

Damage from whopper hurricanes rising for many reasons

August 27 2020, by Seth Borenstein



This GOES-16 GeoColor satellite image taken Wednesday, Aug. 26, 2020, at 2:40 p.m. EDT., and provided by NOAA, shows Hurricane Laura over the Gulf of Mexico. Hurricane Laura strengthened Wednesday into "an extremely dangerous Category 4 hurricane," The National Hurricane Center said. Laura is expected to strike Wednesday night into Thursday morning along the Louisiana-Texas border. (NOAA via AP)

A destructive storm is rising from warm waters. Again.

America and the world are getting more frequent and bigger multibillion dollar tropical catastrophes like Hurricane Laura, which is menacing the U.S. Gulf Coast, because of a combination of increased coastal development, natural climate cycles, reductions in [air pollution](#) and man-made [climate change](#), experts say.

The list of recent whoppers keeps growing: Harvey, Irma, Maria, Florence, Michael, Dorian. And hurricane experts have no doubt that Laura will be right there with them.

It's a mess at least partially of our own making, said Susan Cutter, director of the Hazards and Vulnerability Institute at the University of South Carolina.

"We are seeing an increase of intensity of these phenomena because we as a society are fundamentally changing the Earth and at the same time we are moving to locations that are more hazardous," Cutter said Wednesday.

In the last three years, the United States has had [seven hurricane disasters](#) that each caused at least \$1 billion in damage, totaling \$335 billion. In all of the 1980s, there were six, and their damage totaled \$38.2 billion, according to the National Oceanic and Atmospheric Administration. All those figures are adjusted for the cost of living.



In this Aug. 29, 2017, file photo, water from Addicks Reservoir flows into neighborhoods from floodwaters brought on by Tropical Storm Harvey in Houston. Nasty hurricanes that cause billions of dollars in damage are hitting more often. Laura, which is threatening the U.S. Gulf Coast, is only the latest. (AP Photo/David J. Phillip, File)

The Atlantic is increasingly spawning more major hurricanes, according to an Associated Press analysis of NOAA hurricane data since 1950. That designation refers to storms with at least 111-mile-per-hour (179-kilometer-per-hour) winds that are the ones that do the most damage. The Atlantic now averages three [major hurricanes](#) a year, based on a 30-year running average. In the 1980s and 1990s, it was two.

The Atlantic's Accumulated Cyclone Energy—a measurement that takes into account the number of storms, their strength and how long they

last—is now 120 on a 30-year running average. Thirty years ago, it was in the 70s or 80s on average.

Some people argue the increase is due to unchecked [coastal development](#), while others will point to man-made climate change from the burning of coal, oil and gas. In fact, both are responsible, said former Federal Emergency Management Agency chief Craig Fugate.

"There's a lot of factors going on," he said.



In this Sept. 16, 2019, file photo, immigrants from Haiti recover their belongings from the rubble in their destroyed homes, in the aftermath of Hurricane Dorian in Abaco, Bahamas. Nasty hurricanes that cause billions of dollars in damage are hitting more often. Laura, which is threatening the U.S. Gulf Coast, is only the latest. (AP Photo/Ramon Espinosa, File)

When it comes to hurricane risk, a major factor is "the amount of stuff in the way of natural peril and the vulnerability of the stuff in the way," said Mark Bove, a meteorologist who works for the insurance firm Munich Re U.S.

One factor that increases the possibility that there will be "stuff in the way" of a major storm is that federal disaster policy and flood insurance subsidize and encourage people to rebuild in risky areas, Fugate said.

After storms, communities "always say they are going to rise from the ashes," and, too often, they build the same way in the same place for the same vulnerability and the same outcome, Fugate said.

In addition, some places, like Houston, don't limit development in areas that could serve as flood control zones if left empty and allow development that's not disaster resilient, said Kathleen Tierney, former director of the Natural Hazards Center at Colorado University.



In this Aug. 29, 2017, file photo, cars are flooded near the Addicks Reservoir as floodwaters from Harvey rise in Houston. Nasty hurricanes that cause billions of dollars in damage are hitting more often. Laura, which is threatening the U.S. Gulf Coast, is only the latest. (AP Photo/David J. Phillip, File)

Now add in the meteorology.

Scientists agree that waters are warming, and that serves as hurricane fuel, said NOAA climate scientist Jim Kossin. A [study by Kossin](#) found that, once a storm formed, the chances of its attaining [major storm](#) status globally increased by 8% a decade since 1979. In the Atlantic, chances went up by 49% a decade.

But scientists disagree on why waters are warming. They know climate

change is a factor—but they say it's not the biggest driver and disagree on what else may be behind it.

Some argue it's because of a 25- to 30-year natural global cycle that acts like a giant conveyor belt, carrying different levels of salt and temperature around the globe, including into the part of the tropical Atlantic off Africa where the worst hurricanes form, Colorado State University hurricane researcher Phil Klotzbach said.



Daoith Porm, right, and Bunsant Khov, left, board their business with Hurricane Laura just hours away, Wednesday, Aug. 26, 2020, in Bridge City, Texas. (AP Photo/Eric Gay)

When the water in the northern Atlantic is extra warm, the water in those tropical hurricane breeding grounds is unusually hot, and the [hurricane](#) season is abnormally active, Klotzbach said. Such a busy period started in 1995 and might end soon as northern Atlantic waters shift to a cooler regime, he said.

Klotzbach acknowledged that one problem with this theory is that the waters in the northern Atlantic have been unusually cool this summer, and still there have been lots of storms. It may have been a blip, he said.

But MIT meteorology professor Kerry Emanuel says it's because another counterintuitive factor is at play: There are more storms because of cleaner air.

European air pollution cooled the area over Africa in the 1960s and 1970s and put more dust into the air—both of which tamped down on any hurricanes, he said. When the pollution eased, Africa got warmer, more storms developed, and that's why it's such a busy period, Emanuel said.



In this Sept. 26, 2017, file photo, Nestor Serrano walks on the upstairs floor of his home, where the walls were blown off, in the aftermath of Hurricane Maria, in Yabucoa, Puerto Rico. Nasty hurricanes that cause billions of dollars in damage are hitting more often. Laura, which is threatening the U.S. Gulf Coast, is only the latest. (AP Photo/Gerald Herbert, File)



In this Sept. 28, 2017, file photo, debris scatters a destroyed community in the aftermath of Hurricane Maria in Toa Alta, Puerto Rico. Nasty hurricanes that cause billions of dollars in damage are hitting more often. Laura, which is threatening the U.S. Gulf Coast, is only the latest. (AP Photo/Gerald Herbert, File)

While climate change is not the most important factor in warming waters, it contributes to creating more damaging storms in other ways, by causing a rising sea level that worsens [storm](#) surges and making storms move more slowly and produce more rain, scientists say.

All of this means that we should get used to more catastrophic storms, according to Munich Re's Bove.

In addition, he said: "Climate change will be a bigger driver of losses in the future."

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