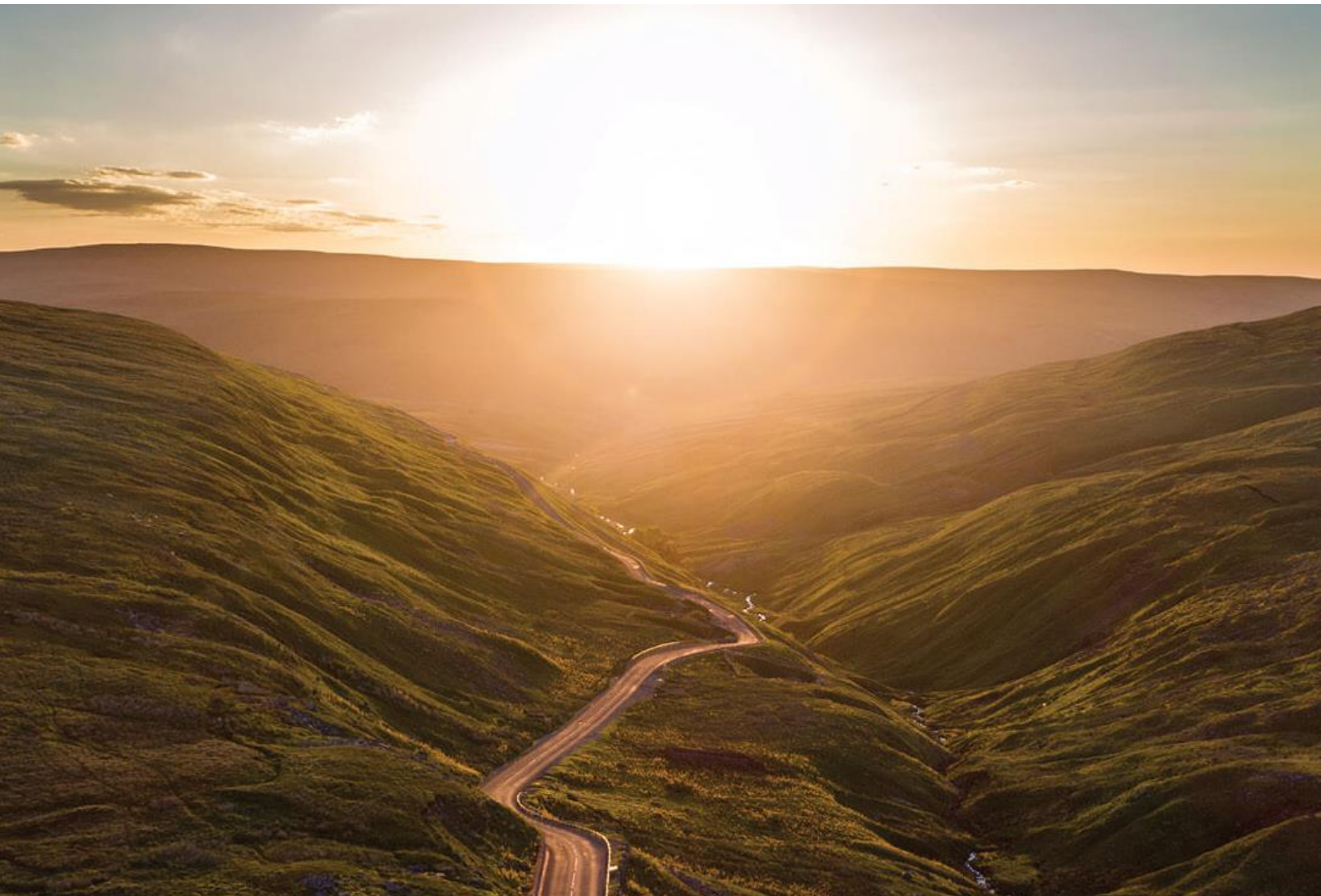
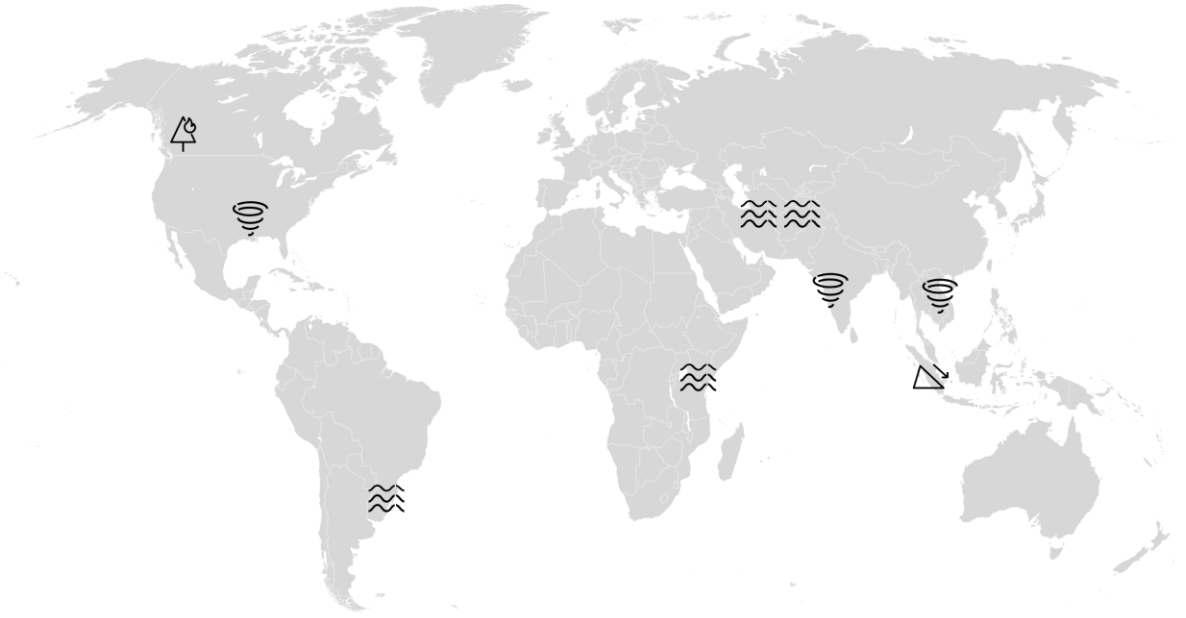
Weekly Cat Report

