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Full Text:

In a world of competing interests, short attention spans, governance by media trial, and political games, natural hazard issues are sometimes sidelined. After all, the event has not happened, so why worry? Then, a natural hazard event—such as rainfall, an earthquake, a volcanic ash fall, a cyclone, a blizzard, a virus, or a geomagnetic storm) becomes a disaster and demands are made about why little was done beforehand.

In an attempt to start overcoming this process of thinking after the event, I propose five, interlinked tenets related to natural hazards and risk management which should be accepted to prevent natural hazards from becoming disasters. Some have claimed that these tenets are straightforward, presenting only common sense. This claim holds particularly well in New Zealand which is a world leader in this field. Nevertheless, even though the tenets are not original and might seem mundane, they are, at times, not made explicit in policy and practice. Stating and explaining them might assist in communicating the challenges and needs of risk management related to natural hazards by providing a common baseline from which policies and practices should emerge.

The suggested tenets are:

1. Natural disasters do not exist. A natural hazard (actually, a normal environmental event) can be a necessary condition for a disaster, but it is never a sufficient condition. Environmental events are always occurring, but the root causes of disasters are vulnerability and lack of resilience, both created by society. Thus, humanity creates disasters and disasters are not "natural". (Unless human beings and society could be considered to be natural processes...)
2. Disasters and risk cannot be understood without focusing on vulnerability and resilience. Vulnerability and resilience dictate how society could be impacted by an event and the processes which developed and maintain the situation which permits those impacts. Vulnerability and resilience refer to what humanity does to itself, including what some sectors do to other sectors. Focusing on these elements, rather than just environmental events, is essential for understanding causes of risk and disasters.
3. Disasters are social, not environmental phenomena. Disasters are about people and their or their organisations' reactions to environmental phenomena or potential environmental phenomena. If an environmental event neither impacts nor worries people, it is just an environmental event, not a disaster. Thus, disasters are social constructs.
4. All disasters are slow-onset. Environmental events might be rapid-onset, but the disaster results from humanity's decisions, attitudes, values, activities and culture over the long-term which affects vulnerability and resilience.
5. Exceptions exist. If a comet bombardment or meteor the size of South Island strikes Earth, it would be unrealistic to blame humanity for having evolved on this planet in the first place. The importance is in realising that exceptions are few, extreme and more related to the galactic-and-larger scales than to our day-to-day and millennium-to-millennium decisions.

Accepting these tenets and applying them for policy and practice help to tackle the attitude of thinking and doing only when it is too late. In particular, children need to be convinced about thinking and acting before the natural hazard event so that it becomes part of their normal thought

patterns, values, decisions, culture and day-to-day actions throughout their lives and careers. Then, as these children enter the workforce, policies, behaviour and actions related to thinking and acting before a natural hazard event becomes a disaster should follow.

Clear and simple messages are vital. One challenge is selecting the name for the overall aim. The activities we seek have many aliases including disaster risk reduction, building resilience, vulnerability reduction, risk management, adaptation, mitigation, prevention, pre-disaster actions, safer communities and variations of each phrase. Yet a good communicator—a simple, engaging, attention grabbing idea is still missing. A succinct, accurate, understandable phrase which conveys the range of ideas and activities encompassed might not exist. “Making communities safer from disasters” appears to be the most widely acceptable (so far), particularly as it avoids the trap of suggesting that entirely safe or risk-free communities are feasible.

The dilemma of the overall name perhaps mirrors the distraction of refining the proposed tenets to perfection. Words are beautiful, but what do they mean in practice? How could the tenets be used and applied? What operational areas do they inform? I use examples from the February 2004 floods.

Tenets 1, 3 and 4: A simple rule for floods is that floodwater should never be touched or, without proper training and equipment, entered. Floodwater contamination could arise from sewage, oil, pesticides, fertiliser, industrial and household chemicals and harmful microorganisms. Floodwater can remove manhole covers, wash away roads, and obscure other perils. During the February 2004 floods, numerous cases of people walking unprotected through murky floodwater occurred along with incidents of children playing in floodwater. These two issues combined in the York Park estuary when a nine-year-old boy playing in a flooded part slipped into a hole and died on 15 February. Such tragedies are preventable through education, awareness and behavioural changes—social actions over the long-term which prevent disasters irrespective of the related environmental phenomena. Such attitude changes are ours, not nature’s. The environmental phenomena should not be faulted.

Tenets 1 and 4: On 16 February, a bridge across the Pohangina River collapsed due to floodwaters. The high-pressure gas pipeline that followed the bridge did not break, but was left dangling across the river. The flood disaster of a gas leak or explosion was thus averted. This incident is an impressive example of building resilient infrastructure without necessarily being aware of the sort of event which the infrastructure would have to withstand. Yet the bridge collapsed, representing a slow-onset human, not natural, disaster which started when the bridge was first designed and constructed human decisions and which continued through any maintenance and upgrades which were performed more human decisions.

Tenets 2 and 3: Many people whose properties were flooded did not have adequate insurance or had not read their insurance policy (or both). Insurance is far from a panacea and, on occasion, can cause more stress than it is worth. Nonetheless, simple education, for both insurance companies and for policy holders, and the commitment to clear, honest communication from insurers would help to prevent problems while saving the insurance companies plenty of money and grief from upset clients. Unfortunately, in some cases related to the February 2004 floods, insurers appeared to be more concerned about whether the floods were one or two events than about putting proper effort into client communication. Also, claim processing delays resulted from insurers not having the staff or infrastructure to deal with the scale of the events. These issues are purely vulnerability-related, because they would occur irrespective of the hazard. They are social decisions, related to priorities and resource allocation, and are not consequences of environmental phenomena.

Tenets 2, 3 and 4: During the February 2004 floods, many farmers risked their lives to save their livestock. I fully respect and understand that decision because the livestock represent their livelihoods, but farmers should not be put in a position of having to do so. They should have the support to prepare evacuation plans, to have warning of impending floods, and to get their livestock to safety before their own lives are threatened. A farmer being saved by grabbing on to her cow makes utterly humorous news, but should not be milked for laughter value. These farmers were not threatened by nature. They were threatened by human and societal decisions, choices, actions, priorities and resource allocations over several decades which put them and their livelihoods at risk from environmental phenomena. Farmers, and the rest of us, deserve better.

Tenet 5 is absent from the above examples. Or are there fundamental flaws throughout the above discussion leading to the conclusion that the February 2004 floods were indeed an exception? I would suggest otherwise. We set the priorities and we make resource decisions. We should accept the blame for consequences, even if it means suffering during extreme environmental events.

If we truly wish to make communities much safer from disasters, then it is our choice to back up our principles with resources and actions. We can make the choice to ensure that the disaster of the February 2004 floods does not recur even if the rainfall of the February 2004 floods does recur. If we choose otherwise and good reasons might exist for doing so should we really blame nature?

Ilan Kelman <http://www.ilankelman.org>