

HURRICANE IRMA

Category 5 Hurricane, Irma, is the most powerful hurricane recorded over the Atlantic Ocean. The hurricane was so powerful that even seismometers (instruments used to measure movement of the ground) detected it.

The hurricane formed over the Atlantic Ocean along the west coast of the African continent. It travelled west hitting the Caribbean Islands with wind speeds reaching up to 215mph.

It is estimated that on the Caribbean island of Barbuda 90% of buildings were destroyed and 50% of the population were made homeless.

Warm waters fuel major hurricanes

Hurricanes act as massive release valves for warm, humid air. Deep water of at least 80 F (27 C) is needed to fuel the storms. If conditions are favorable, storms could rapidly intensify into major hurricanes.

1 Warm water evaporates, creating a cluster of thunderstorms that release heat

2 Winds spiral up and outward; a low pressure system develops on the ocean surface

3 Clouds form and begin to organize in the upper atmosphere as warm air condenses

4 The entire system spins (surface winds counter clockwise, high altitude winds clockwise) as air rushes to the center to fill the low pressure void; at 74 mph (119 kph), a hurricane is born; most major hurricanes rapidly intensify, increasing winds by 35 mph (56 kph) or more within 24 hours

Low wind shear allows storms to grow and organize

Thunderstorms

Well-organized core
Necessary for a major hurricane to form

Warm water
At least 150 ft. (46 m) of warm water is needed to feed a storm; otherwise, the hurricane's churning motion will bring up cold water and weaken the system

5 As a storm passes over land, its supply of heat and moisture is cut off, weakening and eventually ending the storm

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Source: U.S. National Hurricane Center
Graphic: Lindsay Dubois, South Florida Sun Sentinel

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