May 17, 2024



Executive Summary



Event	Affected Region(s)	Fatalities	Economic Loss ($)	Page
SCS, Flooding, & Landslide	United States	5	100s of millions	3
Flooding (Update)	Brazil	149+	1.7+ billion	6
Flooding & Landslide (Update)	Eastern Africa	559+	Unknown	8
Flooding	Afghanistan	330+	Unknown	9
Landslide & Flooding	Indonesia	67+	Millions	9
Severe Convective Storm	India	17	Unknown	9
Severe Convective Storm	Thailand, Vietnam	3	Millions	9
Wildfires	Canada	0	Negligible	9
Flooding	Iran	7+	Unknown	10

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

United States: SCS, Flooding, & Landslide

Overview

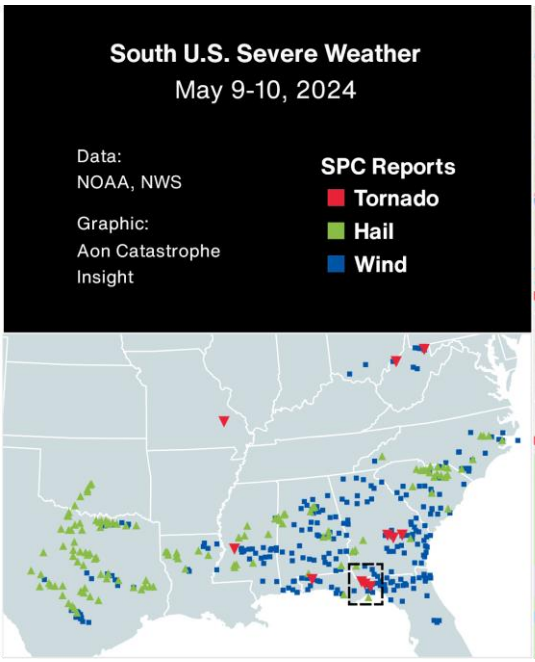
Persistent severe weather continues to wreak havoc within the United States, particularly across many southern states. Multiple waves of intense storms brought hurricane-force wind gusts, gigantic hail, and strong tornadoes from Texas to Florida, causing notable property and infrastructure damage. Parts of Hawaii also received heavy rainfall, triggering several flooding and landslide incidents. Total economic and insured losses could reach into the hundreds of millions USD.

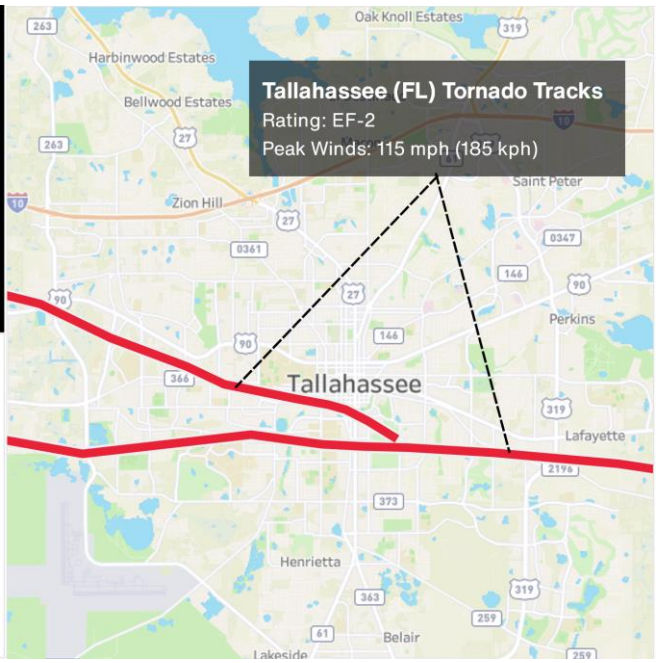
Meteorological Recap

May 9-11

Following two straight weeks of relentless severe weather (see previous Weekly Cat Reports), new storms on May 9-10 primarily affected the southern United States. Intense thunderstorms were seen over a large area spanning from Texas to North Carolina. Over 400 preliminary, filtered storm reports were submitted to the Storm Prediction Center (SPC), including around 330 reports on May 9 alone. Many of the strongest storms moved through northern Florida, including the city of Tallahassee which was hit by gusts up to 84 mph (135 kph) and two strong EF-2 tornadoes.

Severe weather and gigantic hailstones also heavily affected parts of eastern Texas. Astonishingly, Johnson City unofficially recorded the second-largest hailstone in Texas state history at 6.25 inches (15.9 cm) late on May 9. This was just shy of the official state record of 6.4 inches (16.3 cm) set back in April 2021 in the town of Hondo.





Additionally, a separate system near Hawaii produced heavy rainfall and severe storms over most of the state on May 9-11. The islands of O'ahu and Hawaii received as much as 6 inches (152 mm) of rain on May 9 alone, leading to localized flash flooding incidents. Some mountain summits on Hawaii Island were even issued winter storm warnings due to strong wind gusts and heavy snowfall.

May 12-15

After relatively minor severe weather impacts on May 11, more strong storms were seen over the southern United States on May 12-13. Several waves of severe storms packed with heavy rain, large hail, tornadoes, and extreme winds affected dozens of communities from Texas to Florida. Notably, hurricane-force wind gusts caused extensive impacts across Mississippi, Louisiana, and Texas. Multiple locations across Mississippi even recorded gusts exceeding 100 mph (161 kph), according to preliminary SPC reports.

Location	Date	Wind Gust (mph / kph)
Bunker Hill, MS	May 13	110 / 177
Society Hill, MS		105 / 169
Topeka, MS		105 / 169
Eastabuchie, MS		90 / 145
Arm, MS		90 / 145
Port Lavaca, TX		85 / 137
Milton, FL		82 / 132

On May 14-15, more localized severe storms primarily impacted the Carolinas, north Texas, and central Oklahoma. The NWS confirmed that at least 7 tornadoes struck the Carolinas while the SPC received reports of 4 inch (10.2 cm) hail and winds near 80 mph (129 kph) in Oklahoma and Texas, respectively.

Elsewhere, Hawaii experienced additional brief, but intense periods of heavy rain on May 13-15. O'ahu Island was affected again as localized 3-day rainfall totals exceeded 11 inches (279 mm) in some spots. The added rainfall on top of already saturated soils led to numerous flash flooding and landslide incidents, particularly on May 13.

In the coming days, more severe weather and significant flash flooding is expected in the southern United States. Additional heavy rainfall, flooding, and landslides are also expected in parts of Hawaii. More updates will be provided in the next Weekly Cat Report.

