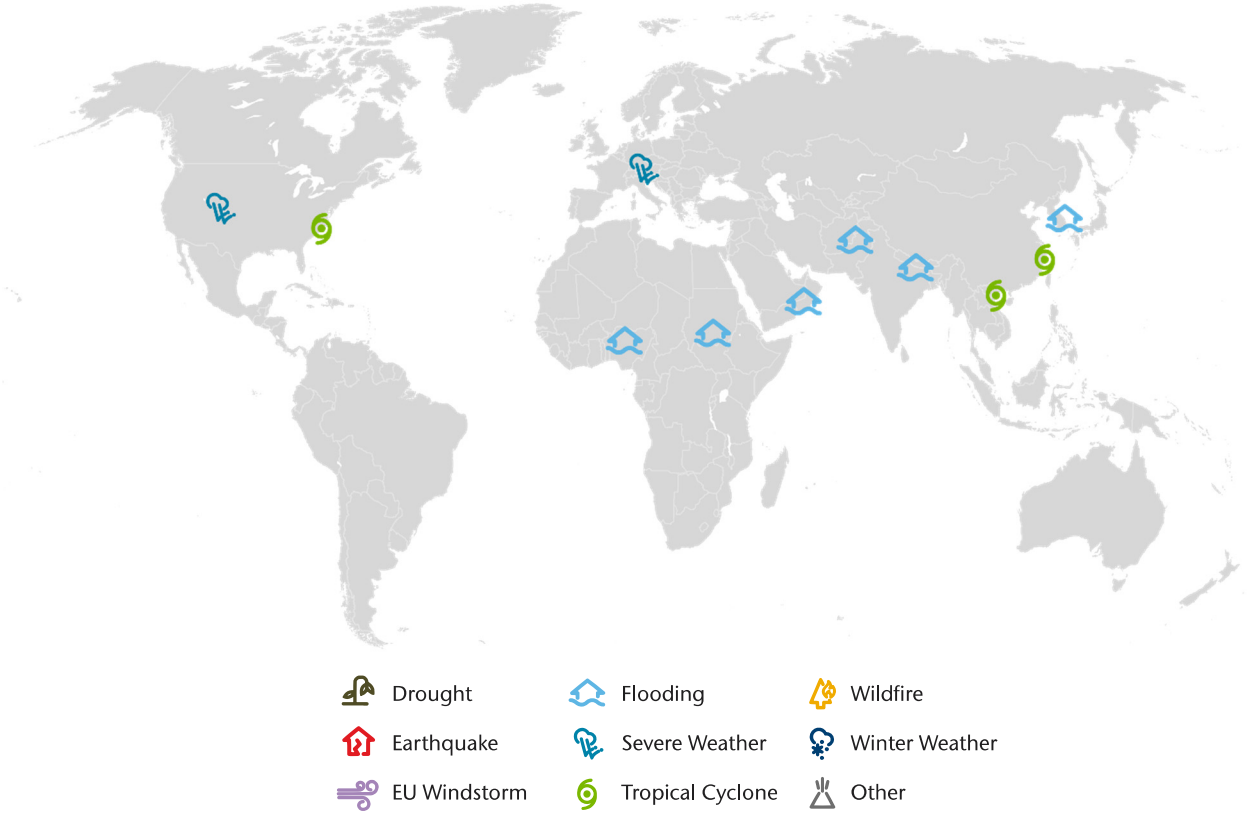
Weekly Cat Report

August 7, 2020

This Week's Natural Disaster Events



Event	Impacted Areas	Fatalities	Damaged Structures and/or Filed Claims	Preliminary Economic Loss (USD)*	Page
Hurricane Isaias	Caribbean, United States	13+	Thousands	1+ billion	3
Typhoon Hagupit	China, Taiwan	1+	Thousands	Millions	15
Severe Weather	Central Europe	0	Thousands	10s of Millions	17
Severe Weather	United States	0	Thousands	Millions	20
Tropical Storm Sinlaku	Thailand, Vietnam	4+	1,400+	10s of Millions	21
Flooding	India	1,153+	75,000+	1+ billion	21
Flooding	Nigeria	30+	Hundreds	Unknown	21
Flooding	Sudan	5+	2,300+	Unknown	21
Flooding	Yemen	20+	Thousands	Unknown	22
Flooding	Afghanistan	16+	Hundreds	Unknown	22
Flooding	South Korea	14+	3,000+	Millions	22
Flooding	Nepal	10+	Unknown	Unknown	22

**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

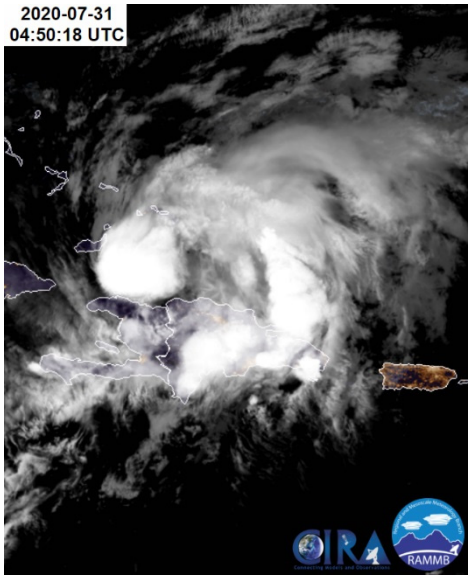
Hurricane Isaias makes U.S. landfall after Caribbean trek

Hurricane Isaias was the second hurricane, and the fifth storm to make landfall in the continental United States to date in the 2020 Atlantic Hurricane season. Isaias churned through the Caribbean between July 28 – August 1 with notable impacts in the Dominican Republic, Puerto Rico, and the Bahamas as the storm struggled to maintain intensity. Strengthening upon approach toward the Carolinas, Isaias made landfall near Ocean Isle Beach, North Carolina at 11:10 PM EDT on August 3 (3:10 UTC August 4), with maximum sustained winds of 85 mph (140 kph) - equal to a Category 1 hurricane on the Saffir-Simpson Hurricane Wind Scale. Significant impacts were experienced along a large portion of the eastern seaboard, including historic storm surge, hurricane force wind gusts, flooding rainfall, and damaging tornadoes. At least 6.4 million customers were without power at the peak of the event on the U.S. mainland. Total economic and insured losses were each individually expected to surpass USD1 billion.

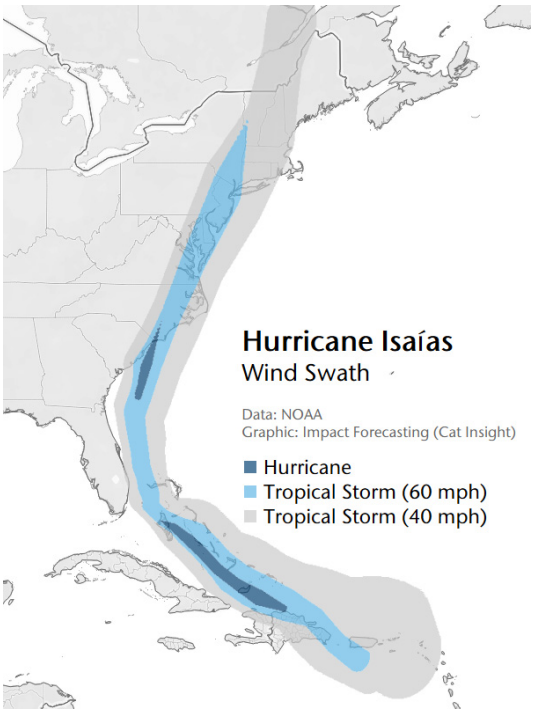
Meteorological Recap

A large tropical wave began producing an area of showers and thunderstorms several hundred miles south of the Cabo Verde Islands on July 25. The wave propagated in a generally westward direction at a rapid pace for several days between July 25-28. By July 28, increased shower and thunderstorm activity within the broad elongated area of low-pressure was evident with sustained winds reaching 40 mph (65 kph). As the low neared the Leeward Islands, being steered west-northwestward around a high-pressure ridge to its north, the National Hurricane Center (NHC) began issuing advisories for Potential Tropical Cyclone Nine at 11:00 AM AST (15:00 UTC) on July 28. The system remained a broad trough of low-pressure oriented southwest to northeast, with the strongest winds occurring well north of a poorly defined center as it traversed the Leeward Islands on July 29.

By 11:00 PM AST (3:00 UTC July 30) a sufficient closed circulation was observed, prompting the NHC to officially designate Tropical Storm Isaias – with maximum winds of 50 mph (80 kph). As the system continued to churn through the Caribbean, Tropical Storm Warnings were in effect for coastal regions of many islands, as the extensive wind field associated with the system consisted of tropical storm force winds at least 300 miles (500 kilometers) to the northeast of the forming low-level center. Isaias subsequently brought flooding rains and tropical storm force winds to the Virgin Islands and Puerto Rico as it briskly continued northwest toward Hispaniola.



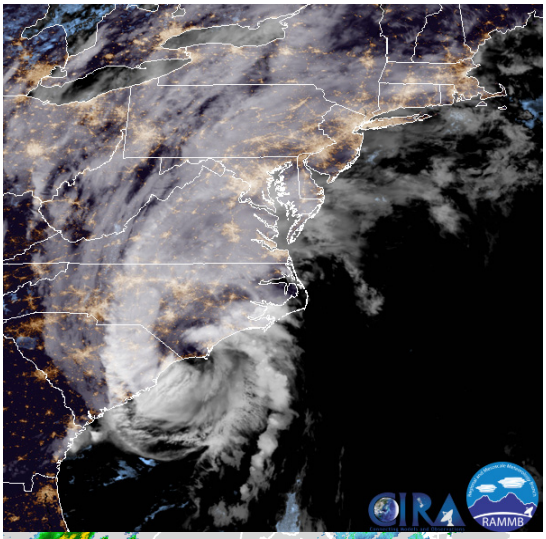
On July 30, minor intensification was observed with Isaias prior to its interaction with the rugged terrain of Hispaniola, which had minimal impact on the strength of the storm, as the center of circulation emerged along and parallel to the northern coastline of the Dominican Republic. In the late evening, Air Force Reserve Hurricane Hunter aircraft data confirmed the storm had further strengthened into Hurricane Isaias at 11:40 PM EDT (3:40 UTC on July 31) with sustained wind speeds of 80 mph (130 kph) - equal to a Category 1 hurricane on the Saffir-Simpson Hurricane Wind Scale. Data confirmed a minimum central pressure of 995 millibars, with a movement northwest at 18 mph (30 kph), as hurricane warnings went into effect for the Bahamas. The hurricane exhibited a long fetch of strong easterly winds on its north side, enhancing flooding concerns across low lying and flood prone island's north and east of the center of circulation. On July 31, Isaias exhibited pronounced structural changes as convection wrapped around the center or circulation, and a closed eye was apparent on radar imagery for a brief period. However, as the storm past the Turks and Caicos and moved toward the Bahamas, increasing mid-level southwesterly shear and dry air entrainment constrained further enhancement, and resulted in a degraded appearance on satellite imagery.



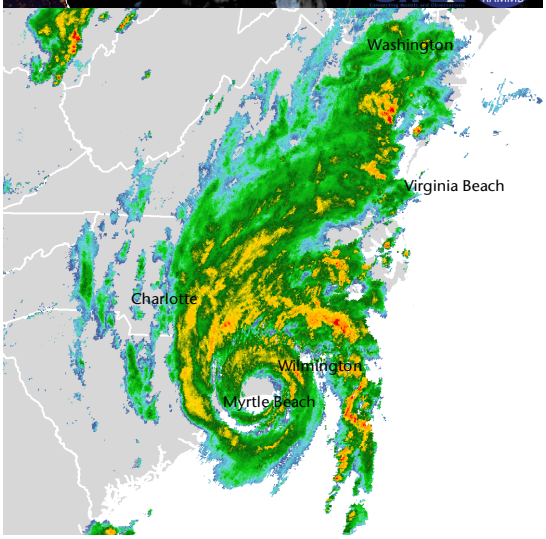
At 11:00 AM EDT (15:00 UTC) on August 1, Isaias made a landfall along Northern Andros Island in the Bahamas with maximum sustained winds of 80 mph (130 kph) and a minimum pressure of 987 millibars while tracking northwest at 12 mph (19 kph). Continuing to struggle against modest wind shear, Isaias exhibited gradual weakening as it neared the southern Florida Coast, and was reclassified as a tropical storm at 5:00 PM EDT (21:00 UTC). On August 2, Tropical Storm Isaias displayed bursts of convection northeast of its center as it paralleled the Florida Coast – keeping the strongest winds offshore, while the outer bands of the storm produced locally heavy rainfall and gusty winds across portions of southeastern Florida.

A slight weakening in the wind shear, combined with the warm waters of the Gulf Stream allowed re-intensification of Isaias as it approached the Carolinas on August 3. At 8:00 PM EDT (0:00 UTC August 4) Isaias regained hurricane status 60 miles (96 kilometers) south of Myrtle Beach (South Carolina), with Air Force Hurricane Hunters confirming sustained winds of 85 mph (135 kph) an hour later. On satellite and Doppler radar, convection was clearly becoming more consolidated around the main eye feature. A Hurricane Warning was in effect for South Santee River (South Carolina) to Surf City (North Carolina), with Tropical Storm Warnings extending northward up the entire eastern seaboard through Maine.

Hurricane Isaias made a U.S. landfall in southern North Carolina near Ocean Isle Beach at around 11:10 PM EDT on August 3 (3:10 UTC August 4), with maximum sustained winds of 85 mph (140 kph) - equal to a Category 1 hurricane on the Saffir-Simpson Hurricane Wind Scale, and a minimum pressure of 988 millibars. A maximum wind gust of 99 mph (159 kph) was measured at Federal Point (New Hanover County).



