The expert view: Messaging around disasters

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Ana: Thank you for making the time to talk with us about your work, Roger. We are looking forward to hearing your views on how journalists, scientists, and others talk about disasters.

Can we begin this interview with an overview of your background and experience, and what drives you and your activities today?

Roger: *30 years ago, I did a postdoc with Michael Glantz at NCAR (National Center for Atmospheric Research), who is a social scientist. I started on a project on floods and hurricanes and how weather forecasts can be better used in the context of warning for extreme events. I noticed right away that there were two communities: (1) the traditional hazards or disasters/resilience community and (2) the emerging climate change* community, and they *weren't talking to each other or even using the same language – for example mitigation and adaptation have different meanings in each community. Even to this day, the disasters research community has been overshadowed by the climate change community.*

So early on in my work, I became aware of a community of social scientists who realized that disasters have human causes, or as Dennis Mileti, at the Natural Hazards Center put it in his book Disasters by Design, when we build human infrastructure, not only are we building that infrastructure, but we are creating the conditions for how we experience future extreme events.

Of course, climate change is real and serious, but it is not the only topic to focus on when we discuss or research disasters; and within the climate change community, the human role in disasters has too often been reduced to the abatement of greenhouse gas emissions. In fact, climate change makes it even more imperative to work on the vulnerabilities and building our resilience.

Ana*:* Thanks for this overview, Roger. I have been following your work for many years and have used your books (Honest Broker and the Climate Fix) in the classroom. I think they were instrumental for me in making "the shift" in how I think about disasters, extreme events, and climate change.

We have a particular interest in messaging around disasters by the media, scientists, and others. To that end we have been talking to journalists such as Andy Revkin and others like yourself.

One particular area of concern is how the "everything climate change" messaging by the media (e.g. the LA fires in January 2025), scientists, and others, is hindering efforts to prevent disasters. Do you have any thoughts on this topic, including communications and messaging approaches on what the science is really telling us?

Roger: *First, after a disaster there is intense political pressure to return to "normal" as if the physical event was the problem, and not where we choose to live and build. On top of that you have a lack of accountability by elected officials and managers (e.g. the recent Los Angeles fires or the Valencia, Spain floods), who will often say that the disaster "was caused by forces outside our control, so don't blame me". Yet, the extreme events we experience (even in a changing climate) take place in places where they have always occurred. For example, hurricane strikes between Central America and Nova Scotia or earthquakes in San Francisco should never come as a surprise. It is also difficult for communities to see themselves as vulnerable places in advance of disasters.*

In the case of earthquakes, which are more or less free of the climate politics, it becomes much more obvious to people that the disaster has been created by poverty, poor building standards, etc. After the 2011 Tōhoku earthquake and tsunami and the incident at the Fukushima nuclear power station, people quickly blamed the location of the backup electricity generator. In Nepal and Turkey, it was the poor building standards that were blamed.

Ana: How about the role of scientists in messaging around disasters, and the fact that the IPCC science on disasters is being largely ignored?

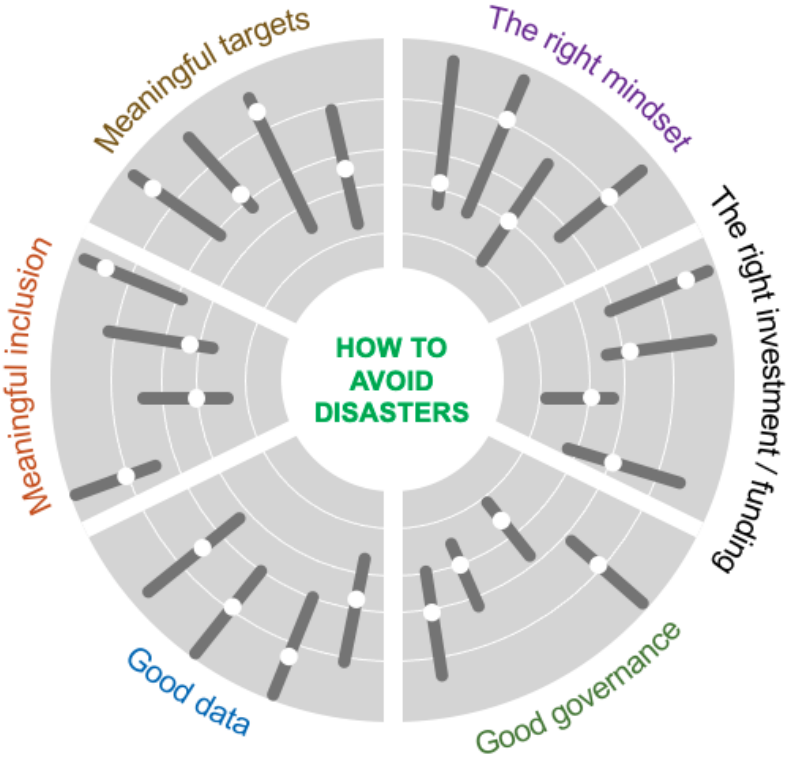
Roger: *You can trace the history of this, but I believe it was around the time of Al Gore's movie An Inconvenient Truth, when there was a shift in the academic community and extreme events became politically instrumental for energy policy messaging. In the case of advocacy groups, they were very open about it and the "need to bring climate change home to people", which they accomplished by making the disasters themselves a poster child of changing energy policy. And at some point, people working in the old school "Denis Mileti and Gilbert White approach" – talking about vulnerability and the importance of where we build - were seen as obstacles to this energy policy messaging. So, these politics in the expert community haven't been helpful.*

So, the question becomes, how do we course-correct on this type of framing within the scientific community? Take for example, the U.S National Oceanic and Atmospheric Administration's 'Billion Dollar Disasters', which is the agency's count of weather disasters per year exceeding a billion (U.S) dollars. I have been writing on this topic for about 15 years. In addition to not meeting U.S. Government data quality and scientific integrity standards, the analysis makes a direct connection between the increase in the number of these disasters and climate change.