Event Details

Straight-line wind damage at Tallahassee, FL (left) & Port Lavaca, TX (right)
Source: City of Tallahassee (left); NOAA DAT (right)

Florida & Louisiana

Powerful storms in the Tallahassee (FL) metro area led to two deaths and extreme infrastructure and property damage. More than 400 utility power poles were snapped, and over 200 reports of blocked roads due to downed trees were submitted across the city. Hundreds of homes and vehicles were heavily damaged, including numerous campus buildings at Florida A&M University. Nearly 160,000 people lost power across Florida, and a state of emergency was declared for 12 north Florida counties.

Southern Louisiana also saw significant impacts as three people were killed and two more were injured due to severe weather. Hurricane-force wind gusts caused widespread downed trees, power outages, and property damage in several towns such as Lake Charles, Westlake, and Lafayette. Multiple twisters also caused damage across the towns of Sulphur and Henderson.

Hawaii

Intense rains and localized flash floods were seen across the islands of O'ahu, Hawaii, Maui, and Kauai. O'ahu was especially impacted as many locations experienced traffic disruptions due to flooding and landslide incidents causing road closures. A state of emergency was declared on May 15 ahead of more torrential rainfall expected in the coming days.

Texas & Elsewhere

Multiple waves of severe thunderstorms generated extensive material damage across much of eastern Texas. Powerful straight-line winds damaged or destroyed dozens of RVs in Port Lavaca, causing two injuries. Several other towns experienced similar wind impacts, including Poteet and Hallettsville. Moreover, gigantic hail and straight-line winds caused massive property damage across Blanco and Hays counties, including in Johnson City.

Mississippi was also heavily impacted as persistent severe weather was responsible for at least one death in the state. Notable straight-line wind damage was seen across several state counties such as Smith, Jefferson Davis, Marion, Lamar, and Forrest. Other locations outside of Mississippi, including Toombs County (GA), Washington County (PA), and Marion County (SC), also experienced impacts from strong winds and tornadoes.

Financial Loss

Although more severe weather and flooding impacts are likely in the next few days, total economic and insured losses from the previous week may already reach into the hundreds of millions USD.

Brazil: Flooding (Update)

Overview

Following the catastrophic floods, the number of casualties and material losses continues to increase across the Brazilian state of Rio Grande do Sul. As of May 15, the national authorities stated that total economic losses have exceeded BRL9 billion ($1.75 billion).

Meteorological Recap

Southern Brazil, particularly the State of Rio Grande do Sul, has experienced several rounds of heavy rainfall since April 26, resulting in extreme multiday rainfall accumulation and widespread riverine floods. See the previous Weekly Cat Report for more details.

Event Details

According to the latest report by State Civil Defense (as of May 15), 149 people have died, more than 800 have been injured and hundreds of others remain missing. Around 3.2 million people have been affected across 449 municipalities within the state.

More than 106,000 houses have been damaged or destroyed, accounting for notable losses in the housing sector.

Widespread riverine floods from the satellite on May 6
Source: Copernicus, Sentinel-2

Financial Loss

The National Confederation of Municipalities (CNM) has already recorded BRL9 billion ($1.75 billion) in financial losses since the end of April, according to the latest figures published on May 15. Most of these losses come from damages within the housing sector, which amounts to BRL4.6 billion ($890 million) alone. Notable damages have also been incurred in agriculture, livestock, industry, local businesses, and other services. Losses are expected to rise further as the damage investigation is still ongoing. Given the flood insurance penetration, total insured losses will probably exceed $100 million.

Eastern Africa: Flooding & Landslide (Update)

Overview

A rainy season accompanied by deadly floods and landslides has continued to severely affect many countries across Eastern Africa since late March, resulting in hundreds of fatalities and injured people. Although this rainy season is approaching the end, total material and human losses are expected to rise further as damage assessments and rescue efforts are still in process.

Meteorological Recap

The region typically experiences increased rainfall during its main rainy season lasting from late March to May. This year's season is expected to be amplified due to the naturally occurring El Niño phenomenon.

Event Details

Heavy rainfall impacts, including severe widespread flooding and deadly landslides, have been reported over the entire region, incurring human and material losses to thousands of homes, crops, and local infrastructure in **Kenya**, **Tanzania**, **Burundi, Ethiopia**, **Rwanda**, **Uganda**, and **Somalia**. Below is the table which summarizes the number of fatalities and injuries and the affected population within individual countries.

Country	Affected Regions	Fatalities / Injuries	Affected Population
Kenya	Garrisa, Kajiado, Marsabit, Nairobi, Tana River, West Pokot	289 / 188	300,000
Tanzania	Arusha, Mbeya, Morogoro, Pwani, Rukwa	155 / 236	200,000
Burundi	Bujumbura Maria, Bujumbura, Bubanza, Rumonge, Makamba, Cibitoke	29 / 175	237,000
Ethiopia	Oromia, Sidama, Central Ethiopia, South Ethiopia	14 / -	125,000
Rwanda	Nyanza, Burera, Gakenke, Ngororero	14 / 27	-
Uganda	Nationwide	49 / 296	39,000
Somalia	Hiraan, Hirshabelle, Jubaland, Lower Juba, Lower Shabelle	9 / -	203,000
Total		**559+ / 922+**	**1,104,000+**

Natural Catastrophes: In Brief

Flooding (Afghanistan)

Torrential rainfall has triggered deadly flash flooding in northern Afghanistan since May 10, resulting in hundreds of fatalities and material damage to thousands of houses. As of May 14, at least 330 people have died and more than 1,600 suffered injuries, according to authorities and media. The province of Baghlan has been the worst impacted. Losses have been reported also in the provinces of Badakshan, Takhar, Ghor, and Herat.

Landslide & Flooding (Indonesia)

On May 11, heavy rainfall triggered landslides and the flow of volcanic deposits (known as *lahar*) from Mount Merapi volcano, affecting several regencies of West Sumatra Province. As of May 16, at least 67 people died and dozens are still missing, according to the National Disaster Management Agency (BNPB). Landslides and lahars affected about 1,500 families and damaged more than 520 houses and dozens of bridges.

Severe Convective Storm (India)

At least 17 people lost their lives and more than 80 others were injured in multiple severe weather-related accidents that occurred in various parts of India between May 10 and 13. Strong wind gusts accompanied by dust storms downed trees, cut power lines, caused notable traffic disruptions, and damaged more than 50 houses, particularly in the New Delfi and Mumbai metropolitan areas.