Hurricane Isaias's landfall came only nine days after Hurricane Hanna made landfall in southern Texas and becomes the 5th named storm of the 2020 season to make a landfall in the continental United States – the earliest this has happened in modern history.



After landfall, Isaias accelerated northward toward the Mid-Atlantic, where its interaction with a strong jet-stream minimized weakening, and aided in producing enhanced sustained winds with hurricane force gusts along with notable coastal storm surge, damaging tornadoes, and widespread flooding rainfall on August 4. By mid-day, Isaias, continued rapidly progressing north-northeastward at 40 mph (65 kph), bringing wind gusts in excess of 70 mph to portions of eastern Pennsylvania, New Jersey, and New York. In addition to the interaction with the noted jet stream – which kept Isaias' winds from degrading over land as quickly as typically expected – baroclinic forcing (influence by differences in temperature and pressure, and often enhanced by land and ocean interaction) resulted in some of the highest gusts being recorded near the coastline. This was in addition to higher gusts noted near the center of Isaias.

By the evening, Isaias was moving through New England, while the NHC designated the storm post tropical at 11:00 EDT (3:00 UTC August 5). On August 5, Isaias gradually weakened over southeastern Quebec (Canada) before being absorbed by a larger low-pressure system.

Storm Data

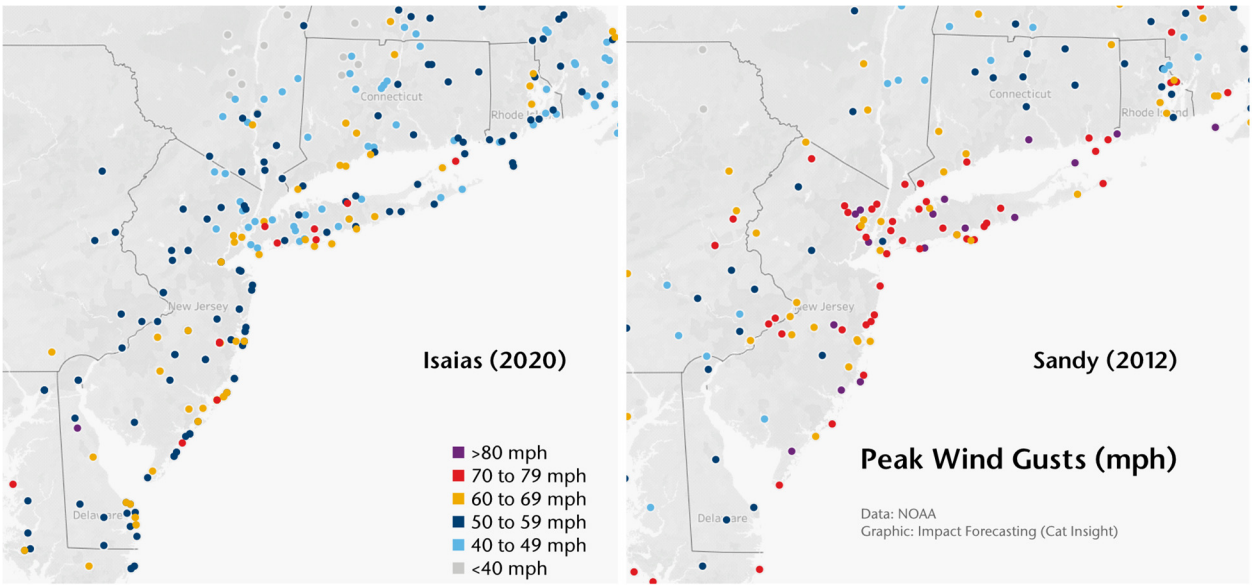
Wind Gusts (United States)

Wind gusts topping 90 mph (150 kph) were cited from the Carolinas into New England.

Location	Wind Gust (mph)
Federal Point, NC	99
Smyrna Landing, DE	96
Oak Island, NC	87
Farmingdale Airport, NY	78
Lockwoods Folly Inlet, NC	77
Norfolk Jordan Bridge, VA	76
Berkeley Township, NJ	75
Stony Brook, NY	75
Great South Bay, NY	75
Wilmington, NC	73
Jackson Heights, NY	73
Great Gull Island, NY	73

Location	Wind Gust (mph)
Avon, NC	72
Ocean City, NJ	72
Grasonville, MD	71
Onancock, VA	70
Tangier Sound Light, VA	70
Rutgers, NJ	70
Berkeley Township, NJ	70
Toms River, NJ	70
JFK Airport, NY	70
Mount Mansfield, VT	70
Jacksonville, NC	69
Chapanoke, NC	69

Most of the power outages were cited in the Tri-State area of New York, New Jersey, and Connecticut. Regional utility officials noted that Isaias resulted in the most outages since Sandy in 2012. While Sandy's wind footprint was larger and included many more wind gusts above 70 mph (110 kph), the peak wind gusts from Isaias were also notable and widespread. Combined with heavy rainfall, this created ideal conditions for downed trees and powerlines.

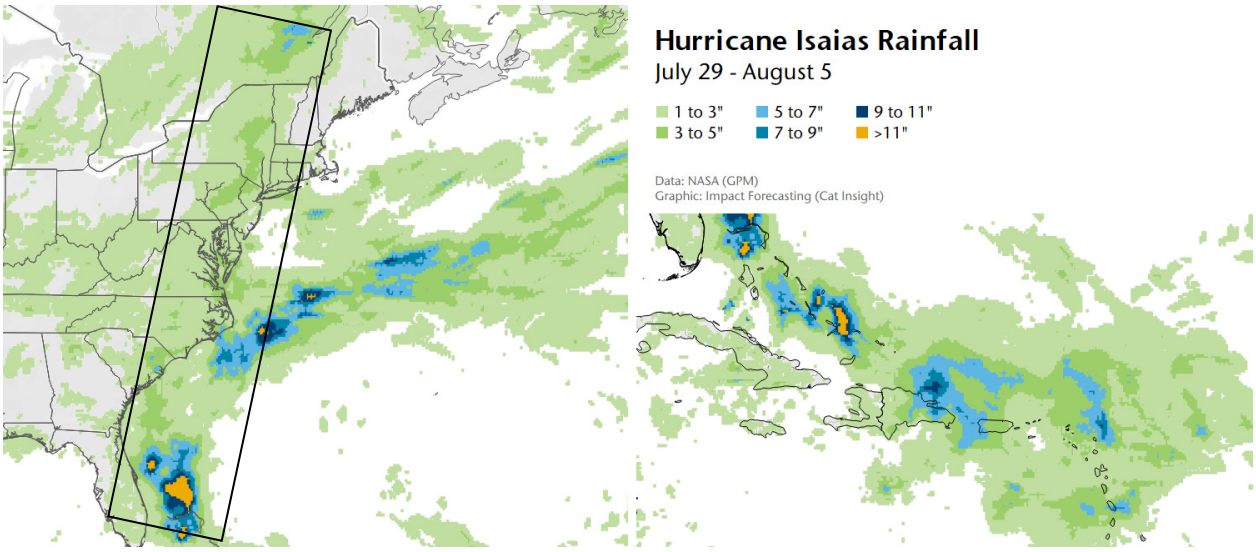


Rainfall

While no major rainfall records were established by Isaias, it did lead to considerable flooding in multiple areas; particularly the Mid-Atlantic and Northeast. At least five river and creek locations established new record crests: Perkiomen Creek at Graterford, PA; Little Lehigh Creek near Allentown, PA, Jordan Creek at Allentown, PA; Christina River at Coochs Bridge, DE; and St. Clement Creek near Clements, MD.

Location	Rainfall (mm)
Rio Blanco, Puerto Rico	315
G. L. Garcia, Puerto Rico	293
Sabana de la Mar, Dominican Republic	280
Samaná, Dominican Republic	275
Duque, Puerto Rico	266
Hato Mayor, Dominican Republic	255
Lomas, Puerto Rico	243
Bayamon, Puerto Rico	242
Hormigueris, Puerto Rico	241
Caguas, Puerto Rico	239

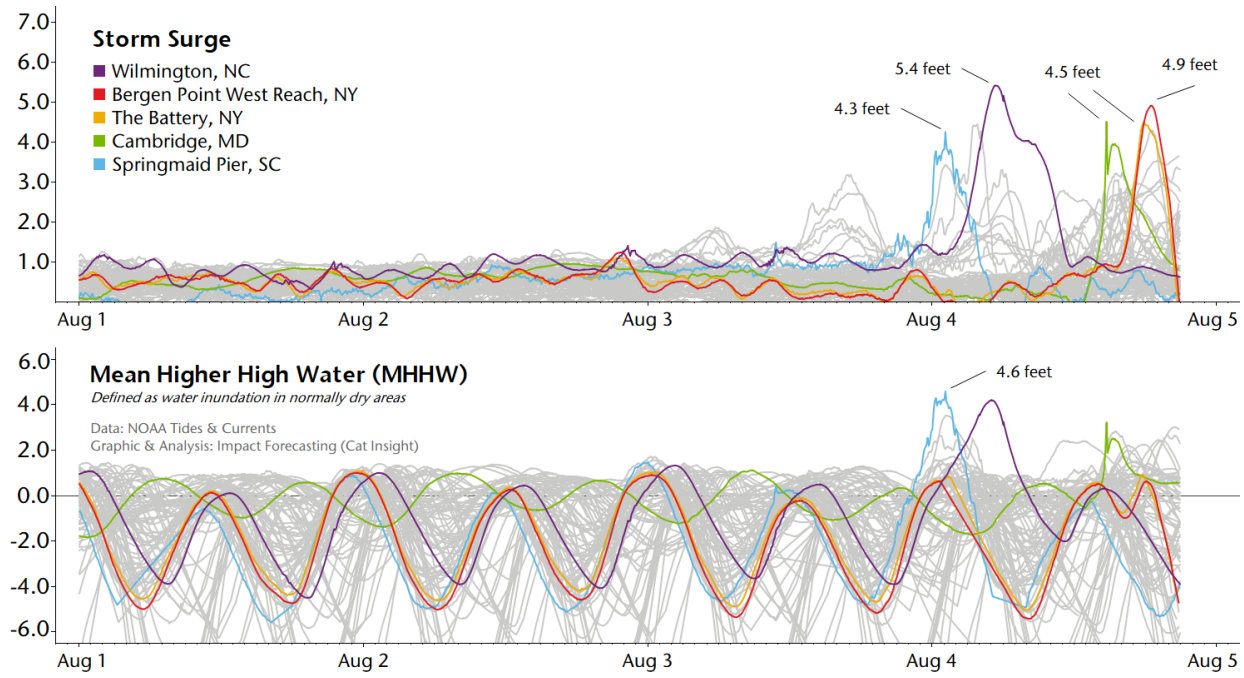
Location	Rainfall (in)
Sotterley, MD	9.00
Wynnewood, PA	8.59
Prince Frederick, MD	8.42
Trappe, MD	8.10
Aiken, SC	8.09
Skippack, PA	8.00
Collegeville, PA	8.00
Worcester Township, PA	7.56
Saint Davids, PA	7.48
Gilbertsville, PA	7.46



Storm Surge (United States)

Despite being a Category 1 storm at landfall, it still brought notable storm surge to areas from South Carolina to New York. The highest official surge was 5.4 feet (1.6 meters) at Wilmington, North Carolina – the third 1-in-100 storm surge event (or a 1 percent chance of occurring in any given year) to be recorded in the past five years (Isaias, Florence, Matthew). A peak surge of 4.5 feet (1.4 meters) was noted at The Battery in New York City. This was significantly lower than what was observed during Hurricane Sandy in 2012 (9.4 feet), but higher than that of Hurricane Irene in 2011 (4.4 feet).

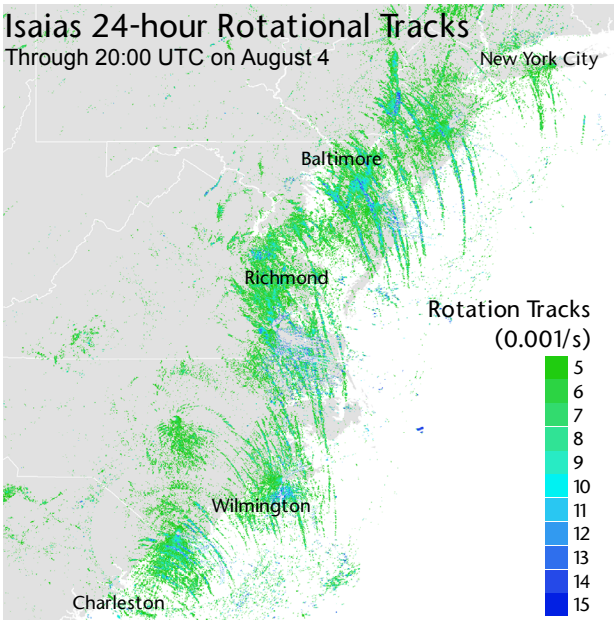
The graphic below highlights all NOAA tidal locations along the U.S. East Coast. Storm Surge is defined as the height of water above normally predicted tide. Mean Higher High Water (MHHW) is water inundation (height of water) in areas that are normally dry. This measure is a better indicated of how high water gets over land.

