



# Weekly Cat Report

June 26, 2020

## This Week's Natural Disaster Events



Event	Impacted Areas	Fatalities	Damaged Structures and/or Filed Claims	Preliminary Economic Loss (USD)*	Page
<b>Severe Weather</b>	United States	0	Thousands	100+ million	3
<b>Earthquake</b>	Mexico	10+	Thousands	Millions	7
<b>Flooding</b>	Turkey	7+	Hundreds	Millions	9
<b>Flooding</b>	Ivory Coast	17+	Dozens	Unknown	11
<b>Flooding</b>	Ukraine & Central Europe	4+	10,000+	10s of millions	11
<b>Flooding</b>	China	80+	183,000+	3.4+ billion	11
<b>Flooding</b>	India	14+	Thousands	Unknown	11
<b>Earthquake</b>	India, Myanmar	0	Hundreds	Negligible	11
<b>Wildfire</b>	Russia	0	Unknown	Unknown	12
<b>Severe Weather</b>	India	107+	Thousands	Millions	12

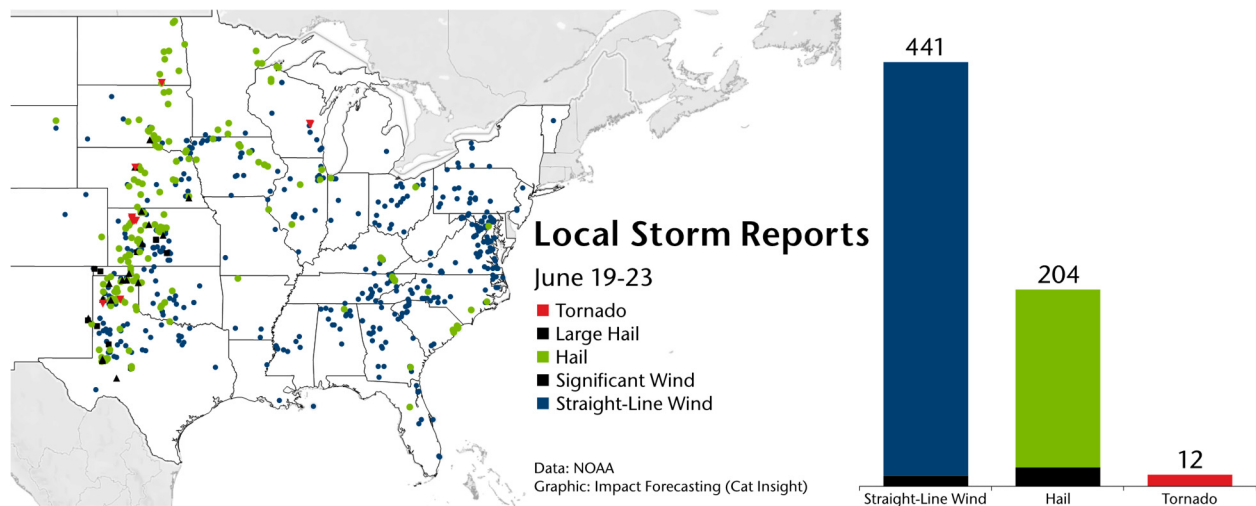
*\*Please note that these estimates are preliminary and subject to change. In some instances, initial estimates may be significantly adjusted as losses develop over time. This data is provided as an initial view of the potential financial impact from a recently completed or ongoing event based on early available assessments.*

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>

# More convective weather affects the United States

An active weather pattern persisted across large portions of the central and eastern United States between June 19-22. Flow around a building high pressure system over extreme southeastern portions of the country allowed for a plume of warm and moist air to interact with a series of frontal boundaries in addition to outflow boundaries from previous storms, creating an environment conducive for severe weather. The main hazards associated with this event were strong straight-line winds, large hail, and isolated tornadoes. Widespread incidences of severe weather were reported, however the greatest impacts occurred in portions of Iowa, South Dakota, Nebraska, Kansas, Oklahoma, and Texas.

## Meteorological Recap

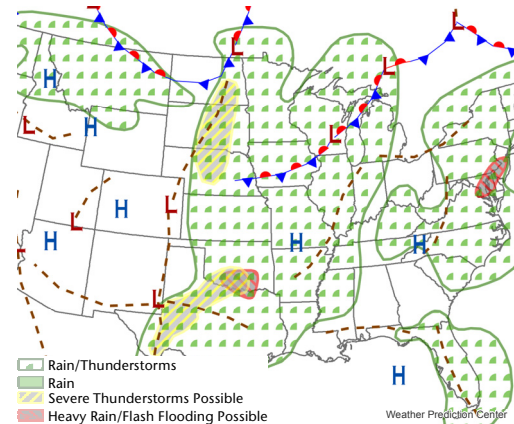


## June 19

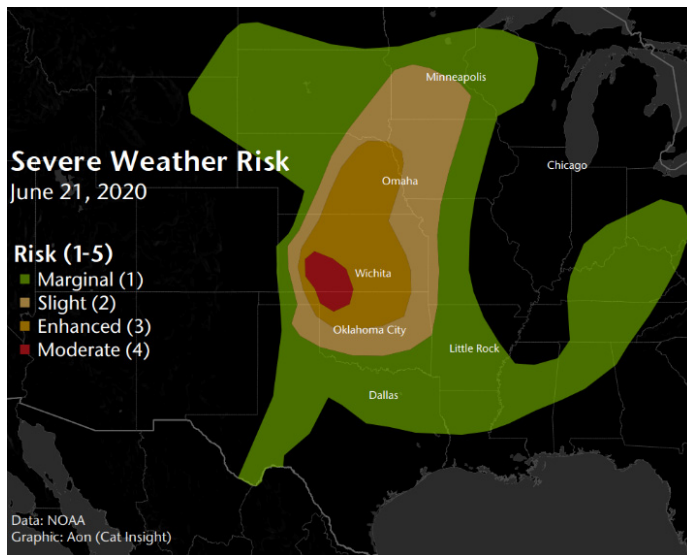
Discrete storms initiating in the vicinity of a quasi-stationary frontal boundary and dryline (a boundary that separates a moist air mass from a dry air mass) approached the Texas panhandle in the evening on June 19. Portions of Potter and Randall Counties (Texas), including the Amarillo metro region, were impacted by a notable hail event, where golf ball size and larger hailstones were observed. The storms organized into linear structures and storm clusters as they advanced southeastward in the evening and overnight hours before weakening.

## June 20

Severe weather on June 20 occurred ahead of the eastward progressing upper level trough, along a series of frontal and outflow boundaries across the central United States. In the morning, The Storm Prediction Center (SPC) indicated two regions for a Slight Risk (level 2 out of 5) for severe weather. The first, an axis spanning from central Nebraska northward toward southeastern North Dakota, and the second across portions of the Southern Plains, particularly in western and central Texas. In the early evening, a low amplitude trough and associated cold front, along with sufficient surface heating allowed localized severe weather to initiate across the Plains, with discrete storms and storm clusters producing large hail up to 3.0 inches (7.62 centimeters) and severe wind gusts up to 70 mph (112 kph).



## June 21

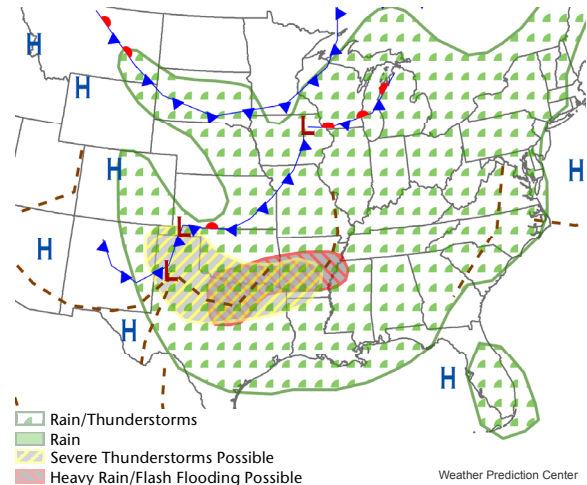


Moisture from the Gulf of Mexico continued to stream northward into the Plains and Midwest, associated with flow around the expanding high-pressure system to the southeast. By the afternoon, the SPC highlighted a region across southwest Kansas and northwest Oklahoma for a Moderate Risk (level 4 out of 5) for severe weather, with a broader region of Enhanced Risk (level 3 out of 5) reaching from central Oklahoma northward into eastern Nebraska. Instability was enhanced by ample diurnal heating, large convective available potential energy or CAPE (related to the updraft strength of a thunderstorm), and steep mid-level lapse rates (changes in temperature with height) ahead of an approaching dryline

(a boundary that separates a moist air mass from a dry air mass). In this region, discrete storms and storm clusters organizing into linear structures were responsible for producing hailstones up to 3.0 inches (7.62 centimeters) in diameter, and severe wind gusts approaching 80 mph (128 kph). To the north, severe winds and hail were associated with storms along and ahead of a cold front extending across the upper Mississippi Valley, focused on the Iowa/Minnesota border. Further east, severe weather was noted with storms progressing through the Ohio and Tennessee River Valleys.