Severe Convective Storm (Thailand, Vietnam)

Storms generated heavy rainfall, strong wind gusts, and tornadoes across Thailand and Vietnam between May 12-13, resulting in casualties and material damage. In Vietnam, thousands of people and hundreds of properties have been affected in the provinces of Lao Cai, Yen Bai, Thai Nguyen, Phu Tho, Quang Ninh, and Hanoi. According to the ASEAN Disaster Information Network (ADINet), three people died due to severe weather in Vietnam.

Additional damages to more than 260 houses and thousands of affected people were reported in Thailand's regions of Lampang, Phrae, Phichit, Nakhon Sawan, Nong Bua Lamphu, Khon Kaen, Lopburi, and Pathum Thani.

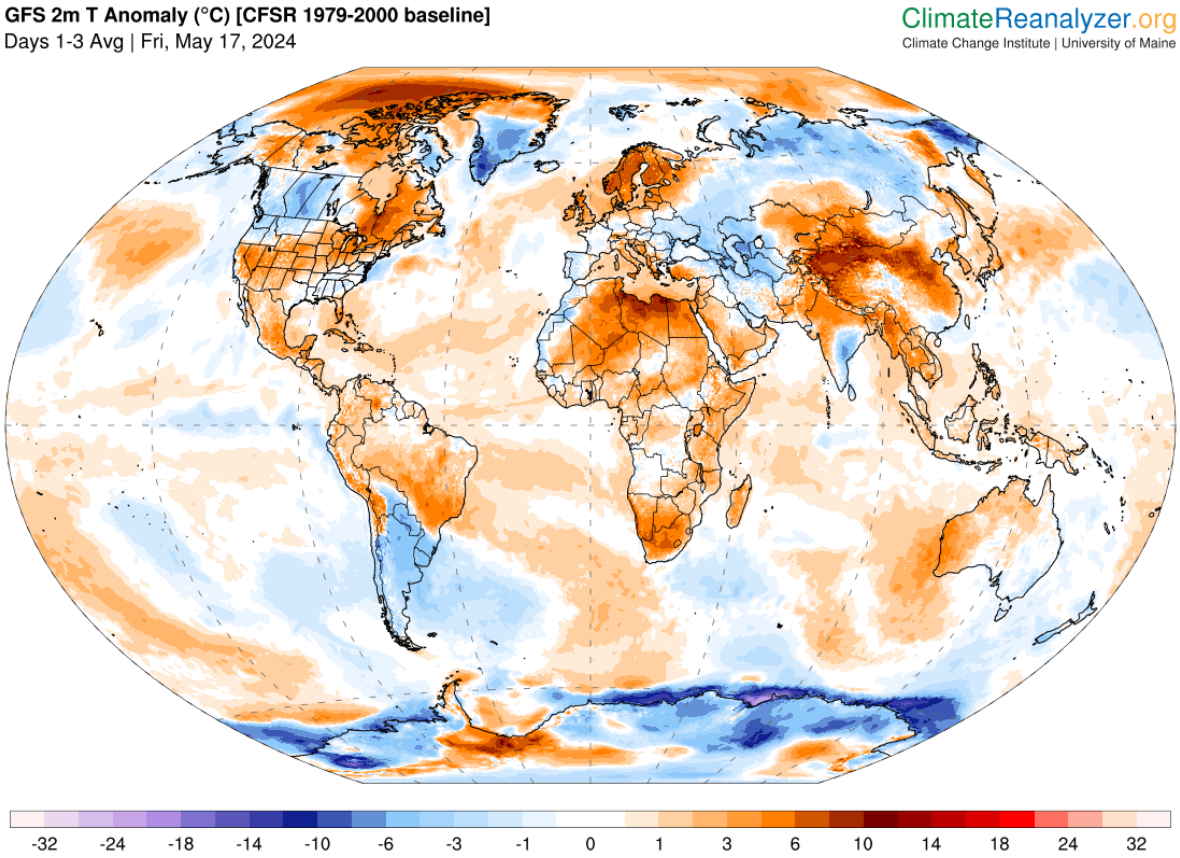
Wildfires (Canada)

Numerous and fast-spread wildfires are blazing in parts of British Columbia and Alberta provinces in Canada this week. While still relatively far from populated areas, authorities have issued wildfire alerts and even evacuation orders for British Columbia. The areas of Fort Nelson, Carpenter Lake, Fontas, and the Doig River First Nation reserve have been declared the most affected areas. Aside from the tens of thousands of hectares of burned forest land, no significant material damage has been reported from the area so far.

Flooding (Iran)

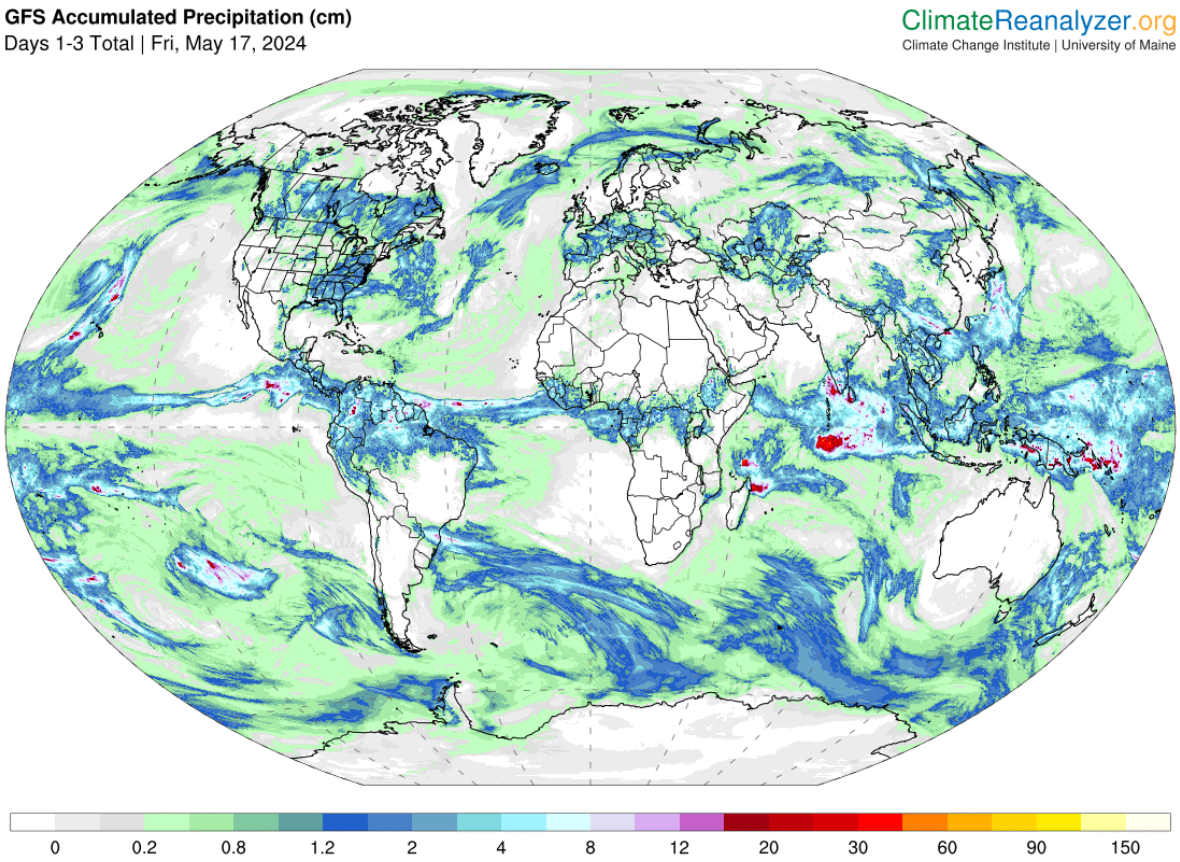
Flash flooding associated with heavy rainfall on May 15 has left at least 7 people dead and 12 missing in Mashhad, Iran's second most populous city. Hundreds of people have been forced to evacuate, while more than 150 houses have been damaged. Other notable infrastructural and vehicular losses have also been incurred, according to the local authorities and fire departments.