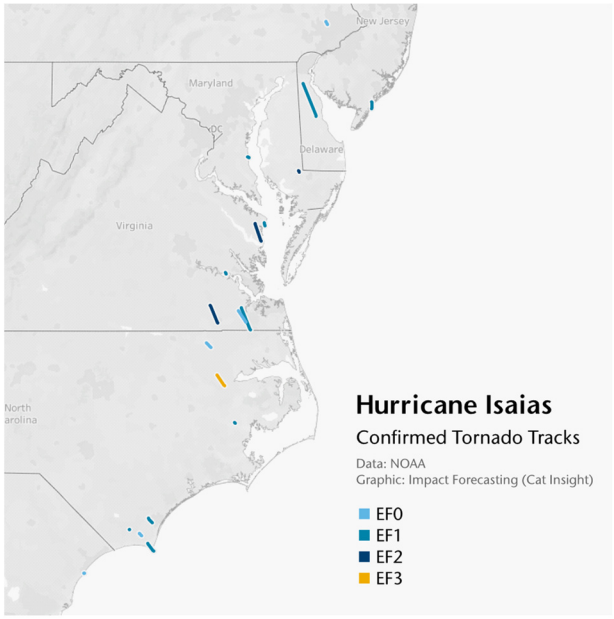


Tornadoes

The Storm Prediction Center (SPC) cited at least 30 unofficial tornado touchdowns during the event. As of this writing, National Weather Service (NWS) meteorologists had confirmed at least 26. The strongest was an EF3 with up to 145 mph (235 kph) winds that left at least two people dead and 14 others injured in Bertie County, North Carolina. This was the strongest tornado spawned by a tropical cyclone in the U.S. since 2005. A breakout of tropical cyclone tornadoes by F/EF scale (1950-2007) demonstrated that approximately 2.2% of tropical cyclone spawned tornadoes reach F/EF3 intensity. A strong EF2 was noted in Southampton, Virginia; while other EF1 or EF0 twisters affected other parts of North Carolina, Virginia, and Maryland. In total, NWS offices issued 109 tornado warnings across 12 states during Isaias.

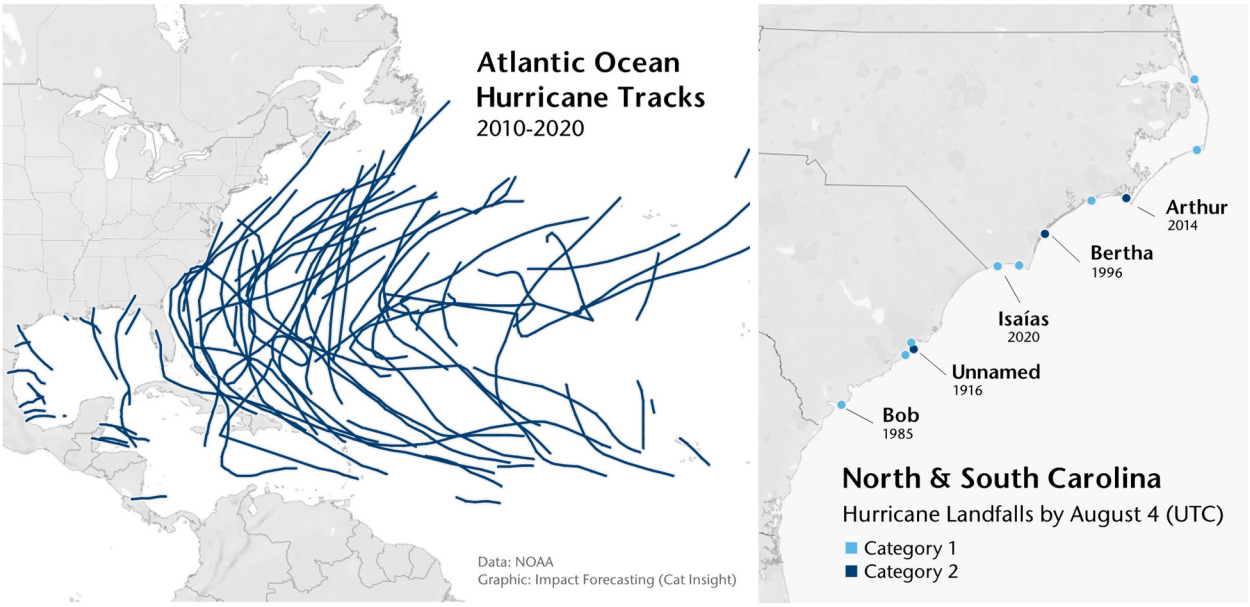
Tornado breakout by Enhanced Fujita (EF) Scale rating (August 6): EF0 (8), EF1 (12), EF2 (5), EF3 (1)





Miscellaneous

Isaias became the 11th hurricane to make landfall in either North or South Carolina prior to August 4; and the 7th in North Carolina. Of note, a majority of hurricane point tracks in the Atlantic Ocean Basin during the past decade (2010-2019) stayed east of the 80°W latitude and re-curved towards the north. While there are some notable exceptions – Harvey (2017), Irma (2017), Michael (2018) in the Gulf of Mexico – the graphic below highlights all of these hurricane tracks since 2010.



Event Details

Caribbean

Hato Mayo, Dominican Republic.
Source: President Elect Luis Abinader

As of this writing, Tropical Storm Isaias was responsible for two deaths across the **Dominican Republic**, where 5,595 people were evacuated. Officials reported landslides and downed trees across multiple provinces, while 131 towns were isolated due to flooding of streams and rivers. Preliminary surveys indicated 1,119 damaged homes throughout the country, with the most significant damage reported in Hato Mayor. The National Institute of Drinking Waters and Sewers indicated at least 1.43 million users were impacted by 77 affected aqueducts.

In **Puerto Rico**, at least 438,000 customers lost power – including 23 hospitals – with portions of Ponce, Caguas and Mayagüez most affected. The Aqueduct and Sewer Authority (AAA) reported nearly 200,000 users lost water service during peak outages. Data from the National Weather Service (NWS) reported 7 river gauges above flood stage, while the most impacted regions on the eastern and southwestern portions of the island received between 6 to 10 inches (150 to 250 millimeters) of rainfall from Isaias, with locally higher amounts. San Juan set a daily maximum rainfall record of 4.38 inches (111 millimeters) on July 30. The National Guard assisted in rescuing dozens of people who were trapped in floodwaters. Noted damage to the regions banana and coffee crops were observed. At least one fatality was reported.

In the **Bahamas**, minimal significant impacts were observed across the islands. Multiple localities reported power interruptions, downed utility lines, fallen trees, and flooding. Initial damage assessments conducted by The National Emergency Management Agency (NEMA) over Andros, Bimini, and The Berry Islands noted storm surge effects along the coasts, with isolated regions of inland flooding. Bahamas Power and Light Co (BPL) reported cutting power among vulnerable flood prone areas to ensure safety. Officials from Long Island stated heavy rainfall and winds gusting to near hurricane force, resulted in widespread inundation of low lying areas. Many local roads along Long Island became impassable, including flooding on the tarmac at Deadman's Cay Airport. Substantial crop loss was observed.

Flooding in Long Island, Bahamas.
Source: Long Island MP

United States (East Coast)

Florida

Isaias had minimum impacts across Florida, as a weakened storm tracked northward paralleling the eastern Florida coast. The outer bands of the storm brought locally heavy rainfall and gusty winds across south-eastern portions of the state. A wind gust of 58 mph (93 kph) was measured offshore near the Dania Beach Pier (Broward County), with a 48-hour rainfall total of 1.86 inches (47 millimeters) reported near Lauderhill. Isolated power outages were noted.

South Carolina

Sand and debris covering roads in Pawleys Island, SC. Source: SCDOT

Notable storm surge and coastal inundation was reported across portions of coastal South Carolina, with the most affected region spanning northward from Pawleys Island to North Myrtle Beach (Georgetown and Horry Counties). A maximum storm surge of 4.2 feet (1.3 meters) was recorded at Springmaid Pier in Myrtle Beach – the third highest water level on record, dating back through 1957. Waters washed excess sand and debris on to local roadways in portions of Pawleys Island and Garden City Beach, temporarily interrupting transportation. Stretches of Ocean Boulevard in Myrtle Beach were covered with several inches of water, as well as noted inundation at the Family Kingdom Amusement Park. Portions of the Sea Cabin Pier in North Myrtle Beach were collapsed into the rough seas.

North Carolina

Structure fire in Ocean Isle Beach, NC Source: Horry County Fire Rescue

Evacuation orders were given for several coastal communities, including portions of the Outer Banks, Ocean Isle Beach, and Holden Beach in anticipation of the storm. Isaias brought 2 to 4 inches (50 to 100 millimeters) of rainfall, hurricane force wind gusts reaching 99 mph (159 kph) at Federal Point (New Hanover County), and multiple confirmed tornadoes. Near the landfall location, in Ocean Isle Beach (Brunswick County), local fire departments responded to calls of structure fires which destroyed three homes. A confirmed EF3 tornado In Bertie County with maximum winds approaching 140 to 145 mph (225 to 233 kph), resulted in 2 deaths and 14 injuries as it destroyed manufactured homes near the town of Windsor. A NWS damage survey reported dozens of destroyed mobile homes, along with multiple single-story homes – some of which were left unrecognizable. As the tornado approached Windsor several businesses and farm buildings were also impacted. An EF1 tornado with estimated wind speeds approaching 105 mph damaged business and homes while snapping multiple trees near Bald Head Island and across the Cape Fear River into Southport. Significant storm surge reaching 5.4 feet (1.65 meters) near Wilmington (New Hanover County), and a historical crest of 8.48 feet (2.58 meters) along the Cape Fear River led to flooding in Wilmington, inundating roadways and stranding vehicles.

Virginia

Hurricane force wind gusts were experienced near the City of Portsmouth, while 3 to 6 inches (75 to 150 millimeters) of rainfall were measured across the most affected regions of eastern Virginia. A station near Williamsburg (James City County) reported a storm total rainfall of 6.8 inches (172 millimeters). Flooding along the Potomac inundated roadways in Alexandria. An EF1 tornado with maximum wind speed approaching 100 mph (160 kph) damaged at least 8 buildings in downtown Suffolk, while snapping numerous trees. An EF2 tornado near Courtland (Southampton County) significantly impacted numerous homes and businesses, while tearing the second story roof from a hotel with wind speeds approaching 125 mph (200 kph).

Maryland/Washington D.C.

Regions in southern Maryland, southeast of Washington D.C, were particularly hard hit by heavy rainfall and flash flooding resulting from Isaias. A weather station near Satterley (St. Mary's County) reported a storm total rainfall of 9.0 inches (228 millimeters). Nearby the St. Clements Creek near Clements (St. Mary County) crested at moderate flood stage. Overall, the heaviest rains extended along a corridor from southwest to northeast adjacent to the Chesapeake Bay where 5 to 7 inches (125 to 175 millimeters) were common. In Silver Spring (Montgomery County) portions of the Washington Beltway was covered in at least a foot of water. One person was killed in St. Mary's County when a tree fell on a moving vehicle. Extensive damage was reported along Maryland's eastern shore, where a rotating storm near Salisbury (Wicomico County) impacted numerous utility lines and trees, some of which fell on outbuildings and structures. In Ocean City (Worcester County), high winds resulted in roofing damage to multiple structures, including a section of roof ripped from the 5th floor of a building which impacted nearby vehicles. To the north, emergency crews responded to several water rescues in Elkton (Cecil County), where floodwaters completely submerged vehicles. Nearby, in North East rescue crews went door to door in localities that were inundate with several feet of water.

Delaware

A 96 mph (155 kph) wind gust was measured near Smyrna Landing (New Castle County). A maximum storm surge of 2.7 feet (0.82 meters) was observed along the Delaware Bay at Delaware City (New Castle County). Inland, the Christiana River at Choochs Bridge reported major flooding with a record crest of 13.98 feet (4.26 meters) – just above the previous record of 13.89 feet (4.23 meters) set in 2011. The Department of Transportation relayed statewide reports of downed trees, power lines, and dark traffic signals impacting numerous roadways. One person in the state was killed due to a falling tree. A State of Emergency was declared for the state capital, Dover (Kent County), after a rotating cell and confirmed EF1 tornado resulted in significant damaged to structures, power lines, and trees throughout the City. City officials reported both the William Henry Middle School and Union Missionary Baptist Church in Dover were condemned due to damages from the storm.

Pennsylvania

Flooding was common across southeastern Pennsylvania where 4 to 7 inches (100 to 175 millimeters) of rainfall was measured, with locally higher amounts. Major flood stage was reached as the Schuylkill River at Norristown (Montgomery County) crested at 20.55 feet (6.85 meters) – flood stage is 13 feet (4.3 meters), with moderate flooding along the Schuylkill River at Philadelphia. This resulted in notable inundation near the town of Manayunk where vehicles were trapped along Main Street, in addition to flooding at a commuter SEPTA (Southeastern Pennsylvania Transportation Authority) station. Nearby, an apartment complex had to be evacuated as rising waters flooded the first-floor units. A large barge became dislodged along the flooded Schuylkill River hitting the Vine Street Expressway bridge (I-767), fortunately only causing minor structural damage. In southwest Philadelphia, large regions of Darby adjacent to Darby Creek (Delaware County) were flooded, initiating water rescues as floodwaters covered vehicles and reached doorways of homes. One fatality was reported when a vehicle was overtaken by water near Allentown, as nearby Little Lehigh reached a record crest of 12.76 feet (3.89 meters) – the previous record was set in 1972 from Hurricane Agnes. High winds in Doylestown (Bucks County) tore a section of roof from the Children's Village Daycare in addition to the Doylestown Hospital where cars were left piled on top of one another in the adjacent parking lot. In total, at least two fatalities were reported across the state.

