Tropical Storm Eta causes widespread flooding in southeastern US as record-setting hurricane season continues

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After devastating large swathes of Central America and southern Mexico last week, the storm system named Eta, the 28th of the 2020 Atlantic hurricane season, made two separate landfalls in Florida as a Tropical Storm on Sunday and Thursday. But even as Eta shot through Florida and began to dissipate in the Atlantic on Thursday, another storm system has already formed in roughly the same location as Eta, placing Central America and the Yucatan back in harm's way.

After making landfall in Nicaragua on November 3 as a Category Four hurricane and causing widespread death and destruction from Panama to Chiapas, Mexico, Eta downgraded into a tropical storm, making its second landfall in Cuba on November 8. Later that night, it made its third landfall in the Florida Keys, marking the first landfall of a named storm in Florida this hurricane season (which officially ends on November 30), and the 12th to make landfall in the continental US so far, a new record.

A storm advisory affected over 20 million people in south Florida. Heavy rains produced widespread flooding in the area, especially in Miami-Dade and south Broward county. Tens of thousands lost power early Monday morning as the storm moved north. Though only at tropical storm strength, Dennis Feltgen, a meteorologist and spokesman at the National Hurricane Center in Miami, said "This is a very big, very serious rainfall event."

Commenting on how saturated the ground already was due to heavy rain in October, Feltgen added that "We're looking at the potential for a lot of urban flooding around here." Robert Molleda, a National Weather Service Meteorologist, said that "Any kind of additional rainfall, even if it looks like a half-inch or an inch, it could make things worse."

Four days after its third landfall, Eta made its fourth north of Tampa after dwelling in the southeastern Gulf of Mexico in the interim. Though it had already moved into the Atlantic by Thursday afternoon, it produced heavy flooding in the Tampa Bay area. The storm surge alone, almost four feet, was the highest recorded in the area in 29 years.

Dozens had to be rescued from high water in Pinellas County, which has a population of over 950,000. Low grade hurricanes and even tropical storms leave almost 10 percent of Florida's properties at risk of flooding, according to the *Tampa Bay Times*. In Pinellas County, this risk is near 30 percent. Diane Kacmarik, a meteorologist at Spectrum Bay News 9, said "Tampa Bay just by geography and population is super vulnerable."

Over 40,000 customers lost power in Pinellas, the St. Petersburg area, Pasco County, and Tampa, mainly due to high winds. Over 20,000 households and businesses were still in the dark Thursday afternoon.

As of this writing, only one storm-related causality has been documented in Florida, a 65-year-old resident of Manatee County who was electrocuted in his home on Wednesday after stepping in water that had inundated his powered clothes dryer.

As it made its way to the Atlantic, moisture from Eta combined with a cold front passing through the eastern US. This mixture has resulted in widespread heavy rainfall and power outages in Georgia, Virginia, and the Carolinas. North Carolina in particular has witnessed deadly flash flooding, with many roads and bridges crumbling and being washed away, and over 100 water rescues being conducted, including one at a charter school in Charlotte where 143 people had to be evacuated from flood waters.

So far there are at least seven deaths accounted for in the state. Four have been recorded in Alexander County, two in Iredell County, and one, an 11-year-old found drowned in the small town of Rolesville. Many others are still unaccounted for.

A study published in the latest issue of the scientific journal *Nature* entitled, "Slower decay of landfalling hurricanes in a warming world," found that the rate at which hurricanes making landfall in the North Atlantic have decayed over the past 50 years "has slowed, and that the slowdown in the decay over time is in direct proportion to a contemporaneous rise in the sea surface temperature."

Professor Pinaki Chakraborty, co-author of the study and a professor at the Okinawa Institute for Science and Technology in Japan, told the BBC, "As to the underlying reason, our analysis suggests that the culprit is climate change."

The study notes that "warmer sea surface temperatures induce a slower decay by increasing the stock of moisture that a hurricane carries as it hits land." Professor Chakraborty stated that "Unfortunately, our research also suggests that as the climate keeps warming, the decay of hurricanes will keep getting slower, and consequently, regions farther inland will face the wrath of ever stronger storms."

