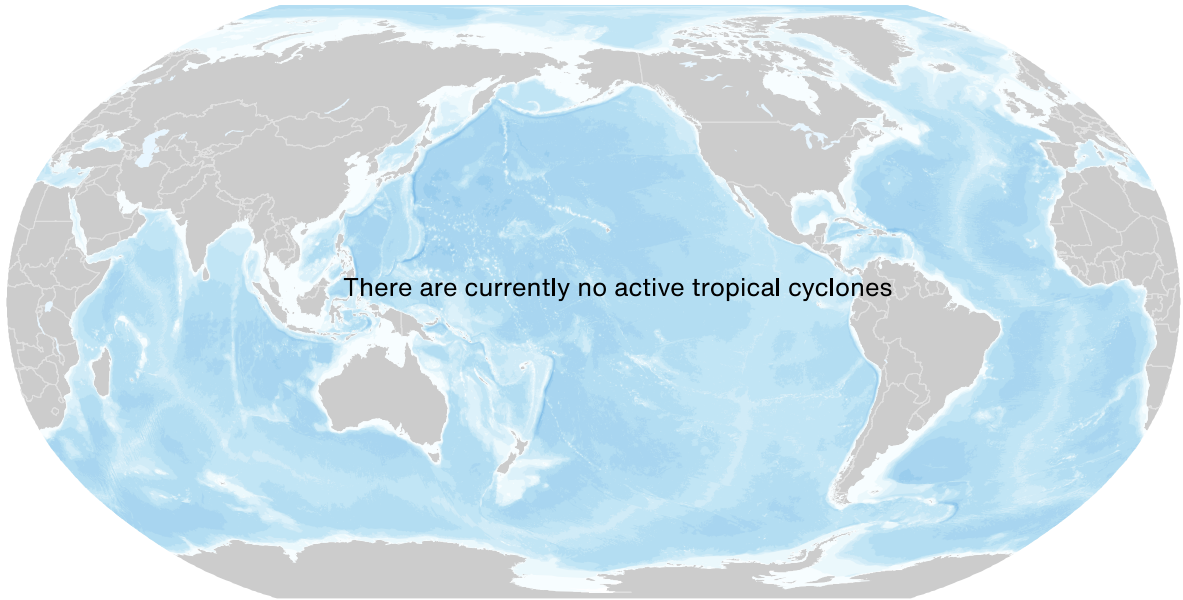
Source: NOAA, Columbia University | Graphic: Aon Catastrophe Insight

Global Tropics Outlook



Source: Climate Prediction Center (NOAA)

Current Tropical Cyclone Activity



🌀 Tropical Depression
 🌀 Tropical Storm
 🌀 Category 1
 🌀 Category 2
 🌀 Category 3
 🌀 Category 4
 🌀 Category 5