Children's Village Daycare
Source: Bucks County Government

New Jersey

Isaias left at least 1.4 million customers across New Jersey without power, many waiting days for service to be restored. Strong winds affected much of the Jersey Coast with gusts reaching and exceeding 70 mph (112 kph) and sustained tropical force winds reaching 40 to 50 mph (65 to 80 kph). The governor declared a statewide State of Emergency in anticipation of the storm. Severe winds toppled a church steeple in Ocean City (Cape May County), where nearby damage was noted at the Cape May County Park and Zoo. A tornado was observed near Marmora and Strathmore where considerable damage to outbuildings, roofs, power poles, and trees were recorded. In Woodbridge Township strong winds reportedly snapped trees in half, blocking roadways and impacting vehicles. At least one death was reported due to rip currents.

New York

With at least 257,000 customers affected, Con Edison reported its second largest outage in company history for New York City, only topped by Superstorm Sandy. Some outages are forecast to persist for an extended time. Wind gusts of 60 to 70 mph (96 to 112 kph) were measured across New York City, with a gust of 78 mph (125 kph) occurring at the Famingdale Airport on Long Island (Suffolk County). In New York City, one person was killed when a tree fell on their car. New York City officials reported thousands of downed or damaged trees; potentially topping 10,000. Services were suspended on the three commuter railroads serving the City (New Jersey Transit, Long Island Rail Road, and Metro-North Railroad). Storm surge at Bergen Point West Reach reached 4.9 feet (1.49 meters). In Albany, heavy rains flooded streets and stranded motorists, where at least two children had to be rescued from a trapped vehicle.

New England

A State of Emergency was declared in **Connecticut** as at least 700,000 customers lost power resulting from Isaias. Officials from Eversource, the state's largest electric utility, indicated that this outage ranks as the state's third largest in recent history. In Wethersfield (Hartford County), an apartment building was partially stripped of its roof due to strong winds. One person was killed by a falling tree near Naugatuck. In West Hartford (Hartford County) local police reported at least 56 roads or intersections impacted by downed wires or trees.

One person was killed in **New Hampshire** due to a tree falling on an apartment building. Conway (Carroll County) police reported at least 25 calls regarding downed trees and utility lines. On August 4, the NWS reported a wind gust of 146 mph (235 kph) at the Mount Washington Observatory – the highest on record for the month of August.

Financial Loss

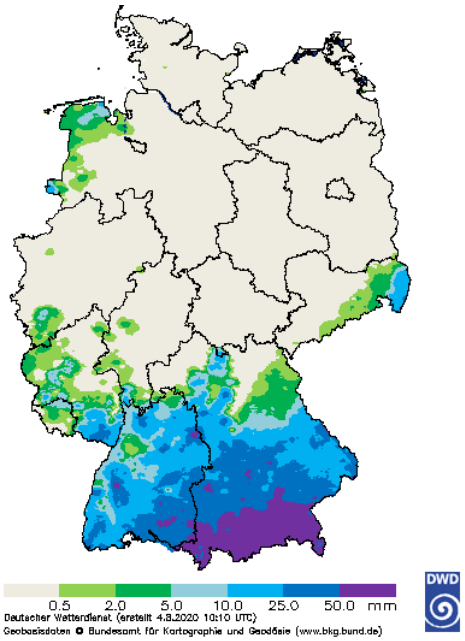
As damage surveys across the Caribbean, United States, and Canada remain on-going, it remains too preliminary to provide an economic or insured loss estimate at this time. The significant footprint of the event and incurred impacts, however, confirms that both the economic and insured totals will each individually surpass the USD1 billion threshold. Given the current COVID-19 environment and the challenges faced by insurers in terms of damage surveying and processing claims, there is a possibility that a longer-than-normal period of loss development may initially occur.

Severe weather outbreaks in Central Europe

Several days of severe weather in late July and early August resulted in anticipated losses for insurers in Central European countries. An outbreak on July 28-29 included hailstorms in Bavaria, Germany and central Slovenia. Heavy rains in early August increased water levels in Germany, Austria and elsewhere; although only relatively minor losses were expected. Total economic and insured impact was likely to reach into the tens of millions EUR.

Meteorological Recap

Severe weather outbreak on July 28-29 resulted from a passage of a low-pressure system named Dana; its frontal system progressed east and affected parts of Germany, Switzerland, Austria, Slovenia and the Czech Republic with large hail, heavy rain and strong winds. The most notable instances of severe weather included hailstorms in central Bavaria, Germany; and in Domžale area in central Slovenia. Further effects were caused by heavy rain, which regionally resulted in elevated water levels, mostly in rural regions.



24-h rainfall in Germany on Aug 3 (Source: DWD)

The last two days of July and early August were relatively quiet for Central Europe, as a large omega-blocking pattern developed and resulted in stable weather pattern. Anticyclonic weather caused a brief heatwave in France; several stations broke all-time historical records, as temperatures soared to up to 41.9°C (107.4°F) in Socoa.

The pattern later deteriorated as a large North Atlantic trough progressed through Western Europe, and a moderate risk of severe weather developed again in parts of Germany, Austria and Switzerland. A pronounced frontal boundary pushed eastward on August 2 and prompted elevated thunderstorm risk, notably in the Alpine region. As the front became quasi-stationary, southeastern Germany experienced very high rainfall accumulations, which notably increased water levels in the Danube River basin. Areas south of the river generally observed 30 to 80 millimeters (1.2 to 3.1 inches) of rainfall within the 24-hour period on August 3, with the highest value measured in Teisendorf-Neukirchen – 155 millimeters (6.1 inches).

Event Details

July 28-29

Parts of Bavaria in **Germany** were hit by a notable hailstorm in the afternoon of July 28. Damage was reported mainly from a strip extending from the district Kehlheim through Regensburg into district Cham in Niederbayern (Lower Bavaria) and Oberpfalz (Upper Palatinate); largest hailstones reached approximately 4 centimeters (1.6 inches) in diameter. The storm resulted in notable agricultural losses, with grain, rapeseed, corn, potatoes and other cultures affected the most. More than 15,000 hectares were affected, with loss estimated at minimally EUR10 million (USD12 million). Eight people were injured by a toppled tree in Roither See.

Storms also affected neighboring Oberösterreich (Upper **Austria**), particularly districts Braunau, Ried im Innkreis and Vöcklabruck. Large hail damaged dozens of roofs, while emergency services responded to more than 150 incidents. Lightning-related fire destroyed one farm in Attersee. Agricultural hail insurance agency noted, that with additional storms in Kärnten and Steriemark on July 29, total losses on 13,500 hectares of agricultural land reached EUR3.5 million (USD4 million).

Strong thunderstorms also affected parts of the **Czech Republic**, notably Moravia and South Bohemia regions. There were nearly 70,000 power outages and multiple instances of damaged roofs and toppled trees. Similar, mostly minor impacts were felt in parts of Lodz and Opole regions in Poland.

Town of Domžale in Central **Slovenia** and the adjacent region was hit by a notable hailstorm in the evening hours of July 29. There were 851 calls for help in total; fire brigades secured roofs of 601 buildings; and total damage was preliminarily estimated at up to EUR7 million (USD8.2 million). The largest hailstones were 11 centimeters (4.3 inches) in diameter. Approximately 6,000 vehicles were damaged to various degrees, with mostly minor dents due to large hail. The event resulted in a notable claims payout for local insurers in several millions EUR.

Source: Domžale municipality, Slovenia

Further losses were reported from other parts of Slovenia, including Prevalje in Carinthia, Laško in Savinja, Hrastnik in Central Sava and elsewhere.

August 2-4

During the first days of August, locally strong thunderstorms caused problems in various regions of Central Europe, although damage was not significant. Streams locally burst their banks in Vorarlberg, Tirol and Niederösterreich in Austria; or Heidenheim and Dillingen districts in Germany. 11 people were injured in weather-related accidents. On August 3, notable instances of severe weather occurred in Karlovac area, Croatia, where a notable hailstorm damaged dozens of cars and properties. Kärtnen in Southern Austria experienced a further wave of heavy rain and localized flooding, notably in Villach-Land and Feldkirchen districts. Floods on Salzach and Saalach were described with a 10-year return period (or a 10 percent chance of occurring in any given year) – however, flood protection measures prevented any notable losses to occur.

The heaviest rains, which occurred on August 3-4, prompted a flood wave in the Danube basin, with culmination reached in the morning hours of August 5. Highest flood warnings were issued for districts Passau, Garmisch-Partenkirchen and Bad Tölz-Wolfratshausen in Germany. Notable flood-related damage was reported from district Rosenheim.

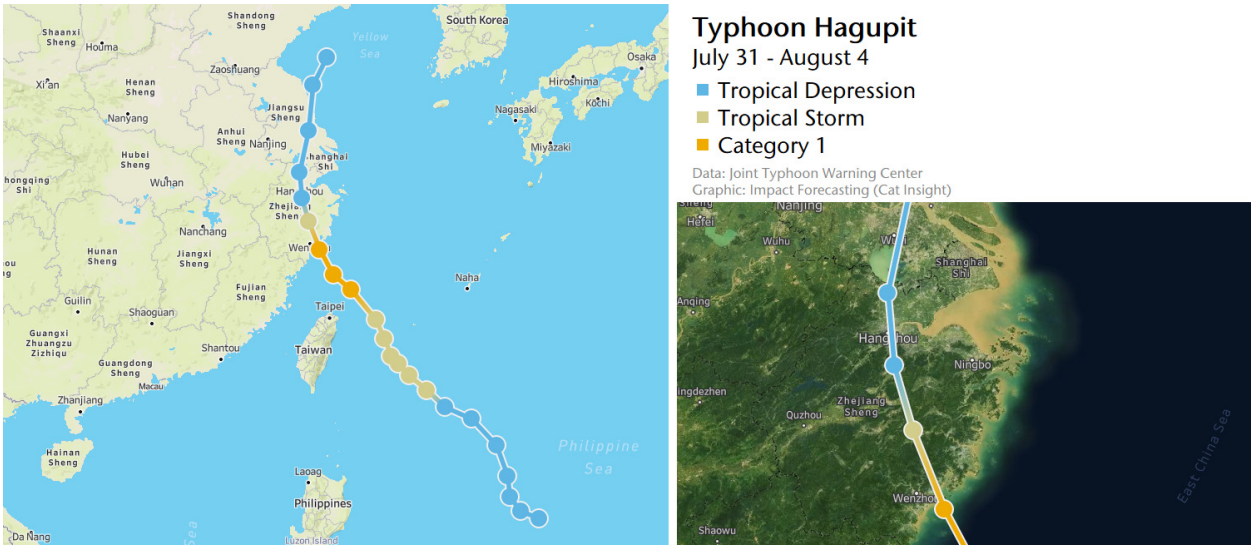
Financial Loss

Outbreaks of severe weather in late July and early August included regionally significant effects of large hail, strong winds, and heavy rain. Particularly notable from a national perspective was the hailstorm in central Slovenia, which likely prompted several thousands of claims. Total economic losses in Germany, Austria and elsewhere are also expected to reach into the tens of millions EUR.

Typhoon Hagupit makes China landfall

Typhoon Hagupit, known as Dindo in the Philippines, became the fourth named storm and second typhoon of the 2020 Northwest Pacific Typhoon Season. The system rapidly organized in the northern Philippines Sea, and tracked north of Taiwan as a Category 1 typhoon on August 3, bringing strong winds coupled with heavy rains in Taipei. At its peak, the JTWC highlighted that the storm had 135 kph (85 mph) winds (1-minute sustained average) – equal to a Category 1 storm on the Saffir-Simpson Scale. Hagupit made landfall near Yueqing City of the eastern Chinese province of Zhejiang at 19:30 UTC on August 3 (3:30 CST on August 4) and tracked northward through Jiangsu province. China's Ministry of Emergency Management cited that Hagupit caused widespread wind, flash flood, and coastal inundation damage in its wake. Total economic losses were anticipated to reach well into the millions (USD).

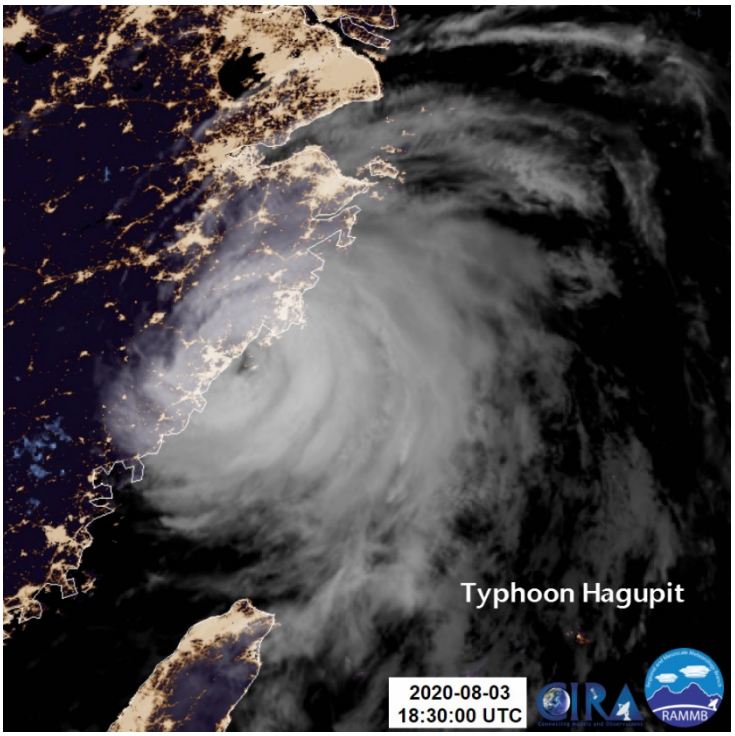
Meteorological Recap



A low-pressure system formed roughly 1,100 kilometers (680 miles) east-northeast of Manila, Philippines on July 31. The meteorological conditions remained favorable for the continued strengthening. Followed by a quick intensification, the system turned into a Tropical Depression August 1, and the Japan Meteorological Agency (JMA) began watching it. The Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) named it as 'Dindo'. In tandem with JMA and PAGASA, the Joint Typhoon Warning Center (JTWC) issued its first tropical cyclone formation alert for the system on August 1. Later, the JTWC upgraded Dindo into a tropical depression and designated it as '03W'. The JMA then assigned to it an international name 'Hagupit', which rapidly intensified in the northern Philippine Sea with wind speed reaching up to 75 kph (40 mph).