While it is true that disasters cost more in absolute terms, this attribution is flawed, the increase is driven by economics, not the hazard.

I also think that one of the more underappreciated elements is the response to typhoons in South and Southeast Asia. When you compare the number of deaths in the 1960s from un-forecasted tropical cyclones to the number of deaths from cyclones today, we really need to give credit to the communities and local officials in this region who, with the help of better data and forecasts, have succeeded in cutting the fatality numbers by several orders of magnitude.

Gareth: Thanks for bringing up the example of cyclones in South and Southeast Asia, Roger. It is a region we have been studying for a while. When you visit the Asia region, which includes countries like Bangladesh (South Asia) and Viet Nam (Southeast Asia), you quickly appreciate the powerful role of local communities in using data to help prevent disasters. It was seeing examples like this as part of the Disasters Avoided project that provided much of the inspiration for the Disasters Avoided model we have developed, which has six factors: mindset, investment, governance, data, inclusion and targets. We created it to articulate key points that help us avoid disasters. We would welcome any views you might have on this model and approach.



The Disasters Avoided model: © G Byatt, I Kelman & A Prados

Roger: *I think that one of the gaps we have is how to move the knowledge and lessons gained from a disaster to the places that are just as vulnerable but haven't yet experienced a disaster.*

Some of the framing out of the climate community around hazards is very negative. e.g. "We are powerless unless we change this or that". But the story of disasters over the past century is an uplifting one. If instead, we say "We know how to improve resilience and decrease vulnerability, and here are examples on the ground from these communities…", we end up with a much more positive framing. Although not popular with everyone, Our World in Data has helpful charts showing the historical decrease in disaster deaths, particularly from droughts.

Returning to the importance of disseminating this knowledge, I wrote a paper in 2015 for an Australian disaster conference, titled "Catastrophes of the 21st Century" outlining where we should focus our attention and resources. I argued that we should focus on scenarios that the expert community is paying less attention to, such as pandemics or solar storms. That takes leadership in the academic community, and the willingness to work on topics that are not generally front-page news.

Ana: We appreciate these points, Roger. We are also wondering about news and media organisations, journalists and others who could work with us on this, such as Andy Revkin, whom we interviewed recently. Are there others we could be working with?

Roger: *Yes, but there are also certain aspects of journalism that we can't control, such as the media segmentation and how publishing is driven by what people are likely to click. There is good media reporting out there on avoiding disasters, but you have to go and look for it.*

Gareth: I'd like to get your views on a couple of urban-related points, Roger. We know that for example you have done some work on coastal cities. Do you have any thoughts on leadership in cities and towns, and how they could - involving the community – do better at avoiding disasters?

Roger: *It has been a while since I have worked at the local level. In the U.S, I recall communities in Grand Forks, North Dakota and Virginia Beach, doing good work on "designing future disasters", as we discussed earlier. Each had suffered disasters, and we know from the literature that this opens a window of opportunity for positive change. But disasters are generally far down the list of priorities for local leaders compared to pressing matters such as taxes, education or healthcare because they are not at the forefront of political conflict.*

A post-disaster 'starter kit' or 'recipe' on longer term decisions – such as where to rebuild - is needed. Matthew Kahn at the University of Southern California has written about decisions impacting the ability to build resilience, such as historical preservation ordinances in municipalities that make it difficult to retrofit roofs to decrease their flammability.

At the same if you look at empirical data like death rates and economic losses (as a proportion of the overall economy) from weather extremes, the news is good in many places, particularly the poorest regions.

I was recently engaged in research on the 1877-1878 El Niño event, and according to the available data, about 4% of the global population perished; and that is a big number. We need to appreciate that we have gained a lot of knowledge with respect to hazards and disasters in urban areas and elsewhere, and that the main challenge is the practical application of this knowledge to make better decisions (such as preparing in advance and reducing the time to respond to hurricanes or floods), versus creating new knowledge.

We also have a nice body of literature seeking to disentangle the societal factors that underlie disaster impacts from the hazard factors, the type of information that used to be included the IPCC reports. But it can be very challenging to separate the relative role of policies, historical events, and variability in extremes, to name a few.

Some have called for a Natural Disaster Review Board, like the NTSB (National Transportation Safety Board) for airplane crashes in the U.S. We don't have review boards for disasters. I would love to see this in place because it would provide an initial framing on how to better manage and prevent disasters. Such as for example, the investigation and report that was released related to the 2025 Washington D.C plane crash. Without strong institutions, it is hard to collect this knowledge; we can see this gap in how leaders turn to climate change to avoid political accountability.

Gareth: I appreciate the point about Review Boards, Roger. Some countries hold inquiries after certain events occur. We know that the Sendai Framework for Disaster Risk Reduction 2015-2030 and the Sustainable Development Goals (SDGs) will be replaced or modified in 2030, when their 15-year lifecycle finishes. In the remaining years up to 2030, are there certain things that you would like to see being focused on?

Roger: *I will use the Sendai Framework indicators as an example. I feel they are backwards- looking. I would love to see forward-looking indicators to identify vulnerabilities in advance. How could we go to a community like Valencia, Spain and identify vulnerabilities and related opportunities in advance, such as the way a river was channelized through an urban area? Or for hurricanes, what are the most vulnerable cities in the U.S? The success in reducing the impact of cyclones in the Bay of Bengal (South Asia), for example, is not well known outside of the hazards community, so how do we get it into the hands of people making decisions?*

Gareth and Ana: Thank you very much for your time, Roger.