## June 22

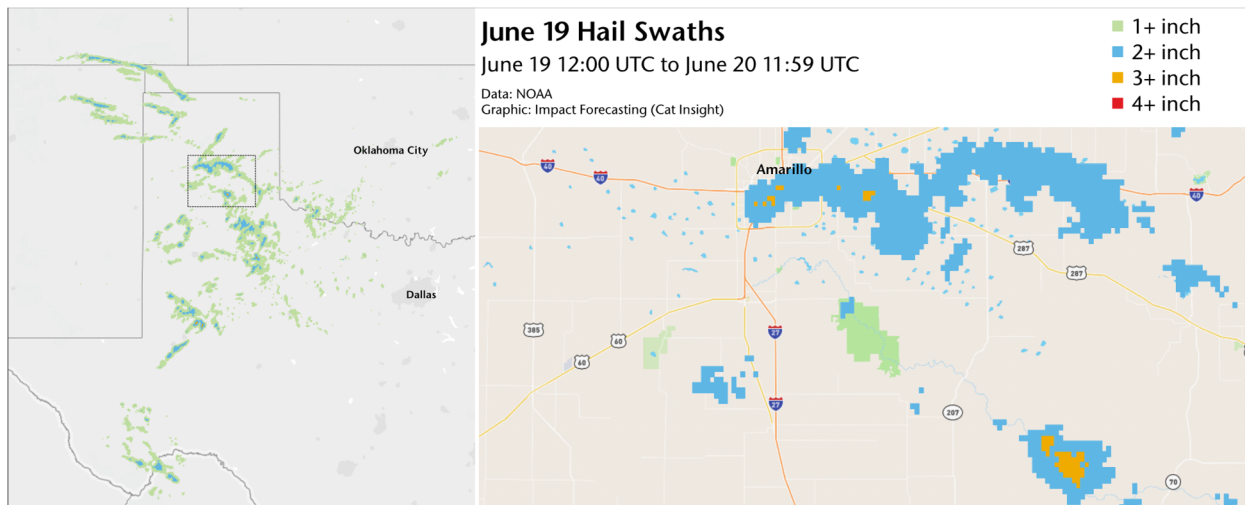
Continued moisture convergence along a southwestward extending cold frontal boundary spanning from the Great Lakes to the Southern Plains was the primary focus for severe weather on June 22. A region in the Southern Plains from the Texas panhandle south-southeastward toward Ark-La-Tex was highlighted for a Slight Risk (level 2 out of 5) for severe weather by the SPC. Initially discrete storms which formed in southern Colorado and northern New Mexico consolidated into a Mesoscale Convective System (MCS) as they propagated south-southeastward throughout Texas and the Red River Valley overnight. The environment was enhanced by favorable wind shear, with southeasterly flow at the surface and northwest flow aloft, while initially steep lapse rates allowed for reports of large hail approaching 3.0 inches (7.62 centimeters). Elsewhere, a remnant mesoscale vortex and short-wave trough led to instances of severe weather, primarily strong winds, across the Mid-Atlantic states.



## Event Details

### June 19

In Texas, hailstones up to 2.0 inches (5.1 centimeters) were reported as severe storms passed over Potter and Randall counties, including the City of Amarillo, resulting in damage to numerous vehicles, as well as exterior damage to structures and homes. Hail up to 3.0 inches (7.62 centimeters) were reported in Ector County (Texas). A wind gust of 98 mph (158 kph) was measured in Cimarron County (Oklahoma).



## June 20

There were 109 instances of reported severe weather on June 20, of which 72 were for hail, with 6 for significant hail (greater than or equal to 2.0 inches). Hailstones approaching 3.0 inches (7.62 centimeters) in diameter, baseball sized, were measured in North County (Kansas) as well as Ector County (Texas). Hail up to 2.75 inches (7.0 centimeters) were reported in Gregory County (South Dakota), where noted vehicle damage was observed. A wind gust in Buffalo County (South Dakota) was measured at 70 mph (112 kph). Severe winds resulted in reported minor exterior damage to homes, along with multiple downed trees and power lines.

## June 21

There were 248 reports of severe weather on June 21, of which 180 were for wind. Hailstones measuring 3.0 inches (7.62 inches) were reported in Ellsworth County (Kansas), as well as Beaver County (Oklahoma). Maximum straight-line wind gusts of 80 mph (128 kph) were measured in Ford, Barton, and Kingman Counties (Kansas). Uprooted trees, downed power lines, and damage to multiple outbuildings and vehicles were reported with this event.

## June 22

Multiple instances of significant hail were observed across portions of New Mexico and Texas on June 22; in New Mexico hailstones of 2.50 inches (6.35 centimeters) were observed in Roosevelt and Ochiltree Counties, while in Texas 3.25-inch (8.25-centimeter) hail was reported in Oldham County. Hailstones reaching 2.00 inches (5.1 centimeters) led to noted roofing, vehicle, and crop damage in Gage County, Nebraska. Wind gusts across Texas associated with the MCS reached 60 to 70 mph (97 to 112 kph) resulting in multiple instances of downed trees and minor exterior damage to structures. Strong winds across the Mid-Atlantic resulted in downed trees, damage to power and utilities, along with reported impacts to roofing and outbuildings. As of this writing, there were 226 reports of severe weather, of which 188 were for wind.

## Financial Loss

Total aggregate economic and insured losses during the period from June 19 to 22 were each likely to exceed USD100 million. Most of the wind and hail-related damage will be covered by insurance.



# Strong Earthquake rattles southern Mexican coast

A powerful magnitude-7.4 earthquake rattled southern Mexico's Oaxaca region on June 23. At least ten people were killed, and dozens injured. However, damage to homes, businesses, and infrastructure – while notable – was not as extensive as initially feared. Shaking from the event was felt as far away as Mexico City in addition to portions of Guatemala, El Salvador, and Honduras.

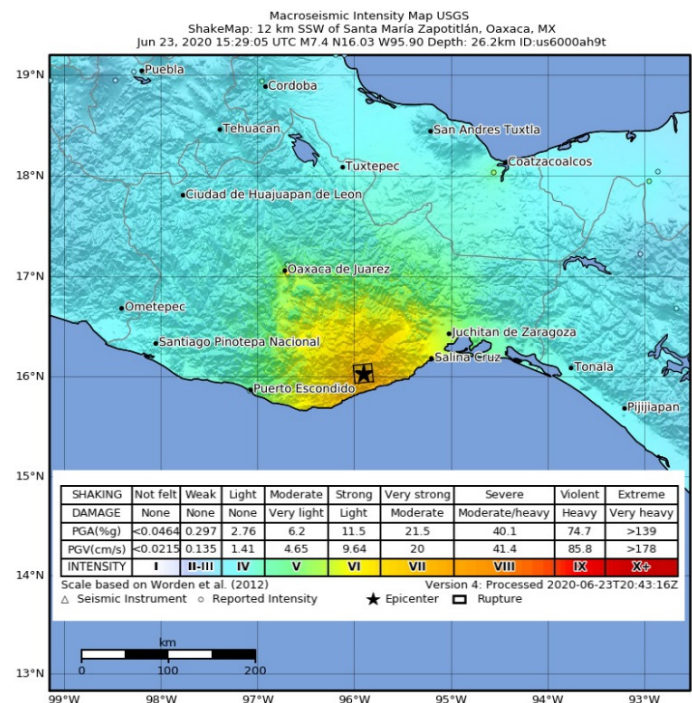
## Seismological Recap

A strong magnitude-7.4 (M7.4) earthquake struck the Oaxaca region of southern Mexico at 15:29 UTC (10:29 CDT) on June 23. The epicenter was located 12 kilometers (7.5 miles) south-southwest of Santa María Zapotitlán at a depth of 26.3 kilometers (16.3 miles). The United States Geological Survey (USGS) cited that more than 826,000 people felt Strong (MMI VI; 733,000) or Very Strong (MMI VII; 93,000) shaking. Residents of the capital, Mexico City, experienced at least “Moderate” or “Light” shaking. The tremor was felt throughout much of southern and central Mexico, as well as regions of Guatemala, El Salvador, and Honduras.

Immediately following the event the Pacific Tsunami Warning Center (PTWC) issued tsunami alerts for coastal regions in Mexico, Guatemala, El Salvador, and Honduras. Tsunami waves of 0.71 meters (2.3 feet) above the normal tidal levels were observed in Salina Cruz, Mexico, while 0.68-meter (2.2-feet) waves were reported in Acapulco, Mexico.

