

Uncontrolled global warming causes devastating storms and floods

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14 December 2025

If there were any doubt that climate change is real and having a devastating impact on millions of people, this year's hurricane season should put that doubt to rest. Only those with a powerful material interest in doing so will continue denying the reality, along with those who have fallen victim to the ensuing right-wing, anti-science propaganda.

Three Category 5 hurricanes were generated in the Atlantic alone, only the second time this has happened in recorded history. These included Hurricane Melissa, which ravaged Jamaica, Hispaniola and Cuba, plus hurricanes Erin and Humberto. In the Pacific basin, two major typhoons struck the Philippines in a week and cyclone Ditwah devastated Sri Lanka. (Note: similar cyclonic storms in different regions are known under a variety of names: typhoons in Asia, hurricanes in the Atlantic and tropical cyclones in the Indian and Pacific Oceans).

What is particularly remarkable is their intensity in both wind speed and quantity of rainfall.

For example, as reported by the US National Oceanic and Atmospheric Administration (NOAA), "Erin underwent rapid intensification, and is tied for the fifth-fastest 24-hour increase in maximum sustained winds on record, from 75 mph to 160 mph. Erin also tied for the third-fastest 24-hour pressure drop in the Atlantic basin on record, dropping 83 millibars from 998 mb to 915 mb." And "Melissa was the fourth storm to undergo rapid intensification this year, with a 115-mph wind increase and a 90 millibar decrease in central pressure in a 72-hour period ending at 11 a.m. EDT on October 28."

According to NOAA, their "Accumulated Cyclone Energy or ACE Index. ... reflects the strength or wind speed of each storm and how long it will last. For 2025 the total ACE is 132.9, which would indicate an above normal or very active season."

In the Pacific, Typhoon Ragasa (a.k.a. Typhoon Nando), reached sustained wind speeds of 270 km/h (165 mph), classifying it as a Category 5 tropical cyclone on the Saffir-Simpson scale. Over three days, Ragasa brought massive rain, floods and landslides to eastern Taiwan and the northern Philippine Island of Luzon. It went on to impact Hong Kong, the southern coast of China and Vietnam.

Millions of people were impacted by Ragasa. Thousands of people were displaced from their homes, either by direct

damage or evacuation orders. Millions of people suffered power outages. Almost 500,000 households in Vietnam experienced power outages, with a similar figure being reported from southern China. In northern Luzon, almost 750,000 households were hit by blackouts.

It is clear that the rise in extreme weather is the direct result of global warming due to the release of greenhouse gases caused primarily by the burning of fossil fuels. As the oceans warm, more water vapor is released into the atmosphere. This provides both increased energy driving the storm and a greater supply of moisture which is subsequently released as rain, thus increasing the storm's impact. This link has been identified in numerous scientific studies, for example, "Tropical Cyclones and Climate Change Assessment: Part II: Projected Response to Anthropogenic Warming" *Bulletin of the American Meteorological Society*, March 01, 2020, Vol. 101, Issue 3).

The extreme weather conditions caused by climate change are not only evident in the intensification of tropical cyclones but also in rainfall from non-cyclonic storms. Scientific studies have found that for each degree C. of global warming, the quantity of rain from a storm will increase by 14 to 21 percent. The earth has already experienced a rise of 1.55 degrees Celsius above pre-industrial levels last year and this will continue unless determined measures are undertaken. The devastating effects are already evident.

In southern Asia alone, so far this year more than 1,000 people have died, thousands are missing and millions have been impacted by the combined effects of cyclones and extreme monsoons. These are preliminary figures which are likely to increase significantly. The torrential rain associated with these storms triggered the worst flooding in decades initiating deadly landslides. Hardest hit have been Indonesia, Sri Lanka, Thailand, Vietnam and Malaysia. In each country, the situation is similar—years of neglected disaster planning and inadequate emergency response.

Cyclone Ditwah, one of the worst natural disasters to hit Sri Lanka in decades, has killed more than 600 people and affected nearly one million across the island. With over 200 people still missing, and search operations ongoing, the death toll is expected to rise further in the coming days. The government response has been totally inadequate to the need and has been

predominantly focused on measures to control the outrage of the population at their abandonment.