The system continued to track generally northwestward through a highly favorable atmospheric and oceanic environment and turned into a Tropical Storm on August 1, at 18:00 UTC. On August 2, Hagupit continued to track generally northwestward and strengthened further over the south of Okinawa in Japan. The system continued to strengthen and during one 24-hour stretch ending on August 2 at 18:00 UTC, the system intensified by 30 kph (15 mph) to an initial peak intensity of 95 kph (60 mph). The system first attained hurricane-equivalent intensity on August 3 at 06:00 UTC – 120 kph (75 mph); Category 1 on the Saffir-Simpson Hurricane Wind Scale – and became better organized.

On August 3, the PAGASA issued its final warning as the Hagupit exited the Philippine Area of Responsibility (PAR). Hagupit tracked north of Taipei, bringing strong winds and heavy rainfall. According to NASA, microwave imagery depicted that the system fluctuated in intensity with a large eye in its center with gusts up to 150 kph (90 mph) gusts as it approached coastal China.



On August 3 at 15:00 UTC, the center of the storm was located 110 kilometers (70 miles) southeast of Wenzhou city in China. Hagupit continued to track northwestward and on August 3, at around 19:30 UTC (August 4 at 03:30 CST), Hagupit came ashore near the Yueqing City of the eastern Chinese province of Zhejiang with winds of 135 kph (85 mph) and gusts exceeding 185 kph (115 mph). This was an equivalent to a Category 1 typhoon. After coming ashore, the storm quickly degraded after encountering the frictional effects due to land interaction. Hagupit exhibited weakening as it tracked northward through the Jiangsu Province, and was reclassified as a tropical depression on August 4 at 06:00 UTC. During the morning hours on August 5, Hagupit exited from continental China and tracked into the western part of the Yellow Sea.

Miscellaneous

The ongoing western Pacific Typhoon season continues to be historically quiet, with well below-average tropical cyclone formation activity through the first week of August 2020. The Japan Meteorological Agency (JMA), which names western Pacific storms, noted that 2020 became the first season in the official record since 1951 to have no named storm develop in the basin during the month of July. The month typically records 3 or 4 named storms in July, and aggregately has five storms in the season by July 31. In 2020, the quiet start slightly accelerated during the period in August as two additional storms formed – taking the seasonal total to four.

Event Details

China

Source: MEM, China

Hagupit brought torrential rains and strong winds to Zhejiang, Jiangsu, Fujian, and Shanghai provinces in eastern parts of China. According to the latest media reports and Ministry of Emergency Management, China, heavy rainfall accumulations associated with Hagupit caused widespread inundation damage in several counties and cities in the affected provinces. Nearly 400,000 people from the coastal provinces of Zhejiang, Jiangsu, and Fujian were pre-emptively evacuated owing to preparedness measures related to Hagupit. Thousands of emergencies were reported from the affected areas, leading to evacuation of several residents by the local disaster officials. Multiple initial reports of damage came from Zhejiang, Jiangsu, and Fujian provinces with significant damage reported to the power infrastructure and the farm sector mainly due to strong winds and floods. A large number of residents in several villages across the affected provinces faced power outages due to destruction of electrical infrastructure.

Hagupit aided in pulling moisture from the Mei-yu front north, leading to a northward movement of the rain-belt in China. During early August, torrential monsoon rains affected the provinces north of the Yangtze River basin, particularly in Shandong, Hebei, Shanxi, and Hanan. According to the Ministry of Emergency Management (MEM), ongoing floods in China have already affected 55 million people in 27 provincial-level regions since the arrival of the East Asian monsoon. Government estimates noted 175 casualties in rain-related incidents. MEM cited that around 500,000 homes were either damaged or destroyed. The direct economic losses were estimated at CNY150 billion (USD22 billion).

Taiwan

Hagupit passed north of the Taiwan as Category 1 storm on August 3, causing flood- and wind-related damage to homes, roads and businesses. Damage was initially reported from Taipei. Taiwan's Central Weather Bureau issued warnings to remain alert with heavy to very heavy rainfall forecast in the coming days. According to the local media reports, one person died, and one person was injured.

Financial Loss

Given the damage footprint in China across populated areas – especially in the Zhejiang, Fujian, Jiangsu, and Shanghai – the economic toll was anticipated to reach well into the millions (USD); however, economic losses were projected to be minimal in Taiwan.

Severe hail affects Colorado Springs

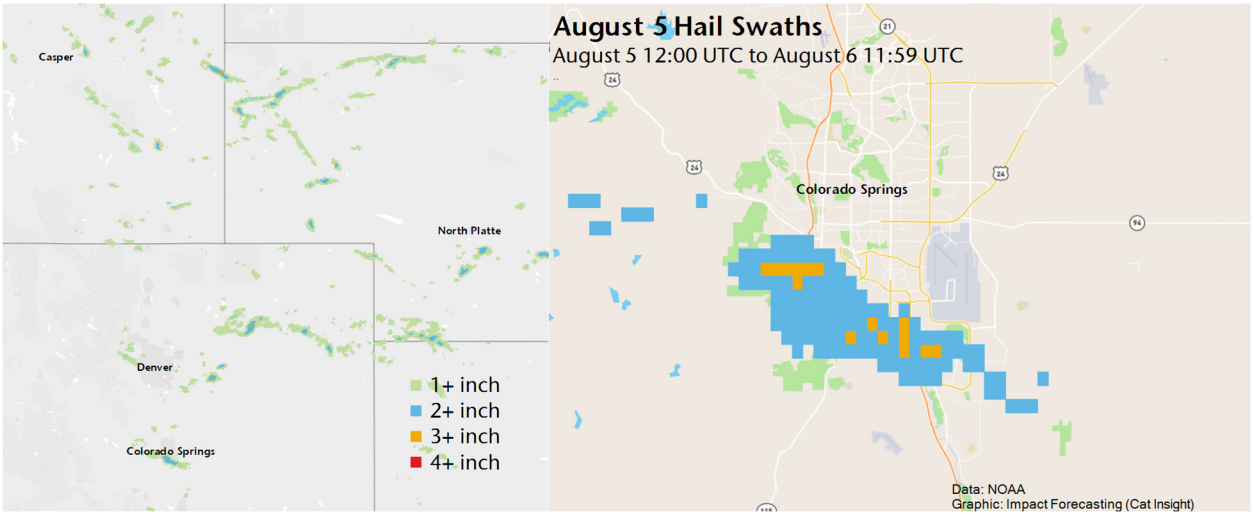
Flow around an anomalous upper-level trough spanning the central United States and a dominant high-pressure ridge anchored over the Southwest allowed for several days of unsettled weather and severe storms across the High Plains. Most notable was a severe cell which produced large and damaging hail across the southern Colorado Springs metro region and adjacent areas during the evening of August 5.

Meteorological Recap

On August 5, the Storm Prediction Center (SPC) highlighted a region across the central High Plains extending northward from northeastern New Mexico through eastern Colorado and into southwestern Wyoming and eastern Nebraska for either a Marginal (level 1 out of 5) or Slight (level 2 out of 5) risk for severe weather. Sufficient diurnal heating and steep lapse rates (changes in temperature with height), in conjunction with an established warm and moist airmass over the High Plains created an environment conducive for the development of severe weather. The threat was enhanced by an approaching short-wave disturbance traveling around the high-pressure ridge centered in the Desert Southwest. By late afternoon, discrete storms and storm clusters which initiated in southern Wyoming and northern Colorado quickly became severe as they progressed southeastward. The primary hazards were severe hail and strong winds. Most notable, was a cluster of severe storms which produced multiple reports of significant hail near downtown Colorado Springs (El Paso County).

Event Details

As of this writing, there were 20 instances of severe hail reported on August 5. Numerous reports of severe hailstones, golf ball sized and larger, were observed in Colorado (El Paso County). Hailstones approaching 2.0 inches (5.1 centimeters) in diameter were reported both in southern Colorado Springs and northern Security-Widefield. Transportation was disrupted as hail covered, and flooding rains inundated highways, while motorist sought protection from the onslaught. Hailstones caused significant damage to vehicles, including dents and broken windshields. Elsewhere, severe storms produced straight-line wind gusts approaching and exceeding 60 mph (96 kph) across portions of Colorado, Nebraska, and Kansas. Damage assessments are currently ongoing, however total economic losses were anticipated to reach well into the millions (USD).



Natural Catastrophes: In Brief

Flooding (*India*)
Heavy monsoon rains during early August enhanced the flooding situation in India. Maharashtra, Tamil Nadu, Karnataka, Uttar Pradesh, and Bihar were worst-hit by the latest spells of torrential rainfall; additional casualties and damage were reported from West Bengal, Goa, and Kerala. Torrential rains coupled with high speed winds exceeding 70 kph (45 mph) affected the state of Maharashtra on August 2-6. According to the information from India Meteorological department, the metropolitan city of Mumbai recorded around 200 millimeters (8 inches) of rainfall accumulation during a 12-hour stretch ending at 05:30 PM IST on August 5 – heaviest precipitation since the notorious floods in 2005 – causing widespread inundation to thousands of houses, businesses, roads and bridges. On August 5, Colaba weather station recorded 24-hour rainfall accumulations approaching 295 millimeters (11.5 inches) – highest ever since the observatory started keeping records in 1974. Hundreds of trees were uprooted, and several power stations were damaged during the event, causing power outages to a large number of residents in the city of Mumbai. Four people were killed in rain-related incidents and several others sustained injuries mainly due to fallen trees. Traffic disruptions due to waterlogging on roads were noted across Mumbai. Train and metro services were suspended, affecting nearly a half-million people. In Karnataka, several landslides incidents were reported, mainly from the mountainous districts in the western parts of the state. According to the latest information by India's Disaster Management Division, Ministry of Home Affairs, the seasonal monsoon death toll rose to 1,153 since June 1. Nearly 75,000 houses and 370,000 hectares (900,000 acres) of agricultural land have been affected.

Tropical Storm Sinlaku (*Thailand*, *Vietnam*)
Tropical Storm Sinlaku made landfall in Vietnam and its remnants later affected Thailand during the period from August 1-3. According to Thailand's Department of Disaster Prevention and Mitigation (DDPM) torrential rains associated with Sinlaku triggered flash floods in 18 northern provinces. At least two storm related fatalities were noted and 1,400 houses were either damaged or destroyed. Further losses incurred to local infrastructure and agriculture. According to the Vietnam Meteorological Hydrological Administration, provinces in central and northern Vietnam were most affected with storm related rainfall totals exceeding 350 millimeters (14 inches), causing widespread inundation damage to thousands of houses, roads, and bridges. Around 5,000 hectares (12,000 acres) of agricultural land was submerged underwater. Government officials noted at least two storm related casualties.

Flooding (*Nigeria*)
Seasonal flooding in Nigeria claimed at least 30 lives during July, notably in the period from July 24 to early August. Among the worst affected were Suleja City and Gwagwalada area near the capital Abuja. Seasonal flooding is likely to continue into August and September.

Flooding (Sudan)
A period of heavy rains hit parts of Sudan from July 31 to August 3, as the country nears its monthly precipitation maximum, typically experienced in August. East and North Khartoum were affected in late July / early August, as authorities noted about 1,000 homes damaged or destroyed. A dam collapse near Bout in the Blue Nile State caused notable inundation in the adjacent urban areas of Bout and Wad Abuk, affecting more than 1,200 homes and leaving five people dead. It is unclear whether the incident was caused by heavy rain, although some local media reports indicate natural causes. Full scope of damage is unclear due to limited information from the area.