The USGS provided the following official seismological summary of the June 23 event:

*“The June 23, 2020, M7.4 earthquake near Oaxaca, Mexico occurred as the result of reverse faulting on or near the plate boundary between the Cocos and North American plates. Focal mechanism solutions for the event indicate rupture occurred on either a shallowly dipping thrust fault striking towards the west or on a steeply dipping reverse fault striking towards the ESE. The depth and focal mechanism solutions of the event are consistent with its occurrence on the subduction zone interface between these plates, approximately 100 km northeast of the Middle America Trench, where the Cocos plate begins its descent into the mantle beneath Mexico. In the region of this earthquake, the Cocos plate moves approximately northeastward at a rate of 60 mm/yr.*”



*While commonly plotted as points on maps, earthquakes of this size are more appropriately described as slip over a larger fault area. Reverse faulting events of the size of the June 23, 2020 earthquake are typically about 70 x 35 km in size (length x width).”*

Located atop three large tectonic plates, Mexico, and its southern coasts have a long history with destructive and significant earthquakes. The strongest being a M8.4 thrust earthquake in 1932 which struck in the Jalisco region to the northwest of the June 23rd event. The deadliest was the September 19, 1985 event, where a M8.0 earthquake in the Michoacán region resulted in at least 9,500 fatalities. More recently on September 8, 2017 a M8.2 quake struck off the coast of Chiapas, followed by a M7.1 earthquake near Mexico City only 11 days later. On February 16, 2018 a M7.2 earthquake struck in Oaxaca approximately 225 kilometers (140 miles) northwest of this event.

## Event Details

Local officials confirmed at least ten fatalities and dozens of injuries resulting from the earthquake. Preliminary reports from the State of Oaxaca indicated that landslides occurred on 3 federal and 5 state highways, while damage was observed at 4 archaeological sites, 15 health centers, and at least 2,000 homes. One hospital dedicated to COVID-19 patients reported structural damage and had to be evacuated. In the nearby city of Salina Cruz, Mexican Petroleum (Pemex) reported a brief fire at a refinery. Local authorities reported minor to moderate damage to additional historical buildings in Oaxaca City. Throughout the state, at least 79 people were relocated to two temporary shelters.



Source: Government of Oaxaca

Elsewhere, tremors in Mexico City resulted in minor damage to buildings and infrastructure as well as several injuries. In total, more than 2.4 million customers lost power.

## Financial Loss

With damage assessments ongoing, it currently remains too preliminary to provide a specific economic or insured loss estimate. The modeled USGS Population Pager estimate indicated that there was a 68 percent likelihood of economic damage being less than USD100 million.

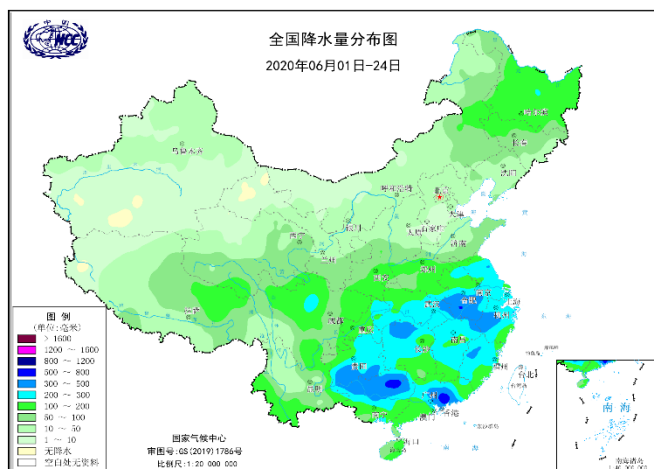


# More rainfall enhances seasonal flooding in China

Seasonal rainfall continued this week across southwest and central China, bringing additional fatalities and damage. Among the hardest-hit areas included Guizhou province and Chongqing municipality from June 20-25. No fewer than 11 people were left dead and several others were reported missing, as the seasonal death toll rose to at least 80. The flooding damaged or destroyed thousands of houses, several bridges and roads, and affected vast areas of cropland – 94,000 hectares (232,000 acres). Since June 1, more than 200 river locations have swollen above warning levels that have led to inundation of 180,300 homes and 861,000 hectares (2.13 million acres) of cropland. Total combined economic losses were listed by the government at CNY24.1 billion (USD3.4 billion).

## Event Details

### Guizhou



Total precipitation (mm) in China from June 1-24 (Source: CMA)

Heavy flooding in the Guizhou province in China since June 21 has submerged several townships and forced hundreds of thousands from their homes. Widespread damage was reported from the Guizhou province with roads and houses inundated in many locations; additional damage was reported from Guangxi, Guangdong, Hunan, Jiangxi, and 27 other provinces. At least three people were killed, and 10,000 people relocated in Tongzi County. According to the Ministry of Emergency Management (MEM) China, several townships in the north of Tongren City and Zunyi City were flooded, leaving a large proportion of residents without electricity and drinking water, and

interrupting telecommunications. Thousands of people were evacuated to safety by the Zunyi City Fire and Rescue Detachment during the event.

Flooding caused by heavy monsoonal rains has resulted in swelling of several medium- and small-sized rivers well above the danger mark. Flash floods have affected nearly 40,000 people in 22 villages of Huishui County, according to local media reports. Severe damage was reported to several bridges and roads in the affected areas. Recent observations by the provincial meteorological department suggests that the flooding has shifted from northern to southern Guizhou province.

According to the Ministry of Emergency Management, flooding in Guizhou Province has affected 73,000 people. Thousands of homes were damaged or destroyed and more than 21,000 hectares (52,000 acres) of crops were damaged. The direct economic losses were estimated at CNY150 million (USD21 million). With additional rainfall in the forecast, further damage in the Guizhou province is likely in the coming days.

## Chongqing

Heavy flooding since June 20 continues to affect several locations in the Chongqing municipality in southwestern and central China. Chongqing city recorded its worst flooding in more than two decades. According to the Chongqing authorities, Qijiang River has seen the largest flooding since 1940 with water levels at Wucha Station exceeding 5 to 6 meters (16 to 20 feet) above the danger mark. The Qijiang district has suffered the heaviest flooding since 1951 – when the Qijiang hydrological monitoring station was built. According to the Qijiang district's Publicity Department, more than 40,000 people have already been evacuated. At least 8 kids have died while playing near Fu river. As of June 22, nearly 201,000 people were affected across 26 districts; including Qijiang, Wushan, and Pengshui in Chongqing City which were among the worst affected. Thousands of homes were impacted, of which nearly 200 were destroyed. Nearly 73,000 hectares (180,500 acres) of crops were affected. The direct economic losses were estimated at CNY210 million (USD29.6 million).



*Flooding in Zunyi City (Source: MEM, China)*

## Financial Loss

Preliminary estimates of the Chinese government suggest economic costs approaching CNY360 million (USD51 million) in the Guizhou province and Chongqing municipality during June 20-25. Since June 1, more than 200 river locations have swollen above warning levels that have led to inundation of 180,300 homes and 861,000 hectares (2.13 million acres) of cropland. Total combined economic losses were listed by the government at CNY24.1 billion (USD3.4 billion). It was anticipated that most property and agricultural costs will be uninsured, given the low insurance penetration in China.

# Natural Catastrophes: In Brief

## *Flooding (Turkey)*

Notable flooding ensued in Bursa Province of Turkey after a period of intense rainfall on June 21. According to the Disaster and Emergency Management Presidency (AFAD), the most affected were Kestel, Orhangazi, Yenişehir, İznik and Gürsu districts. Five people died, and one person was missing, while dozens of homes were affected, according to the latest information. Damage assessments were ongoing, as the event caused notable impacts on property, agriculture and infrastructure. Based on preliminary assessments, total economic losses will likely end up in the millions USD. A further round of severe storms affected the Istanbul Province and the City on June 23, causing additional damage and disruption. Preliminary estimates noted dozens of properties flooded or with wind-related damage. One person died and eight were injured.

## *Flooding (Ivory Coast)*

A landslide, following a spell of heavy rain during the rainy season, resulted in at least 17 fatalities in Anyama City, north of Abidjan in Côte d'Ivoire on June 18. According to unconfirmed media reports, several people were still missing, and 8 were injured. Officials confirmed that more than 3,600 people were affected by the event to some degree.

