



Powerful Hurricane Irma could be next weather disaster

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While much attention remains on Texas and the destruction left by Hurricane Harvey and its historic rainfall, powerful Hurricane Irma is rapidly intensifying in the open Atlantic and poses a major threat to the Caribbean and potentially to the United States next week.

With the storm still five days away from the outermost Caribbean islands and at least a week away from any potential US impacts, there is still a lot of uncertainty about where it will go.

The range of possibilities presented by the forecast models more than a week out literally spreads from Mexico to Canada -- and everywhere in between.

Good bet at a casino is an intense Hurricane Irma at Cat 4 or 5. But it's still red or black on U.S. impacts. Hope it's a "fish storm"

Irma was designated a tropical storm Wednesday morning, and by Thursday afternoon, it had strengthened into a large Category 3 hurricane, with winds of 115 mph.

Such explosive strengthening is known as "rapid intensification," defined by the National Hurricane Center as having its wind speed increase at least 30 knots (35 mph) in 24 hours.

"Irma has become an impressive hurricane," the National Hurricane Center said Thursday, noting the rapid intensification. "This is a remarkable 50 knot (58 mph) increase from yesterday at this time."

Hurricane Harvey underwent rapid intensification just before it made landfall late last Friday, strengthening quickly from a tropical storm into a Category 4 hurricane when it moved onshore near Corpus Christi, Texas.

Hurricane kryptonite not in the mix

Irma is a classic "Cape Verde hurricane," a type of hurricane that forms in the far eastern Atlantic, near the Cape Verde Islands (now known as the Cabo Verde Islands), then tracks all the way across the Atlantic. Cape Verde storms frequently become some of the largest and most intense hurricanes. Examples are Hurricane Hugo, Hurricane Floyd, and Hurricane Ivan.

Hurricane Irma is forecast to continue to strengthen as it moves westward over the next five days, and the official forecast from the National Hurricane Center puts a dangerous Category 4 Hurricane Irma on the doorstep of the Caribbean by the end of the five-day forecast on Tuesday afternoon.

#Irma has continued to strengthen over the eastern Atlantic and is now a major hurricane. Details at <http://hurricanes.gov>

A strong high-pressure ridge to the north of Irma, over the Atlantic, is steering the storm to the west and limiting the wind shear in the upper levels of the atmosphere, which has allowed the storm to grow so quickly. Wind shear is like hurricane kryptonite, and prevents storms from forming or gaining strength.

Unfortunately, Irma will remain in a low-shear environment for the next several days, so there isn't much hope that Irma will weaken any time soon.

There is considerable confidence that Hurricane Irma will track to the west through the weekend and then take a slight jog to the southwest early next week in response "to a building ridge (of high pressure) over the central Atlantic."

From there, the forecast becomes a lot less clear, with some major differences among some of the key models meteorologists use to forecast hurricanes. The differences are so drastic that one prediction has Irma sliding harmlessly back out to sea, while in another, it makes multiple disastrous landfalls in the Caribbean and likely hits the United States after that.

Dueling prediction models

The European model, or ECMWF, and the American GFS model have had some notable showdowns before, most notably with Hurricane Sandy.

With Sandy, the ECMWF correctly predicted a landfall in the Northeast nearly a week ahead, while the GFS continually kept the storm offshore in what became a major black eye for the US weather-modeling industry. There have been other examples in which the GFS model has outperformed its European counterpart, such as with a few major snowstorms in the Northeast.

Right now, the GFS has Irma taking a more northerly track that curves to the north before it reaches the Caribbean, thus making a US landfall much less likely.

The European model keeps the storm tracking further west and into the Caribbean by the middle of next week.

"The ECMWF sees a much stronger ridge or Bermuda High (than the GFS) which forces Irma west, whereas the GFS has a weaker ridge and a more rightward, parabolic track," said Ryan Maue, a meteorologist with WeatherBell Analytics.

European vs American weather models

"The prospects for major impacts anywhere from Cuba to Carolinas is concerning for this very reliable model," Maue said.

Irma is still more than 1,700 miles east of the Leeward Islands, and any impacts from the storm wouldn't be felt until Tuesday or Wednesday for the Leeward Islands and Puerto Rico.

The forecast picture should become clearer after the weekend.

Bottom line: Hurricane Irma is already a powerful hurricane and looks to only become more so. Those with interests in the Caribbean and southeast US coast should pay close attention to the forecast.