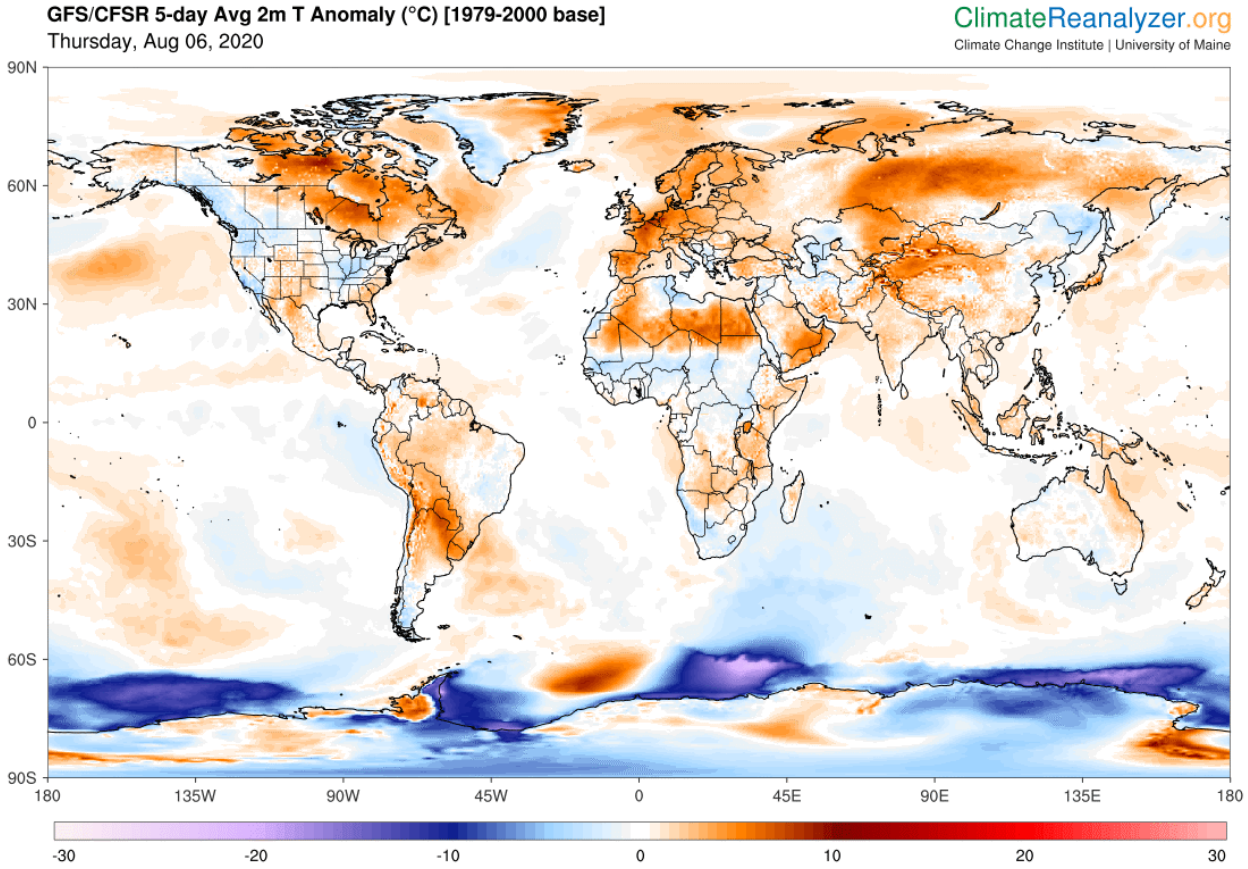
Flooding (*Yemen*)
Widespread flooding in Yemen continued in early August as 24-hour rainfall accumulations of up to 112 millimeters (4.4 inches) affected the western part of the country. According to local reports, the governorates of Hajjah and Al Hudaydah were affected the most. According to the UNHCR, there were at least 20 fatalities, while the floodwaters affected up to 9,000 families. This recent wave of flooding also hit other governorates including Marib, Dhale, Abyan, Hadhramaut and Ibb.

Flooding (*Afghanistan*)
Heavy rainfall prompted flash floods in Nangarhar and Parwan provinces of Afghanistan on July 31 – August 1, particularly in Kuz Kunar district. Afghanistan National Disaster Management Authority (ANDMA) cited that at least 100 homes sustained damage to various degrees, and thousands of homes, businesses, and roads were flooded during the event. No fewer than 14 casualties were noted, and several others sustained injuries.

Flooding (South Korea)
Typhoon Hagupit helped in enhancement of the flooding situation in South Korea by supplying additional moisture into the Mei-yu front which has affected Geyonggi and Chungcheong provinces along with national capital region of Seoul and metropolitan city Busan. According to the Korean Meteorological Administration, several observatories noted more than 250 millimeters (10 inches) of rainfall during July 29 through August 5, causing widespread inundation which damaged thousands of houses, businesses, roads, and bridges. According to the local media reports, around 750 streets and 400 sections of railway track were damaged. Recent spells of heavy rainfall inundated more than 5,750 hectares (14,200 acres) of farmland. Around 1,000 people were evacuated to safety by the local disaster officials. Government officials noted 14 casualties and around 11 people were missing as of this writing. A total of 2,958 property damage related claims were reported on August 1-5. The economic costs were anticipated to reach well into the millions (USD).

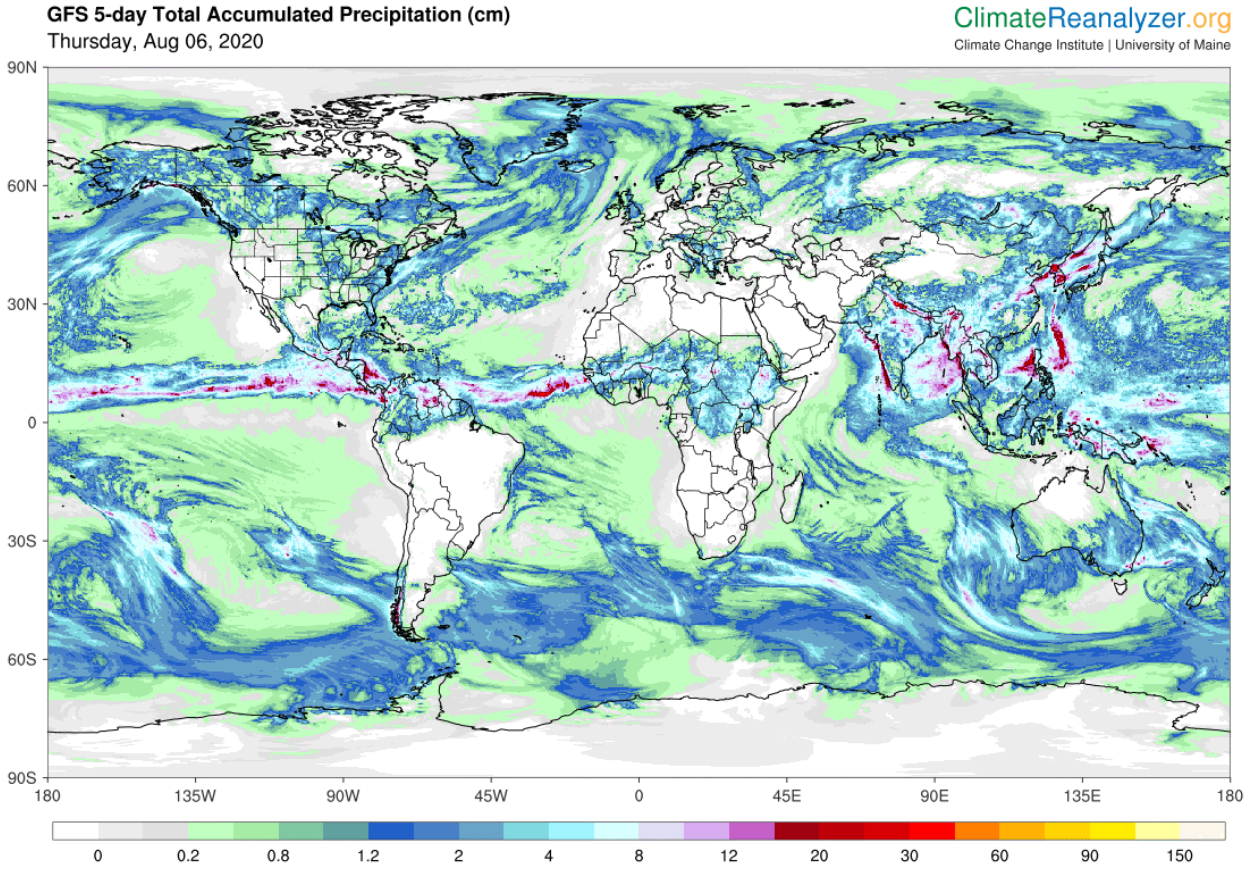
Flooding (Nepal)
Incessant rains prompted flash floods and landslides in Nepal on August 3. At least 10 people were killed in during a landslide event in Melamchi municipality. According to the latest media reports, no fewer than 193 people have died in rain-related incidents since the start of the monsoon season on June 1.

Global Temperature Anomaly Forecast



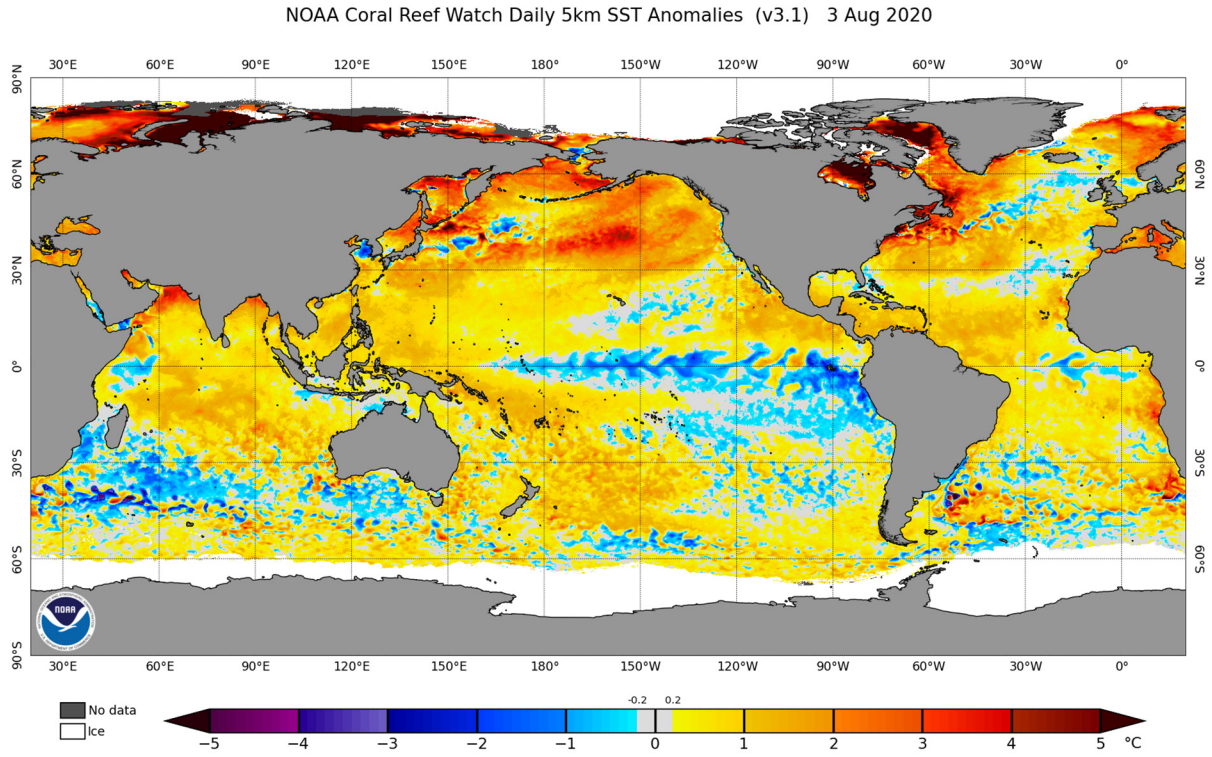
Source: Climate Reanalyzer, Climate Change Institute, University of Maine, USA

Global Precipitation Forecast



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

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



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.

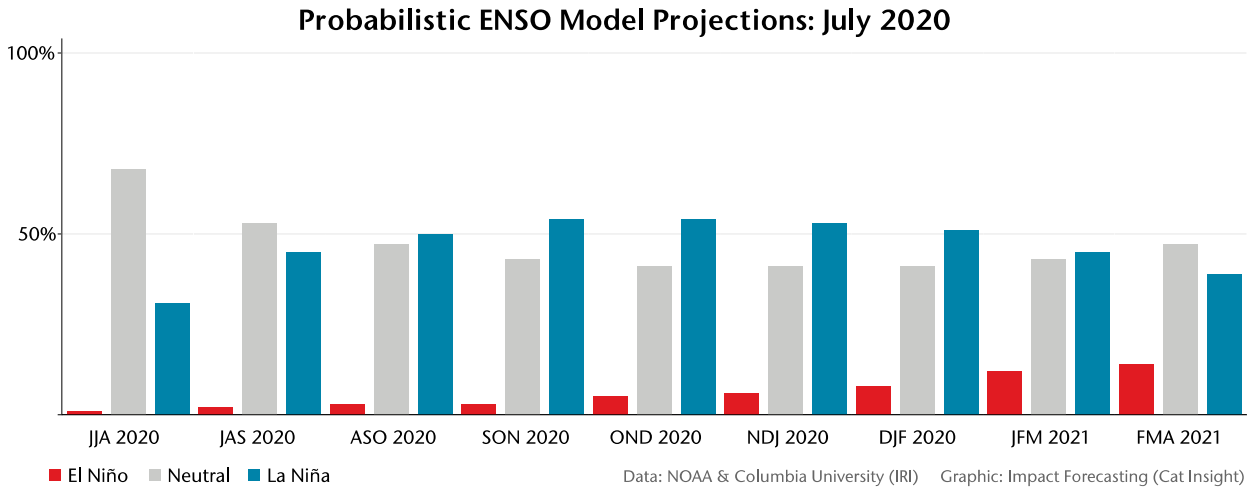
Select Current Global SSTs and Anomalies

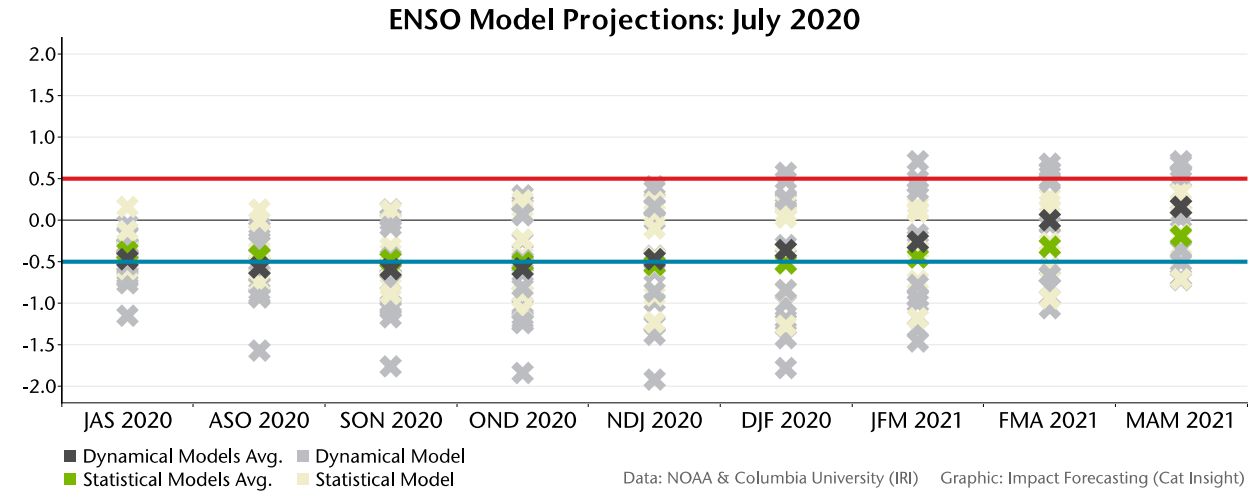
Location of Buoy	Temp (°C)	Departure from Last Year (°C)
Eastern Pacific Ocean (1,020 miles SW of San Salvador, El Salvador)	23.7	-2.6
Niño3.4 region (2°N latitude, 155°W longitude)	24.3	-1.9
Western Pacific Ocean (700 miles NNW of Honiara, Solomon Islands)	29.8	-0.2

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

El Niño-Southern Oscillation (ENSO)

ENSO-neutral conditions are currently present. NOAA notes that these neutral conditions will likely linger through the Northern Hemisphere (boreal) summer months. The agency further states that there is a 50 to 55 percent chance that a weak La Niña will emerge in the boreal autumn and last through the winter (2020/21).