## *Flooding (Ukraine & Central Europe)*

Widespread flooding affected parts of Western Ukraine after heavy rains on June 22-24. The State Emergency Service of Ukraine noted 197 settlements in 15 districts of the Ivano-Frankivsk region affected – 5,250 residential properties and 3,100 basements were flooded. An additional 1,200 homes and basements were flooded in the Chernivtsi and Lviv regions. Regional infrastructure suffered heavy losses, as the agency reported 29 bridges destroyed, along with approximately 125 kilometers (78 miles) of road sections in Ivano-Frankivsk alone; connection with 21 settlements was disrupted. Emergency services rescued or evacuated nearly 950 residents. Locally severe storms also caused damage in other countries, including southeastern Poland and northern Romania. Strong storms also impacted eastern Slovakia; the worst affected were Pichne and Zubné municipalities in Snina district, where several flood waves inundated virtually all properties and resulted in notable infrastructural damage.

## *Earthquake (India, Myanmar)*

An earthquake of magnitude-5.3 struck the border region of India (Mizoram) and Myanmar (Chin) on June 22 at 04:00 am IST. The epicenter was located 27 km south of Champhai city, Mizoram, India and the depth was approximately 20 kilometers (12.5 miles), according to the National Centre for Seismology, India. The tremor was followed by two more aftershocks of magnitude-4.1 and 4.3 on June 23 and June 24, respectively. According to the local media reports of India and Myanmar, hundreds of structures were damaged while no casualties were reported.

## *Flooding (India)*

Torrential monsoonal rains prompted flash floods and landslides in the state of Assam, India since June 20. According to the Assam State Disaster Management Authority (ASDMA), flooding caused widespread inundation damage to thousands of houses and business, and nearly 4,500 hectares (11,120 acres) of cropland in more than 120 villages across five severely affected districts (Dhemaji, Jorhat, Majuli, Sivasagar and Dibrugarh). Around 38,000 residents were affected during the event. Heavy rains caused the Brahmaputra River to swell just below the warning level, while some of its tributaries continue to flow well above the danger mark. At least three deaths were reported since June 20 with a total death toll of 14 people since the beginning of southwest monsoon season on June 1.

### *Wildfire (Russia)*

On June 20, the Pogoda I Klimat weather station near the town of Verkhoyansk in Siberian Russia (north of the Arctic Circle) recorded a maximum temperature of 38°C (100.4°F) – the highest ever since meteorological records at this station begun in 1885. The heat was the result of a stationary high-pressure dome over Siberian Russia which resulted in abnormally high temperatures across the region and contributed to notable permafrost melt. According to the historical temperature records and the World Meteorological Organization (WMO), this is the first time that a temperature at any geographical location inside the Arctic Circle has crossed the 37.7°C (100°F) mark. The previous record highest temperature of 37.2°C (99°F) was recorded in the same location on July 25, 1988. It should be noted that that the average temperatures in Russia in the month of June seldom crosses the 30°C (86°F) mark. Temperature records suggest that the recent average temperature departure in northern and central Siberia have remained well above the climatological value – 8°C (14°F). A consequence of the anomalous heat and dry vegetation since the Spring season, large wildfires have erupted and expanded to more than 12.3 million acres (4.98 million hectares) as of mid-June. This is a rapidly evolving situation as above average temperature in Siberia are forecast to persist in the coming days and weeks. Melting of permafrost resulted in damage at a diesel storage facility near the city of Norilsk, spilling more than 21,000 metric tons of fuel into the Ambarnaya River, freshwater lakes, and surrounding subsoil.

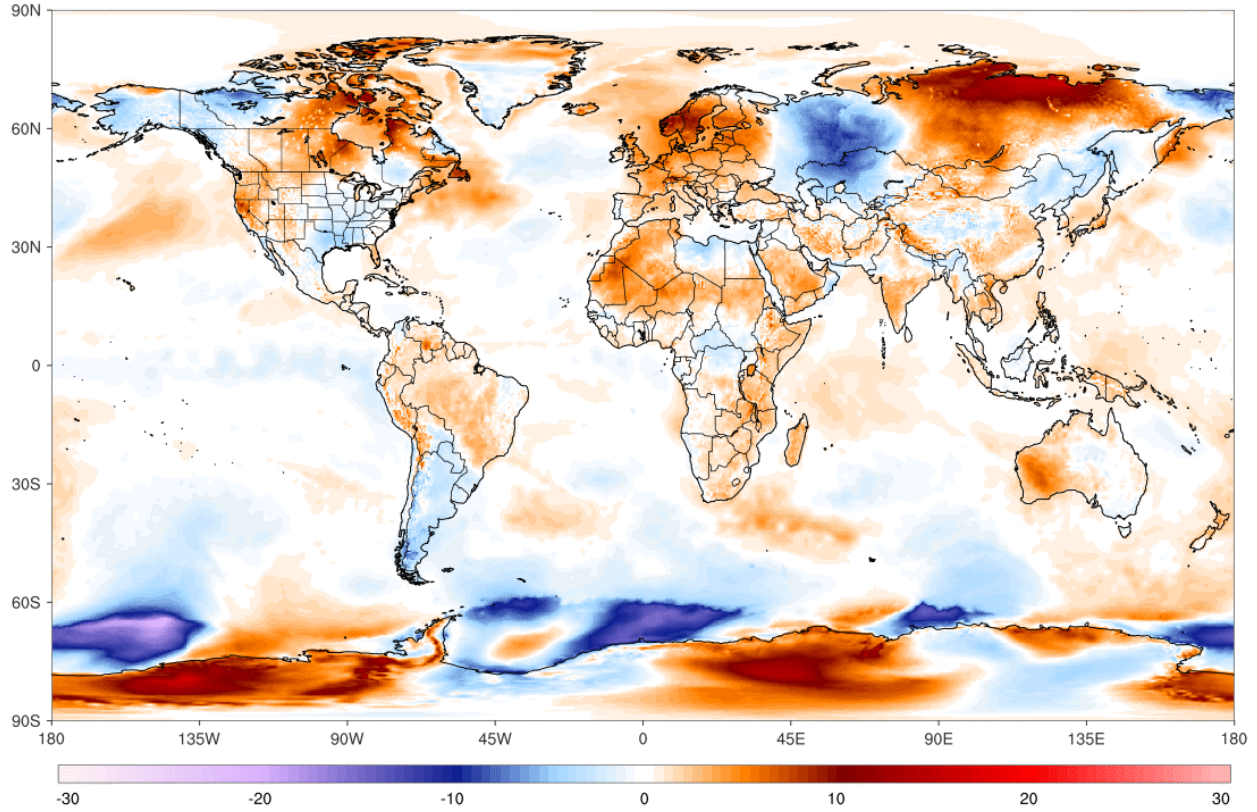
### *Severe Weather (India)*

Heavy rains coupled with thunderstorms, lightning, and wind swept across 23 districts of Bihar and Uttar Pradesh in northern India on June 24-25. According to the Bihar State Disaster Management Authority, at least 83 people died in the state of Bihar and several others sustained severe injuries. Another 24 people died in Uttar Pradesh from the lightning strikes. The event resulted in widespread damage to thousands of houses, businesses, roads, and a large area cropland. Damage assessments remain ongoing. More than 2,300 people died from lightning strikes in 2018.

