

Natural Hazard Disaster Risk Reduction as an Element of Resilience: Considerations about Insurance and Litigationⁱ

Edward A. Thomas, Esq.¹

¹Natural Hazard Mitigation Association; American Bar Association Committee on Disaster Response and Preparedness

Contact: edwathomas@aol.com

Keywords: Disaster risk reduction, Resilience, Insurance, Litigation

"Disaster risk reduction is not a luxury. It's an essential insurance policy for a more disaster-prone world, and one of the smartest, most cost-effective investments we can make in our common future. The benefits of this investment will be calculated not only in dollars saved, but most importantly, in saved lives."

Jan Egeland, Former U.N. Under-Secretary General for Humanitarian Affairs and Emergency Relief Coordinator

Introduction

As a Society, may never have had a greater opportunity to seriously consider how to reduce the mounting toll which follows foreseeable natural events. The passion and energy of those who believe in the reality of climate change brings an entire new breath of oxygen into conversations about what sort of future we will build for the next generations. This energy should be linked with those of us who care about Disaster Risk Reduction with those concerned that we as a World are on a path of vast economic damage to our economy due to a mounting toll of disasters.

Worldwide, we are building the future every day: one cubic yard of fill at a time, one building at a time, and one road at a time. We have a choice: we can build safely and properly so as to not exacerbate our enormous existing problems caused by improper construction and development; or we can continue to do business as usual and build an unsustainable future of misery, waste and needless destruction. Right now we are clearly on the path of mounting losses from foreseeable natural events.

Basic thought: Fundamentally, we all must take responsibility for our actions.

ⁱThis paper is part of the IRGC Resource Guide on Resilience, available at: <https://www.irgc.org/risk-governance/resilience/>. Please cite like a book chapter including the following information: IRGC (2016). Resource Guide on Resilience. Lausanne: EPFL International Risk Governance Center. v29-07-2016

[When disaster strikes, who pays for the damage incurred?](#)

When Mother Nature's natural processes cause harm to property, an individual who suffers damage can pay for the reconstruction of his property in three ways:

- A) Self-Help.** The injured party might choose to rebuild on her own by using savings, borrowed money, assistance from national and local charities, and the help of friends and neighbors. This type of rebuilding was once common throughout the World. Today, this tradition survives in such communal situations as helping a neighbor rebuild a barn destroyed by lightning.
- B) Insurance.** Casualty insurance can provide an efficient mechanism for recovery, whether the insurance is purchased by the damaged party or made available through a special legislatively created mechanism, as is the case for Workers' Compensation Insurance. State and federal disaster relief grants are another form of special, legislatively established social insurance for disaster victims.
- C) Litigation.** Beyond self-help and insurance, litigation is the only remaining alternative for recovery when a person suffers damage. Successful litigation requires demonstrating that a person, corporation, or agency caused, or somehow is legally culpable for the damage that has taken place.

Sometimes recovery mechanisms can be linked together. For example, disaster assistance in the United States is typically a combination of self-help (via disaster loans) and insurance (via special legislation that both authorizes and subsidizes such loans). Each of these three mechanisms has distinct advantages and disadvantages, as well as widely varying degrees of efficiency, depending on the particular circumstance.

- Self-help worked well in the past and still does, in specific situations. For optimal use of this mechanism, the community must be committed to helping each other in times of difficulty. This form of recovery cannot work well if most of the helpers are themselves suffering damage.
- Insurance can be an extremely efficient mechanism for distributing funds, provided the individuals damaged possess a sufficient amount of insurance or have been provided such insurance by operation of law. The downside of insurance is that a person must generally purchase a policy prior to damage. Experience has shown that people will generally not purchase insurance for infrequent events such as earthquakes and floods absent a government requirement. Even when the government does require insurance, compliance is an issue.
- Litigation is inefficient. Not only does it take many years, but litigation has huge costs that go not to the damaged party but to attorneys, courts, expert witnesses, court recorders, and others. Litigation is also uncertain. The damaged party may not be able to obtain counsel or find a culpable entity. Sometimes a plaintiff will not recover damages because the defendant can hire clever expert witnesses and/or attorneys. For all of these reasons, litigation is the least reliable of the three methods discussed.

A fourth, vastly preferred alternative exists! The safe and proper design of buildings and infrastructure is another option, which should come before insurance and litigation. This alternative

is featured in the Disaster Risk Reduction Curriculum being developed by the Natural Hazard Mitigation Association (NHMA, 2015).

