Increased Hurricane Losses Due to More People, Wealth Along Coastlines, Not Stronger Storms

by NAMIC

A team of scientists have found that the economic damages from hurricanes have increased in the United States over time due to greater population, infrastructure, and wealth on the U.S. coastlines, and not to any spike in the number or intensity of hurricanes.

â€œWe found that although some decades were quieter and less damaging in the U.S. and others had more land-falling hurricanes and more damage, the economic costs of land-falling hurricanes have steadily increased over time,â€• said Chris Landsea, one of the researchers as well as the science and operations officer at National Oceanic and Atmospheric Administrationâ€™s National Hurricane Center in Miami. â€œThere is nothing in the U.S. hurricane damage record that indicates global warming has caused a significant increase in destruction along our coasts.â€•

In a newly published paper in Natural Hazards Review, the researchers also found that economic hurricane damage in the United States has been doubling every 10 to 15 years. If more people continue to move to the hurricane-prone coastline, future economic hurricane losses may be far greater than previously thought.

â€œUnless action is taken to address the growing concentration of people and property in coastal hurricane areas, the damage will increase by a great deal as more people and infrastructure inhabit these coastal locations,â€• said Landsea.

The Natural Hazards Review paper, â€œNormalized Hurricane Damage in the United States: 1900-2005,â€• was written by Landsea, Roger A. Pielke Jr. from University of Colorado, Joel Gratz from ICAT Managers, Inc., Douglas Collins from Tillinghast-Towers Perrin, Mark A. Saunders from University College London, and Rade Musulin from Aon Re Australia.

The team used two different approaches, which gave similar results, to estimate the economic damages of historical hurricanes if they were to strike today, building upon the work published originally by Landsea and Pielke in 1998 and by Collins and Lowe in 2001. Both methods used changes in inflation and wealth at the national level. The first method utilized population increases at the county coastal level, while the second used changes in housing units at the county coastal level.

The results illustrate the effects of the tremendous pace of growth in vulnerable hurricane areas. If the 1926 Great Miami Hurricane were to hit today, the study estimated it would cause the largest losses at $140 billion to $157 billion, with Hurricane Katrina second on the list at $81 billion.

The team concludes that potential damage from storms ï¿½ï¿½" currently about $10 billion yearly ï¿½ï¿½" is growing at a rate that may place severe burdens on exposed communities, and that avoiding huge losses will require a change in the rate of population growth in coastal areas, major improvements in construction standards, or other mitigation actions.

Source: National Oceanic and Atmospheric Administration news release.