

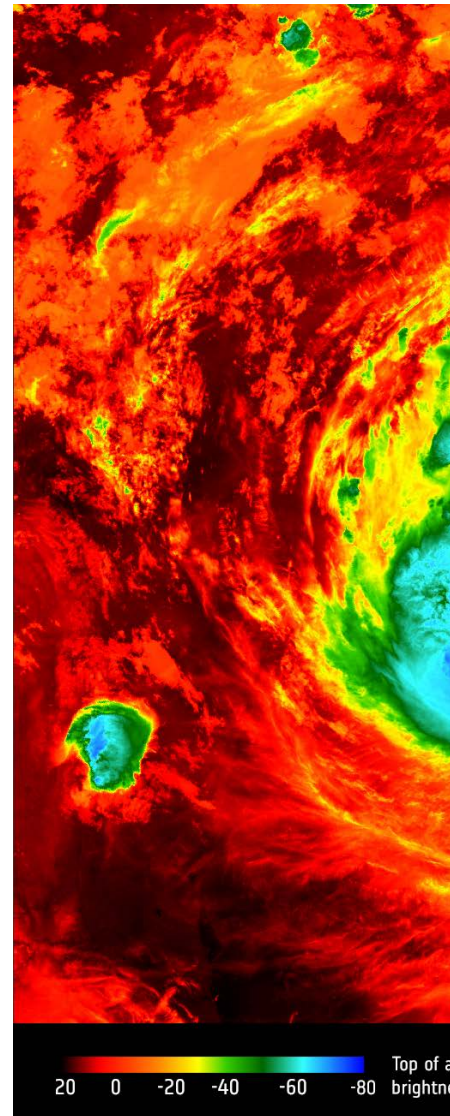
Preparing for extreme events

Organisations tend to underprepare for disasters. A behavioural risk audit could help people get ready for the worst

..... BY HOWARD KUNREUTHER

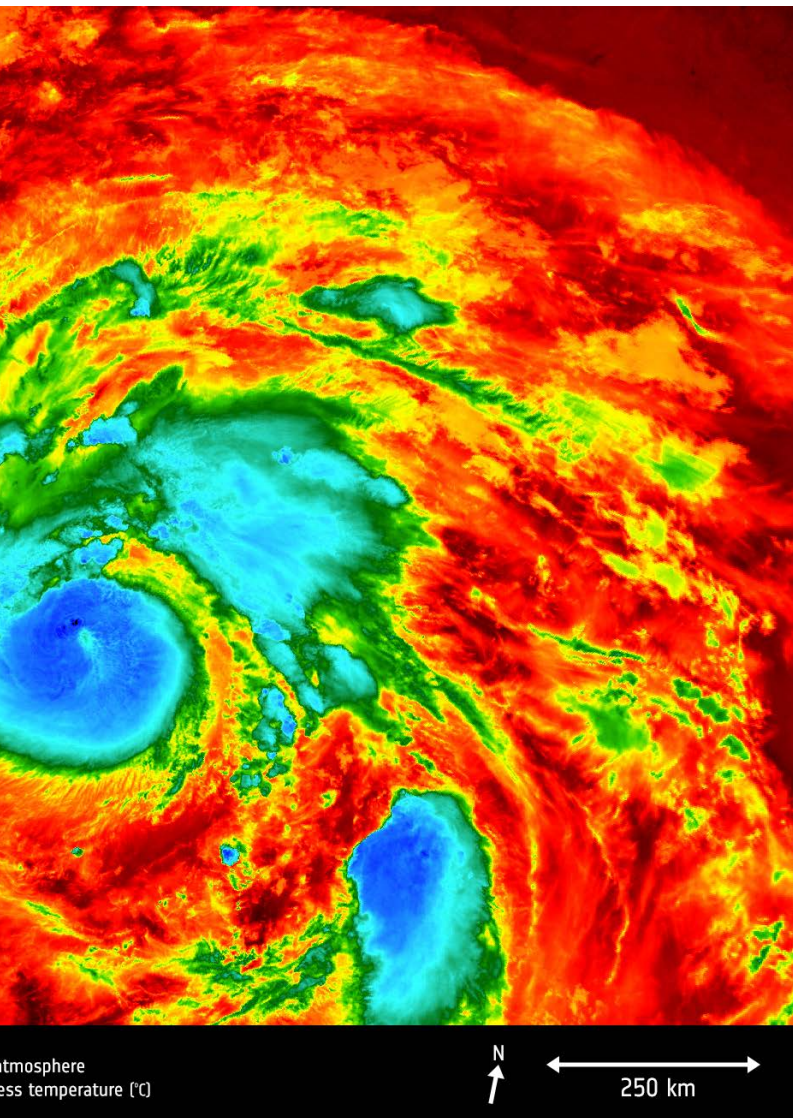
Hurricane Harvey, which has devastated Houston, Texas, highlights again the challenges we face when dealing with low-probability, high-consequence events. Houston had never experienced any severe flooding, so it is natural that residents assumed that they would not be subject to any severe damage. It is thus not surprising that, according to estimates by the Federal Emergency Management Agency, only 15 per cent of the victims of Hurricane Harvey had purchased flood insurance even though it is not very expensive.