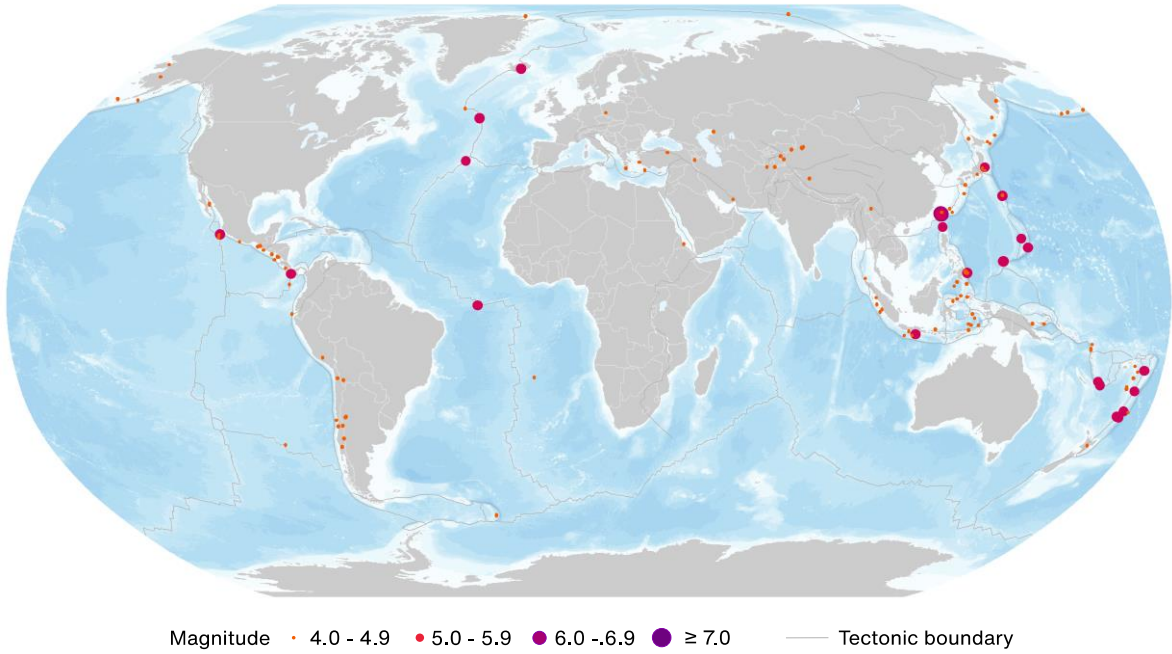
Name	Location	Winds	Center

* TD: Tropical Depression, TS: Tropical Storm, HU: Hurricane, TY: Typhoon, CY: Cyclone

** N: North, S: South, E: East, W: West, NW: Northwest, NE: Northeast, SE: Southeast, SW: Southwest

Source: National Hurricane Center, Joint Typhoon Warning Center, Central Pacific Hurricane Center (NOAA)

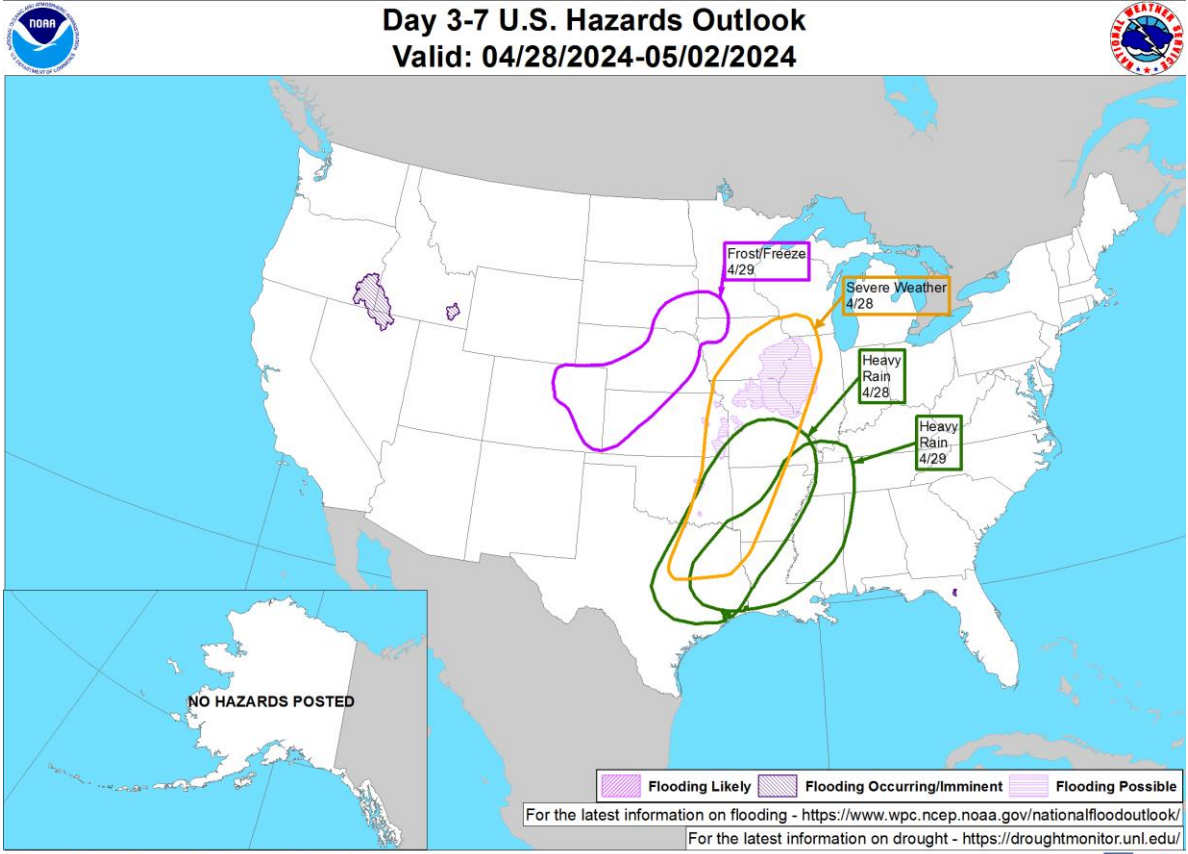
Global Earthquake Activity ($\geq M4.0$): April 19-25