# Global Temperature Anomaly Forecast

GFS/CFSR 3-day Avg 2m T Anomaly (°C) [1979-2000 base]  
Thursday, Jun 25, 2020

ClimateReanalyzer.org  
Climate Change Institute | University of Maine



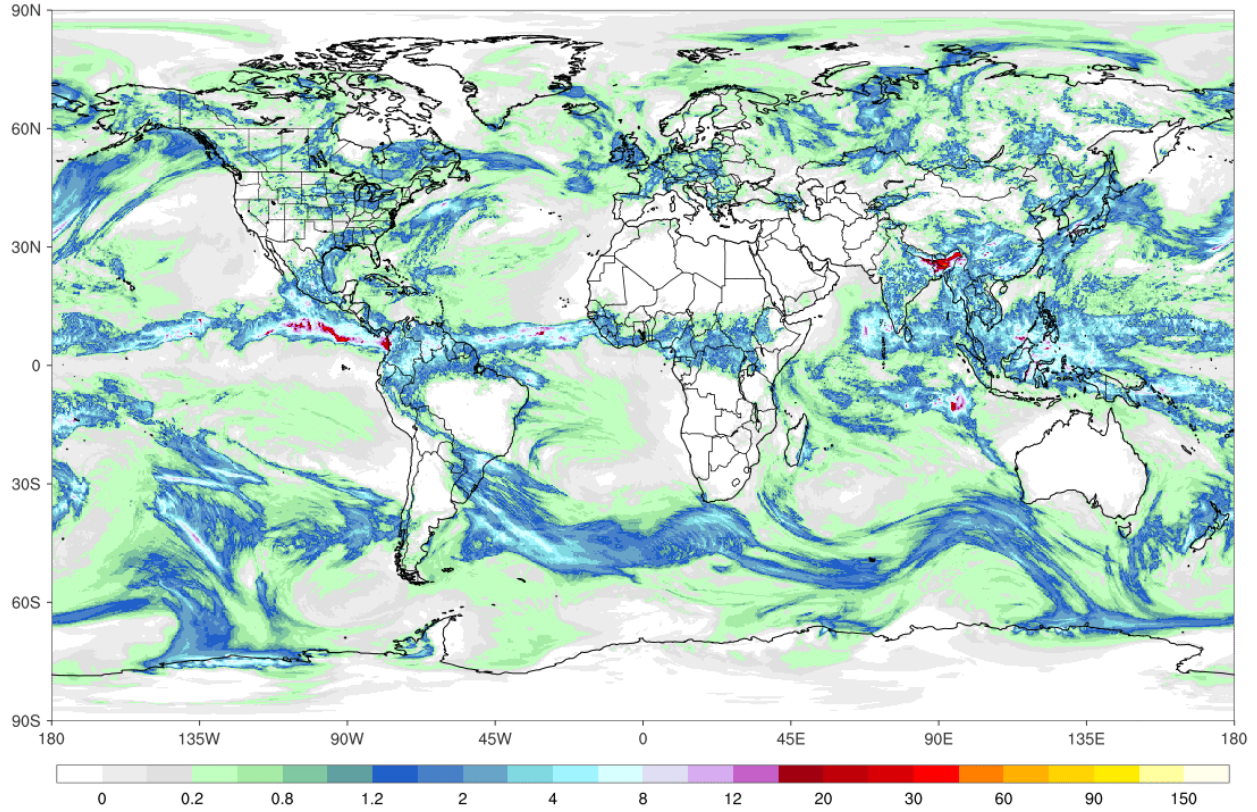
Source: Climate Reanalyzer, Climate Change Institute, University of Maine, USA



# Global Precipitation Forecast

GFS 3-day Total Accumulated Precipitation (cm)  
Thursday, Jun 25, 2020

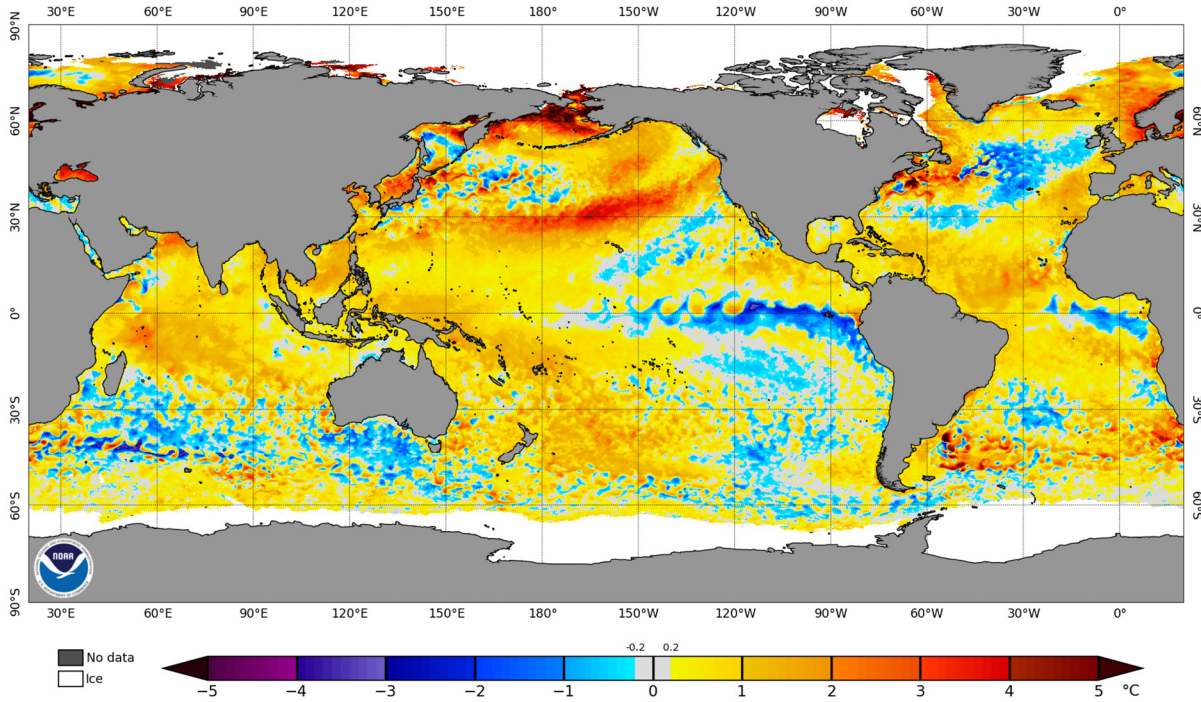
ClimateReanalyzer.org  
Climate Change Institute | University of Maine



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

# Weekly Sea Surface Temperature (SST) Anomalies (°C)

NOAA Coral Reef Watch Daily 5km SST Anomalies (v3.1) 23 Jun 2020



The SST anomalies are produced by subtracting the long-term mean SST (for that location in that time of year) from the current value. This product with a spatial resolution of 0.5 degree (50 kilometers) is based on NOAA/NESDIS operational daily global 5 kilometer Geo-polar Blended Night-only SST Analysis. The analysis uses satellite data produced by AVHRR radiometer.

## Select Current Global SSTs and Anomalies

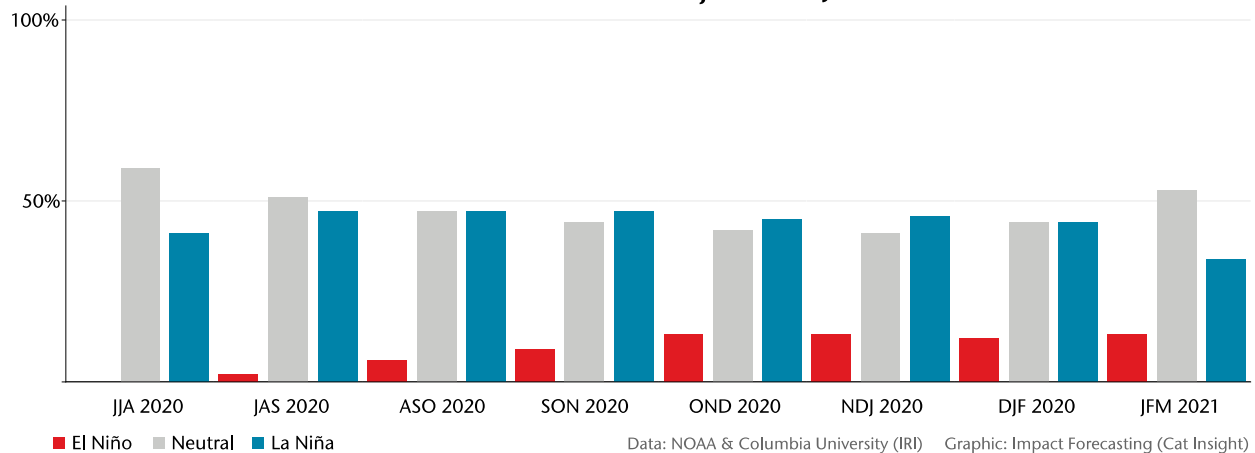
Location of Buoy	Temp (°C)	Departure from Last Year (°C)
Eastern Pacific Ocean (1,020 miles SW of San Salvador, El Salvador)	21.2	-2.2
Niño3.4 region (2°N latitude, 155°W longitude)	27.4	-2.1
Western Pacific Ocean (700 miles NNW of Honiara, Solomon Islands)	30.6	+0.5

Sources: ESRL, NOAA, NEIS, National Data Buoy Center

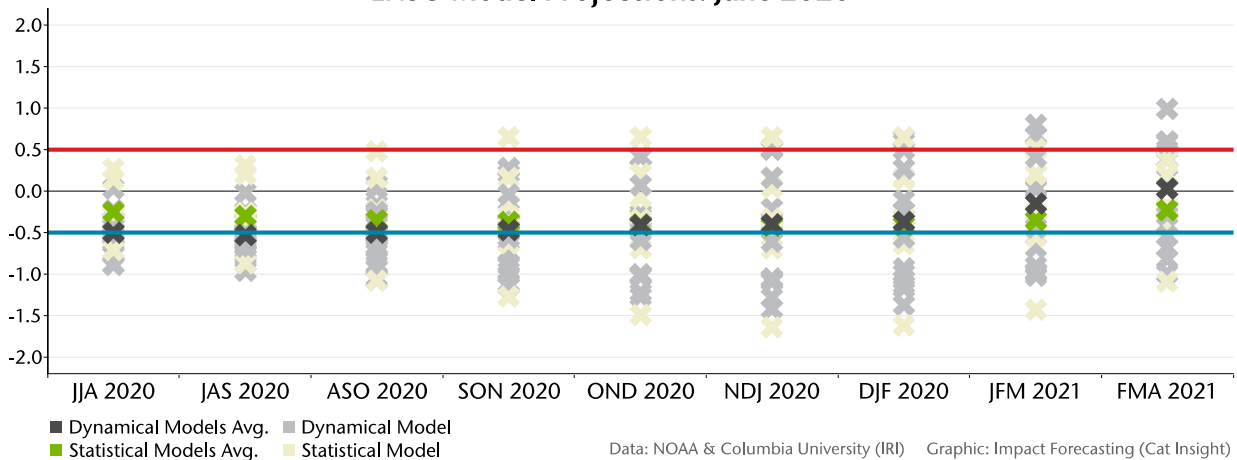
# El Niño-Southern Oscillation (ENSO)

ENSO-neutral conditions are currently present. NOAA notes that there is a roughly 60 percent chance of neutral conditions lingering through the Northern Hemisphere (boreal) summer months. The agency further states that there is a nearly equal chance (~40 to 50 percent) of a weak La Niña or ENSO neutral into the boreal autumn and winter (2020/21).