Global Temperature Anomaly Forecast



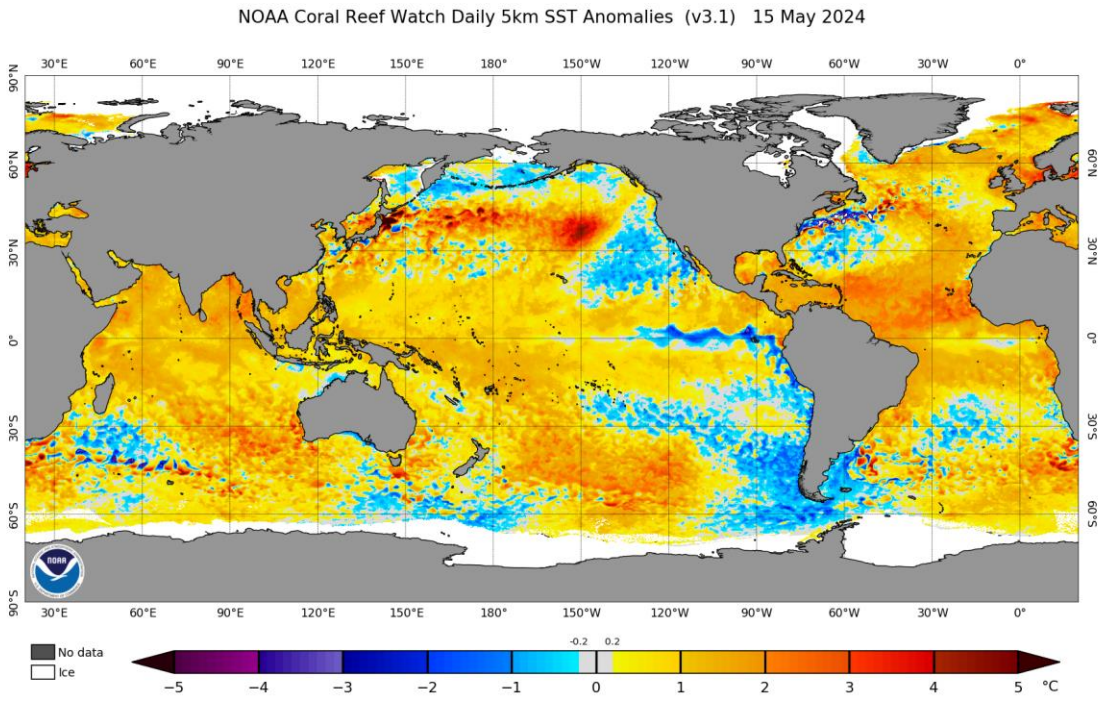
Source: Climate Reanalyzer, Climate Change Institute, University of Maine, USA

Global Precipitation Forecast

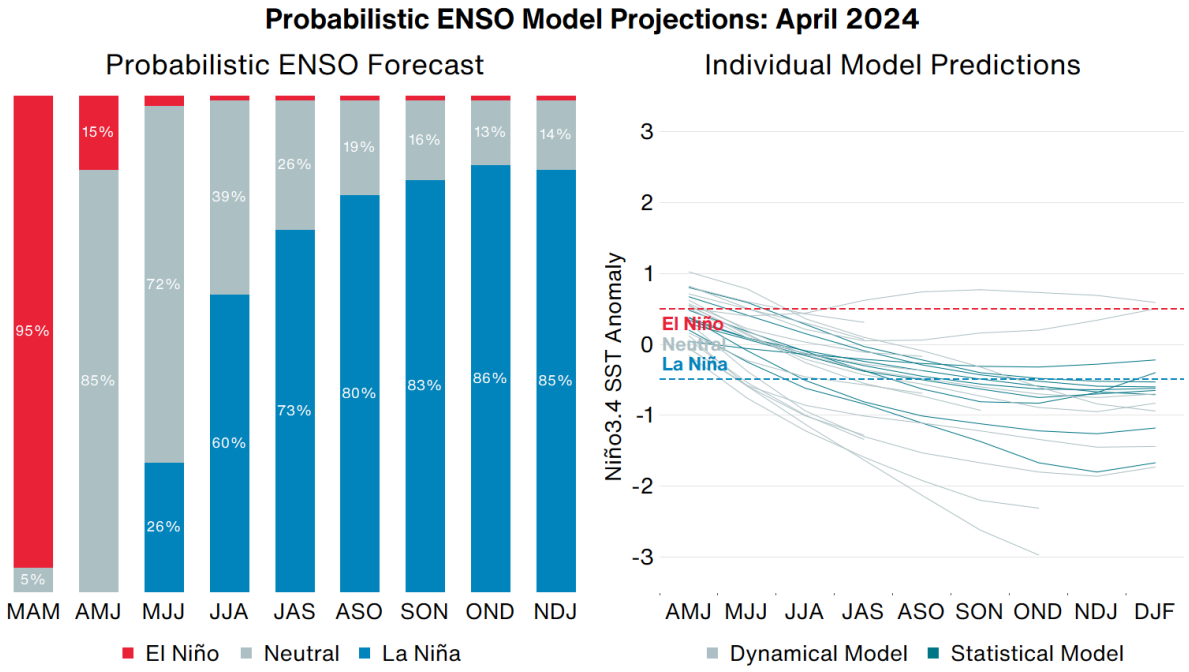


Source: Climate Reanalyzer, Climate Change Institute, University of Maine, USA

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



El Niño-Southern Oscillation (ENSO)



