

Bad Bets

By Vaclav Smil

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By last Tuesday afternoon I suspected that much.

By Thursday evening -- after I saw a distraught black woman pleading into a TV camera: "Help us, they are raping children out there!" and after I watched other cameras repeatedly scanning that massive crowd of helpless people that waited for days to be given, or even just told, anything to ease their pain --- I was sure.



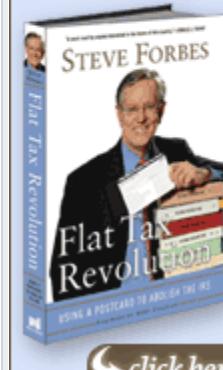
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I knew that Ayman al-Zawahiri must be immensely pleased as he watches these scenes (his English is good, but no English is needed to interpret that unraveling) on his Pakistani (maybe Iranian) TV. This predictable -- almost totally avoidable and hence overwhelmingly self-inflicted -- disaster will cost the US more than did the attack on the World Trade Center that he helped to mastermind. But the money cost may be a lesser part of it. More importantly, Katrina's aftermath proved in a most graphic fashion that the only remaining superpower is increasingly helpless to respond to any threats in any coherent way. And perhaps the deepest message of Katrina's aftermath is how it exposed the frightening fragility of urban America and the increasingly Third-World nature of much of its urban environment and population: the world's only remaining superpower is rotting from the inside.

Let me explain, just briefly. Predictability of Katrinas must be clear to any school child: they are a matter of recurrent when and not if, and any rational, risk-minimizing society (let alone the world's richest one) should be taking constant systematic steps to minimize their impact. Hoping that a hurricane path will miss you, building levees to meet no more than the hurricane category 3 threats and permitting unlimited construction along the entire Gulf of Mexico coast are all state- and federally-sanctioned acts that are just asking for disasters to happen, a form of high-level gambling. Most gamblers, of course, lose.

Perfect defenses are impossible, near-perfect ones are exceedingly costly. A rational society with limited wealth to spare on any particular challenge would favor passive prevention and limited push-back. An easiest step to take, it would not allow any new permanent construction along any shoreline that could be swept by a massive storm surge. That is, after all, a matter of kindergarten physics: a cubic meter of water weighs 1000 kg, a cubic meter of air weighs 1.2 kg, a thousandfold difference; and the vertical impact power on structures goes up with the cube of speed on top of that. Under such a regime, all old structures would be gradually wiped out by hurricanes, and new structures -- built beyond the storm surge reach (this may be, depending on the terrain, just 50 m or 2 km inland) to high wind-resistance standards -- would be able to survive all but the strongest conceivable cyclones. Fortunately,

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America, unlike Bangladesh, has plenty of land to leave the land that belongs (recurrently but most violently) to the sea to the sea. Those libertarians who might object to an outright building ban (but we zone everywhere as it is, so why not?) might like the idea of having the incorrigible beach-builders paying the real price for their insurance, not one subsidized by millions of people in safer locations. Few would find that affordable.

A rational decision-maker inheriting a city sunken below the sea level faces a tougher challenge than gradually reducing and eventually eliminating the sprawl along a coast, but the same strategy applies. Discourage the city's further growth, build a second, less formidable, line of defenses behind the existing (reinforced) dykes (that is what the Dutch have been doing recently, setting aside areas that will be deliberately flooded, not defending every bit of land) and manage its decline. After all, regardless of what you do, the current rate of deltaic erosion will turn the city into an utterly indefensible island in a matter of five to six generations.

But the safest of all bets is to conclude that the sanctimoniously defiant "we shall rebuild" cry will, yet again, prevail and that billions will be spent to set up more infrastructure for future destruction. There is no will, at any governing level, to behave rationally. But this multibillion dollar waste is in the future. What we see already is the multibillion dollar waste called the Department of Homeland Security whose megamachinery of dozens of agencies has been shown to base their decision on information that was vastly inferior to broadcasts freely available on radio and TV to the rest of the world.

Much has been said about the immensely catastrophic nature of Katrina. Yes, of course, in terms of the area affected and the misery it brought to hundreds of thousands of people -- but, no, if we are thinking about what the DHS should be thinking, countless worse and worst scenarios. How about having hundreds of thousands of dead bodies, as was the case with the Sumatran tsunami, in a radioactive environment, not just (fortunately) a limited number of casualties in shallow dirty water? If Zawahiri thinks as a cost-benefit maximizer, Katrina taught him a crucial lesson: why bother with any such arcane (and costly and unpredictable) stuff as dirty bombs when an equivalent of a couple feet of dirty water will do.

The one lesson that would be easiest to act on is to remember that large segments of all major US cities are inhabited by populations whose standard of living is more African than American. In any massive catastrophe, all young, sick, helpless and decent people of this population will become instant victims, while the predatory, violent segment of this population will take control of the chaotic place. Everybody found something incredible about Katrina's aftermath; few details can compete with the fact that, as a CNN reporter repeated breathlessly, a group of policemen (those who did not desert!) in a major US city was, four days after a hurricane, banding together to defend -- their own police station!!! Is this a glimpse of America's future? Are similar scenes, on a much larger scale, amidst much more impassable chaos and thousands of dead bodies possible? If Katrina will teach at least one limited lesson it should be this: do not let Los Angeles or San Francisco, after a 9.0 magnitude quake, pass into the hands of gangs. But I am afraid that is exactly what is coming, especially when you take into account the number of gang members in California.

Vaclav Smil is the author of [Energy at the Crossroads](#).

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