**Probabilistic ENSO Model Projections: June 2020**



**ENSO Model Projections: June 2020**



**El Niño** refers to the above-average sea-surface temperatures (+0.5°C) that periodically develop across the east-central equatorial Pacific. It represents the warm phase of the ENSO cycle.

**La Niña** refers to the periodic cooling of sea-surface temperatures (-0.5°C) across the east-central equatorial Pacific. It represents the cold phase of the ENSO cycle.

El Niño and La Niña episodes typically last nine to 12 months, but some prolonged events may last for years. While their frequency can be quite irregular, El Niño and La Niña events occur on average every two to seven years. Typically, El Niño occurs more frequently than La Niña.

**ENSO-neutral** refers to those periods when neither El Niño nor La Niña conditions are present. These periods often coincide with the transition between El Niño and La Niña events. During ENSO-neutral periods the ocean temperatures, tropical rainfall patterns, and atmospheric winds over the equatorial Pacific Ocean are near the long-term average.

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).

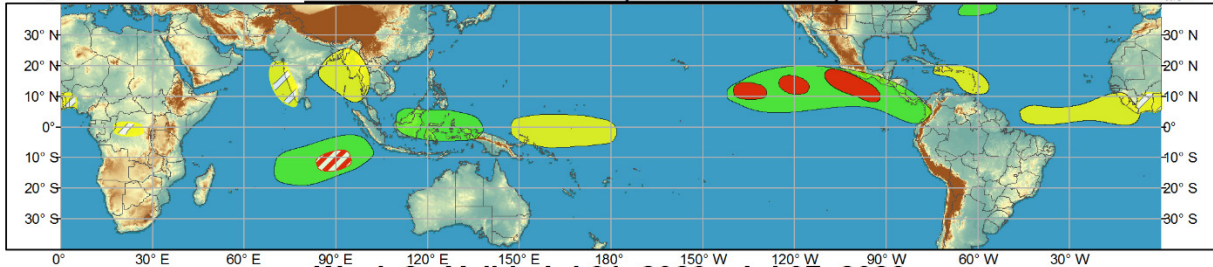
# Global Tropics Outlook



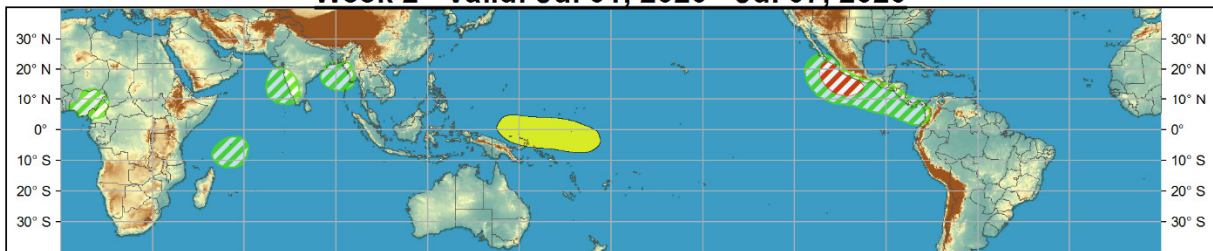
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



**Week 1 - Valid: Jun 24, 2020 - Jun 30, 2020**



**Week 2 - Valid: Jul 01, 2020 - Jul 07, 2020**



**Confidence**  
High Moderate

- Tropical Cyclone Formation** ■ ■ Development of a tropical cyclone (tropical depression - TD, or greater strength).
- Above-average rainfall** ■ ■ Weekly total rainfall in the upper third of the historical range.
- Below-average rainfall** ■ ■ Weekly total rainfall in the lower third of the historical range.
- Above-normal temperatures** ■ ■ 7-day mean temperatures in the upper third of the historical range.
- Below-normal temperatures** ■ ■ 7-day mean temperatures in the lower third of the historical range.

Produced: 06/23/2020

Forecaster: MacRitchie

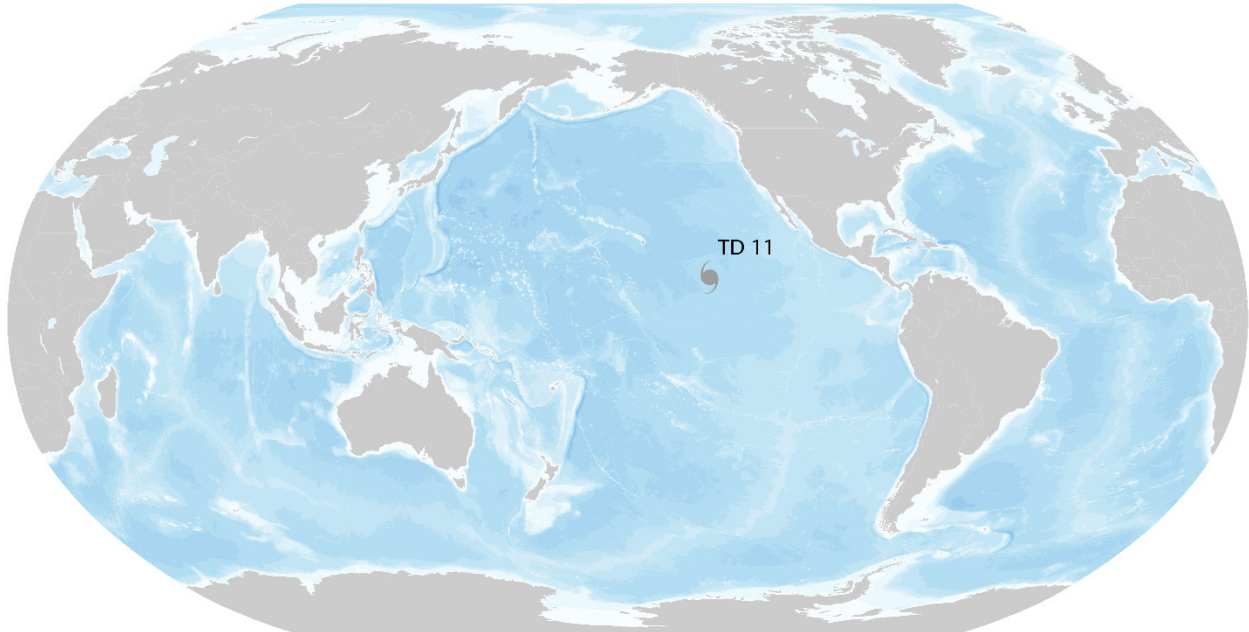
Product is updated once per week, except from 6/1 - 11/30 for the region from 120E to 0, 0 to 40N. The product targets broad scale conditions integrated over a 7-day period for US interests only. Consult your local responsible forecast agency.