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

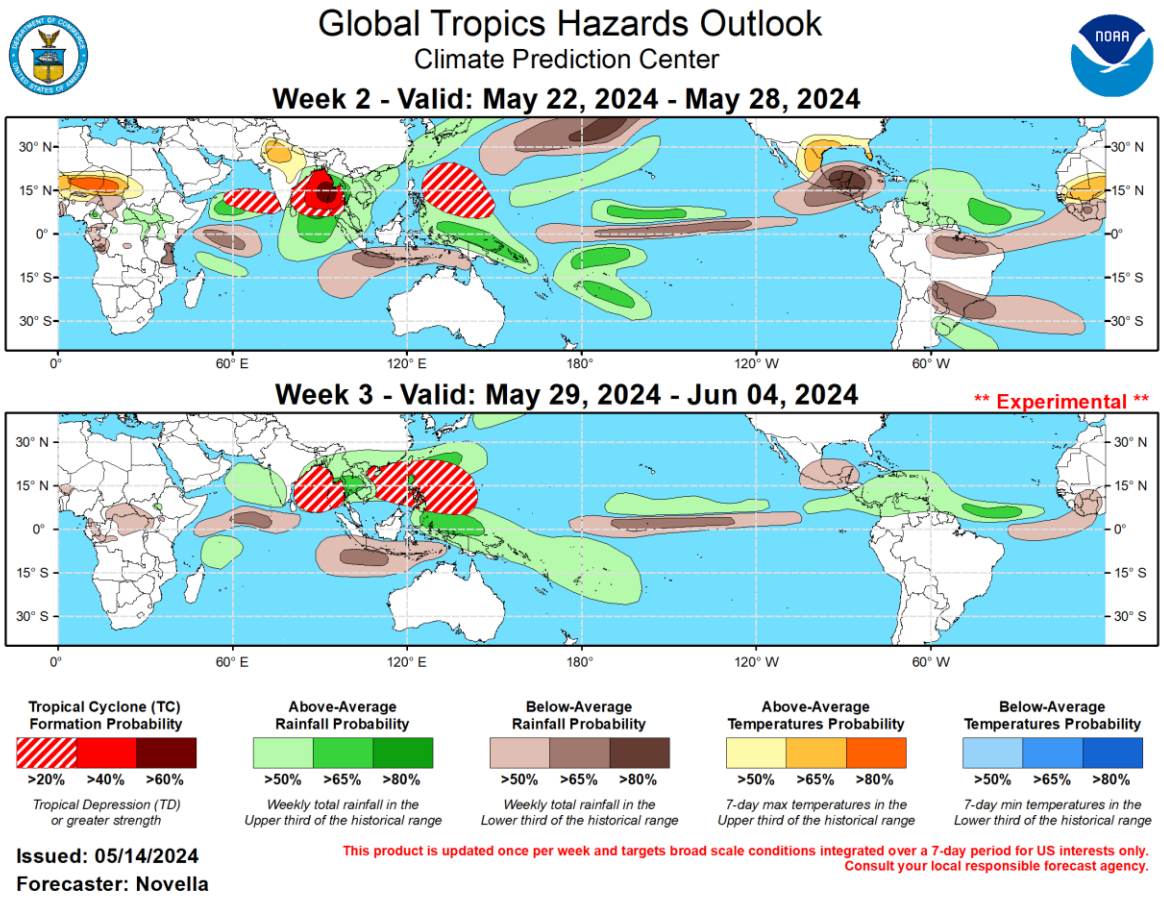
La Niña: *Cool phase of an ENSO cycle. Sea surface temperatures of -0.5°C occur across the east-central equatorial Pacific.*

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).

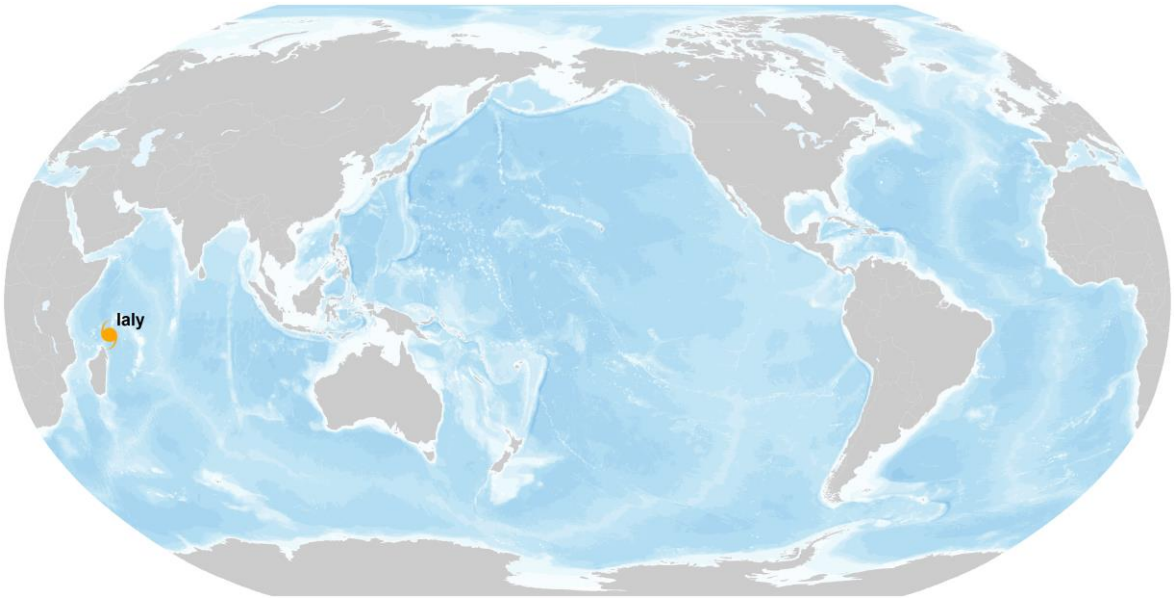
Source: NOAA, Columbia University | Graphic: Aon Catastrophe Insight

