

# Yes, global warming caused this

## BE OUR GUEST

BY STEVEN COHEN

**A**s we dry out from Superstorm Sandy, we have to face a very inconvenient reality: A changing climate will make our world all the more vulnerable to extreme weather and its effects. We can try to put our heads in the sand, but the longer we do, the more damage future storms will likely cause.

First things first. In the past several days, we have seen the now-routine mobilization of the nation's emergency response system.

There is no question we are developing a growing organizational and technological capacity to respond to storms and rebuild after they have hit.

In the coming years, we will have to pay even more attention to this issue in the face of reduced public tolerance for service interruptions. None of us ever liked sitting in the dark with our freezers thawing, but today, when the power goes, we also lose our connection to the Internet and our ability to communicate.

More important, we must figure out — quickly — how to build a more robust infrastructure. While the storm here was unprecedented and caused great pain, similar events are unlikely to be as unusual in the decades and generations to come as they were in the past. If an emergency happens every year, it's hard to call it an emergency

anymore.

The issue no one wants to discuss is perhaps the biggest one of all: the root causes of these more frequent storms. I am not a climate scientist, but a sustainability policy and management analyst, so while I know that correlation is not causality, if you really think Irene and Sandy are just a coincidence, then I've got a bridge I'd like to sell you. Normally I'd throw in a tunnel, too, but right now it's filled with water.

As executive director of Columbia University's Earth Institute, I have the privilege of working with more than 100 Ph.D.-level scientists and policy analysts focused on every aspect of the climate problem.

See through the fog of politics. There is no doubt that climate change is underway, and there is no doubt that its causes are human economic activity. Denying the science of climate change is like denying the science of gravity. Our fossil fuels, landfills and patterns of land use and transportation are making the planet warmer.

Some of the impacts of a warmer climate are more frequent and intense storms. That does not mean Sandy or Irene was "caused" by climate change, but over time,

we should expect that climate change will, on average, result in more frequent and more intense storms.

Think about it this way: If I get drunk, drive 90 mph and forget to buckle my seat belt, it doesn't mean that my driving habits caused a serious accident; it just increases the odds that one will take place. A sober, slower and seat-belted driver has a lower probability of ending up in an accident — but that does not mean he won't hit an ice sheet and drive into a ditch. When a situation is as complicated as weather or a car accident, we look for probabilistic explanations rather than causal ones.

The politics of this presidential season have driven climate change and the importance of green energy off the national political agenda.

Superstorm Sandy will not bring it back before Election Day, but thoughtful people will once again start to add up the cost of neglecting this critical issue.

The climate issue is mainly an energy is-

sue. We need to transition from fossil fuels to renewable energy, and we need to begin decisively doing so now.

This is not only America's problem, it's the world's. And the serious consequences go well beyond climate. The process of extracting these fuels damages the ecosystems that humans depend on for water and food.

Most of the 7 billion people on the planet do not have access to the energy that we take for granted here in the U.S. If the entire world used fossil fuels at the rate we do, the resulting scale of environmental destruction would almost certainly poison our water and food supply. Fossil fuels are finite, and in the long run, supply will diminish and prices will rise.

Let us fervently hope that that one result of the pain of the past several days might be the United States — and the world — decisively accelerating the process of developing a renewable energy-based economy.

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**Global climate change is causing extreme weather — and we must either adapt or suffer the consequences from Mother Nature**