Interior areas, not adjacent to ocean coastlines, are also being affected by enhanced rainfall due to global warming. For example, the flash flooding in Ingram, Texas early in July, during which the Guadalupe River rose 31 feet in 90 minutes, took nearly 300 lives, confirmed dead or missing. This event was not unforeseen. Indeed, eight years before the disaster, the county's application for a federal grant to build a flood warning system had been rejected by the first Trump administration. This was by no means an isolated incident. One study found that extreme rainfall events in the United States could become three times more likely and up to 20 percent more severe within the next 45 years.

Devastating flooding due to unusually heavy monsoon rains recently hit Pakistan. Over 800 people died and millions were affected.

In addition, to torrential rainfall and high winds, storms near coastal areas can cause tidal surges, especially if the storm's arrival coincides with lunar high tide. This is further exacerbated by sea level rise, due to glacial and continental ice sheet melting, also a consequence of global warming.

Major urban areas near shorelines are of especial concern due to high population density, sensitive infrastructure and poor options for mass evacuation in a short time. One prime example is New York City. The devastating effects of a major storm's impact on the city was already seen when Superstorm Sandy hit in 2012. A new study by First Street, a climate risk group in Manhattan, reported in the *New York Times*—"The Disaster to Come: New York's Next Superstorm"—paints a dire picture of what today's even more powerful storms could cause.

"Sandy produced a deadly storm surge, and in 2021, the remnants of Hurricane Ida introduced the damage of extreme rainfall. The next hurricane could bring both."

"The results [of the new study] showed a 16-foot storm surge, two feet higher than Sandy's, which when combined with a torrential downpour, could put 25 percent of the city under water."

In a series of graphics, air photos of the city are superimposed with shaded areas illustrating the areas projected to be flooded. For example, "Some of Manhattan's most iconic spots would be submerged. Downtown, that would include parts of Chinatown, SoHo and the financial district... In Midtown, several feet of water would pool above long-paved-over creeks. This includes the theater district and areas near Madison Square Garden... In the Bronx, Yankee Stadium would be nearly surrounded by water, up to 11 feet in places." And so forth.

"But Manhattan and the Bronx would largely fare better than the boroughs that border the ocean. Brooklyn, Staten Island and Queens, [home to millions of working-class and middle-class residents] with miles of low-lying neighborhoods and dire drainage problems, would bear the brunt—over 80 percent—of the flooding."

"Property damage across the city could exceed \$20 billion, twice as much as Sandy caused, according to First Street."

Much of the city's subway system, the majority of which is below ground, would be extensively flooded.

Most city residents do not have flood insurance because they are not located within currently designated flood zones. Projects which are supposed to address at least some of these impacts are still only in the planning stage.

Similar fates await thousands of coastal communities around the world.

Another dangerous consequence of global warming is catastrophic flooding due to the accelerating melting of mountain glaciers.

Beyond the immediate impact, flooding also has major longer-term negative effects on human health. New research estimates that in the year following major floods, the United States saw more than 22,000 excess deaths. Among the causes are respiratory illnesses due to residual dampness which promotes the growth of mold, not to mention loss of housing, infrastructure and food resources. On a world scale, this translates into many millions of avoidable deaths.

Paradoxically, global warming can also starve some areas of rainfall, resulting in severe drought.

Trump has shut down any federal programs addressing climate change and effectively banned research into global warming. At the same time, he is doing everything possible to increase the burning of fossil fuels. His vulgar and ignorant dismissal of climate change as a "hoax" is only the most overt expression of the world ruling oligarchy's willful belittling of the overwhelming evidence of its reality in favor of its own immediate interests and the system which it supports.

The United Nations' "Emissions Gap Report 2025" shows the planet is on course for 2.8 degrees Celsius of warming above the pre-industrial average by the end of this century based on current policies. This is well beyond the goal of keeping warming to below 1.5 degrees C. set by the 2015 Paris Agreement. If current climate commitments are implemented, temperatures will still rise by 2.3-2.5 degrees. In either case, the devastation already experienced will be greatly amplified.

The international capitalist ruling class, which values profit over human life, is criminally responsible for the mass destruction and catastrophic loss of life caused by the uncontrolled global warming and consequential climate change which has already occurred and will continue to worsen unless the working class takes power and establishes a rational, socialist world system.



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