Global Tropics Outlook



Source: Climate Prediction Center (NOAA)

Current Tropical Cyclone Activity

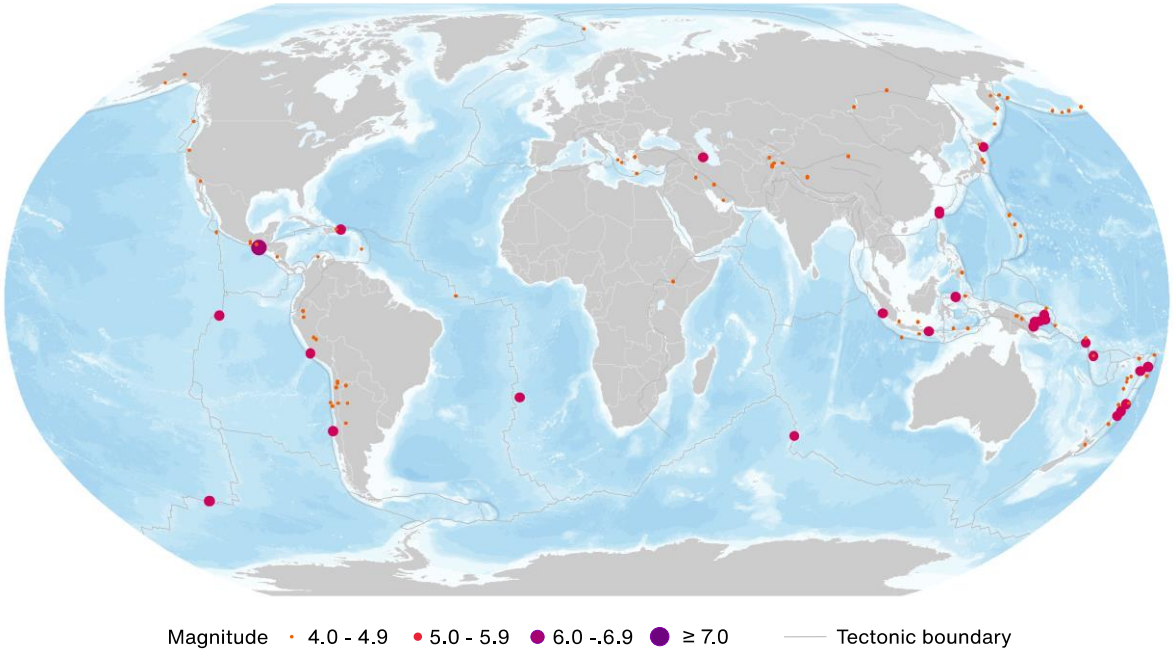


Name	Location	Winds	Center
CY Ialy	9.1S, 51.9E	45	280 mi (450 km) NE from Antsiranana, Madagascar

* 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)

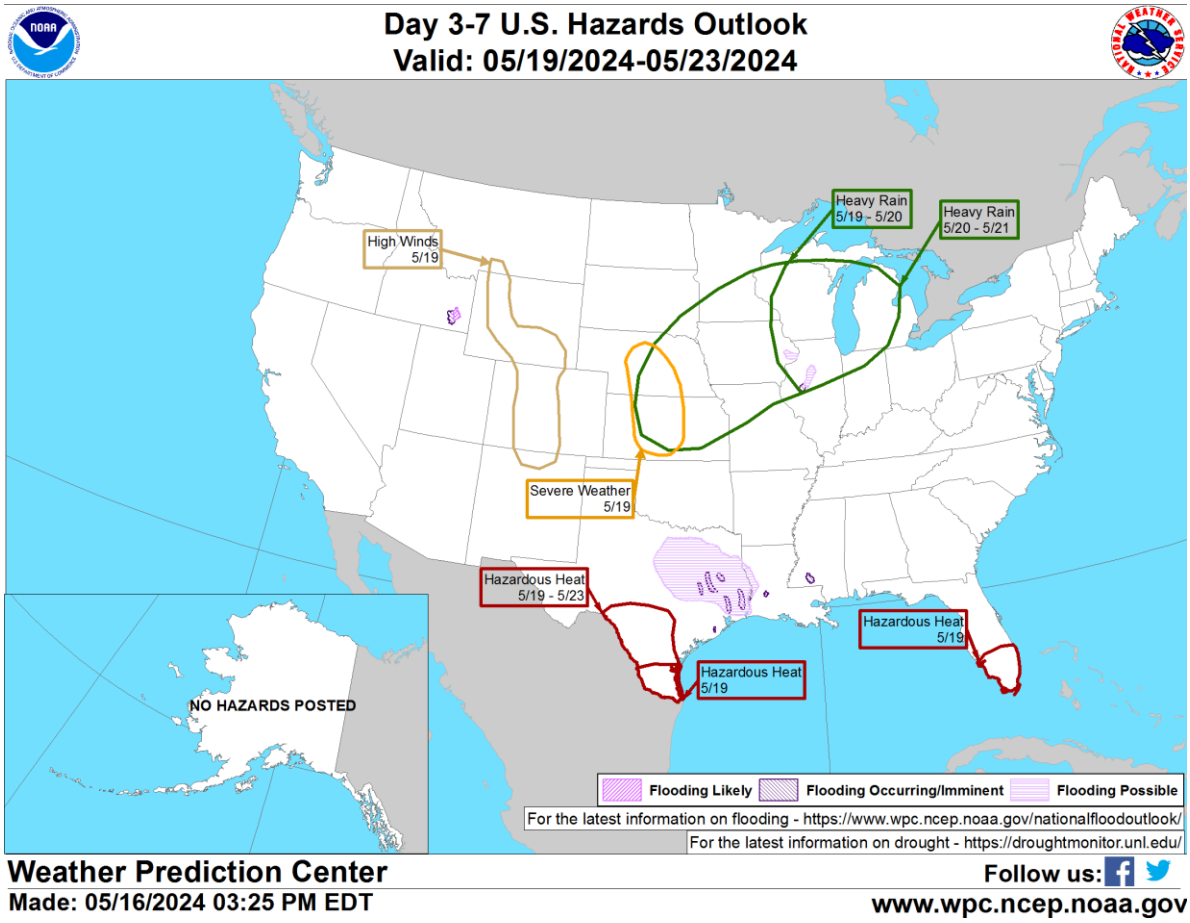
Global Earthquake Activity (≥M4.0): May 10-16