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.*

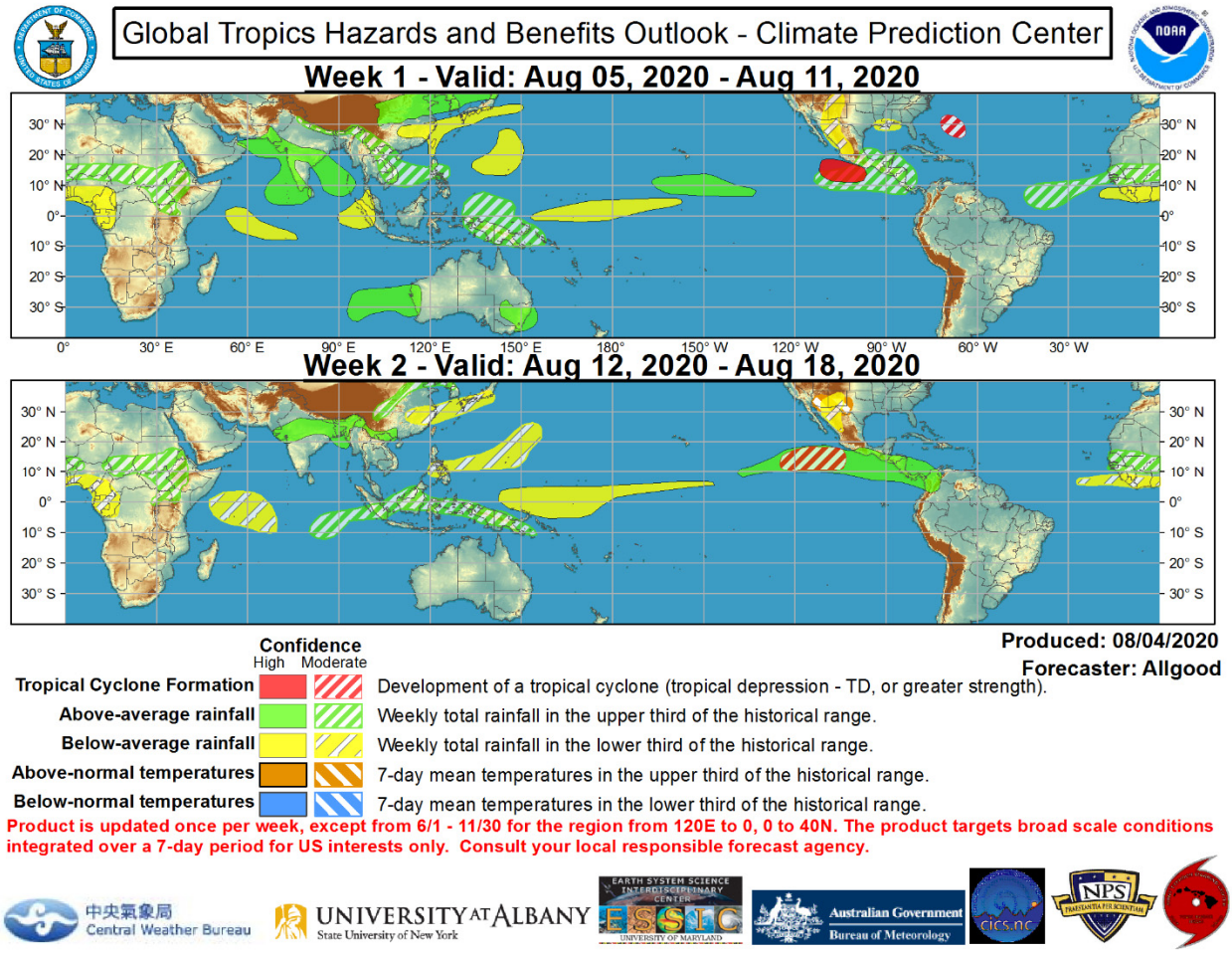
La Niña *refers to the periodic cooling of sea-surface temperatures (-0.5°C) across the east-central equatorial Pacific. It represents the cold phase of the ENSO cycle.*

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.*

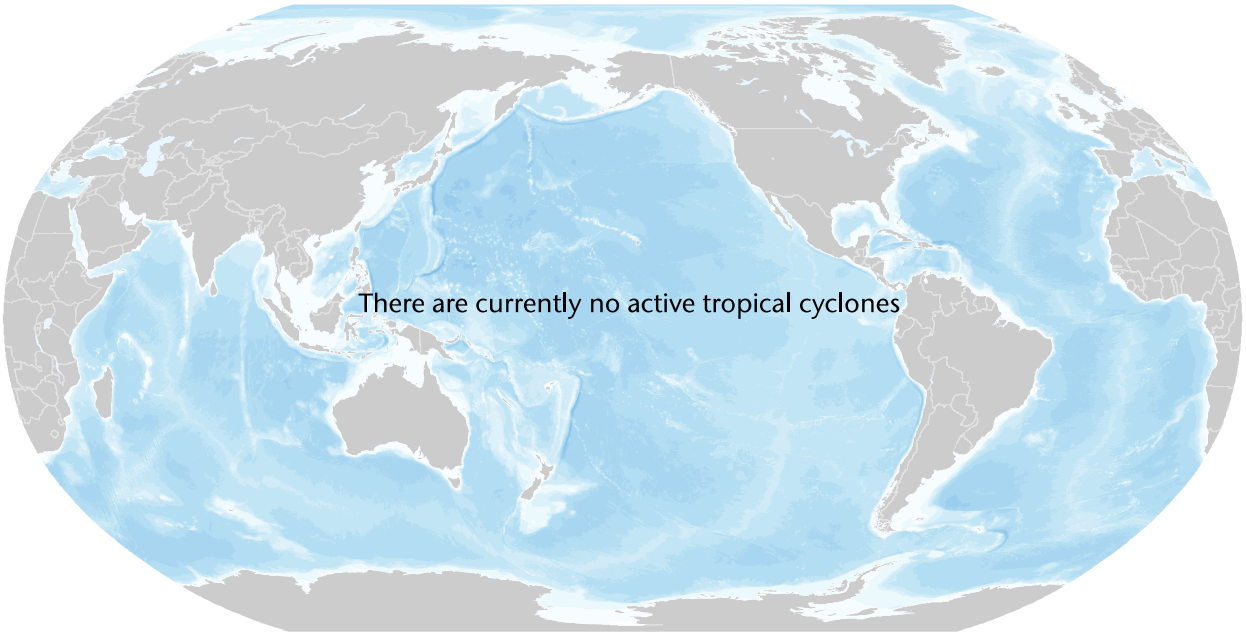
El Niño (La Niña) is a phenomenon in the equatorial Pacific Ocean characterized by a five consecutive 3-month running mean of sea surface temperature (SST) anomalies in the Niño 3.4 region that is above the threshold of +0.5°C (-0.5°C). This is known as the Oceanic Niño Index (ONI).

Global Tropics Outlook



Source: Climate Prediction Center

Current Tropical Systems



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

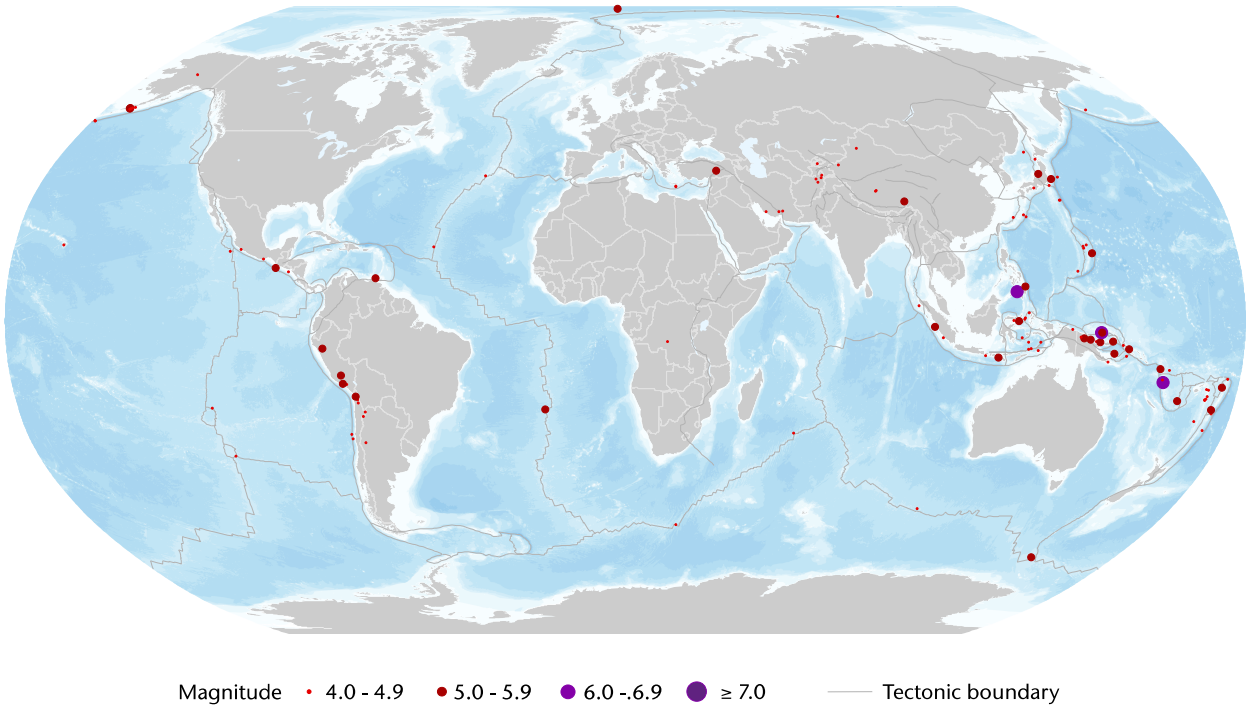
Location and Intensity Information

Name*	Location	Winds	Storm Reference from Land	Motion**

* TD = Tropical Depression, TS = Tropical Storm, HU = Hurricane, TY = Typhoon, STY = Super Typhoon, CY = Cyclone
01 ** 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 (≥M4.0): July 31 – August 6