Multiple paths to change behaviour: Using legal concerns as a path of education, messaging, and persuasion

The Law

The law, in theory if not always in practice, strongly encourages responsible behaviour. That responsible behaviour is based on a standard of care as exercised by the individual or corporation taking action. Professionals, such as engineers or architects, are typically held to a higher standard of care than the ordinary person.

We are increasingly seeing evidence of movement in the law to hold folks responsible for what they do and do not do when they had a duty to take action. Typically, when someone breaches a duty of care and others suffer harm, civil litigation is the way our system of law resolves the controversy.

I believe that recent litigation supports and enforces a view that based on ancient principles of law, morality and equity; folks do not possess the right to harm their neighbours. Actions which harm others have consequences beyond karmic payback, to include both civil and even in some situations, criminal penalties. Today, it is much easier to show causation through forensic sciences such as forensic hydrology, forensic chemistry, and forensic hydraulics. Today, we can much more easily answer the question posed by Jimmy Cagney in the wonderful old movie, Mr. Roberts: "All right, who did it; I want to know: who did it?"

Some Examples of Recent Litigation

A) Civil Litigation

1.) We as a society increasingly struggle to balance the need to feed an ever increasing population while preserving the quality and quantity of potable water supplies for that population. There can be a particularly important conflict when farming practices consume potable water desired by city dwellers or cause that water to be undrinkable. A good illustration of this conflict is an especially important lawsuit brought by the City of Des Moines Water Works against upstream farming counties over nitrates in the water supply (New York Times, 2015).

Some additional recent cases which illustrate this concept of civil liability for money damages:

2) Background: For over thirty years lenders and the companies who read FEMA Flood Insurance Maps have escaped liability when they read a map incorrectly. These companies escaped liability even when the plaintiff is not required to purchase Flood Insurance, as the law requires, and then suffers an uninsured loss.

Then: in the case of Paul v. Landsafe Flood Determination, Inc., No. 07-60652 (5th Cir. Dec. 5, 2008), the plaintiff was allowed to sue to recover from a flood determination allegedly containing an error.

The court noted that a Flood Zone Determination was the kind of Professional Opinion for which it is foreseeable that "justifiable and detrimental reliance by a reasonable person would be induced."

3) More recently we have seen the *St Bernard Parish* case (2014) and the *Arkansas Game and Fish* case (2015). The St. Bernard Parish decision and case exhibits really emphasize the importance of science and engineering in determining foreseeability, standard of care and consequent legal liability concerning what was done and not done with respect to the MR-GO portion of the failed New Orleans levees. I believe that such a legal analysis is directly on point to current concerns about Climate Change, including climate migrants or refugees. Both these cases demonstrate a remarkable change in how the courts are treating action which causes harm, even when the Agencies involved had previously escaped liability for conduct found to be outrageous by courts based on the concept of Sovereign Immunity (Thomas, 2014; Adams-Schoen, 2015).

B) Criminal Cases

If someone does not deliberately intend to cause harm, yet carries out an activity, particularly an activity which leads to loss of life, in a manner so reckless as to the consequences, criminal action can be considered under a theory of "depraved indifference" or "common law murder." Such was the case in 2006, on the island of Kawai, Hawai'i, when the operator of the Ka Loko was indicted for common law murder for his actions taken before that reservoir breached killing several people. The operator was not alleged to have intended to murder anyone. However his actions were allegedly so reckless as to provide the requisite intent.

Litigation may be one path we can take so as to begin to solve our serious problems of moral hazard, including dissuading activities which exacerbate climate change, whereby one person or group externalizes the true cost of an activity to others. We know that way too often the folks most harmed by that externalization of costs are the most vulnerable and underrepresented folks much as described in the excellent NAACP publication: *Equity in Building Resilience in Adaptation Planning*, by Jacki Patterson. I would also mention the really excellent publication: *Bounce Forward*, by Island Press, funded by the Kresge Foundation, as containing some truly excellent material relating to thus discussion, Both *Building Resilience* and *Bounce Forward* are on the Natural Hazard Mitigation Association website at: <http://nhma.info/resources/recommended-reading/>

In part, the solutions to today's problems involve our nation and the world following the wisdom of the First Nations; redeveloping a sense of stewardship of the earth; and following of the ancient maxim of law: *sic utere tuo ut alienum non laedas*, (use your property so as not to harm others). The great moralist Mohandas Gandhi described *sic utere tuo ut alienum non laedas* as "a grand doctrine of life and the basis of ahimsa (peaceful relations between neighbors). This maxim of law has also been called inarguable and universally accepted.

