



When personal opinion trumps science

Hurricane Harvey (August/September 2017) has resulted in over 30 deaths; the loss of 100 000 homes and 1 million cars; and damage, private and public, that it is estimated will cost as much as USD190 billion to remedy. The President of the USA has (at the time of writing) committed just under USD10 billion to the State of Texas (not yet mentioning the devastation in eastern Louisiana). At the same time, he is proposing trillions of dollars in tax cuts for business and the wealthy, and is demanding that Congress approve the cost of a southern border wall, which, in effect (over the time of construction), is estimated by engineers to be USD200 billion, not to mention the cost of preventing people entering the USA by boat to circumvent the wall.

On 30 January 2015, President Barack Obama signed an Executive Order 'Establishing a federal flood risk management standard and a process for further soliciting and considering stakeholder input'. One of the results was the securing of reservoirs which, during the damage caused by Hurricane Harvey, held back flood waters so successfully that they backed up and spread waters westwards into homes, to the point that engineers were forced to evacuate residents below the reservoirs and open the floodgates.

It might have been logical to assume that the current President would have reflected on the benefits of the Obama Executive Order and so strengthened its requirements in view of the known probability of increasing risk to low-lying areas in the USA (home to almost 14 million people). In fact, 50% of the world's cities most at risk from coastal flooding are in the USA – Miami, New York, New Orleans, Tampa and Boston. Houston is not strictly a coastal city (although for 10–15 km it could very well be), but 7000 homes are located in areas that have been subject repeatedly to flooding over many years.

But the predicted risks were not part of the current President's understanding of the world and so, instead of strengthening Obama's Executive Order, he overrode it on 15 August 2017. On that day, he signed Executive Order 13807 – not strengthening Obama's Order but rolling back many of its conditions and requirements. Hurricane Harvey had already begun to form on 13 August 2017 and, 2 days after the signing, had reached the status of a tropical storm. In view of the course predicated for the storm, it is the kind of development that Presidents would be informed of in their daily briefings. The Executive Order had, however, been signed and the views of scientists are, in any event, held to be of little significance.

President Trump has since tweeted (on 30 August 2017) that 'After witnessing first hand the horror & devastation caused by Hurricane Harvey, my heart goes out even more so to the great people of Texas!' @realDonaldTrump.

But as the *Dallas Times* reported

With Houston still inundated, Trump kept away from the heart of the disaster zone. ...It wasn't just that he didn't visit a shelter or interact with any Texans who'd lost a home or loved one. He made no public mention of Texans undergoing such hardship.

The problem is worse, of course, because his appointed head of the Environmental Protection Agency (EPA), Scott Pruitt, has previously been funded by large businesses in the fossil fuel industry. Although

Pruitt says he does believe in global warming, he says equally clearly that he does not believe that there is a human cause, and that fossil fuels should be promoted in the interests of energy generation and economic growth. In his previous position as Attorney General of Oklahoma, Pruitt sued the EPA 14 times, leading Ken Kimmell, President of the Union of Concerned Scientists in the USA, to issue a statement that

...Pruitt is supported by the very industries he would be responsible for overseeing, particularly fossil fuel producers. He has questioned the clear scientific evidence for climate change and resisted science-based rules that protect our air and water from pollution. ...

And it is now also clear that there is an intention to cut the EPA's staffing levels by over 30%, beginning with staff who work on climate change.

The effects of 'opinion vs science' sadly run deeper in society for a core of Americans, for while almost 60% of the population believes that there is such a phenomenon as global warming – and that it is mostly caused by human agency – a larger majority believes that the threats of climate change either will happen in the distant future, or will not happen to themselves or their families. This view is presumably not currently held by thousands of residents of Houston and other southeastern parts of the country.

The right-wing media in the USA are, for the most part, also sceptical of the human role in global warming and carry considerable public weight. Popular right-wing commentator Ann Coulter, for example, stated that she 'would be more willing to believe that gay people caused the flooding than buy into the idea of climate change' although quite how that might also apply to devastating flooding in South Asia, which has killed more than 1200 people in a swath from New Delhi to Dhaka, is not clear. It is equally unclear as to whether the broader, equally (or more) disastrous, flooding in Asia and elsewhere is the world has become part of the awareness of the President.

Simon Baptist, *The Economist's* Global Chief Economist, a far more astute observer, had this to say:

With Hurricanes Irma and Harvey battering the Caribbean and southern US states, I have been thinking about the implications of climate change for countries across the world. The cost of relief and mitigation from natural disasters is rising, but the displacement of large communities in the longer term represents an international crisis in the making. The UN estimates that an average of 22.5m people a year have been displaced by natural disasters since 2008, yet this remains a trickle compared with the flood of refugees and migrants that could result from the growing effects of global warming. Large concentrations of people in India, Bangladesh and China are at risk from rising water levels and floods, while a loss of agrarian land, acidification of oceans and extreme weather events pose risks to communities everywhere.

That such a clear-cut reality should be so muddled, at the expense of sound decision-making, is difficult to believe. That seems, however, to be the price to be paid for Presidential hubris and personal opinion.



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