Source: Climate Prediction Center



# Current Tropical Systems



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

## Location and Intensity Information

Name*	Location	Winds	Storm Reference from Land	Motion**
TD Eleven	10.8°N, 136.2°W	35 mph	1,400 miles (2,250 kilometers) ESE of Hilo, Hawaii	W at 9 mph

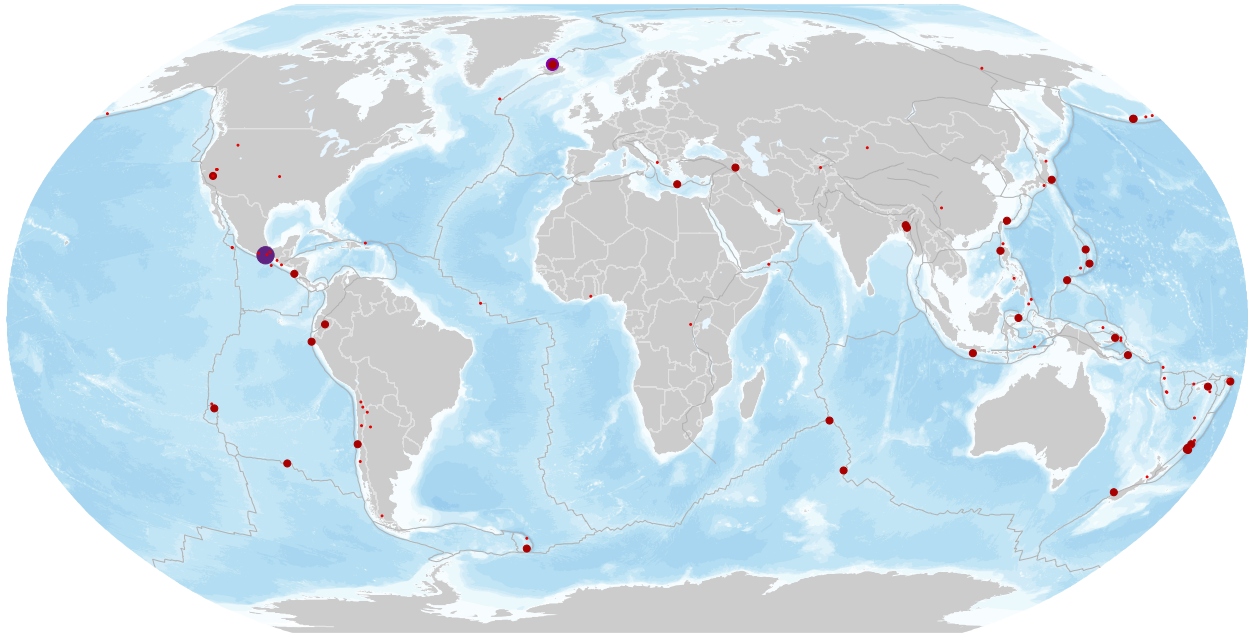
\* TD = Tropical Depression, TS = Tropical Storm, HU = Hurricane, TY = Typhoon, STY = Super Typhoon, CY = Cyclone

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

Sources: National Hurricane Center, Joint Typhoon Warning Center, Central Pacific Hurricane Center



## Global Earthquake Activity ( $\geq M4.0$ ): June 19 – 25



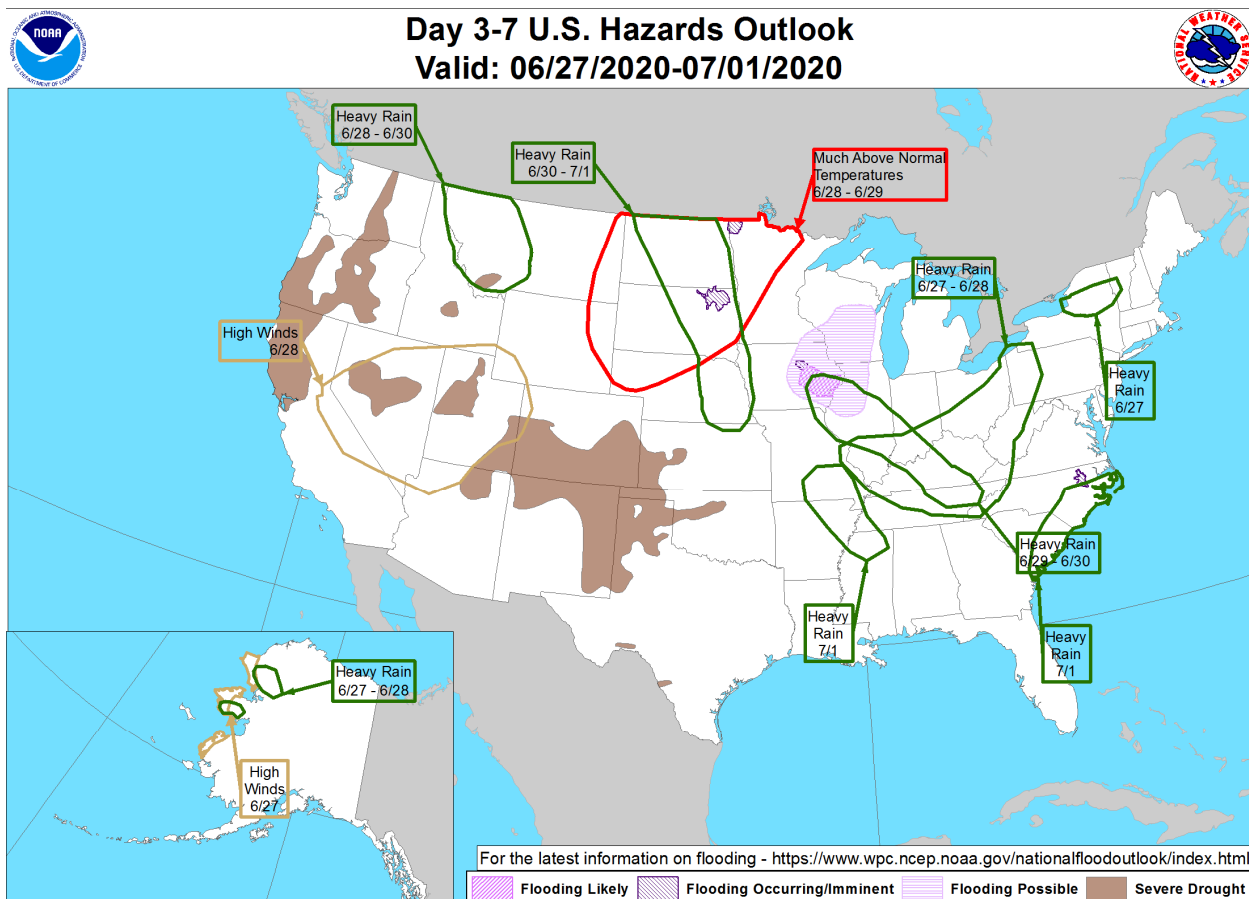
Magnitude • 4.0 - 4.9 • 5.0 - 5.9 • 6.0 - 6.9 •  $\geq 7.0$  — Tectonic boundary

### Significant EQ Location and Magnitude ( $\geq M6.0$ ) Information

Date (UTC)	Location	Magnitude	Depth	Epicenter
6/21/2020	66.39°N, 18.69°W	6.0	10 km	28 kilometers (17 miles) NNE of Siglufjordur, Iceland
6/23/2020	16.03°N, 95.90°W	7.4	26 km	20 kilometers (12 miles) ENE of Santa Maria Xadani, Mexico

Source: United States Geological Survey

# U.S. Weather Threat Outlook



Weather Prediction Center

Made: 06/24/2020 3PM EDT

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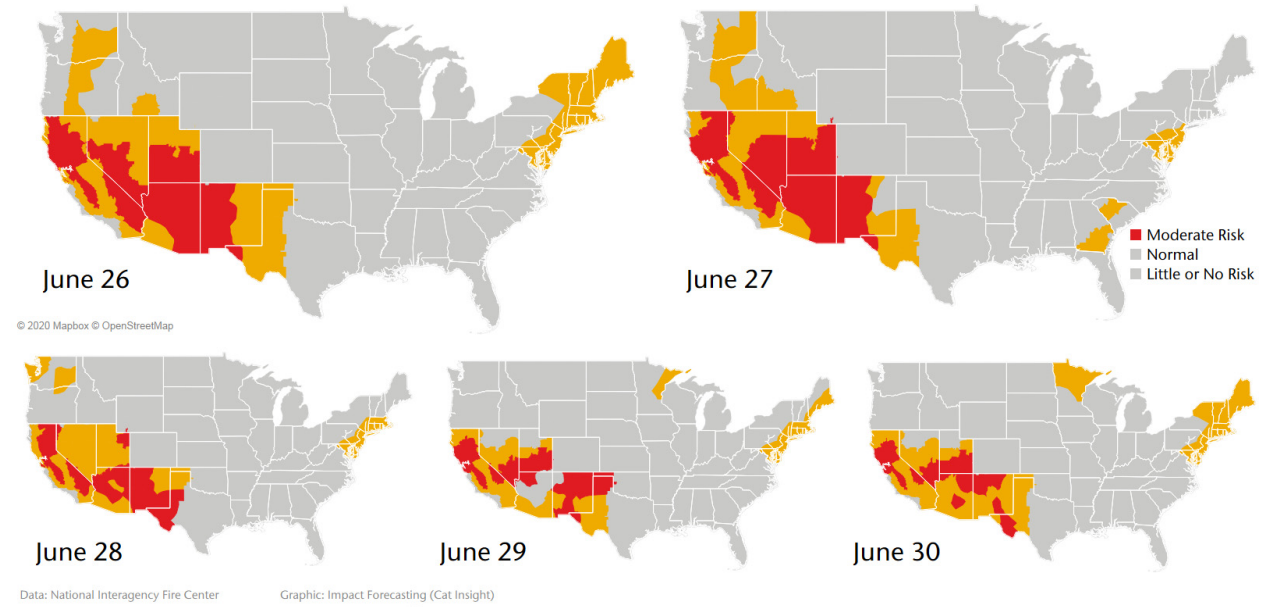
[www.wpc.ncep.noaa.gov](http://www.wpc.ncep.noaa.gov)