Litigation may well help us begin to solve our serious problems of moral hazard, including dissuading activities which exacerbate climate change, whereby one person or group externalizes the true cost of an activity to others. We know that way too often the folks most harmed by that externalization of costs are the most vulnerable and underrepresented populations, much as described in the excellent NAACP publication, *Equity in Building Resilience in Adaptation Planning*, by Jacki Patterson; and also the brilliant and insightful publication by Island Press, funded by the Kresge Foundation and written by Laurie Mazur: *Bounce Forward: Urban Resilience in an Era of Climate Change*.

In 2007, I wrote an article for the Environmental Law Institute which posed a question in its title: Recovery Following Hurricane Katrina: Will Litigation and Uncertainty Today Make for an Improved Tomorrow? [*National Wetlands Newsletter*, vol. 29, no. 5.]. In that article I expressed the hope that the Katrina Litigation would prod society to do a better job of at providing a safer, more just and resilient future for our Nation. The article went on to urge: "As Katrina so clearly demonstrated, we must do a better job of providing for the rebuilding of shattered lives following a catastrophe. At the same time, our land use and building decisions must improve dramatically. Otherwise, the problems we currently face in hazard management will only get worse."

Criteria or indicators for resilience

We must change our foundation of building codes to include cost effective damage reduction and post event operability in order to achieve resilience.

At the 2016 Building Innovation Conference and Expo, sponsored by the National Institute of Building Sciences, Dr. Keith Porter from the University of Colorado suggested that if the goal of building codes were to be resilience, costs would increase about 1%; the savings in areas prone to earthquakes would be many multiples of the extra costs. In following the earthquake example in the above paragraph, earthquake codes could be modified as Dr. Porter suggests from current standards to a more holistic one: "Ordinary buildings in earthquakes will: 'Avoid serious injury and life loss due to structural collapse, substantial damage to non-structural components and systems, and release of hazardous materials, and be largely habitable or functional.'" [Emphasis added]. The codes should be modified for other foreseeable natural hazards as well to incorporate resilient standards into our development practices and avoid the costly scenario of losses and future retrofits.

The idea of including Disaster Risk Reduction in any scheme of Resilience parallels to the origins the United States systems of dealing with the reduction of urban fire risk. As indicated in the FEMA Publication: *America at Risk America Burning Recommissioned* (FA-223/June 2002) when discussing fire loss in urban portions of the United States: "Today, the threat of fires is still with us. But we have done a lot to address the risk, minimize the incidence and severity of losses, and prevent fires from spreading. Our states and localities have an improving system of codes and standards; most of us are aware of the risks; we have accomplished a lot, but we have much more to do."

As the report (FA-223/June 2002) very clearly indicates, the success of America's fire services over the past 100 years is instructive for the strength and sustainability of America's communities for the next 100 years as well. **Today, we must not only continue and reinvigorate our successes, but also expand them to include the natural and man-made threats that each of our counties, cities, towns and villages face every day – floods, earthquakes, hurricanes, hazardous material spills, highway accidents, acts of terrorism, and so much more.**" [Emphasis added]

In a similar manner, the FEMA National Flood Insurance Program (NFIP) Community Rating System (CRS), has also successfully provided incentives for communities to exceed floodplain standards. The lessons drawn from the establishment and enhancement of CRS is to first identify the most important and meaningful activities that earn incentives. These activities are systematically verified and tested best practices which will result in measurable Disaster Risk Reduction as well as protection of the local economy and environment. Such a systematic approach to measuring

capability to reduce risk is not theoretical; it is being done worldwide in Fire Insurance Risk Rating Schedules. This objective and focused approach to rating local ability to deal with fires is working, we need to expand this system to all hazards. The Federal Emergency Management has noted:

“...the success of America’s fire services over the past 100 years is instructive for the strength and sustainability of America’s communities for the next 100 years as well. **Today, we must not only continue and reinvigorate our successes, but also expand them to include the natural and man-made threats that each of our counties, cities, towns and villages face every day – floods, earthquakes, hurricanes, hazardous material spills, highway accidents, acts of terrorism, and so much more.**” (*Emphasis added*) [*America at Risk America Burning Recommissioned*

(FA-223/June 2002)

Conclusion

More complete Resilience-based Disaster Risk Reduction solutions can only come from first making a holistic examination of the issues with the systems we have both for development and the systems we have for providing disaster relief throughout the world.; and then developing a system of economic rewards and disincentives for individual, community or business actions taken which either reduce future risks or exacerbate them.

