

Bridging Science and Society

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Gordon McBean, director of policy at the Institute for Catastrophic Loss Reduction (ICLR), has dedicated much of his professional life to researching a perceived disconnect between natural catastrophes and the socio-political consequences of such major events. He has spent years studying the vulnerability of people in disaster situations. But recently (and unintentionally), his studies entered the realm of practical application.

McBean (pronounced Mc-BAIN) was in Paris chairing an international committee, the Integrated Research on Disaster Risk (IRDR), when Iceland's Eyjafjallajökull volcano erupted on Apr. 14, sending a cloud of ash into the atmosphere. The cloud drifted over Europe and ground air travel to a halt, stranding trav-

ellers for one week. McBean was caught in the centre of the chaos, featuring scores of people scrambling to find temporary accommodations while their flights were grounded for safety reasons.

Pre-dating this social disruption, roughly two weeks earlier, on Apr. 7 in Ottawa, McBean became a member of the Order of Canada for his "contributions in atmospheric and climate sciences [that] have enhanced Canada's stature on the world stage."

McBean, a self-described "climate guy," has been researching climate and severe weather since the 1970s. In 1990, the United Nations declared the decade to be the international decade for natural disaster reduction. McBean joined the national Canadian committee, where he met Paul Kovacs, director of the ICLR.

Throughout the 1990s, McBean worked in the public sector. He became the assistant deputy minister of the atmospheric environment service for Environment Canada in 1994. Six years later, he decided to resign from the public sector. Around the same time, Kovacs and Alan Davenport — ICLR's former director of research up until Davenport's passing in July 2009 — were in the process of establishing ICLR. They offered McBean a faculty position.

Since that time, McBean has

continued to sit on a number of national and international research bodies, including the Intergovernmental Panel on Climate Change. The panel shared a Nobel Peace Prize in 2007 with former U.S. vice president Al Gore. And yet, despite the Nobel Peace Prize already hanging on his office wall, McBean says having the Order of Canada medal pinned on him by the Governor General has meant a lot to him. The award is national and recognizes people's contributions to Canadian society from across the spectrum. McBean sees the attention around the medal as an opportunity to further spread his message that climate change research and awareness must be linked to the socio-political (or human) dimensions of the problem.

"When do scientists cross from being scientists to being advocates? I think it's important that we do it and still at the same time maintain our credibility," he says. "If top scientists don't speak out on these issues who will the media listen to?"

Climate change is more than just an "emissions reduction game," he says. "The reality is that with climate change, it's inevitable that we'll have more storms, floods and droughts. Storms, floods and droughts kill people. They cause economic damage. They cause insurance companies to have to pay out

big amounts of money and we have to see this as part of the overall package of disaster risk reduction. Climate change is not a separate topic."

Roughly two years ago, McBean began chairing the IRDR, which is sponsored by the International Council for Science, the International Social Science Council and the UN International Strategy for Disaster Reduction.

The 2004 Boxing Day Tsunami in the Indian Ocean sparked the group's formation, he explains. But although McBean and the committee were able to find abundant research on physical events, weather and climate, not a lot of work was being done to include social issues. "For example, how do governments, right down to the individuals, make the choices that make themselves more or less vulnerable?" he says. "How do they keep informed? What information do they have? What features are dominant in their thinking process?"

Wealthy people, who are presumed to be smart, still insist on having large homes on cliffs overlooking beaches, he notes. And in other areas, poor populations have no choice but to live in shantytowns on hillsides, or on the banks of major rivers. "How does a society function in such a way that it doesn't provide any opportunities or support, so that

PROFILE



Photo: Sgt. Serge Gouin, Rideau Hall

these people are so vulnerable?" he wonders aloud.

McBean recalls a trip to Venezuela roughly 10 years ago. As he was driving to the airport with two other colleagues, they looked out the cab window and noticed a town "with houses stacked one on top of the other" perched on the hillside. "It was pouring rain and we simultaneously said: 'That's a disaster waiting to happen.' One week later it did. The whole town just slid

down the hillside. They don't know how many people died. It was in the tens of thousands."

McBean expressed hope the legacy of IRDR will be that it has saved lives. "When a similar tragic hazard happens — like a volcano, a flood or a hurricane — we'll be sure that fewer people die. There will be fewer economic costs and less interruption." [This is assuming, of course, that governments implement the committee's findings and recom-

mendations, he says.] "It's not just the earthquake or the hurricane," he adds. "It's about working to make ourselves less vulnerable."

McBean says being stranded by the volcano for a week served as a reminder to him that impoverished people are not the only ones vulnerable to natural catastrophes. The volcano "brings home in your own mind that these things happen to everyone, including us." The episode is a

perfect example of the vulnerability of our society, he says. "We as a society just assume that things will work."

He draws a parallel to the 2003 electricity blackout that affected large swaths of Ontario, Quebec and the northeastern United States. "No ATMs, no credit card systems, no one had \$5 in their pocket," he observes of that event. "I don't remember the last time I talked to a bank teller. Wherever I am, I just assume that I will electronically be able to access money.

"I just assume that I can be in Paris, get on a flight in the morning and be home for dinner with my wife. When this thing comes up, it hits you that you can't. It really brings home the vulnerability that we all have because we have set ourselves up in a very technologically dependent society. And this technology is not 100%. It will be impacted by things in ways that we don't usually think about."

Events such as the blackout or the Icelandic volcano create uncertainty, he continues, and the uncertainty creates difficulty in making decisions. "That's another part of disaster risk reduction — to have a thought or thinking process that allows individuals, governments, organizations and insurance bureaus to determine how to make decisions when faced with uncertainty." ■