
Disaster expert: Signs pointed to catastrophe in New Orleans

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A weekly interview on a topic in the news, this week with Gregory V Button, an adjunct faculty member with the University of Michigan's School of Public Health.

Gregory V Button is a nationally recognized disaster researcher who has investigated disasters around the world over the past three decades. He was a member of a national team of disaster researchers affiliated with the Center of Hazards Assessment, Response and Technology at the University of New Orleans. About six months ago, the researchers predicted that a catastrophe similar to Hurricane Katrina would happen in New Orleans.

Q: Why was New Orleans vulnerable?

A: The city is below sea level. It is surrounded by water. It is in a bowl formation. The top of the levees are higher than the city itself. If you were to fly over it, it would look like a bowl. It is very vulnerable to sea storms. You have the land sinking over time slowly. The coastal erosion is 35 square miles a year along the Gulf Coast area due to the land sinking. You are losing a considerable amount of land. It is unstable. Many people in the United States have long thought that Los Angeles is the most vulnerable to a national disaster because of the fault lines. But many people in the disaster research field have long felt that New Orleans was the most vulnerable. Unfortunately, we were right.

Q: Why didn't all the people evacuate New Orleans?

A: There is a sizable portion of New Orleans, over 100,000, that are sick and disabled. Approximately 120,000 residents are low income and don't possess cars or any type of transportation. There are only three or four major avenues of evacuation. There is a long bridge over Lake Pontchartrain that has now been destroyed. That makes it problematic in terms of evacuation. Those people without any personal transportation were stuck. Many of those were the people who ended up in the Superdome.

Q: How bad a disaster is this in terms of history?

A: Even though this disaster occurred several days ago, because of the enormous geographical area that has been affected, we haven't been able to measure the extent of the damage. We still don't know what the total death toll will be. It is prudent to say it will be in the thousands.

It looks at this point of time that this is probably the worst national disaster we have ever experienced. That's because of the vast geographical area. There are actually early

indications there is a very high loss of life. The building infrastructure damage is very extensive. Another thing that compels me to say that this is the most extensive damage this country has ever experienced is just given the extent of damage to the city of New Orleans. And it will probably take ... six to 10 weeks to pump the water out of New Orleans. And we have hundreds of people homeless.

It is reasonable to predict that it will take at least a decade for the region to recover. Based on the recovery rate of (Hurricane) Andrew, it may well be more than a decade. It is hard to estimate. I wouldn't be surprised if we are talking 15 to 20 years in terms of re-establishing the infrastructure ... the factories, the highways, the houses, the oil pipelines that have to be rebuilt. It takes a considerable amount of time as well as money. We know from national disasters from all over the world that recovery periods are often very long.

Q: With New Orleans underwater, is standing water a health hazard?

A: Stagnant water has already been contaminated by the sewer system and undoubtedly toxicant chemicals from a variety of sources.

Q: Why was this such a severe hurricane?

A: In regards to Hurricane Katrina, there are two meteorological aspects that make it unique. One is that it moved very slowly once it hit Florida. It was labeled Level 1 when it landed in Florida. Its wind speed was very slow. That was important. It gave it time to gather momentum. When a storm moves faster, it's less able to absorb the kind of energy that Hurricane Katrina was able to build up. The Gulf waters were very unusually warm, which added to this problem. The warmer waters actually fed that hurricane. Those two factors in itself contributed to it coming on land as least a Level 4. Plus, it was an unusually wide hurricane. Its entire mass was much wider than the average hurricane.

Q: Tell me a little about your connection with the University of New Orleans.

A: I became affiliated with them because I know a number of researchers there. About six months ago, the director of this center brought this team together to look at the prospect of the Gulf Coast and the city of New Orleans being vulnerable to the hurricanes. What we predicted six months ago is pretty much what happened.