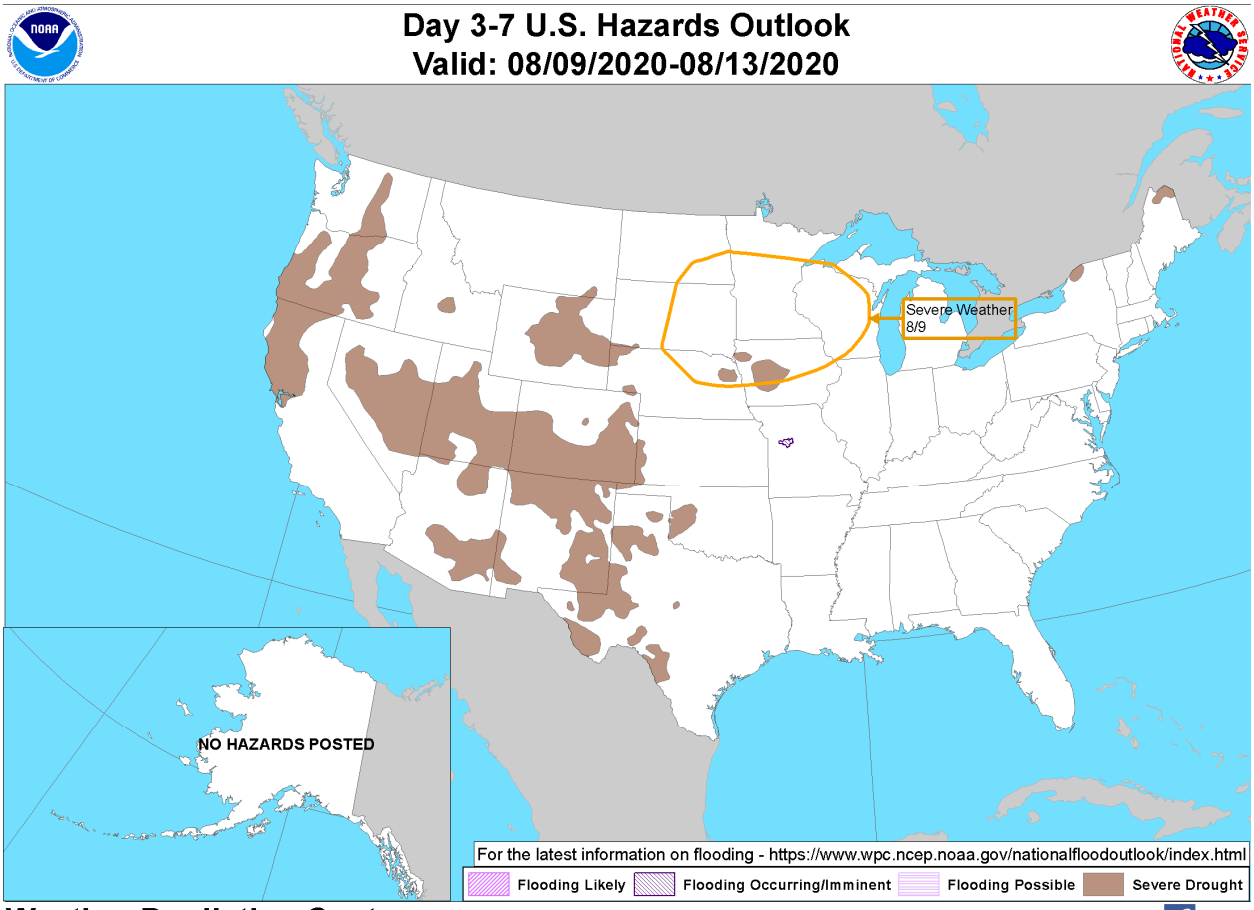


Significant EQ Location and Magnitude (≥M6.0) Information

Date (UTC)	Location	Magnitude	Depth	Epicenter
08/01/2020	7.28°N, 124.12°E	6.4	481 km	11 kilometers (7 miles) SE of Litayan, Philippines
08/01/2020	3.27°S, 148.57°E	6.0	10 km	19 kilometers (12 miles) SE of Lorengau, Papua New Guinea
08/05/2020	16.11°S, 168.08°E	6.4	175 km	71 kilometers (44 miles) E of Lakatoro, Vanuatu

Source: United States Geological Survey

U.S. Weather Threat Outlook



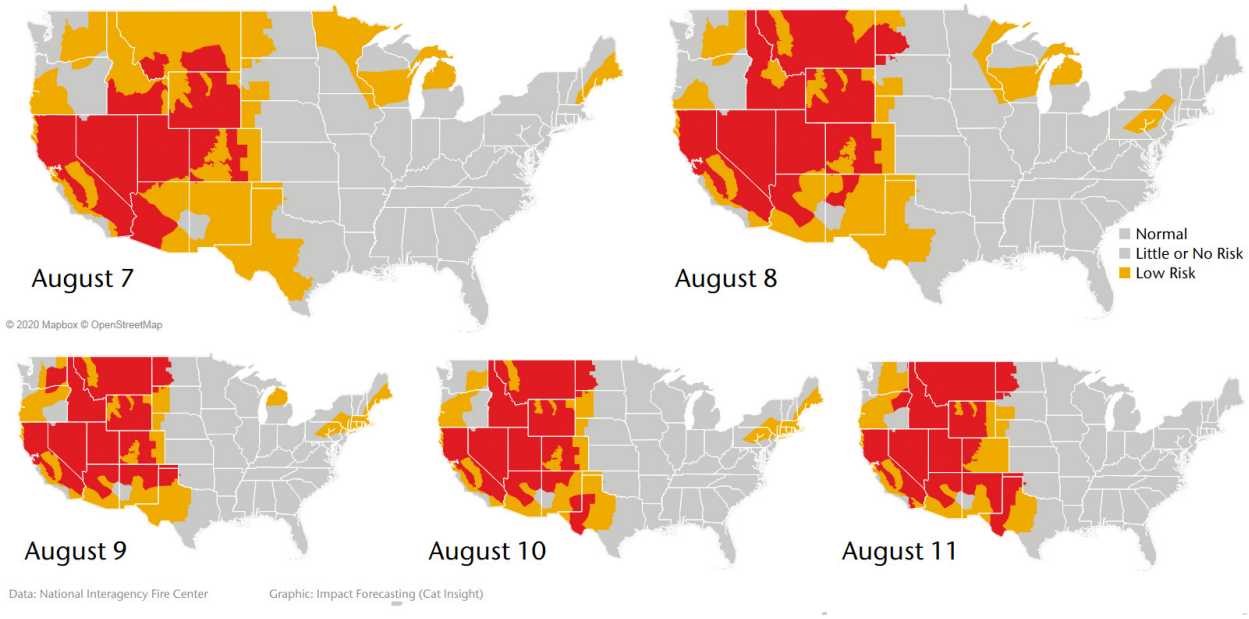
Potential Threats

- Severe weather is anticipated across portions of the Plains and Upper Midwest on August 9, resulting from an approaching piece of shortwave energy associated with a larger low-pressure system progressing through central Canada.

- Extreme drought has expanded across the Western United States, with continuing drought conditions spanning from the Southern Plains through the Central Rockies, and toward the West Coast. A region of prolonged drought has also been persistent in Iowa.

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, Southern Plains, and Midwest during the second week of August. Continued summer heat will maintain the heightened chance of wildfire ignition, including due to dry lightning, as drought conditions become more expansive.



Annual YTD Wildfire Comparison: August 6*

Year	Number of Fires	Acres Burned	Acres Burned Per Fire
2016	35,061	3,532,725	100.76
2017	39,741	5,771,813	145.24
2018	38,692	5,078,427	131.25
2019	27,171	3,235,456	119.08
2020	32,808	2,249,108	68.55
10-Year Average (2010-2019)	**36,621**	**4,026,739**	**109.96**

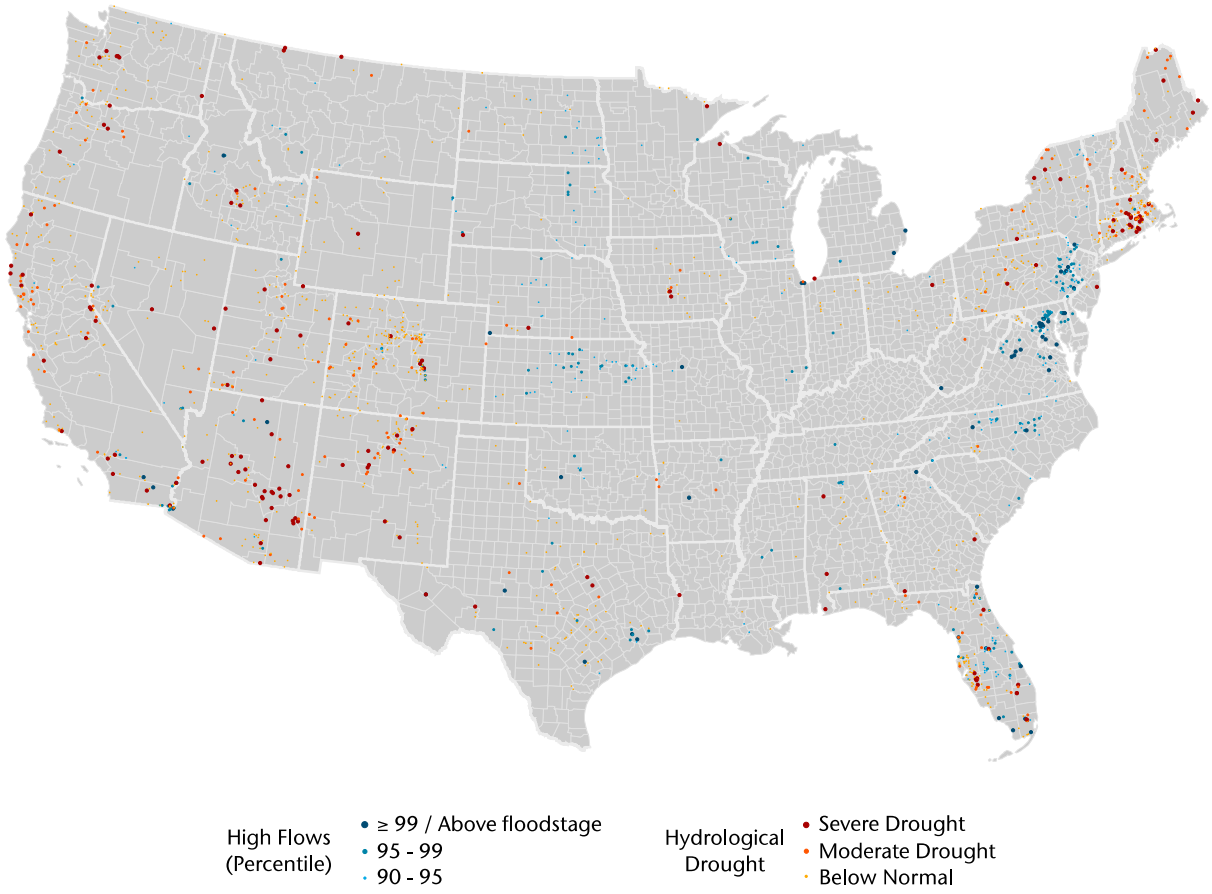
**Last available update from NIFC*
Source: National Interagency Fire Center

Top 5 Most Acres Burned by State: August 6

State	Number of Fires	Acres Burned	Acres Burned Per Fire
Arizona	1,528	678,735	444.20
Texas	3,093	211,251	68.30
Nevada	486	196,806	404.95
California	6,035	195,119	32.33
Utah	931	188,102	202.04

Source: National Interagency Fire Center

Current U.S. Streamflow Status



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.

Top 5 Rivers Currently Nearing or Exceeding Flood Stage

Location	Current Stage (ft)	Flood Percentile
Delaware River at Trenton, New Jersey	14.12	99.07
Little Wabash River near Clay City, Illinois	19.89	99.06
Delaware River at Belvidere, New Jersey	9.80	98.98
Blackwater River at Blue Lick, Missouri	31.51	98.94
Schuylkill River at Pottstown, Pennsylvania	7.14	98.92

Source: United States Geological Survey

Source Information

Hurricane Isaias makes U.S. landfall after Caribbean trek

U.S National Weather Service
U.S National Hurricane Center
Saturday Updates: All Clear For New Providence, Andros, Abaco, Eleuthera, The Tribune
Pm And Nema Team Assess Damage From Isaias, The Tribune
Hurricane Isaias appears to have spared the Bahamas, but Bimini remained a concern, Miami Herald
NEMA issues all clear as storm conditions lashed northwest Bahamas, Eyewitness News
Hurricane Isaias churns through Bahamas as Florida prepares, The Washington Post
About 700 homes affected by floods left by Isaías in Hato Mayor, Diario Libre
Isaías leaves more than 5,000 evacuees in the country, elCaribe
Storm Isaías exposes shortcomings of Hato Mayor, elCaribe
Thousands of subscribers remain without water and without light, Primera Hora
Tropical storm Isaías leaves 23 hospitals in Puerto Rico without electricity in the middle of a pandemic, 20minutos
7 dead, millions without power after Isaias ravages East Coast: What we know, USA Today
Isaias leaves millions in the dark in Mid-Atlantic and Northeast after roaring up East Coast, The Washington Post
Isaias Causes Damage in Ocean City, Roof Damage and Downed Wires, WBOC
Manayunk apartment complex evacuated, Main Street businesses flooded due to rising Schuylkill River after Isaias, ABC 6
Tow truck driver helps rescue woman from flooded Belmont Avenue, ABC 6
Con Edison
Tropical Storm Isaias batters NYC region, Fox 5 New York
More than 700,000 without power in Connecticut after storm, The Associated Press
North Conway, NH Woman Killed When Tree Falls On Apartment During Tropical Storm Isaias, CBS Boston
Tropical Cyclone Tornadoes, 1950–2007, Monthly Weather Review

Severe weather outbreaks in Central Europe

Heavy rain and flooding: Eleven injured in bad weather. BR24
The damage in Domžale alone exceeds two million euros. Delo
Vereinigte Hagel
Österreichische Hagelversicherung
Deutscher Wetterdienst

Typhoon Hagupit makes China landfall

Hagupit spares nation, but CWB warns of damage, Taipei Times
Typhoon Hagupit kills one in Taiwan before moving towards China, DPA International
NASA finds an eye and a giant 'tail' in Typhoon Hagupit, Phys Org
Joint Typhoon Warning Centre
Philippine Atmospheric, Geophysical and Astronomical Services Administration
Ministry of Emergency Management, China
Chinese National Climate Center Climate System Monitoring, Diagnosis, Forecast, Evaluation, China Meteorological Agency
Japan Meteorological Agency
Emergency Response Coordination Centre
National Aeronautics and Space Administration
Floodlist

Natural Catastrophes: In Brief

'Hundreds' of homes destroyed after Sudan dam collapse, Arab News
16 killed in flash flood in Afghanistan; several injured, The Statesman
Tropical storm Sinlaku destroys more than 1,300 homes in Thailand, Xinhua
Torrential downpours triggered by Storm Sinlaku killed two people, Vietnam Insider
Death toll from heavy downpour rises to 14, Korean Herald
Landslides bury construction workers near Nepal's capital, Aljazeera
UNHCR
Afghanistan National Disaster Management Authority
Department of Disaster Prevention and Mitigation, Thailand
Vietnam Meteorological Hydrological Administration
Vietnam Disaster Management Authority
India Meteorological Department
National Disaster Management Agency, India
Korean Meteorological Administration

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