This finding is important in light of the simultaneous increase in rapid intensification—which is when a storm's maximum wind speeds increase at a minimum of 35 miles-per-hour in 24 hours—that recent storm systems have been undergoing. Nine storm systems have undergone this process during this season alone, and Eta intensified at twice the defined rate during its early lifespan, "a move never observed so late in the season and only a handful of times at any point in the Atlantic," according to the *Washington Post.*

The frequency with which named storms are making landfall is also increasing. As Eta was making its third landfall earlier this week, Tropical Storm Theta, the 29th named storm this season, formed in the Atlantic Ocean, officially making 2020 Atlantic hurricane season the most active on record. And as Eta made its way through Florida, the 30th named storm, Iota, formed in roughly the same location Eta started out in the central Caribbean.

The National Hurricane Center's afternoon advisory stated that Iota "is expected to strengthen and be a major hurricane when it approaches the coast of Central America," and that "Flooding and landslides from heavy rainfall could be significant across Central America given recovery efforts underway after Hurricane Eta."

Dan Kottlowski, hurricane expert at AccuWeather, warned that "I am greatly concerned we may soon have another major disaster on our hands in Central America if this Caribbean tropical system pans out like we suspect."

Iota would be the 13th hurricane of this season, rivaling only one other year that produced as many Atlantic hurricanes—2005, the year of Hurricanes Katrina and Rita.

Jake Carstens, meteorology graduate research assistant at Florida State University, told CNN that this hurricane season, "Every mile of the US Gulf and Atlantic coast has been under a Tropical Storm or Hurricane Watch or Warning, except for one single county with coastline: Wakulla County, Florida." That means 99.6 percent of the US coastline from Texas to Maine that has been under a tropical storm and hurricane warning so far this year, according to James Franklin, the former chief of the Hurricane Specialist Unit at the National Hurricane Center.

Since May, which is one month before the hurricane season begins, every month has seen a storm system make landfall in the US. The states that saw landfall include Texas (Hanna in July and Beta in September), Louisiana (Cristobal in June, Laura and Marco in August, and Delta and Zeta in October), Alabama (Sally in September), Florida (Eta in November), North Carolina (Isaias in August), South Carolina (Bertha in May), and New Jersey (Fay in July).

However, as Carstens said, "It's worth noting that despite Florida seeing a bit less of the action compared to other states like Louisiana, landfall locations don't fully describe the range and extent of impacts," citing Isaias, Sally, and Marco as examples. The usage of the Saffir–Simpson scale, which categorizes hurricanes based solely on their wind speed, is increasingly being called into question for this reason.

The United Nations recently released its *State of Climate Services 2020*, which states that human-induced climate change has increased the number of recorded weather, climate, and water-related disasters throughout the world over the past 50 years. Over 10,000 of these disasters have occurred over this time span, claiming millions of lives and causing trillions of dollars in economic losses. The poorest and least developed nations, such as the small island states, have borne the brunt of the deaths. The study calls for the creation and consistent financial investment in effective early warning systems, stating that the shift in emphasis from forecasting to predicting weather systems' impact must take place.

Mami Mizutori, special representative of the UN secretary-general for disaster risk reduction, told the BBC that "COVID-19 has made risk everybody's business," and that "We need to carry this understanding and momentum into the much bigger fight for our planet against the larger, stronger, more devastating climate emergency."

Another sobering study published in the Journal of Crisis Intervention and Suicide Prevention further examining the human toll of natural disasters underscores this point. Demonstrating the correlation between natural disasters and suicide rates, in US counties where one major disaster declaration was made between 2003 and 2015, suicide rates increased by as much as 23 percent following the natural disaster.

"That finding is important, I think, because those could be preventable deaths with better disaster preparedness and response," Jennifer Horney, founding director of the epidemiology program in the College of Health Sciences at the University of Delaware, told Medicalxpress.com. She continued: "Counties impacted by hurricanes saw the biggest increase in the rate of suicide in the first year, which makes sense because it's the most widespread type of disaster among those we examined," however, "these data are probably underestimate the association between disaster exposure and suicide because we know that there are a lot of additional mental health impacts from repetitive loss."

The impacts natural disasters have on the environment, infrastructure, economic and social life are becoming more uniform the world over. The ruling capitalist class's criminally indifferent response to all crises perpetuated by the private profit motive, from the COVID-19 pandemic to natural disasters, is increasing the social and psychological misery that's been leveled on the working class, peasants, and youth for decades. The *World Socialist Web Site* stated its perspective and the tasks necessary to overcome this situation in its earlier coverage of Hurricane Eta:

> These urgent issues can only be solved by the international political mobilization of the working class to expropriate the fortunes of the financial elites and major banks and corporations globally. Trillions of dollars from this social wealth must be used in programs to rebuild Central America, develop clean, safe and efficient energy and transportation systems and abolish all forms of social inequality.