In our book, *The ostrich paradox: why we underprepare for disasters*, Robert Meyer and I outline six decision-making biases that cause individuals, communities, organisations and institutions to underinvest in protection against low-probability, high-consequence events. These biases are myopia (we have a hard time thinking much beyond tomorrow); optimism (the tendency to believe that the disaster will not happen to us); amnesia (the tendency to forget too quickly the lessons of recent disasters such as Hurricanes Sandy and Katrina); inertia (the tendency to do nothing if we are unsure of the best action to take);



A behavioural audit can nudge and encourage individuals to undertake preparedness measures for disasters before they occur

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Left: Satellite image of Hurricane Harvey.

Above: Water coming over the road in Kemah during Hurricane Harvey.

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simplification (the tendency to selectively attend to limited data that supports our preferences); and herding (the tendency to imitate others).

Nudge

We propose a behavioural audit that recognises the above biases and uses them to nudge and encourage individuals to undertake preparedness measures for disasters before they occur.

There are several ways to incentivise those at risk to take action now. One is to stretch time horizons. Rather than indicating that the chance of a severe hurricane next year is a 1-in-100, experts could reframe their estimate as a greater than 1-in-4 chance that there will be at least one such hurricane in the next 25 years. The same probability is presented over

a longer time period. This reframing may help overcome the myopia and optimism biases.

Give short-term incentives. For example, provide a long-term loan to property owners to spread the cost of a loss-reduction measure over time. If the mitigation measure is cost-effective and insurance premiums reflect risk, then the annual cost of the loan will be less than the savings in insurance costs for the safer structure. Tying the loan and insurance to the property and/or the mortgage rather than the individual will address the amnesia bias, as safety measures in place will be a constant reminder.

Reframing

Use default options. For example, insurance premiums could be

automatically included in a homeowner's mortgage or taxes. Individuals would be able to opt out if they did not want coverage. However, the need to spend time and energy to cancel a policy may lead them to keep insurance due to the inertia bias.

Another strategy could be that insurers consider offering homeowners multi-year insurance policies, thus freeing them from the need to make an annual decision about renewal. For example, flood policies would be written for three- to five-year terms that would carry an annual premium that would remain stable for the length of the contract. Such an insurance policy would address the simplification bias. Rather than homeowners having to deliberate each year about whether they should renew, or worry if they

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Caroline is global risk and compliance director at Diageo, and a director at Aster Group UK. She has held various director positions across audit, finance and risk functions.

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“ Our biases are part of our cognitive DNA




Above: An aerial view of Houston showing the extent of flooding caused by Hurricane Harvey. Houston emergency services with cars across the flooded street in Houston, Texas.

are covered should a flood occur, the coverage would be automatic for the length of the contract.

Finally, seals of approval can be effective. The most cost-effective means of making communities safer from hazards may be through social norms that directly address the herding bias. If residents in flood-prone areas see all of their neighbours making investments in loss-prevention measures and buying insurance, they are likely to follow suit. The Insurance Institute for Home Building and Safety has awarded seals of approval to homes that meet or exceed building code standards. The hope is that such marks of excellence would not only increase the property value of the home but also be seen as signs of status by others – nudging them

to undertake improvements.

We need to recognise that when making decisions, our biases are part of our cognitive DNA. While we may not be able to alter our internal wiring, we may be able to improve preparedness by recognising these biases and designing strategies that anticipate and deal with them. ☹

 Howard Kunreuther is the James G Dinan professor; professor of decision sciences and public policy at the Wharton School; and co-director of the Wharton Risk Management and Decision Processes Center at the University of Pennsylvania. He will be speaking at IRM's 8th Annual Risk Leaders Conference, *No more business as usual*, November 23, 2017. Book now: <https://www.theirm.org/events/risk-leaders-2017.aspx>