

Hurricane Emergency Management Approach: A Critical Review

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Extended Abstract

In recent years, extreme weather has demonstrated the strengths and the limits of the transportation infrastructure system in nearly every region of the United States. Intense hurricanes have plagued the east coast and the gulf coast, completely disrupting major transportation systems. With increasing changes in climate and an increase in the amount and severity of hurricanes, transportation management agencies are forced to reevaluate their models and design more effective emergency action plans. In the last two decades, major hurricane events such as Katrina, Sandy, and Harvey have disrupted the transportation management infrastructure in their respective regions. Hurricane Katrina made landfall in 2005 and devastated many parts of Louisiana and just a few weeks later they were struck by a second hurricane. Collecting as much data from these catastrophic events is crucial in understanding them further to gather a better understanding of the exact time and path an event occurs. This research will explore the steps taken prior to these massive hurricanes focusing on Hurricane Sandy, Katrina, and most recently Harvey. A summary of the action hurricane management action steps with recommendations for relatively economical and efficient management steps will be made. A GIS mapping system that periodically updates is a potential solution to help solving these problems would be cheaper to invest in and save damage costs than to be unprepared and pay for billions of dollars of damage. Recent hurricanes Harvey and Irma had roughly 180-220 billion dollars estimated losses due to flooding and evacuation. Designing roadways in advance to withstand the power of these events is a viable option to saving money in damage costs.