## Potential Threats

- An area of low pressure and associated frontal boundary is anticipated to bring several rounds of heavy rainfall and thunderstorms to portions of the Midwest and Ohio Valley between June 27-30, while flooding is likely across the upper Mississippi Valley.
- A potent southwesterly jet is forecast to produce a period of high winds across the Great Basin around June 28. The winds, along with recent dry conditions and expanding western drought will enhance the risk for fire weather in this region.
- Regions across the Upper Midwest and northern Great Plains, downstream of an amplifying upper level trough, can expect much above normal temperatures between June 28-29, followed by chances for heavy rain heading in July.
- On July 1 a frontal boundary is expected to bring elevated chances for heavy rain across portions of the Mid-South and Southeast.

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

The National Interagency Fire Center has highlighted an extended risk of elevated wildfire conditions across parts of the West, Desert Southwest, and the Southern Plains into the rest of June. Hot and dry conditions have become more prevalent in recent weeks, along with dry lightning, which has enhanced fire conditions.



## Annual YTD Wildfire Comparison: June 25\*

Year	Number of Fires	Acres Burned	Acres Burned Per Fire
2016	24,168	1,007,336	41.68
2017	28,453	2,004,924	70.46
2018	27,993	2,247,088	80.27
2019	18,331	613,345	33.46
2020	23,052	1,079,167	46.81
<b>10-Year Average (2010-2019)</b>	<b>25,974</b>	<b>1,732,905</b>	<b>66.72</b>

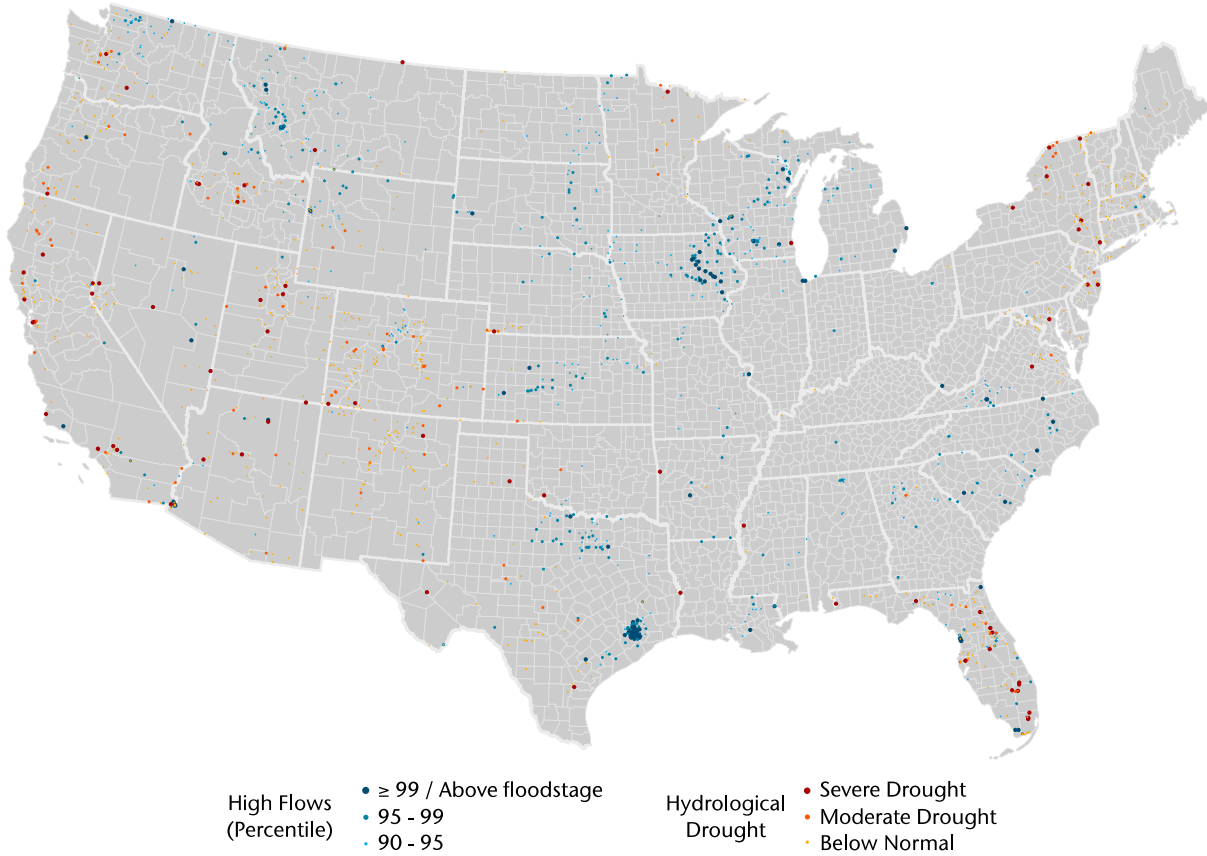
\*Last available update from NIFC  
Source: National Interagency Fire Center

## Top 5 Most Acres Burned by State: June 25

State	Number of Fires	Acres Burned	Acres Burned Per Fire
Arizona	998	369,419	370.16
Alaska	263	167,652	637.46
Texas	1,736	86,140	49.62
Florida	1,673	83,455	49.88
Oklahoma	559	75,323	134.75

Source: National Interagency Fire Center

# Current U.S. Streamflow Status



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 10<sup>th</sup> and 24<sup>th</sup> percentile.

## Top 5 Rivers Currently Nearing or Exceeding Flood Stage

Location	Current Stage (ft)	Flood Percentile
Owyhee River near Gold Creek, Nevada	2.51	98.92
Tar River at Tarboro, North Carolina	22.66	98.91
Contentnea Creek at Hookerton, North Carolina	13.51	98.90
Cedar River at Cedar Rapids, Iowa	15.56	98.87
Brays Bayou at Houston, Texas	27.93	98.81

Source: United States Geological Survey

# Source Information

## More convective weather affects the United States

*U.S. National Weather Service  
U.S. Storm Prediction Center  
U.S. Weather Prediction Center*

## Strong Earthquake rattles southern Mexican coast

*United States Geological Survey (USGS)  
Government of Oaxaca  
A strong magnitude 7.5 earthquake shakes southern Mexico. There are at least six confirmed dead, Telemundo  
Powerful earthquake shakes southern Mexico, at least 5 dead, Associated Press  
Death toll from Mexican quake rises to 10 as residents clear rubble, Reuters*

## More rainfall enhances seasonal flooding in China

*Heavy rain continues to batter China's Guizhou, Xinhua  
Ministry of Emergency Management, China  
Chinese Meteorological Administration  
Climate system monitoring, diagnosis and forecasting system, China  
Eight children drown in southwest China after playing near river, prompting calls for water awareness lessons, South China Morning Post  
Chongqing's Qijiang River to see largest flooding since 1940, China Daily*

## Natural Catastrophes: In Brief

*The Ivory Coast landslide: "Final" death toll rises to 17 dead and 8 injured (Anyama). Connection Ivorienne  
Disaster and Emergency Management Presidency, Turkey  
The State Emergency Service of Ukraine  
Assam State Disaster Management Authority  
India Meteorological Department  
Emergency Response Coordination Centre (ERCC)  
Arctic Temperatures Hit Record High in Russia Amid Heat Wave, The Moscow Times  
Climate crisis: alarm at record-breaking heatwave in Siberia, The Guardian  
Russia's 2020 Wildfires Cover Greece-Sized Area – Greenpeace, The Moscow Times  
Federal Service for Hydrometeorology and Environmental Monitoring, Russia  
Reported new record temperature of 38°C north of Arctic Circle, World Meteorological Organization (WMO)  
State Disaster Management Authority  
83 Killed In Lightning Strikes, Thunderstorms In Bihar, PM Condoles Deaths, NDTV*



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Aon plc (NYSE:AON) is a leading global professional services firm providing a broad range of risk, retirement and health solutions. Our 50,000 colleagues in 120 countries empower results for clients by using proprietary data and analytics to deliver insights that reduce volatility and improve performance.

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