We need to devise a multidisciplinary "Whole Community" approaches to a series of problems. Use of ancient concepts of law and morality can help to achieve those solutions. An article in the Washington Post recently pointed out: the word moral may be a “magic word” when it comes to convincing folks. “The magic word this researcher says can get people to agree with you” (Washington Post, 2016).

Other folks may be convinced of the need to change our community development practices so as to reduce disaster losses by the reality of the threat posed by litigation; others by economic or environmental arguments; still others can be convinced by concerns for taxpayer expenditures; others by concern for future generations and the stewardship of the Earth; still others by concerns for the suffering and potential death of disaster victims. However when we reach decision-makers we must reach them so as to promote Resilience and Disaster Risk Reduction.

Annotated Bibliography

(NHMA, 2015) *NHMA Disaster Risk Reduction Ambassador Curriculum*, by Skakel, K., Watson, D., Thomas, E. A. Natural Hazard Mitigation Association, with funding provided by the US Department of homeland Security, Federal Emergency Management Agency. This document is available at: www.nhma.info

The Disaster Risk Reduction Curriculum emphasizes the need for multi-hazard, multi-disciplinary systems based approach to minimizing the harm caused by foreseeable natural events through better design, planning, construction, emergency management practices.

Mazur, L. (2015). *Bounce Forward, Urban Resilience in an Era of Climate Change*. Island Press

Patterson, J. (2015). *Equity in Building Resilience Adaptation Planning*. NAACP.

Both publications are available at: <http://nhma.info/resources/recommended-reading/>

Two Brilliant Publications Designed to Promote True Resilience Including Disaster Risk Reduction for all

Adams-Schoen, S. J., & Thomas, E. A. (2015). *Federal Law Related to Local Climate Recent Resilience Planning and Zoning*. soon to be published article in *The Urban Lawyer*, 47 URB. LAW. 3 (2015). Available at: http://nhma.info/wp-content/uploads/2016/02/UL-47-3_08Adams-Schoen-Thomas.pdf

A THREE-LEGGED STOOL ON TWO LEGS

Thomas, E. A., & Walther, L. (2015). Hazard Mitigation in Disaster Recovery. FAIA, in *Planning for Post Disaster Briefing Papers*, American Planning Association, 2015.

Thomas, E. A., & Johnson, L. R. J. D. (2014). Turning Koontz into an Opportunity for More Resilient Communities. *National Wetlands Newsletter*, March/April 2014, 36(2). Located on the American Bar Association Website at:

http://www.americanbar.org/content/dam/aba/administrative/state_local_government/land_use/authcheckdam.pdf

New York Times (2015) The Des Moines case is well described in an article in the New York Times available at: http://www.nytimes.com/2015/04/19/us/conflict-over-soil-and-water-quality-puts-iowa-nice-to-a-test.html?_r=0

St Bernard Parish case (2014)

“Turning Koontz into an Opportunity for More Resilient Communities”, by Edward A. Thomas Esq., and Lynsey R. Johnson J.D., in *National Wetlands Newsletter*, March/April 2014, 36(2). Located on the American Bar Association Website at:

http://www.americanbar.org/content/dam/aba/administrative/state_local_government/land_use/authcheckdam.pdf.

Arkansas Game and Fish case (2015)

A THREE-LEGGED STOOL ON TWO LEGS: FEDERAL LAW RELATED TO LOCAL CLIMATECENT RESILIENCE PLANNING AND ZONING, by Sarah J. Adams-Schoen and Edward A. Thomas, in *The Urban Lawyer*, 47 URB. LAW. 3 (2015). Available at: http://nhma.info/wp-content/uploads/2016/02/UL-47-3_08Adams-Schoen-Thomas.pdf

Washington Post (2016) Daniel Paquette, June 1, 2016 available at:

https://www.washingtonpost.com/news/wonk/wp/2016/06/01/how-to-make-people-trust-your-opinion/?tid=hybrid_experimentrandom_2_na