Date (UTC)	Location	Magnitude	Epicenter
4/22/2024	23.72N, 121.64E	6.1	28 km (17 mi) S of Hualien City, Taiwan
4/22/2024	23.87N, 121.54E	6	13 km (8 mi) SSW of Hualien City, Taiwan

Source: United States Geological Survey

U.S. Hazard Outlook

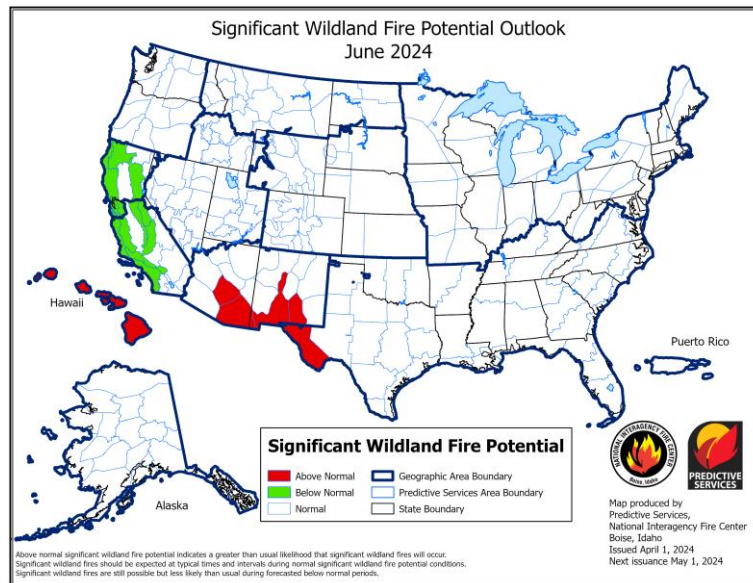
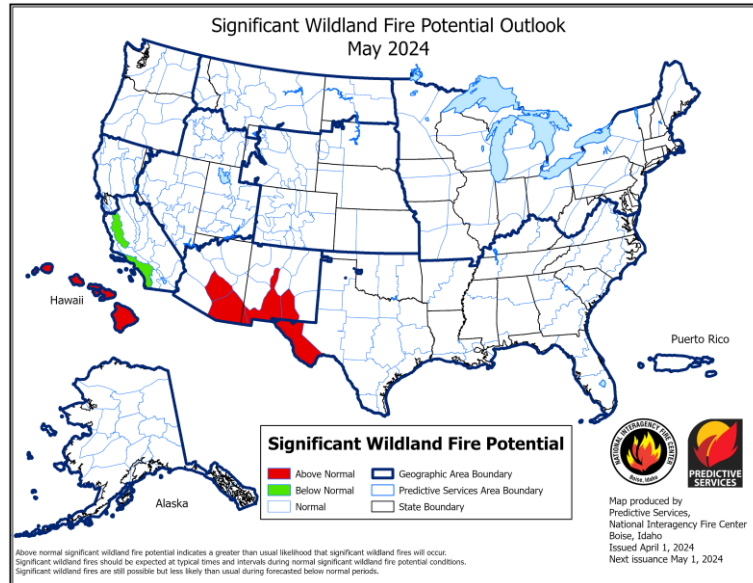