Date (UTC)	Location	Magnitude	Epicenter
5/12/2024	14.45N, 92.36W	6.4	17 km (11 mi) WSW of Brisas Barra de Suchiate, Mexico

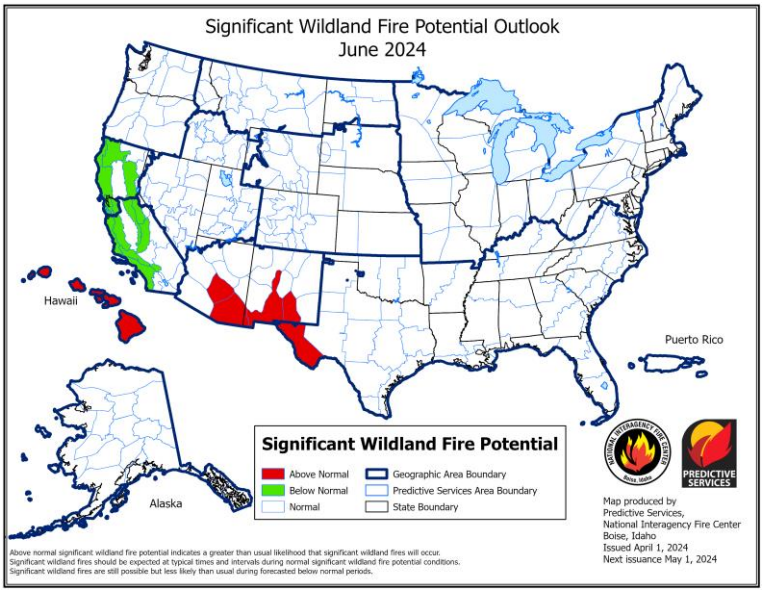
Source: United States Geological Survey

U.S. Hazard Outlook



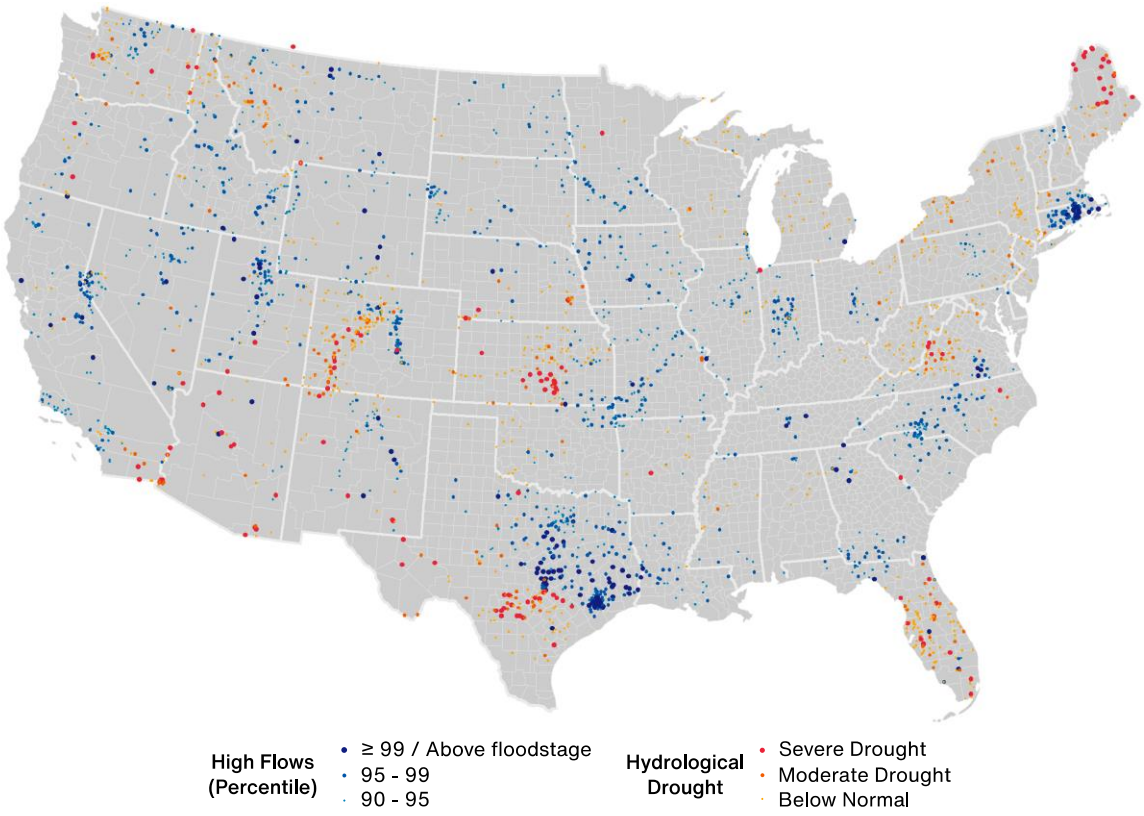
Source: Climate Prediction Center (NOAA)

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



Source: NIFC

U.S. Current Riverine Flood Risk



A ≥99th 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 steam 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

United States: SCS, Flooding, & Landslide

Storm Prediction Center (SPC)
Weather Prediction Center (WPC)
NOAA Damage Assessment Toolkit (DAT)
City of Tallahassee
Mississippi Emergency Management Agency
Deadly severe storms rake Gulf Coast with 82-mph winds, baseball-sized hail, tornadoes, *Fox Weather*
Johnson City, Blanco County consider emergency declaration after hail storm, *KXAN Austin*
5 tornadoes touched down across NC during Tuesday storms, officials say, *CBS17*
At least 1 dead in Florida as storms continue to pummel the South. DeSantis declares emergency, *AP News*
Updates: Woman killed as Tallahassee faces what may be its worst tornado strike in history, *Tallahassee Democrat*
Hawaii faces severe flooding as Kona Low brings heavy rain, state of emergency declared, *KITV Island News*

Brazil: Flooding (Update)

Civil Defense of Rio Grande do Sul
The National Confederation of Municipalities (CNM)
Copernicus, Sentinel-2

Eastern Africa: Flooding & Landslide (Update)

IFRC Africa
UN OCHA
ReliefWeb

Natural Catastrophes: In Brief

The National Confederation of Municipalities (CNM)
Civil Defense of Rio Grande do Sul
Indonesian Disaster Management Agency (BNPB)
ASEAN Disaster Information Network (ADINet)
IFRC
WHO
Heavy flood in Mashhad leaves at least 7 dead, 12 missing, *Iran Press*

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