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The high winds and floodwater would be only the beginning of the misery.

A groundbreaking new study by Old Dominion University researchers suggests the financial cost of a major hurricane hitting southeastern Virginia could be staggering.

Robert McNab

The total impact from a hurricane similar to 2018's Florence or 2005's Katrina striking Hampton Roads could approach, or even exceed, $40 billion in the first year after landfall - equating to 40 percent of the Hampton Roads gross domestic product and nearly 10 percent of Virginia's GDP.

"Given the potential magnitude of losses from a major hurricane making landfall in the Hampton Roads region, planning and preparation for such an event is paramount," said Robert McNab, director of the Dragas Center for Economic Analysis and Policy in the Strome College of Business and principal investigator for the estimate.

In addition to wind and water damage approaching $20 billion, the disruption in life in Hampton Roads in the first year after the hurricane would result in the storm toll more than doubling in cost. The report estimates that the loss of 175,000 jobs and a decline in economic activity of nearly $23 billion if infrastructure and military installations suffered significant damage.

The report was produced for the Commonwealth Center for Recurrent Flooding Resiliency in collaboration with the Dragas Center for Economic Analysis and Policy. It was presented to Gov. Ralph Northam's cabinet this month, at the launch of the 2019 hurricane season.

To arrive at the estimated economic impact of a Hampton Roads hurricane, the researchers examined the history of major storm events in Virginia as well as the impact of major storms throughout the southeastern United States.

The Federal Emergency Management Agency Hazus model generated the damage estimates for a hurricane similar to Florence making landfall in Hampton Roads. Hazus is a regional multi-hazard model created as a decision-making tool which helps estimate potential losses from natural disasters, visualizing the effects of such hazards.

George McLeod

George McLeod, senior fellow in the Commonwealth Center for Recurrent Flooding Resiliency, said hurricane and flood modeling of this nature are a critical first step for identifying vulnerabilities and baseline damage estimates beforea major storm hits Hampton Roads.

"Our goal is to provide valuable information in support of an array of resilience activities, ranging from the time-sensitive emergency management work to enhanced economic impact analyses and other research," McLeod said.

The Hazus model estimates that 20,137 buildings, or 3% of all structures in Hampton Roads, would be at least moderately damaged in a Florence-type event.

However, the physical damage is only part of the total impact. Such a storm would also send harmful ripples through the economy, as employees would lose jobs, possibly even leave the region, causing a reduction in economic activity for months.

Given the Commonwealth's history of hurricane activity, it is a near certainty that a major hurricane will make landfall in Hampton Roads at some point. As a result, the report suggests four actions the region undertake to be prepared as possible:

- Continue tackling the issue of sea-level rise, a policy area where this region has taken a national leadership role, including through the creation of the Commonwealth Center for Recurrent Flooding Resiliency.
- Consider what structures may be too costly to save because of their susceptibility to flooding and storm surge.
- The Commonwealth should seriously review building codes in other, hurricane-prone, jurisdictions and adopt more stringent codes.
- The region should recognize the positive benefits that can arise from taking action in storm preparedness, including increased capacity to respond regionally, something that has long been challenging.

To see a copy of the report, please click HERE (https://nam03.safelinks.protection.outlook.com/?url=http%3A%2F%2FWww.floodingresiliency.org%2FFlorence&data=02%7C01%7Cbohallar%40odu.edu%7Ca96da445819441d7298208d6eb5fd6b6%7C48bf86e811a24b8a8cb368d8be2227f3%7C0%7C0%7C636955194183590948&sdata=t9mX7zVDTCNiyI4wk%2FyI2E2NTL%2FJTHCzb%2Fcgj5dEbkc%3D&reserved=0).

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