Weather Prediction Center
Made: 04/25/2024 03:25 PM EDT

Follow us:  
www.wpc.ncep.noaa.gov

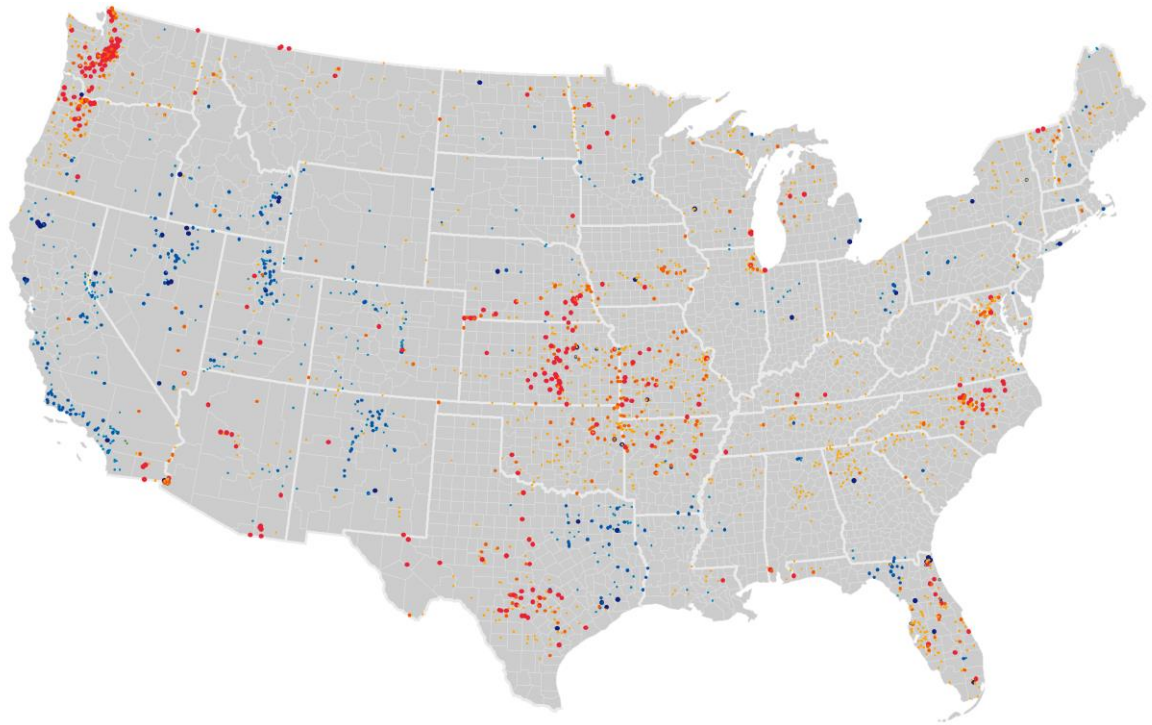
Source: Climate Prediction Center (NOAA)

U.S. Wildfire: Significant Fire Risk Outlook & Activity



Source: NIFC

U.S. Current Riverine Flood Risk



High Flows (Percentile)

- ≥ 99 / Above floodstage
- 95 - 99
- 90 - 95

Hydrological Drought

- Severe Drought
- Moderate Drought
- Below Normal

A $\geq 99^{\text{th}}$ percentile indicates that estimated streamflow is greater than the 99th percentile for all days of the year. This methodology also applies for the other two categories. A stream in a state of severe drought has 7-day average streamflow of less than or equal to the 5th percentile for this day of the year. Moderate drought indicates that estimated 7-day streamflow is between the 6th and 9th percentile for this day of the year and 'below normal' state is between 10th and 24th percentile.

Source: United States Geological Survey

Source Information

China: Flooding

China Meteorological Administration (CMA)

China floods: four killed in Guangdong sparking concerns over extreme weather defences, *The Guardian*

Tens of thousands evacuated from massive China floods, *BBC*

Flooded Guangdong, Guangxi respond rapidly to continuing heavy rainfall, *Global Times*

United States: Severe Convective Storm

National Weather Service at Greenville-Spartanburg (NWS GSP)

Storm Prediction Center (SPC)

York County Office of Emergency Management

Extensive Storm Damage in York & Gaston Counties, *WCCB Charlotte*

South Carolina Allows Out-of-State Adjusters After Massive Hail Storm, *Insurance Journal*

Downed trees, damaged roofs, smashed cars: Rock Hill deals with fallout from hail storm, *Rock Hill Herald*

Natural Catastrophes: In Brief

UN OCHA

IFRC

The Indonesian Disaster Management Agency (BNPB)

ASEAN Disaster Information Network (ADINet)

The Biggest Disaster in a Hundred Years. Damage to the Fruit Crop Due to Frosts Will Exceed a Billion, *Deník.cz*

Flooding wreaks havoc across East Africa. Burundi is especially hard-hit, *AP News*

A cluster of earthquakes shakes Taiwan after a strong quake killed 13 earlier this month, *AP News*

Pakistan Provincial Disaster Management Authority (PDMA)

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